1 Outlook

Collecting methods for transdisciplinary workplace research and management

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Workplace management is a "collaborative task towards aligning the workplace with the organization and the employees using it" (Danivska & Appel-Meulenbroek, 2022, p. 2). Although it has not been recognized as an autonomous discipline independent of corporate real estate (CRE), facility management, or human resource management, workplace management is progressively gaining a distinct identity. The work of a few scholars that bundled up theories as a foundation of the field (see the two precedent volumes of the book series that hosts this handbook) has been contributing to making it clear that a variety of approaches converge from distinct disciplines into one recognizable set of tools, reasoning, and logic. This isolates workplace management as a specific effort aimed at understanding and improving the way organizations, buildings, and people interact in a holistic and transdisciplinary way.

This happens at a moment when workplaces have been seriously challenged in their very nature, as hinted in the Preface. *What* is the office? *Where* are we working? *When* are we working, and *when* are we *not*? All these questions have occupied the minds of most of the population employed in knowledge-intensive jobs in the past years, and more urgently after the outbreak of the COVID-19 pandemic. Starting from those 'ontological' questions, management of the (physical) work environment is gaining more and more attention in both the industry and academia. Still, the bulk of knowledge on this topic is rather scattered and will benefit from progressive systematization. On the one hand, workplace managers require assistance applying workplace theories in practice and making decisions about the workplace with appropriate information. On the other hand, workplace researchers need to combine all the angles from which workplaces are studied and take advantage of a reference collection of methodologies from different disciplinary areas that are applicable in this context. The multiplication of available data further complicates the matter. Novel opportunities are open to triangulate information from various sources and produce original insights. However, guidance is lacking to support the full exploitation of data through both traditional and innovative methods.

DOI: 10.1201/9781003289845-1

1.1 Foundation axioms and scope

Workplace management shares with other relatively young disciplines a "rich diversity of foundation axioms" (Linstone & Turoff, 2002, p. 15). Methodologies of different names come up frequently, borrowed from "this discipline or that previous study". Often, the choice of a particular method may appear rather casual or occasional. Indeed, as recalled in the Foreword, researchers tend to use only a limited number of specific methodologies (Appel-Meulenbroek et al., 2018). This might be due to the variety of axioms and available methods, which makes it difficult for an inquirer to orient him-/herself in the quarrel about what technique is the best to gather data and address new problems. Not only are we generally unaware of the wide range of different approaches that may underlie our research questions but we also tend to have limited sight of the potential range of our choice. Background studies, training, experience, and philosophical references any person holds affect the choice.

The following edited handbook has been composed to elevate awareness over methodological approaches that can be used in workplace research and management. Given the variety of disciplines relevant to the said field, the compiled methodological approaches might inspire novel and not habitually used data-gathering approaches in subjects closely interlaced with the contemporary workplace. The attempt is to generate a critical examination of alternative and/or complementary methods, with emerging differences and conflicts between one another, and to encourage conscious evaluation of the approach to adopt. No one method can fulfil all the requirements for a specific research question, and no one mode is *best* for all circumstances, making it even more important to choose consciously.

1.2 Rationale for the book

This book emphasizes not much the results of a particular application but the reasons why a specific method was used in a certain context and how it was implemented. The idea is that, from this approach, the reader will be able to transpose the considerations to their problems and decide on the applicability of the method to its area of endeavour. Each chapter delineates the inquiring system that has been used to address some issues in the workplace realm. The collection of methods happened quite spontaneously and, as such, we believe the book could be read in different ways, switching back and forth through the chapters, based on each reader's interest. This Handbook, therefore, includes foundational knowledge of different methodological research approaches; innovative evolutions of these methodologies; and their added value for application in various workplace contexts. The volume proposes a hands-on approach and guides the reader throughout the research process until the interpretation of outcomes. The necessary evolution of the office should follow evidence-based decisions on the abovementioned matters, which are only possible through rigorous investigations. This volume supports these investigations, which call for innovative

applications of qualitative and quantitative methodologies. Doing so will encourage more solid practices and thorough research agendas in workplace design, management, and use.

This introductory chapter develops as follows. First, it discusses *evidence-based* approaches starting with a discussion on using data to back meaningful decisions for research and practice. Afterwards, it gives a panoramic view of how data collection and elaboration methods evolved and can now support workplace strategies and decisions. Then it briefly touches upon the clash between quantitative and qualitative methods by suggesting that the workplace realm might become an exciting ground for a more 'peaceful' exchange between the two approaches. The second part of the introduction anticipates the methods herewith collated. The emergence of *multiple perspectives* is commented on in the following section, which gives an overview of the various interpretation lenses that can be taken while exploring the book and will help the reader find their own mental order across the different contributions.

The whole volume is embedded in the contemporary world of work. As such it encompasses a variety of methods that can capture the most recent transformations undergoing in the workplace. It is worth noting that, when buildings are constructed for particular purposes and at a certain time in history, they tend to have many similarities or, at least, they apply similar design strategies (Becker, 1990); hence, it is likely that they share a similar view towards the future and a similar predisposition to analysis. Even though this book does not claim completeness, the selection of methods herewith included will help address many of the common issues in today's workplace realm, which are summarized under a few *themes and threads*. Finally, the *set-up* of the single chapters is described, and the diversity of the contributors is shown to reflect the richness and complexity of research and management in the workplace.

1.3 Evidence-based approaches

Buildings are socially negotiated solutions (Watson, 2003) designed to meet the typical needs of the human being for shelter and to support the development of their activities. To manage these negotiated solutions, a holistic approach is fundamental as it integrates objective-quantitative data with stakeholders' subjective opinions, preferences, and experiences (for an in-depth discussion about the term 'stakeholders' and synonyms see Danivska & Appel-Meulenbroek, 2022, p. 8). This requires periodically capturing the "quality of use of the built space" (Foti, 2005, p. 145), that is the quality of the relationship between buildings and people.

Poor quality and misuse of the built space will negatively impact the result expected by both occupants and operators in the built environment, namely finding the appropriate support for their activities in the space. On the contrary, the key to successful results corresponds to reasonable levels of information and communication between the parties, which is possible only when decisions and strategies are grounded on evidence-based information. Consequently, building users benefit

from gathering *data* through specific methods and approaches to align the built environment conditions with their respective interests.

1.3.1 The use of data to back decisions

Ackoff (1989, p. 3) defines data as "symbols that represent the properties of objects, events, and their environments". Making sense of data has been a constitutional act for human beings since the earliest societies. Data measurement and analysis are embedded in a process encompassing the collection of records from various sources and subsequent interpretation to unveil information that is useful to make decisions. Data elaboration has always been at the basis of human behaviour in its attempt to get to know the surrounding world and gain knowledge and understanding. For much of history, mankind's highest achievements arose from conquering the world by measuring it (Mayer-Schönberger & Cukier, 2013). The first traces of data storage can be recognized in the prehistoric ages when tribespeople used sticks and bones to track records of trading activities or food supply (Marr, 2015). The Library of Alexandria might be considered the most extensive data collection in the ancient world.

The beginning of data analysis dates back to the first statistical purposes in ancient Egypt when periodic censuses were necessary to manage building pyramids (Mayer-Schönberger & Cukier, 2013). Retrieving data through censuses has always been used worldwide, especially for governmental planning activities, such as taxation. Mayer-Schönberger and Cukier (2013) report the example of analysing population growth by the district for governments to determine the number of necessary hospital facilities in different areas. Therefore, census takers are already used to collect and process data to increase its usefulness by transforming it into information.

Over time, measurement techniques have been refined, and data have been multiplying. The advent of computers disrupted traditional ways of dealing with data by making gathering a lot easier and less time- and resource-consuming. Meanwhile, this new computational capacity has also revolutionized our approach to data analysis, by opening up new evidence of correlations between phenomena (Mayer-Schönberger & Cukier, 2013). Since the advent of computers, the evolution has gone through business intelligence, data centres, and the internet, until the emergence of Big Data (Marr, 2015). Nevertheless, all data need wise elaboration in order to provide useful insights, explain events, and support decisions. Automated data-elaboration systems cannot generate the understanding and wisdom necessary for learning and development. Ackoff (1989, p. 3) while drawing his renowned Data-Information-Knowledge-Wisdom pyramid states that: "Information […] answers to questions that begin with such words as *who, what, why, when, where, and how many*". Instead, knowledge answers how-to questions while providing *instructions* to control different systems. Understanding answers to *why* questions thus enables the detection of errors, the identification of their causes, and, eventually, their correction. Finally, wisdom is the ability to employ judgement and evaluate a choice concerning the amount of

progress it will make possible. Going from data to wisdom necessitates the adoption of sound methods.

1.3.2 Data collection and elaboration methods in the working environment

Many companies nowadays use data-driven decision-making for their core business operations – e.g. Amazon and Netflix, among others (Miller et al., 2014; Waber, 2013). Curiously enough, oftentimes they forget to apply data-driven decisions inwards, i.e. to face issues regarding the way people work, and the management of their workplace, even though a variety of data might theoretically be available. Data analysis has been happening in the working environment for many years, at least since the middle of the twentieth century when managers started getting appointed to organize and control corporate physical spaces (Danivska & Appel-Meulenbroek, 2022). The earliest methods encompassed data from human observation (Waber, 2013). Subsequently, we augmented data collection tools by applying interviews and surveys, which better encapsulate the people's components of the workplace. Now plenty of new data about the workplace are available from various sources (Waber, 2013), including psycho-physiological measurements, real-time sensor data, and more.

The extension of data sources makes data collection and elaboration further intricate and complex. If the availability of multiple data sources allows relief from biases typical of social science disciplines (Mayer-Schönberger & Cukier, 2013), now the issue lies in how to merge all the different data sources in a meaningful way and obtain a sound understanding of data; there is a strong need "to balance between personal judgment and datafied assessment" (see Chapter 4 of this book). Moreover, "wisdom-generating systems are ones that men will never be able to assign to automata" (Ackoff, 1989, p. 9), meaning that human action is fundamental in the process and it cannot prescind from thorough awareness of and capacity to combine the available methods.

1.3.3 About the complementarity between qualitative and quantitative methods

In very general terms, the inquiry process happens throughout a 'method' or several consequential stages. First, an event or a raw dataset presents itself in the real world (Linstone & Turoff, 2002). Originally from the Latin 'given', *data* represent what is available to the senses (Uher, 2019). Nevertheless, this does not mean that they are ready to be collected. Each individual will be driven to recognize only specific 'objects' as relevant data, based on his/her own subjective perceptions, prior experiences, and field of investigation. Therefore, data generation and collection are an act of choice that must be carefully undertaken in every research setting (read more about how to choose a method in Chapter 14).

Second, some transformation or filtering of this dataset is applied to make it compatible with input into a 'model'. The model corresponds to some set of rules or a structured process (e.g. an algorithm, heuristic principle, or theoretical framework) that is functional to elaborate the 'input data' and convert it into 'output information'.

An encoding process must occur based on agreed schemes (Uher, 2019). Namely, this phase consists of transforming, reorganizing, and interpolating the data by putting it in a way (i.e. the 'model') that carries some new meaning or adds some levels of understanding compared to the previous stage of data generation and collection. Finally, the information obtained herewith will need another filter or transformation round to be presented in a form that is useful for making decisions or recommendations (e.g. for policymakers, designers, company managers, etc.).

Throughout this process, the debate around quantitative and qualitative methods usually comes up more or less implicitly. The discussion revolves around whether data should be explored utilizing quantification through measurement instruments or require the recognition of specific qualities by human interpretation. The two approaches are normally considered in contrast with one another. The first is typically associated with a *natural* conception of causation (*N-causation*); therefore, it implies the account of a systematic pattern of behaviours or happenings, on the model of experimental approaches adopted in the natural sciences (Howe, 2011). The latter, instead, is typically associated with an *intentional* conception of causation (*I-causation*), meaning the account of norm-governed institutions and practices behind behaviours or happenings, on the model of interpretative approaches applied in the social sciences (Howe, 2011).

Often, qualitative methods are attributed only an auxiliary role in exploring new phenomena and/or descriptions. In contrast, quantitative methods have the more 'prestigious' function of understanding and explanation. To subvert this view, the concept of "mixed-methods interpretivism" has been proposed (Howe, 2011), according to which experimental-quantitative methods play the basic role of recognizing patterns. Besides, qualitative-interpretive methods are responsible for reaching a deeper understanding of causation. This would show how quantitative methods can be used to investigate I-causation, while on the flip side, qualitative methods can be employed to disentangle N-causation. These contrasting positions pose doubt about what 'scientific' research is and whether non-scientific research may even exist.

The boundaries between research and evidence-based practice are sometimes blurred in the workplace realm. Applied research based on hard measurements intertwines with overarching psychological and philosophical theories on people's interactions with each other and with the space. In particular, what is unique about workplace investigations is that they often require a combination of the two approaches, which, in the end, come out not as an alternative to one another but rather as complementary. The combination of quantitative and qualitative methods is already frequent in workplace research and management and deserves further exploration and exploitation. This volume takes the first step in this direction by presenting multiple perspectives to handle workplace-related data.

1.4 Multiple perspectives

A book needs to file the chapters that compose it in some order. However, deciding the most interesting, reasonable, and/or natural way of ordering the various contributions in this specific volume was challenging. Also, the collection of methods

is far from comprehensive and exhaustive as it was not subject to particular criteria other than "what happens to be useful and original to address contemporary workplace matters". Therefore, we found it stimulating to highlight multiple perspectives through which one can create a personal path throughout the reading experience.

These perspectives may also offer hints on practical and more theoretical ways to approach the methods. Below they are described and grouped by those that may suggest when, where, and how to apply a method (Table 1.1); and those that will tell instead who and why to use a method (Table 1.2). The first set of perspectives gives information about data collection and processing, whereas the second set collects the origins of the different methods and outlines the logic for their choice.

With these instructions, we also intend to provide a ready reference to support multi- and mixed-method approaches and triangulation of methods.

1.4.1 When, where, and how to apply a method

The order chosen by the editors aims to reflect a *spectrum between the human component and the spatial component of the workplace*. The first chapters focus primarily on people to show that, first and foremost, researchers and practitioners should acknowledge who is using the space and with what purpose. The researcher's own human presence is recognized within the inquiring process as an essential element that may affect the investigation results and even become the same investigation object. The last chapters, instead, focus more on the physical elements within which people behave while working. Of course, all the methods, in the end, aim at disentangling the difficult relationship between people and space during work.

However, the reader will find a logical flow from methods that primarily look at people's feelings and perceptions (e.g. ethnographic methods) to those that analyse the spatial dimension (e.g. Space syntax). This flow is curiously reflected also in the writing style; an attentive reader will appreciate that the first chapters are written in first person, whereas the voice becomes more impersonal and objective towards the end of the book, where the authors take the third person to describe how they approached and applied the different methods. By going through the chapters in this order, the reader might as well notice a progressive change in tone from a more theoretical to a more practical attitude. A gradient appears from the ethnographic field, which is interesting on a scientific level and offers operational instruments to a practitioner as a secondary outcome, to the spatial approaches described towards the end, which are more directly transferable in practice and reveal scientific findings as a subsidiary impact.

Beyond this general note, a few other points of interest are worth mentioning. First, is the emergence of different *granularity, or scale, in the data collection process*, despite generalization always being a scientific goal. Some methods gather data about individuals, namely one's preferences and emotions (e.g. Stated Choice Experiments; Autoethnography), whereas other methods tend to privilege the interactive dimension between two subjects (e.g. Social Network Analysis). Some

Table 1.1 Practical information about data collection

Chapter/method	*Granularity/scale of data collection*	*Type of data*	*Kind of evidence/data elaboration*	*Timestamp of data*
2. Workplace autoethnography	Person	Qualitative	Narrative of an individual experience (either single or co-authored)	Present
3. Affective ethnography	Person/ organization	Qualitative Description of an experience through participant observation + Quantitative Organizational data like statistical records, salary structures, organigrams, company documents on values, policies and strategies, employee satisfaction reports, etc.	Autobiographical accounts of and interviews with the participating employees, work diaries, and participant observation in extensive fieldwork notes	Present
4. Digital ethnography	Person	Qualitative (ethnographic observations) + quantitative (computational network analysis)	Fieldnotes during participant observation and technical walkthroughs, interview transcripts + network graphs	Present
5. Critical discourse analysis	Person/ organization	Qualitative and quantitative (spoken, written, or otherwise depicted forms of texts)	Theoretical sampling (also assisted by computerized operations)	Present or past
6. Diary studies	Person	Predominantly quantitative self-reports over an extended period of time (e.g. questionnaires, tally sheets, physiological measurements, or pictorial scales)	Quantitative data analysis (statistical) – recommended consultations with someone profoundly experienced	Present (longitudinal studies), ideally, do not contain any retrospective assessment of certain periods, but the assessment aims at the current experience

(*Continued*)

Table 1.1 (Continued)

Chapter/method	*Granularity/scale of data collection*	*Type of data*	*Kind of evidence/data elaboration*	*Timestamp of data*
7. Cluster analysis	Person/group	Quantitative – survey data (including self-reported data)	Group observations through hierarchical and non-hierarchical algorithms to maximize within-cluster homogeneity and between-cluster heterogeneity	Present, past, and future
8. Stated choice experiments	Person	Quantitative –revealed (real life) or stated (controlled hypothetical situations) choices/preferences	Statistical models (e.g. multinomial logit, latent class model, mixed logit)	Future Punctual data (data are acquired at one moment in time)
9. Delphi method	Person/group	Qualitative or semi-quantitative	Qualitative or semi-quantitative analysis	Future
10. Social network analysis	Relationships/ interactions between members of a network	Quantitative relational data from questionnaires, interviews, observations, and artefacts through purposive sampling (necessary to have information from every actor in the network)	Network graph visualization Quadratic assignment procedure and multiple-regression Quadratic Assignment Procedure analysis	Present and past
11. Surveys	Person and space	Quantitative	Statistical analysis	Present
12. Space Syntax	Space	Parameters of spatial configuration that both describe a space (central, isolated, large, elongated, open/close) allow for comparison to human behaviour (location, activity, perception)	Statistical analysis	Present
13. Journey Mapping	Person and space	Semi-structured user interviews, user testing, facilitated co-creation workshops and secondary data from desk research	Journey map: a schematic visual document, typically matrix-like, used as a proxy to represent one or more user experiences within space	Present or future

Table 1.2 Origin of the methods and logic for their choice

Chapter/method	*Original disciplines*	*Underpinning theories/ philosophical approaches*	*Output (goal)*	*Outcome (helpful for)*
2. Autoethnography	Ethnography, autobiography	Positioning theory	Reveal individuals' perception towards physical space and its change due to specific factors	Understand a particular cultural occurrence
3. Affective ethnography	Ethnographyand cultural anthropology	Performativity Embodied phenomenology (Merleau-Ponty)	Go native and take the perspective of the participants usually with reformative ambitions	Understand the complexity related to diversity
4. Digital ethnography	Human geography, sociology, anthropology, nursing, educational sciences, and, more recently, business, and management studies	Emic perspective Grounded theory	Learn how people do things Elicit subjective meanings	Interpret the penetration of digital platforms into the workflows and taskscapes of employees
5. Critical discourse analysis	Linguistics	Social constructivism	Shed light on the practices of subjectivity in creating concepts (e.g. physical, remote, and hybrid work)	Demystify ideologies and help the dominated people towards emancipation from the associated problems
6. Diary studies	Psychology, anthropology, history, and literature	Within-subject vs between-subject approach	Unveil the fluctuating nature of thoughts, feelings, and behaviours, their antecedents, and their dependence upon situational conditions	Increase accuracy in the formulation and testing of hypotheses, the assessment of phenomena (thoughts, feelings, behaviours) that are dynamic, allows to test and reject causal explanations
7. Cluster analysis	Marketing, biological sciences and genomics, operation management	Post-positivist approach	Group workers (i.e. profiling) based on multiple dimensions	Create workers' profiles based on their relations with the workplace

(*Continued*)

Table 1.2 (Continued)

Chapter/method	*Original disciplines*	*Underpinning theories/ philosophical approaches*	*Output (goal)*	*Outcome (helpful for)*
8. Stated choice experiments	Marketing, health, transportation, and tourism	Information integration theory, probabilistic choice theory, Random utility theory	Describe, explain, and predict the choices people make between two or more discrete alternatives based on their individual preferences	Identify the relative importance of the attributes of the choice alternatives, predict the probability that certain alternatives will be chosen
9. Delphi method	Defence, technology, healthcare, and medical applications	Combination of positivist and constructivist approach General Theory of Consistency (GTC)	Reach stability in opinions and ultimately facilitate the convergence of different viewpoints	Long-term forecasting; gathering current and historical data; exploring planning options; putting together the structure of a model; delineating pros and cons of policies; uncovering causal relationships; exposing priorities of personal values
10. Social network analysis	Organization studies	Least effort theory and homophily theory	Map patterns of relationships among interacting members	Indicate how an individual is connected to others, also show the cohesion of a network
11. Surveys	Social science research	Person-environment fit theory	Create a snapshot of the occupant perception in the workplace	Describe the basic characteristics of experiences of a population
12. Space syntax	Architecture, urban planning, archaeology, neuroscience, and biology	Space syntax	Treat space as a set of parts (rooms, streets) interconnected through permeability or visibility (doors, windows, and junctions), forming spatial networks	Understanding the relationship between workspace and human behaviour, and derive suggestions when designing space
13. Journey mapping	Business management, user experience (UX) design, and service design	Human-centred design actor-network theory	Describing an experience (including user needs and challenges) from the point of view of the user	Interpreting the reasons why people behave in a certain way in space

other methods look at the group or organizational dimension (e.g. Delphi; Critical Discourse Analysis) and aim to aggregate data beyond the individual data point to recognize overarching trends (e.g. Cluster Analysis).

One additional element to point out is the *type of data* and *kind of evidence* that is produced through certain elaboration techniques. This goes beyond the schematic distinction and battle royal between qualitative and quantitative techniques. As anticipated above, most methods combine both qualitative and quantitative data and elaborate them in such a way that the researcher can interpret them, sometimes thanks to the aid of computerized systems. Intriguingly, many methods require the interaction of different actors (either additional researchers or between researcher and observed individuals) into an interactive process. This reminds us that evidence is never apparent but requires repeated attempts of interpretation from multiple viewpoints to be deeply understood.

One final point regards the focus over time or the *timestamp of data*. Some techniques mostly use data that look at the present, almost simultaneously or very close to the time of analysis and interpretation (e.g. Space syntax). On the contrary, other methods utilize data created in the past, even in times very far from the moment they are elaborated (e.g. Critical Discourse Analysis). Finally, specific methods can be used to simulate future scenarios and generate 'what-ifs' situations projected into the future (e.g. Stated choice experiments; Delphi method).

1.4.2 Who and why to apply a method

Different methods' attention on people or space reflects the disciplines where the method has been incepted. Indeed, the methods investigating primarily people and their behaviour originated from disciplines such as ethnography, anthropology, biography and literature, linguistics, and psychology, among others. Conversely, methods addressing first the spatial features of the workplace are related to disciplines like architecture, urban planning, service design, neuroscience, and technology.

Partially depending on the *disciplinary affiliation*, most of the methods are rooted in *underpinning theories or philosophical approaches* that explain the way these methods are conceived and applied, their reliance on quantitative or qualitative data, and the way they require these data to be elaborated. Most of them are embedded in a constructivist approach. However, it is recommended to look at these theories while consulting the previous books of this series to find connections between theories that mainly belong to disciplinary areas other than the workplace and those that have their origins within the workplace domain.

Finally, we can distinguish between the *direct output* of a method and its *outcome*. By output, we mean the immediate goal one can reach when applying one method, for instance, understanding individuals' perceptions and their change given different conditions, explaining and predicting choices, etc. By outcome, we intend instead the indirect effect that one may have the ambition to reach when adopting a method (i.e. what is the method useful for?), namely the kind of *wisdom* that the method enables. For example, inform future developments based on

values, identify the relative importance of alternatives, test causal explanations, and so on.

1.5 Themes and threads

Throughout the pages, the book discloses many of the most relevant contemporary themes in workplace studies and practice, which recur in more than one chapters. Especially, the volume focuses on the most pressing questions regarding the relationship between the spatial component of the workplace, including its progressive hybridization with other physical and virtual places, and its users, being public organizations, private companies or start-up businesses, and solopreneurs. These questions do not have an impact only in the research realm but translate into very concrete practical matters and deserve to be tackled through careful analyses.

It is recommended to start from the first chapter on 'Autoethnography' (Chapter 2) to set the stage. Here the reader will find a broad story of how work has been transforming lately, especially in the wake of the COVID-19 pandemic. *COVID-19* has indeed played a crucial role by impacting how people work, and making them interact much more with screens than with people. The chapter on "Digital ethnography" (Chapter 4) explains well how we cannot prescind nowadays from investigating this aspect and shows that new research methods should be integrated with traditional ones. Consider, for instance, that technical walkthroughs are now available besides physical walkthroughs. In an era where digital and analogue ways of interacting are deeply intertwined, it makes sense to adopt mixed-method approaches that can illuminate the multiple facets of digital labour.

The *dematerialization and digitalization of work* exacerbated by the hit of the pandemic is addressed in different chapters, including "Critical discourse analysis" (Chapter 5), as something partially independent from physical space but still happening in some other (virtual) dimension that needs to be coherent with the company culture, ethics and power relations, and its approach to space. This will also affect the way people interact with one another and their social ties, as the chapter on "Social network analysis" underlines (Chapter 10).

Multiple chapters highlight the need for understanding spatial and personal relations *within and beyond the traditional boundaries of 'the office'*. The chapter on "Cluster analysis" (Chapter 7) shows how different work locations might determine alternative work patterns and, therefore, foster multiple clusters of workers who use work locations for different purposes. The chapter on "Workplace autoethnography" (Chapter 2) points out the existence of new working spaces (e.g. coworking spaces) and homes in the balance across multiple workplaces. In addition, "Social network analysis" (Chapter 10), "Space syntax" (Chapter 12), and "Journey mapping" (Chapter 13) all bring attention to the use that people make of different workplaces, highlighting how research and practice need to understand the human-space relation better, especially considering how space can affect people's behaviour beyond traditional offices.

The increasing relevance of ethnographic research is evident given the attention to the aspects of *diversity and inclusion* that are becoming more widely embedded

in the workplace realm. The varied human component of work is a crucial focus of all the chapters; however, the chapter on "Affective ethnography" (Chapter 3) places particular attention on the role of the researcher in understanding the dynamics of the contemporary workplace. Besides the well-known Hawthorne effect, which explains how the presence of researchers can affect the behaviour of the observed population, this chapter introduces the underestimated factor of how the same researcher can feel within the research process – especially during some immersive experiences like that of covered participant observation.

The researcher's feelings might indeed raise important dimensions in research including sensitivity to data generation and the bodily sensation of the working body. The same reflections could also be drawn for what concerns the role of professional workplace operators (facility managers, CRE managers, human resources managers, architects, and designers). Problems potentially rising from the growing diversity of the working population, such as racism and ethnic prejudice, can be found also in the chapter dedicated to "Critical discourse analysis" (Chapter 5).

This growing diversity enhances the importance of *individuals* and their respective preferences and needs. The chapter on "Stated choice experiments" (Chapter 8) addresses the idea that each person carries their own desires and may have distinct approaches and preferences about how to work. This implies additional attention to what concerns the *health and well-being* of people, as the chapter on "Diary studies" underlines (Chapter 6).

The fundamental importance of measuring workplaces 'performance' and their fit with people's characteristics and needs by integrating various measures and indicators is mentioned in chapters about "Surveys" (Chapter 11) and the "Delphi method" (Chapter 9). They consider the present and the past's role while discussing the alignment of the workplace with the organization and the employees using it and how workplace management helps reach this goal.

1.6 Set-up and authors

To respect the scope of a handbook, which is that of being a tool assisting the reader in some learning process, and to offer a reference work, all the chapters follow a similar structure, even though some flexibility was given to the authors to personalize their style and make it coherent with the method itself.

On the whole, each chapter develops into five subsequent sections. This first section introduces the *background* of the method. It gives context on how the method can support (a) advancements in the workplace research field; and (b) evidence-based decision-making in practice. This section introduces where the method is coming from (who are the people that initiated it), in which fields it has been used, its disciplinary roots, evolution over time, etc. – plus the essential tools for its application. This section also describes the basic assumptions of the method and the general approach to its application. In the second section, the reader finds *arguments* on how this method has been and/or can be applied to workplace research and/or management. Here the authors explain why it makes sense to implement

this method to solve a workplace-specific question/issue. Especially, one can read here specific comments on how this method may help balance out the digital and physical work environment and help face the most recent challenges related to physical vs. remote vs. hybrid types of work. Moreover, the section discusses what competencies are required when applying the method, how long it may take to apply, etc. The third section hosts *examples of the method's application* in one or more specific workplace cases in research or practice. In most chapters, it reports on the experience (often done by the same author or authors) while applying that method to solve a workplace-specific question/issue. These concrete examples, of how the method has been used already, include details about the objectives of its use, data collection strategies, and analysis. The resulting empirical outputs are shown only briefly because the focus should not be on the outputs and outcomes that have been obtained but rather *on the way* they were obtained, stressing the usefulness and applicability of the method. The fourth section presents *implications for both research and practice*. This section provides a critical discussion on why each method can be favourably applied in workplace studies and illustrates how this would help address certain gaps in workplace research and/or management. On the one hand, ideas are proposed on how *scholars* may benefit from the described method if it is widely applied in academic research. Recommendations are also provided for researchers to apply this method in their studies. On the other hand, suggestions are made on how *practitioners* could benefit from the described method if it is widely applied in the professional field. Brief guidelines for practitioners to transfer the basics of each method in practice are available here. Finally, the chapters end with *conclusions*, including key takeaways for the employment of the method (e.g. what kind of questions/issues it is most suited for, either in research or in practice, or both) and some pros and cons to its use. Possible limitations and risks, when present, are highlighted in the described method, and methodological suitability for workplace research is discussed as a final remark. Most chapters are complemented, besides the bibliography, by a short list of *further reading* sources recommended by the authors based on their expertise. These additional references can incorporate both the own research of the authors and other research relevant to situate the method in broader inquiry areas. This is intended to act as an initial expansion of the literature for those who want to learn more about a specific method, before adopting it themselves.

The book ends with *two final chapters* with a different outline than the previous ones. The first of the two proposes an operative guideline for young researchers, scholars new to the field, or practitioners unfamiliar with the evidence-based inquiry approach. The concluding chapter wraps up the main concepts that emerged throughout the book and reflects upon the potential impact of this contribution to both literature and practice.

We are proud to have collected chapters from authors that hold different positions in various educational institutions worldwide. Table 1.3 lists the authors of all the chapters. We believe their diversity expresses well the range of approaches and the multiple paths workplace management can take.

Table 1.3 An overview of the authors

Chapter	*Authors*	*Country*	*University/organization*
Foreword	*Appel-Meulenbroek, R.*	Netherlands	Eindhoven University of Technology
	Danivska, V.		Breda University of Applied Sciences
Preface	*Hua, Y.*	USA	Cornell University
	Tagliaro, C.	Italy	Politecnico di Milano
	Orel, M.	Czech Republic	Prague University of Economics and Business
Outlook	*Tagliaro, C.*	Italy	Politecnico di Milano
Workplace autoethnography	*Orel, M.*	Czech Republic	Prague University of Economics and Business
Affective ethnography	*Holck, L.*	Denmark	Copenhagen Business School
Digital ethnography	*Ritter, C.S.*	Netherlands	Karlstads Universitet
Critical discourse analysis	*Shadnam, M.*	Iran	Sharif University of Technology
Diary studies	*Soucek, R.*	Germany	MSH Medical School Hamburg
	Weber, C.	Switzerland, UK	Zurich University of Applied Sciences and University of Surrey
	Gunkel, J.	Germany	Hochschule Fresenius, University of Applied Sciences
	Degenhardt, B.	Switzerland	University of Zurich
Cluster analysis	*Migliore, A.*	Italy	Politecnico di Milano
	Rossi-Lamastra, C.		
Stated choice experiments	*Appel-Meulenbroek, R.*	Netherlands	Eindhoven University of Technology
	Kemperman, A.		
Delphi method	*Tagliaro, C.*	Italy	Politecnico di Milano
Social network analysis	*Zhou, Y.*	USA	Virginia Tech
Surveys	*Hua, Y.*	USA	Cornell University
Space syntax	*Koutsolampros, P.*	UK	University College London
Journey mapping	*Iadarola, A.*	USA	New York University
Compendium	*Shepley, M.*	USA	Cornell University
Wind-up	*Orel, M.*	Czech Republic	Prague University of Economics and Business

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