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ORGANIZING FOR SOCIETAL GRAND CHALLENGES

 OPEN ACCESS
BOOK

Edited by Ali Aslan Gümüşay,
Emilio Marti, Hannah Trittin-Ulbrich
and Christopher Wickert

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RESEARCH IN THE
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VOLUME 79

**ORGANIZING FOR SOCIETAL
GRAND CHALLENGES**

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RESEARCH IN THE SOCIOLOGY OF
ORGANIZATIONS VOLUME 79

ORGANIZING FOR SOCIETAL GRAND CHALLENGES

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FOREWORD: RESEARCH IN THE SOCIOLOGY OF ORGANIZATIONS

Research in the Sociology of Organizations (RSO) publishes cutting edge empirical research and theoretical papers that seek to enhance our understanding of organizations and organizing as pervasive and fundamental aspects of society and economy. We seek provocative papers that push the frontiers of current conversations, that help to revive old ones, or that incubate and develop new perspectives. Given its successes in this regard, RSO has become an impactful and indispensable fount of knowledge for scholars interested in organizational phenomena and theories. RSO is indexed and ranks highly in Scopus/SCImago as well as in the Academic Journal Guide published by the Chartered Association of Business schools.

As one of the most vibrant areas in the social sciences, the sociology of organizations engages a plurality of empirical and theoretical approaches to enhance our understanding of the varied imperatives and challenges that these organizations and their organizers face. Of course, there is a diversity of formal and informal organizations – from for-profit entities to non-profits, state and public agencies, social enterprises, communal forms of organizing, non-governmental associations, trade associations, publicly traded, family owned and managed, private firms – the list goes on! Organizations, moreover, can vary dramatically in size from small entrepreneurial ventures to large multi-national conglomerates to international governing bodies such as the United Nations.

Empirical topics addressed by *Research in the Sociology of Organizations* include: the formation, survival, and growth of organizations; collaboration and competition between organizations; the accumulation and management of resources and legitimacy; and how organizations or organizing efforts cope with a multitude of internal and external challenges and pressures. Particular interest is growing in the complexities of contemporary organizations as they cope with changing social expectations and as they seek to address societal problems related to corporate social responsibility, inequality, corruption and wrongdoing, and the challenge of new technologies. As a result, levels of analysis reach from the individual, to the organization, industry, community and field, and even the nation-state or world society. Much research is multi-level and embraces both qualitative and quantitative forms of data.

Diverse theory is employed or constructed to enhance our understanding of these topics. While anchored in the discipline of sociology and the field of management, *Research in the Sociology of Organizations* also welcomes theoretical engagement that draws on other disciplinary conversations – such as those in political science or economics, as well as work from diverse philosophical

traditions. RSO scholarship has helped push forward a plethora theoretical conversations on institutions and institutional change, networks, practice, culture, power, inequality, social movements, categories, routines, organization design and change, configurational dynamics and many other topics.

Each volume of *Research in the Sociology of Organizations* tends to be thematically focused on a particular empirical phenomenon (e.g., creative industries, multinational corporations, entrepreneurship) or theoretical conversation (e.g., institutional logics, actors and agency, microfoundations). The series publishes papers by junior as well as leading international scholars, and embraces diversity on all dimensions. If you are scholar interested in organizations or organizing, I hope you find *Research in the Sociology of Organizations* to be an invaluable resource as you develop your work.

Professor Michael Lounsbury
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HOW ORGANIZING MATTERS FOR SOCIETAL GRAND CHALLENGES

Ali Aslan Gümüşay, Emilio Marti, Hannah Trittin-Ulbrich and Christopher Wickert

ABSTRACT

Societal grand challenges have moved from a marginal concern to a mainstream issue within organization and management theory. How diverse forms of organizing help tackle – or reinforce – grand challenges has become centrally important. In this introductory paper, we take stock of the contributions to the volume on Organizing for Societal Grand Challenges and identify three characteristics of grand challenges that require further scholarly attention: their interconnectedness, fluidity, and paradoxical nature. We also emphasize the need to expand our methodological repertoire and reflect upon our practices as a scholarly community.

Keywords: Grand challenges; impact; organization theory; management; methodology; research; teaching

THE TURN TOWARD SOCIETAL GRAND CHALLENGES

Research disciplines are not merely a collection of methods and theories; they also foster a sense of what questions are “worth answering” (Davis, 2015, p. 314). Organizational scholars are continuously rethinking and reframing what these questions are and how their research addresses current and important phenomena in the real world with a view to impacting society (Marti & Scherer, 2016; Wickert, Post, Doh, Prescott, & Prencipe, 2021). Societal grand challenges have been a key construct that have motivated and propelled these efforts (Ferraro,

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Etzion, & Gehman, 2015; George, Howard-Grenville, Joshi, & Tihanyi, 2016; Gümüşay, Claus, & Amis, 2020). Resonating with an enduring interest in societal issues (Freeman, 1984; Walsh, Weber, & Margolis, 2003), this renewed and intensified focus on societal grand challenges, which proliferated in the past few years, is based on an understanding that organizations play a key role in creating and addressing these challenges. On the one hand, organizations are often part of what gives rise to grand challenges, for instance, when they engage in practices that fuel the “dark” and problematic societal aspects of the digital transformation (Trittin-Ulbrich, Scherer, Munro, & Whelan, 2021). On the other hand, organizations can help tackle or address such challenges, for instance, by promoting responsible innovations that mitigate climate change (Scherer & Voegtlin, 2020). The papers in this volume consolidate and expand organizational research on societal grand challenges. In doing so, it shows that grand challenges need to be a key concern for organizational scholars and how they can exert an impact on these challenges through their research and engagement with practice.

Societal grand challenges are all around us. These challenges are “societal” insofar as they affect members of society and their environments. They are “grand” insofar as their effects are large scale and potentially global. Key grand challenges include the climate emergency, the digital transformation, and different forms of inequality. As such, grand challenges are highly complex and wicked in nature and may never be fully solved (Rittel & Webber, 1973). They are commonly defined as “specific critical barrier(s) that, if removed, would help solve an important societal problem with a high likelihood of global impact through widespread implementation” (*Grand Challenges Canada*, 2011, p. iv). These definitions also suggest that business-centric challenges such as ensuring competitive advantage or increasing innovation performance are *not* societal grand challenges – an attempt to overstretch the research agenda in this way would be problematic as it would weaken the conceptual clarity and value of the underlying construct.

We conceive of “societal grand challenges” as a perspective rather than a theory. By perspective, we mean that the construct expands the questions worth answering for organizational scholars, that it offers conceptual ideas on how to engage with central societal concerns of our time, and that it creates an umbrella term that facilitates interaction and collaboration among scholars (Hirsch & Levin, 1999). At the same time, organizational research on societal grand challenges must draw on organizational theories to develop thorough theoretical contributions. As a new perspective, the societal grand challenges approach should also motivate researchers to rethink their role within society – a topic that several papers in this volume cover. We now turn to an overview of the volume.

THE VOLUME ORGANIZING FOR SOCIETAL GRAND CHALLENGES

This volume offers an organizational perspective on societal grand challenges. Section I (“Diverse Forms of Organizing & Societal Grand Challenges”) features six papers that examine how diverse forms of organizing tackle or reinforce grand challenges. Section II (“Scholarship & Societal Grand Challenges”) includes five

papers that focus on the implications of engaging with grand challenges for scholarship. Section III (“Reflections & Outlook”) concludes with two reflective essays that ponder and expand upon two seminal papers by [Ferraro et al. \(2015\)](#) and [George et al. \(2016\)](#), respectively.

The papers in this volume cover diverse forms of organizing; they consider an entrepreneurial initiative, an advocacy hub, a digital platform, and a meta-organization. They also focus on a wide variety of regions – including Africa, Asia, Europe, and South America – and engage with multiple grand challenges, such as the COVID-19 pandemic, decent work, hunger, inequality, and poverty. [Table 1](#) provides an overview.

[Ferraro et al. \(2015, p. 365\)](#); see also [Gehman et al., \(2022\)](#) have highlighted three analytical facets of grand challenges: complexity, uncertainty and evaluativeness. Complexity refers to the entanglement of grand challenges with feedback loops and tipping points as well as their nonlinearity. Uncertainty highlights difficulties in predicting and preparing. Evaluativeness relates to the plurality of meanings, understandings, and assessments due to the diversity of evaluation criteria. [Ferraro et al. \(2015\)](#) further argue for a participatory architecture, distributed experimentation, and multivocal inscription to tackle grand challenges organizationally. Participatory architectures are structures and rules that allow for engagement and interaction among diverse actors to constructively pursue long-term plans. Distributed experimentation refers to a joint effort to iteratively explore different pathways to generate small wins. Multivocal inscription is a material and discursive activity that enables coordination and engagement despite different interpretations and without consensus over meaning. Extending these considerations, the papers feature three themes that organizational engagement with grand challenges have in common: (1) governance, partnerships, and regulation; (2) fluidity and temporality; and (3) communication, imagination, and narratives.

Insights into the Complexity of Grand Challenges

Three papers in this volume explore how the complexity of societal grand challenges triggers the emergence of certain forms of organization and new regulatory infrastructures. [Kaufmann and Danner-Schröder \(2022\)](#) insightfully review the existing research on grand challenges with a focus on the Sustainable Development Goals (SDGs). The authors outline the various organizational forms that can address these grand challenges and suggest a framework how to analyze them in relation to their organizational segment and their communicational technological qualities. [Gegenhuber, Schüßler, Reischauer, and Thäter \(2022\)](#) illustrate how new infrastructures of private governance emerge in response to the growing platform economy and the proliferation of precarious platform work. The authors outline how new institutional infrastructures that address grand challenges are based on creatively recombining existing templates to allow multiple actors from different domains to take part in collective organizing efforts. [Berkowitz and Grothe-Hammer \(2022\)](#), in turn, draw on the notion of meta-organization and the case of the International Whaling Commission to investigate how incompatible social orders emerged, evolved, and clashed between the meta-organization

Table 1. Papers in This Volume.

Paper	Core Argument	Key Contribution	Grand Challenge	Theoretical Perspective(s)	Context
1. Kroeger, Siebold, Günzel-Jensen, Saade, Heikkilä	Value-driven sensegiving mobilizes heterogeneous stakeholders who ordinarily would not collaborate with each other	Demonstrates the centrality of values for mobilizing heterogeneous stakeholders across boundaries to collectively tackle grand challenges	Gender inequality	Sensegiving	Entrepreneurial initiative in Lebanon
2. Gegenhuber, Schußler, Reischauer, Thäter	Templates for new institutional infrastructures enable actors from various field to organize for grand challenges together in new private governance efforts	Pre-existing templates are important to build new institutional infrastructures in emerging fields	Decent work	Institutional theory	“Crowdwork Agreement,” a jointly developed initiative by platforms and the trade union IG Metall in Germany
3. Schoeneborn, Vásquez, Cornelissen	Metaphorical communication may help to coordinate multiple actors to tackle societal grand challenges	Framework for metaphorical communication based on a metaphor’s vividness and responsible actionability	COVID-19 pandemic	Communication perspective	Theoretical framework for metaphorical communication
4. Arciniegas Pradilla, Bento da Silva & Reinecke	Grand challenges or wicked problems present themselves in different manifestations over time, which in turn shape how organizations respond to these problems	There is never a “true” formulation of a grand challenge, only a narrative construction that informs the responses to grand challenges	Poverty	Narratives	Fe y Alegria (FyA)
5. Berkowitz & Grothe-Hammer	Different social orders interfere with each other in the process of meta-organizing, which can create problems that prevent a meta-organization from effectively tackling a grand challenge	Demonstrates that meta-organizational decidability is necessary to ensure the continuity of collective action in governance-mandated meta-organizations	Marine ecosystem conservation	Meta-organizational lens	International Whaling Commission
6. Sjerne, Wenzel & Svejnova	Different temporalities in shared narratives help different actors to commit to fluid forms of organizing	Illustrates importance of different temporalities in shared narratives for collectively tackling grand challenges	Hunger	Narrative perspective	SDG2 Advocacy Hub

7. Kaufmann & Danner-Schröder	Different and novel forms of organizing need to be employed creatively to tackle grand challenges	A trichotomous relationship between different forms of organizations is necessary to tackle grand challenges	SDGs	–	Literature review
8. Dittrich	Consider the “scale” of grand challenges as a social construction	Researchers can better understand the meaning of grand challenges for different people in different contexts where scale is not necessarily a static phenomenon	–	–	Individual researchers’ methodological repertoire
9. Rauch & Ansari	Using diaries can uncover otherwise hidden perceptions about grand challenges	Evaluate how analyzing diaries can be a valuable source to illuminate the innermost thoughts and feelings of people at the forefront of grand challenges	Doctors without Borders as illustrative case	–	Individual researchers’ methodological repertoire
10. Gatzweiler, Frey-Heger, Ronzani	Grand challenges need to be a core feature of business school curricula	Identifies three barriers to learning about grand challenges and how to overcome them	–	“Uncomfortable knowledge”	Business Schools and their curricula; Individual academic as teacher
11. Friesike, Dobusch, Heimstädt	Early career scholars should adopt a postheroic understanding of impact	Five common concerns are addressed that early-career researchers face when they strive for societal impact	–	Post-heroic conception of impact; Impact work	Individual academic as researcher, and teacher
12. Gehman, Etzion, Ferraro	Robust action is a novel theoretical framework for tackling grand challenges	Three promising research directions are scaffolding, fictional expectations and distributed actorhood	–	Robust action, pragmatism	Reflection on Ferraro et al. (2015)
13. Howard-Grenville & Spengler	Research needs to explore the construction, persistence, and unintended consequences of grand challenges	Grand challenges research so far can be classified according to the justifying context, motivating theory, elaboration of the grand challenges concept, and engagement in academic introspection	–	Management scholarship	Reflection on George et al. (2016)

and its members over time. The authors outline that the “nondecidability” of controversial social orders can lead to the failure of organizing efforts that attempt to tackle societal grand challenges. By investigating issues of governance, partnerships, and regulation, these papers provide new insights into how organizations deal with the complexity of grand challenges.

Insights into the Uncertainty of Grand Challenges

The uncertainty of societal grand challenges demands that organizations engage in temporal coordination. Along these lines, [Stjerne, Wenzel, and Svejenova \(2022\)](#) illustrate how the different temporalities of various narratives support the organizing efforts of an SDG#2 advocacy hub, which is a quite fluid form of organizing. The authors outline how different temporalities enable the commitment of multiple actors to tackle the grand challenge of zero hunger by 2030. [Kroeger, Siebold, Günzel-Jensen, Saade, and Heikkilä \(2022\)](#) outline how value-driven sensegiving allows heterogeneous stakeholders to make sense of and mobilize for a common future vision based on shared values. Focusing on a Lebanese entrepreneurial initiative that aims to tackle the grand challenge of inequality, the authors describe how collective sensemaking around values enables successful joint organizational efforts over time. By investigating issues of fluidity and temporality, these papers examine how organizations deal with the uncertainty of grand challenges.

Insights into the Evaluativeness of Grand Challenges

Three papers in this volume provide insights into the evaluative nature of societal grand challenges by showcasing that commonly shared narratives, metaphors, and communication about grand challenges play a crucial role in coordinated and organized attempts to address these challenges. [Schoeneborn, Vásquez, and Cornelissen \(2022\)](#) develop an analytical framework based on two dimensions of metaphorical communication that may support co-orientation among various actors attempting to tackle grand challenges. The authors argue that two dimensions – vividness and responsible actionability – bolster the organizing capacity of metaphorical communication, a form of communication that enables multiple actors to respond to grand challenges. Ideally, according to the authors, to facilitate co-orientation among multiple actors, metaphors about societal grand challenges should generate novel insights across various domains and indicate specific, tangible, and ethically responsible forms of coordinated action. [Arciniegas Pradilla, Bento da Silva & Reinecke \(2022\)](#) study Fe y Alegría, likely the world’s largest nongovernmental organization, which provides education for the poor across 21 countries in Latin America and Africa. The authors empirically illustrate the emergence of shared narratives about the societal grand challenge of poverty and potential solutions to it. They outline how ongoing cycles of narration about poverty and potential solutions to the challenge helped the organization to provide and adapt its poverty alleviation efforts over time. By highlighting issues of

communication, imagination, and narratives, these papers investigate how organizations deal with the evaluativeness of grand challenges.

Reflecting on Our Scholarly Practices

Engaging with grand challenges also requires us to reflectively engage with our research practices, both with the methods we employ and how we go about having an impact with our research within and beyond academia (Gümüşay & Reinecke, 2021). In this regard, two papers offer methodological innovations to address societal grand challenges. Dittrich (2022) suggests considering “scale” as a social construction and treating it accordingly when examining how actors experience grand challenges at different levels of analysis. The author argues that, from a methodological point of view, scalar terms such as “local” and “global” or “big” and “small” are fundamental to how academics and practitioners make sense of and respond to grand challenges. Yet, scale is so taken-for-granted that we rarely question or critically reflect on the concept and how it is used in our research methodologies. To address this, Dittrich seeks to identify scale as an important methodological concept in research on grand challenges and suggests seeing scale as an epistemological frame that participants employ in their everyday practices to make sense of, navigate, and develop solutions to grand challenges. Looking at methodological innovations from a different angle, Rauch and Ansari (2022) suggest that diaries are a useful yet underappreciated methodological tool for studying grand challenges. The authors illustrate how different ways of compiling and analyzing diaries can enable a “deep analysis of individuals’ internal processes and practices” (Radcliffe, 2018, p. 188), and the insights thus gained cannot be gleaned from other sources of data, such as interviews and observations. In essence, diaries serve to enrich our methodological toolkit by capturing what people think and feel behind the scenes but may not express or display in public.

Two further papers reflect on our role as academics and on the challenges of making an impact beyond the scholarly community. In an analysis of the role of academics that combine teaching and research, Gatzweiler, Frey-Heger, and Ronzani (2022) discuss how scholars can overcome barriers to learning and uncomfortable knowledge related to grand challenges. Focusing on recent programmatic attempts to advance “responsible education” in business schools, they identify three barriers to learning about grand challenges: cognitive overload, emotional detachment, and organizational obliviousness. Ultimately, the authors seek to contribute to the discussion on barriers to learning on grand challenges and how to make business school education more attuned to the transformational and societal challenges of our time. Friesike, Dobusch, and Heimstädt (2022) take this discussion further by highlighting several challenges that early-career scholars specifically face in their quest to reconcile their research and teaching duties, as well as their own career aspirations and ambitions to achieve societal impact. These authors argue that many early-career researchers are motivated by the prospect of creating knowledge that is useful beyond the academic community. However, as they add, these aspirations often come hand in hand with multiple challenges faced by early-career researchers when they strive for societal

impact. The paper concludes with a reflection on these concerns in light of the authors' own experience with impact work, alongside the sketch of a "postheroic" perspective on impact, according to which seemingly mundane activities are inter-linked and aggregated in a meaningful way.

Finally, two essays review existing work and outline avenues for future research. [Gehman, Etzion and Ferraro \(2022\)](#) revisit their award-winning paper in *Organization Studies* ([Ferraro et al., 2015](#)). They take their original framework further and refine their argument for robust action as a theoretical framework to engage with grand challenges. They then identify three promising research directions – termed scaffolding, fictional expectations and distributed actorhood. [Howard-Grenville and Spengler \(2022\)](#) take the influential 2016 editorial by [George et al. \(2016\)](#) as a starting point for a forward citation analysis. They find that existing work can be classified according to the justifying context, motivating theory, elaboration of the grand challenges concept, and engagement in academic introspection. Future work, they argue, should further scrutinize the construction and consequences of grand challenges.

MOVING FORWARD

Based on the papers in this volume, we outline (1) a research outlook on how to move forward research on societal grand challenges and (2) ideas on how researchers can make their scholarly practices more impactful.

Research Outlook

There is still considerable promise and potential in researching grand challenges from an organizational perspective. In particular, we identify three characteristics of grand challenges that are conceptually related to the three facets (complexity, uncertainty, evaluativeness) classified by [Ferraro et al. \(2015\)](#). These characteristics are the interconnectedness, fluidity, and paradoxical nature of grand challenges.

First, grand challenges are interconnected. This highlights that grand challenges are not just individually complex, as highlighted by [Ferraro et al. \(2015\)](#), but collectively interwoven. Tackling one grand challenge may lead to another one being negatively reinforced. As a result, while lists of grand challenges, such as the United Nations SDGs, are useful guiding categories, they need to be treated with caution. They may lead to cognitive rigidity and create an image of mutually exclusive individual grand challenges that are collectively exhaustive. The universal spread of COVID-19 has shown that new grand challenges may rapidly appear. As work by [Sachs et al. \(2019\)](#) highlights, the 17 SDGs can be grouped into 6 larger categories of deep societal transformations pertaining to social, health, energy, ecological, community, and digital concerns. The authors indicate that these grand challenges are highly intertwined, which makes tackling them all the more difficult. As a result, engaging with them commonly requires coordinated, collaborative, and collective efforts. Thus, we encourage case-study research that explores how organizations tackle the entanglement of multiple

grand challenges – for instance, by exploring key trends such as digitalization and sustainability as well as their positive and negative repercussions.

Second, grand challenges are fluid. They are dynamic and evade simple demarcation. This relates to their uncertainty (Ferraro et al., 2015) and highlights the need to approach them as n-order problems with feedback loops and unintended consequences. For example, crowdsourcing and other new forms of platform-organized work are fueling the proliferation of precarious, self-employed, and low-paid work that is undermining social welfare systems and are thus endangering modern democracies (Bauer & Gegenhuber, 2015; Karanović, Berends, & Engel, 2021; Morozov, 2015). Similarly, while digitalization can arguably support organizational efforts to tackle grand challenges, new, seemingly efficient big data management techniques have the potential to promote racism, inequality, and discrimination rather than reducing it (O’Neil, 2016). Yet, we lack thorough analysis and theorizing of these double-edged outcomes of organizing for society. We need to pay close attention to organizing, and not just as a potential solution to various grand challenges, as called for by George et al. (2016) – the potential dark side of organizing efforts for grand challenges and their negative social impact also require attention. One possible research pathway involves considering the implications of the fluidity of grand challenges for forms of organizing – such as fluid memberships and boundaries (Gümüşay, 2012). Dobusch and Schoeneborn (2015) emphasize specific criteria, namely interconnected decision-making, actorhood, and identity. Based on these criteria, the authors introduce the notion of “organizationality” to describe how fluid social collectives achieve coordinated organizing. There may thus be a link between the fluidity of the grand challenge and the fluidity of actorhood and of the response mechanisms. More research is needed to examine both how grand challenges cause 2nd or nth-order problems and how organizing can tackle these problems through dynamic, fluid engagement.

Third, grand challenges are paradoxical. They entail contradictory yet inter-related parts that need to be addressed jointly. Paradoxes are “persistent contradiction between interdependent elements” (Schad, Lewis, Raisch, & Smith, 2016, p. 10). The paradoxical nature of grand challenges relates to the evaluative facet that Ferraro et al. (2015) have highlighted. Grand challenges have multiple criteria of worth that are potentially interdependent yet contradictory. Hence, organizations need to consider developing strategic ambiguity (Jarzabkowski, Sillince, & Shaw, 2010) and elastic organizing (Gümüşay, Smets, & Morris, 2020) to embrace diverse perspectives and approaches. Tackling this facet requires a paradox mindset (Miron-Spektor, Ingram, Keller, Smith, & Lewis, 2018). The response mechanism to this facet is thus a “both-and” mindset and “both-and” action. We see strong potential for applying a paradox perspective when researching grand challenges. We encourage research examining the relationship between seemingly paradoxical response strategies and forms of organizing. For instance, we wonder whether certain forms of organizing are better suited to addressing paradoxical grand challenges, given that, for many forms of organizing, such as organizational hybrids, paradoxes are inherent to their existence.

Outlook for Scholarly Practice

Addressing societal grand challenges requires organizational researchers to reflect on their role as academics and expand their methodological repertoire as well as how they go about striving to make an impact. Several of the papers in this volume, specifically those in the section entitled “Scholarship & Societal Grand Challenges,” provide food-for-thought about how to reflect on our scholarly practice and enhance our impact on practice.

Methodological creativity and innovation are needed to shine light on those yet underexplored aspects of societal grand challenges related to organizations and organizing. While we do not wish to argue for a move away from the established quantitative and qualitative methodological toolbox, the turn to grand challenges provides complementary opportunities for organizational scholars to leave their methodological comfort zone. Several contributions in this volume attest to the benefits of such endeavors (Dittrich, 2022; Rauch & Ansari, 2022). More generally, we concur with Eisenhardt et al. (2016) that research on important societal phenomena, such as grand challenges, must not come at the expense of rigorous methodology. However, we need to appreciate the complexities of the empirical settings that are part and parcel of this type of research (Gümüşay & Amis, 2020). While scholarship on grand challenges is still developing its methodological repertoire, we as authors will have to show the highest possible degree of methodological transparency and to thoroughly justify our choices if we are to create credible scholarship that is appreciated by the mainstream audience we want to reach. As authors, we also need to anticipate what reviewers are familiar with and explain our methodological pathways. As reviewers of research on grand challenges, in turn, we need to be open to methodological innovations while expecting their authors to explain them properly.

These considerations about where and how we collect and analyze our data concur with recent calls for more problem-driven and phenomenon-oriented research when examining grand challenges (de Bakker et al., 2021; Hoffman, 2021; Wickert et al., 2021). In essence, problem-driven research that can be both qualitative and quantitative takes an empirical “complication” as a starting point for the inquiry which then informs subsequent theorizing. As Wickert et al. (2021, p. 303) suggest,

a theoretical contribution should not be seen as an end in itself, but as a means to the end of solving or at least better understanding and raising awareness about an important real-world problem.

As such, contributions to theory should not stand in opposition to contributions to practice – quite the opposite is true.

Moving away from the methodological concerns that accompany potentially impactful research, we should also consider important ways to raise awareness about grand challenges – by bringing them into the classroom (Wickert et al., 2021) and making this knowledge openly available to nonstudent learners (Trittin-Ulbrich, 2020). Organizational scholars, like other academics in business schools, are in an ideal position to engage in conversations with the business leaders of tomorrow, who will likely have the capacity to make decisions that can affect

grand challenges in different ways, positively and negatively. Research shows that raising awareness about such topics in business school curricula is a critical yet often underemphasized aspect of how academics can have an impact on practice and society more broadly (Campbell, 2007; Gatzweiler et al., 2022).

Despite the importance of impact work and the various opportunities we have as scholars to engage in it, we should not forget that striving for impact can become yet another task on our ever-growing to-do list and we must find ways to manage this pressure. Friesike et al. (2022) draw attention to the challenges that particular early-career scholars face when juggling with all those growing expectations. Some division of labor might thus be not only necessary but also desirable, as the expectation to produce regular A-level publications, to excel in teaching, and, in addition, to be featured in the media may be overwhelming to many of us. Balancing the need to change the world for the better with the need to maintain a healthy work–life balance is important, particularly for younger scholars. Honest conversations about this are thus important and we encourage scholars to put this topic on the agenda of workshops and conferences.

Overall, we believe that the scholarly practices of organizational theorists that tackles societal grand challenges need to involve reflexivity about methodological choices and how we develop our self-understanding as scholars based on what are probably the three most important building blocks of scholarship: research, teaching, and creating societal impact.

CONCLUSION

Organizing is front and center in addressing grand challenges and organizational theorists need to engage with grand challenges more closely and extensively. With this volume, we hope to contribute to this endeavor. More work is certainly needed to further theory development but also to achieve methodological advancement as well as community building – all with a complementary focus on impact.

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SECTION I

DIVERSE FORMS OF ORGANIZING & SOCIETAL GRAND CHALLENGES

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TACKLING GRAND CHALLENGES COLLABORATIVELY: THE ROLE OF VALUE-DRIVEN SENSEGIVING

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ABSTRACT

In this paper, we contribute to the understanding of how entrepreneurs can deploy their values to enable joint action of heterogeneous stakeholders. Such an understanding forms a critical endeavor to tackle grand challenges adequately. Building on sensegiving research, we conducted a single-case study of an entrepreneurial initiative that tackles gender inequality in Lebanon which has been successful in mobilizing heterogeneous stakeholders who ordinarily would not collaborate with each other. We find that the values of the founders were pivotal for the initiative's success as those values activated latent values of stakeholders through processes of contextualization and enactment. We subsume these processes under the label value-driven sensegiving. As a result of value-driven sensegiving, heterogeneous stakeholders could make sense of the founders' aspirational vision and the role they could play in it, which paved ways for tackling grand challenges collaboratively. Our study provides insights into the centrality of values for mobilizing heterogeneous stakeholders across boundaries. Therefore, it contributes to the body of work on sensegiving, societal grand challenges, and new forms of organizing.

Keywords: Sensegiving; values; insider–outsider case study; female entrepreneurship; societal grand challenges; new forms of organizing

Organizing for Societal Grand Challenges

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INTRODUCTION

The values of entrepreneurs play a key role in making sense of, and giving sense to, societal grand challenges such as climate change, poverty, and gender inequality (Borquist & de Bruin, 2019). Values can be understood as “desirable transsituational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity” (Schwartz, 1994, p. 21). Hence, they can function as a “source of meaning” (Chatterjee, Cornelissen, & Wincent, 2021, p. 3) attributed to grand challenges by entrepreneurs. Values therefore determine not only how important entrepreneurs consider a grand challenge to be (Schwartz, 1994) but also guide their action, i.e., determine how entrepreneurs tackle grand challenges (Hitlin & Piliavin, 2004). Due to their transsituational nature, values span geographical, cultural, and sectoral boundaries (Schwartz, 2012). They are thus imbued with characteristics shared by grand challenges, which are understood as ambiguous and complex problems that have multi-faceted and interrelated effects across geographical, cultural, and sectoral boundaries on individuals, organizations, and society at large (George, Ryan, & Schillebeeckx, 2021; Martí, 2018). At the same time, the ability of values to span boundaries also depends on other factors such as social cohesion. More cohesive communities tend to have “more impervious boundaries that are less open or receptive to external information, ideas, and values” (Simons, Vermeulen, & Knobens, 2016, p. 571; see also Sagiv & Schwartz, 1995). Hence, depending on the degree to which values are already manifested in a community, the explicit formulation of values may even accentuate boundaries. These disparate effects of values to cross or accentuate boundaries open up the question of *how entrepreneurs can deploy their values to enable joint action of heterogeneous stakeholders to tackle grand challenges?*

To investigate this research gap, we conducted an inductive single-case study of WTSUP!,¹ an entrepreneurial initiative founded to tackle gender inequality in Lebanon by supporting and empowering women in the Middle East to become technology entrepreneurs. Building on sensegiving research and 21 interviews, complemented by observations and archival data, we studied WTSUP! as a unique phenomenon that succeeded in creating a setting in which people from diverse backgrounds collaborated despite the fact that traditionally these individuals would not have worked together.

We find that leaders can contextualize and enact their values in the spirit of their vision – a process we call *value-driven sensegiving* – and thereby proactively influence which values their stakeholders deem relevant. As a result, stakeholders who share those values can make sense of leaders’ aspirational change efforts and envision their role in achieving the leaders’ vision. Value-driven sensegiving can thus pave ways for boundary-spanning collaborative activities of heterogeneous stakeholders toward tackling grand challenges. With these findings, our study contributes to research on sensegiving by revealing the role of values in the sensegiving process and demonstrating how value-driven sensegiving can mobilize heterogeneous stakeholders. Our study also contributes to research on grand challenges and new forms of organizing by proposing that value-driven sensegiving can help overcome geographical, ethnic, religious, political, and sectoral boundaries.

SENSEGIVING AS A MEANS TO TACKLE SOCIETAL GRAND CHALLENGES

Tackling societal grand challenges requires the collaboration of stakeholders across boundaries (George et al., 2021). To mobilize stakeholder support, entrepreneurs need to rationalize their mental models in a convincing way (Lounsbury & Glynn, 2001). Notably, communicating and rationalizing a mental model to stakeholders with the aim of reducing the complexity and ambiguity of a societal grand challenge can be considered a sensegiving process (Hill & Levenhagen, 1995). Sensegiving is defined as the “process of attempting to influence the sense-making and meaning construction of others toward a preferred redefinition of organizational reality” (Gioia & Chittipeddi, 1991, p. 442). It is often actively utilized by leaders to direct their interpretive schemes at other organizational stakeholders (Rouleau, 2005). As such, it builds upon research on sensemaking, which is considered a retrospective and interpretive process of the meaning construction of uncertain, equivocal, and ambiguous situations, such as the malpractice of governmental institutions (Brown, Colville, & Pye, 2015; Maitlis, 2005; Maitlis & Christianson, 2014; Weick, 1993, 1995). Gioia and Chittipeddi (1991) describe the connection between sensemaking and sensegiving as an alternating sequence, which starts with a leader’s sensemaking of an ambiguous and uncertain situation and proceeds with the sensegiving of their envisioned mental model to other people. This sensegiving is followed by the sensemaking of the meaning of the leader’s narratives by those recipients, thereby leading to a further sensegiving effort directed at other stakeholders, who subsequently convert the leader’s mental model into action. Hence, sensegiving processes reflect a leader’s active attempt to influence her or his stakeholders – as opposed to sensemaking, which is a retrospective process (Bartunek, Krim, Necochea, & Humphries, 1999; Randall, Resick, & DeChurch, 2011).

Dacin, Dacin, and Tracy (2011) have suggested that sensemaking and sensegiving research can provide valuable insights into social impact-related topics. Since its inception in 1991, scholars have continuously advanced this sensegiving perspective (Cornelissen, Clarke, & Cienki, 2012; Daniel & Eckerdt, 2019; Hoyte, Noke, Mosey, & Marlow, 2019; Maitlis & Christianson, 2014; Maitlis & Lawrence, 2007; Nicholson & Anderson, 2005; Santos & Eisenhardt, 2009). Hill and Levenhagen (1995) have suggested that sensegiving can also be applied to the entrepreneurial processes because the uncertainty and ambiguity of starting an enterprise is similar to the envisioned mental model of CEOs who aim for strategic change. Following a sensegiving process, entrepreneurs articulate the aspired vision of their venture to other stakeholders in order to mobilize resources or convince them to become involved (Cornelissen et al., 2012). In this context, previous research has shown numerous forms of sensemaking and sensegiving, such as narratives (Maitlis & Lawrence, 2007; Stjerne, Wenzel, & Svejnova, 2022), metaphors (Hill & Levenhagen, 1995), gestures (Cornelissen et al., 2012), framing and decoupling (Fiss & Zajac, 2006), and other forms of communication. However, despite the great potential of values for making sense of and giving sense to ambiguous and complex events, such as grand challenges, our understanding remains limited of how entrepreneurs can actively utilize values to mobilize

stakeholders across boundaries to collaboratively tackle grand challenges. Thus, working at the intersection of research on sensemaking, sensegiving, and societal grand challenges, we draw on the unique case of WTSUP! to examine the following research question: *How can entrepreneurs deploy their values to enable joint action of heterogeneous stakeholders to tackle grand challenges?*

METHODOLOGY

Research Setting: The Lebanese Context and the Case of WTSUP!

Gender inequality is one of Lebanon's main socioeconomic challenges (Terjesen & Lloyd, 2015). The country is ranked 145th out of 153 in the gender gap index (Global Gender Gap Report, 2020), thus lagging behind most states in the Middle East and North Africa region (MENA). Due to patriarchal cultural norms (Bastian, Sidani, & El Amine, 2018), Lebanon struggles in terms of gender equality in education, labor representation, political representation, economic rights, and marriage rights (Metcalf, 2008). A further challenge lies in Lebanon's unstable economic development, which peaked in an economic collapse in 2020 caused by years of mismanagement and corruption (Youssef, 2020). Lebanon is a melting pot of different cultural, ethnic, and religious groups. Tensions between these various ethnic groups and religious creeds have additionally burdened the country's socioeconomic and institutional development (United Nations & World Bank, 2018).

Against this backdrop, WTSUP! is unique because its two founders brought together stakeholders from different ethnicities, religions, and socioeconomic, institutional, political, and professional backgrounds who otherwise would never have met nor collaborated. These differences pertained both to the various collaborators from Lebanon itself, which included female entrepreneurs, entrepreneurship accelerators and funders (e.g., banks, venture capital institutions), NGOs (e.g., women's advocacy groups), research institutions, influential individuals (e.g., politicians, ambassadors, high-profile and successful female entrepreneurs), government institutions, and media outlets, as well as to the two distinct geographical settings at hand (i.e., the MENA region and Nordic countries). The two founders of WTSUP! shared extensive work experience in conducting start-up events and business activities in Finland, as well as in developing countries such as Lebanon and the Democratic People's Republic of Korea (North Korea). As formulated in a concept note, the mission statement positioned WTSUP! as a mission-oriented initiative that aimed to challenge established Lebanese structures and encourage independent free thought among Lebanese women through entrepreneurship and cross-country collaboration:

The core values of WTSUP! ... aim to promote women entrepreneur inclusiveness, educational and cultural exchange between the Nordic/Scandinavian countries and Lebanon, and cross-cultural entrepreneurship research. When combined, these values serve to plant the seed for a more bold and creative culture of innovation and entrepreneurship among Lebanon's women. By empowering women to reach their life and business goals, WTSUP! ... aims to enable budding women entrepreneurs to take full advantage of the combination of ecosystems; including

knowledge, networking, and technological exchanges and transfers. This Nordic-Lebanese partnership is also expected to create a new crop of female entrepreneur role models that will inspire and empower future generations of women in Lebanon and in the wider region. (WTSUP! Concept Note)

Data Collection

Our study is based on rich data collected from inquiry and examination, including interviews, observation material, and archival data (see Table 1). The sum of our data allowed us to explore the emergence of the entrepreneurial initiative at hand by both “following forward” and “tracing back” (Langley & Tsoukas, 2010, pp. 11–12). *Interview data* were collected from August 2019 to January 2020. We conducted 21 interviews which lasted between 45 minutes and 90 minutes (907 minutes in total). The interviews started with broad questions designed to understand the interviewee’s role within the initiative and the reasons for their involvement, as well as their experiences of its launch. We further asked them to reflect on perceived individual and collective benefits, their views on WTSUP!’s potential influence on gender inequality, and the unstable economic situation in Lebanon. The interviews are complemented with *observation data*, which include video material of pitches by female entrepreneurs, as well as key notes and presentations held at an organized side-event at SLUSH 2019 in Finland. Collected observation material comprised 99 minutes of video material. Besides interviews and observations, we collected 698 pages of *archival data*, which include internal documents (i.e., concept notes, project descriptions, e-mails) as well as external documents (i.e., website content, presentations). Internal documents thereby span a time period from the inception of the WTSUP! initiative (in 2018) until the implementation of its pilot event (February 11–13, 2019) and beyond (ending

Table 1. Data Sources.

Interview Data		Observation Data		Archival Data	
<i>Interviewee</i>	<i>Number/min</i>	<i>Site</i>	<i>min</i>	<i>Key Documents</i>	<i>pp</i>
Founders	5/274	Start-up event Finland (organized Slush side-event)	99	WTSUP! concept notes and project descriptions	294
Entrepreneurs	4/141			Internal communication	20
Funders	1/45			Website and presentations	25
Volunteers	7/291			GEM Reports (2016–2018)	227
NGO Managers	2/80			Lebanon reports/ articles (gender)	19
Entrepreneurship Hub Manager	1/39			Newspaper articles	113
Research Institution Manager	1/37				
TOTAL Interviews	21/907	TOTAL Observations	99	TOTAL Document Pages	698

in April 2020). In addition, we collected Lebanese and international newspaper articles, and international reports documenting Lebanon-related statistical data and country comparisons.

Insider–Outsider Perspective

Studying sensegiving requires an interpretive approach and, hence, demands “involved interaction with informants” (Gioia & Chittipeddi, 1991, p. 435). According to Maitlis and Christianson (2014), sensegiving should be studied by using unconventional methods, such as an insider–outsider perspective. This perspective combines the insight of a knowledgeable participant–observer within the organization (often one of the researchers) with the fresh perspective of an outside researcher (Sharma & Bansal, 2020).

In line with these suggestions, our study is designed as a joint project of external researchers with outsider views and insights from the founders of the case, who are simultaneously also scholars. Having no connection to the WTSUP! initiative, the outsider researchers were exclusively involved in the data collection process and conducted the interviews. This procedure served to reassure interviewees that the insider researchers would not have access to the data and that all gathered data would be anonymized. This procedure allowed the outsider researchers to maintain scholarly distance. In their role as primary informants, the insider researchers provided full access to the WTSUP! data and kindly agreed to be interviewed, thereby revealing numerous meaningful insights into the case. As entrepreneurship scholars, they functioned as true double agents in the sense that they were simultaneously familiar with the practicalities of launching a new initiative which tackled societal grand challenges as well as being profoundly informed about the conceptual issues of entrepreneurship. Nevertheless, due to their key involvement in the launch of WTSUP!, they did not participate in the data analysis and were only involved after the data had been analyzed, offering post-hoc, overarching “metacommentary” (Gioia, Price, Hamilton, & Thomas, 2010, p. 8), which was essential for the research team in order to avoid insider bias. This research design allowed us to give voice to knowledgeable insiders “who could best articulate the rationales for conceptions and actions” (Gioia et al., 2010, p. 8) that affected the inception, launch, and development of this new initiative to tackle societal grand challenges collaboratively.

Data Analysis

We moved between data collection, analysis, and prior literature to generate insights throughout each analytical step, which included (1) developing an in-depth case description; (2) identifying and corroborating key empirical actions and events with data; (3) coding data to develop core constructs; and (4) developing a theoretical model. Although the data analysis is described in four discrete steps, in practice this was a highly iterative process.

In the first step, the three outsider researchers developed a rich chronology of events of how WTSUP! emerged as an entrepreneurial initiative to tackle grand challenges (Langley, 1999). We particularly made use of archive data, utilizing

concept notes, executive summaries, and internal communication documents in order to relate the decisions and actions of the founders and stakeholders. In the second step, the case description was used to identify the decisions and actions that determined the inception, launch, and development of the initiative, as well as their potential impact on gender inequality and economic development in Lebanon. During discussions between the outsider researchers at this early stage, we were astonished by how rapidly the WTSUP! founders could mobilize a diverse set of stakeholders who, under normal circumstances, would not collaborate with each other, as well as by the role played by the WTSUP! founders' values in this mobilization. We found this intriguing and created coding memos to record initial observations and patterns.

In the third step, the three outsider researchers engaged in several iterative cycles of open coding (Miles & Huberman, 1994), where we analyzed the data that described founders' values and how stakeholders were mobilized to tackle grand challenges collaboratively. By cycling through the data we identified 22 first-order codes. We then searched for relationships between our first-order codes so as to identify how the founders' values had driven a sensegiving process that resulted in joint action on solving grand challenges. At this stage, we began to iterate between the distinct sources of data and the literature by comparing our emerging findings to suggestions from prior literature on sensegiving, new forms of organizing designed to tackle grand challenges, and the role of values. In this way, we created nine second-order themes.

In the fourth and final step, we increased the level of abstraction to form an initial view of the relationship between the aggregated theoretical dimensions. We hence arranged theoretical concepts, iterated between the data, the literature, and the emerging dimensions to examine their fit (Denzin & Lincoln, 2005). This led to the refinement of our constructs, up until the point when we believed to have fully captured the complex relationship between the relevance of the founders' values in mobilizing heterogeneous stakeholders, the activities involved in bringing WTSUP! to life as a new form of organizing, and the change in joint action on tackling grand challenges. In Fig. 1, we provide our data structure as a visual display of the process described above.

WTSUP! – A CASE OF VALUE-DRIVEN SENSEGIVING

In order to understand how values are deployed to enable joint action of heterogeneous stakeholders, we explored how sense was given to tackling gender inequality collaboratively in the case of WTSUP!, and the role played by values in this process. Specifically, we find that the founders influenced which values stakeholders deemed relevant by contextualizing and enacting those values to propose their vision of positive societal change toward greater gender equality in Lebanon. In this way, latent values shared by heterogeneous stakeholders were activated and subsequently mobilized by making stakeholders realize that they shared those same values (i.e., value-driven sensegiving). This activation of latent values then influenced how stakeholders made sense of the founders' aspirational



Fig. 1. Data Structure.

vision for Lebanese society and enabled them to envision which role they could play in implementing it, as common ground and a shared sense of purpose was created among them (i.e., change in sensemaking). In acting upon the founders' change efforts, heterogeneous stakeholders engaged in boundary-spanning collaborative activities which paved ways of tackling gender inequality collaboratively (i.e., change in joint action). Drawing on these findings, Fig. 2 displays a model of value-driven sensegiving that illustrates how sensegiving is triggered and the changes that arise as a consequence thereof; and Table 2 provides additional quotes that illustrate our theoretical constructs. We report our findings along the four main elements of Fig. 2.

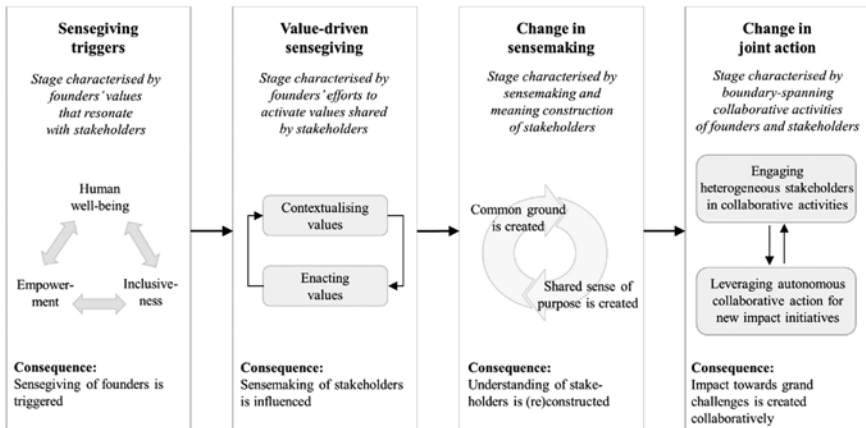


Fig. 2. Model of Value-driven Sensegiving, Change in Sensemaking and Joint Action.

Triggers of Value-driven Sensegiving

Our analysis shows that sensegiving was triggered by distinct values that were anchored in the founders' world view and resonated with stakeholders. Indeed, already upon their initial meeting in November 2018, the two founders felt deeply connected by their shared belief in the importance of supporting women and, especially, female entrepreneurs in Lebanon, which they viewed as highly relevant in order to tackle the challenge of gender equality. Our analysis suggests that, in the founding days of WTSUP!, both founders based their activities on three types of values which were latent among stakeholders and acted as a precursor to value-driven sensegiving: human well-being, inclusiveness, and empowerment.

Human well-being: Both founders were deeply motivated by caring for others. As a Lebanese expatriate living in Finland, Founder #2 wanted to broaden the opportunities of his compatriots who, unlike him, did not have the privilege of living in a developed country. Reporting that “there is often carried some guilt in them that they have left their families or have abandoned their country” (Founder #2), founding WTSUP! fulfilled his wish to give something back to Lebanese society. This caring attitude resonated with a group of stakeholders who believed that the founders “really care about us and really want to help” (Stakeholder #10). Stakeholders also reported that the founders exhibited a compelling “desire to create change” (Stakeholder #15), especially for female entrepreneurs; and they were attentive to the fact that the founders’ hope for social progress “engaged people a lot more than events usually do” (Stakeholder #13).

Inclusiveness: Both founders were also driven by inclusiveness, which they understood as an essential stance in terms of showing openness and being welcoming to diverse people while treating them as equals. Inclusiveness was also grounded in the founders’ belief that grand challenges are a concern for everyone, simply because “we are equal in this boat” (Founder #1). As became evident in the respectful and egalitarian manner of communication and interaction with the various stakeholders, the founders believed that anybody who was willing to

Table 2. Dimensions, Themes, Categories, and Quotes.

Second-order Themes and First-order Categories	Representative Quotes
Aggregate Dimension: Sensegiving triggers	
<i>1. Human well-being</i>	
A. Care for others	<p>“It is about helping each other without financial incentive.” (Founder #1)</p> <p>“During the WTSUPI meetings there was a giving-back culture.” (Stakeholder #8)</p> <p>“In North Korea, I learned that impact can be made through Nordics (...). My question is: Is there another way to dedicate your expertise? Then push it towards changing societies not that it would be on you (...). It is the people who you have the privilege to work with.” (Founder #1)</p>
B. Desire to initiate societal change	<p>“It is about the equality which is having the blast in this region and that should be utilized much more.” (Founder #1)</p> <p>“We are not structured and not hierarchical. Of course, some decisions are probably on me, but I rather make them as a group. Especially these people, they know when to say this is not your territory, which is very good.” (Founder #1)</p> <p>“The spirit of WTSUPI is based on openness, trust, and collaborative action.” (WTSUPI 2020 Executive Summary)</p> <p>“They maintained a policy of openness, of open communication and they very carefully managed the expectations of all parties involved.” (Stakeholder #6)”</p>
<i>2. Inclusiveness</i>	
C. Belief in the power of equality	<p>“The entrepreneurial potential of the youthful MENA region remains widely untapped – especially among women, many of whom cannot gain access to education and the labour market.” (WTSUPI 2019 Seed Funding Application)</p> <p>“The organizers believe that each individual has unique communication strengths and abilities. By recognizing individual strengths, methods such as storytelling, acting, audio-visual communications, and other forms of expression will be encouraged and supported.” (WTSUPI 2020 Global Report)</p> <p>“Changing the structure and also to encourage and empower independent and free-thinking among the women in Lebanon and there is no better tool than to take control of their destiny, economically and socially.” (Founder #2)</p> <p>“It is an initiative bridging the Northern European and MENA region’s start-up ecosystem to support local growth, to solve socio-economic challenges and to promote equality.” (WTSUPI 2019 Partner Brief)</p>
D. Everyone is welcome	
<i>3. Empowerment</i>	
E. Belief in self-determination of women	
F. Recognition of independence and free-thinking of women	

Aggregate Dimension: Value-driven sensegiving

4. Contextualizing values

G. Communicating values to show discrepancy between values and gender inequality seen and enacted in Lebanon

“[WTSUP] is a place where people are given the opportunity, the chance, the privilege, to share their knowledge with others but also to learn. A lot of the experience is emotional, it is one of discovery, discovery of the other, maybe another culture, discovery of oneself, discovery of a new place.” (Founder #2)

“In countries like Lebanon, women are in a not so privileged positions in society. If there was more female entrepreneurship, women would become more visible; they would have more economical opportunities.” (Stakeholder #15)

“What matters is the values and what I see as progress or as good or as beneficial. From my perspective it so just happens that the values we have here in the Nordies, I believe, would benefit the society in Lebanon.” (Stakeholder #11)

“Entrepreneurship has shown to enable peacebuilding, particularly in the Middle East (...) as entrepreneurship can contribute to conflict transformation.” (WTSUP! 2019 Seed Funding Application)

“The beauty about WTSUP! is that it is well catering to a niche of the Lebanese women entrepreneurs who would actually cut across the social structure. So, it was catering for women in tech entrepreneurship but as well for women from rural parts of Lebanon which could be disadvantaged in terms of skills, in terms of knowledge, in terms of access to opportunities.” (Stakeholder #6)

5. Enacting values

I. Making values tangible and living them

“Openness and trust are the binding forces that unite the networks that form WTSUP!.” (WTSUP! Executive Summary 2020)

“Just sitting with someone and treating them like your peer, versus in Lebanon, we don’t have that. So, if a mentor is coming, they make you always feel they are superior and that gets in the way of being honest of talking about your mistakes. (...) When I talk to the WTSUP! team, even the small things they point out and they tell you, that is interesting, good job.” (Stakeholder #2)

“The WTSUP! team is a unit.” (Founder #2)

“When you can trust quite blindly, then you will find yourself in a role that makes sense in an occupational sense.” (Founder #1)

“I heard about this Beirut thing and that there is a three-day programme, and they are looking for volunteers as mentors. I was instantly sold. Like, that is my thing, I wanted to be involved. It represents my worldview, my values and that is why I jumped instantly in.” (Stakeholder #11)

Overarching Dimension: Change in sensemaking

6. Common ground

K. Sharing interests in entrepreneurship education and exchanging knowledge

“What I liked about the presentations is that I am learning from people abroad. They are just telling us about their companies and what they do and that is something that I am always interested in knowing, what start-ups all over the world are doing, how are they doing business, how do they grow and how do they scale.” (Stakeholder #8)

“Finnish entrepreneurs could learn or at least could observe resilience [in Lebanon].” (Stakeholder #1)

(Continued)

Table 2. (Continued)

Second-order Themes and First-order Categories	Representative Quotes
L. Bridging entrepreneurial ecosystems through cross-country collaboration	<p>“Once people are all together in one physical space, that is the key place where these two ecosystems come together.” (Stakeholder #14)</p> <p>“You see a lot of effort that comes with flying in industry experts from abroad to talk about every single facet of this entrepreneurship process, of the product-building process, of the legal entity-building process.” (Stakeholder #5)</p> <p>“Technology is beyond geographical boundaries.” (Stakeholder #3)</p> <p>“The people are amazing, what can you say. It is really, really great to be a part of it.” (Stakeholder #13)</p> <p>“They interacted with different people and different ideas, you could listen and critically appraise.” (Founder #2)</p>
M. Embracing the diversity of stakeholders within the community	<p>“Connecting with her and knowing the struggles that she has been through, how she thinks (...), I felt like this is an opening to either friendship or business opportunity and I think it is like a concrete example of what WTSUPI is trying to accomplish by bridging both ecosystems.” (Stakeholder #2)</p>
N. Developing an understanding for communalities and shared interests	<p>“Entrepreneurship education for women, supporting women, that is something I am really happy to help with.” (Stakeholder #12)</p>
7. <i>Shared sense of purpose</i>	<p>“What makes it successful, I believe, is the commitment of a certain group of people who share the same purpose, share the same values and share the same kind of goal of meaningfulness.” (Stakeholder #11)</p>
O. Committing to the meaningful goal of tackling gender inequality collaboratively	<p>“It is really nice to be part of a project that actually has a sense of purpose.” (Stakeholder #10)</p> <p>“Whenever there are opportunities like this and I feel like there are people who are serious and have potential, and can bring in something meaningful, I am always ready to help out.” (Stakeholder #3)</p>
P. Envisioning an engagement in complementary activities	<p>“What contributed to that success was the ability to bring together credible partners, cross-section, from the private sector, from the public sector, from the social sector. They sit together at one table and work out an event that could cater for women entrepreneurs in technology from different parts of Lebanon.” (Stakeholder #6)</p>
Q. Conceptualizing the initiative through co-creation efforts together	<p>“You see things in a different perspective, you get to know different people from different areas and industries and that kind of fuels your own creativity and, at the same time, you feel very powered around these people.” (Stakeholder #13)</p> <p>“Whatever idea I have, if I can explain why, we do it – that is very powerful.” (Stakeholder #10)</p> <p>“Although we were at the core of the organization, WTSUPI could not have happened without everybody combined in the way that we did.” (Founder #2)</p>

<p>Aggregate Dimension: Change in joint action</p>	<p>8. <i>Engaging heterogeneous stakeholders in collaborative activities</i></p>	<p>R. Carrying out entrepreneurship education events for female entrepreneurs in Lebanon and Finland</p>	<p>“The best benefit of WTSUP! is to showcase role models and kind of make sure that there are these opportunities for these female entrepreneurs and their companies.” (Stakeholder #14)</p> <p>“I think this exchange of ideas, getting new perspectives is quite beautiful. I saw massive growth in the participants during the WTSUP! three-day program in terms of presentation skills, the ability to explain their business idea, the kind of trust in themselves.” (Stakeholder #15)</p> <p>“Start-up, not War Stories, from Beirut.” (WTSUP! 2019 Presentation Title at SLUSH Event)</p> <p>“WTSUP! is a volunteer platform to begin with.” (Founder #2)</p> <p>“Under circumstances like this I know that the curators (...) get very serious and put so much time and effort into it.” (Founder #1)</p> <p>“Giving back and volunteering are essential instruments of sustainable cultural and societal progress.” (WTSUP! Global Report 2020)</p>
<p>T. Contribution of complementary skills, knowledge, contacts, and assets</p>	<p>9. <i>Leveraging autonomous collaborative action for new impact initiatives</i></p>	<p>U. Close ties between diverse stakeholders enable individual collaborations</p>	<p>“Let’s join hands and try to create an impact as big as possible.” (Stakeholder #9)</p> <p>“Collaborative action is reflected in the way stakeholders from Scandinavia and Lebanon are emboldened to take ownership and initiative toward achieving common values-driven goals.” (WTSUP! 2020 Global Report)</p> <p>“For 2021-2022, WTSUP! is planning events for Saudi Arabia and Jordan. Furthermore, it aims to incorporate new tracks with further expanded social objectives including, e.g., Youth Entrepreneurship and Senior Entrepreneurship.” (WTSUP! 2019 Partner Brief)</p> <p>“Everyone we met was an inspiration. New friends, stronger bonds, lots of experiences.” (WTSUP! 2019 E-Mail between Stakeholder #1 and Founder #1)</p> <p>“When we travelled to Finland, we were having already the revolution in Lebanon and it was very nice to share this experience with everyone who was there. I felt like they felt a lot with us and with what we are going through. This empathy was extremely nice. You feel like that this other side of the world knows exactly what we are going through. So, I believe that this part, this sharing-the-experience part, impacted me.” (Stakeholder #1)</p> <p>“I feel like (...) I can reach out to more people because I made enough connections with the people from WTSUP! and everybody knows a lot of the people involved. I am sure that, whenever I need somebody, somebody knows someone.” (Stakeholder #2)</p> <p>“Co-creation [between stakeholders] happens during the events and finally after them.” (Founder #1)</p>
<p>V. Common experience provides ground for new projects and initiatives</p>			

contribute to their cause was welcome to join their initiative, regardless of their educational or professional backgrounds:

I don't like to watch background in education and alike. All are welcome. (Founder #1)

Empowerment: The founders' values were complemented by empowerment, which they believed was crucial in strengthening gender equality and improving the inclusion of women in Lebanon. As opportunities for women and their social inclusion into society as well as the economy were perceived to be severely limited, the founders believed that they needed to support the independence and self-determination of women by "changing the structure and also to encourage and empower independent and free-thinking among the women in Lebanon (...) economically and socially" (Founder #2). Stakeholders perceived the founders' quest for empowerment as "channelling everyone's own strength" (Stakeholder #13) for long-term positive impact.

Value-driven Sensegiving

Our findings reveal that the founders' values functioned as triggers in initiating a process of sensegiving, which eventually influenced the sensemaking of stakeholders and provided the impetus for their engagement. As this process was chiefly driven by the values discussed above, we label this "value-driven sensegiving" which, we find, is characterized by the founders' efforts to activate values shared by a group of heterogeneous stakeholders. While some of the shared values we identified could be directly activated, some values were rather latent and thus had to be revived by the activities of the founders. Notably, our findings suggest that value-driven sensegiving is not a way of convincing people with other values, but rather a way to mobilize them by making them realize that they share certain values.

Contextualizing values: The founders' contextualized their values in terms of the societal problem at hand by embedding them in the WTSUP! mission, which conveyed the values they viewed as relevant in tackling gender inequality in Lebanon. In the mission statement, the founders communicated their values (i) to show the discrepancy between their values and the gender inequality that pertained in Lebanon; and (ii) to embed the values into their proposed solution of entrepreneurship education for female entrepreneurs to create positive societal change. Regarding the former, using the values of human well-being, inclusiveness, and empowerment as a lens enabled the founders to portray the challenges experienced by women in general, and female entrepreneurs in particular, in an equalizing and unifying way that was meaningful to heterogeneous stakeholders. For example, stakeholders shared the founders' view that "in countries like Lebanon, women are in not so privileged positions in society" (Stakeholder #15). Furthermore, in order to create positive societal change for the women, what "matters are the values and what I see as progress or as good or as beneficial" (Stakeholder #11).

Regarding the latter contextualization, the founders' values of inclusiveness, human well-being, and empowerment were key to the proposed solution to the

severe problem posed for individuals and Lebanese society by gender inequality: entrepreneurship. Based on the founders' extensive work experience in conducting start-up events and business activities at home and abroad, and combined with their scholarly backgrounds in the field of entrepreneurship, they were well aware of the potential for transforming individuals and societies through entrepreneurship. Believing in its positive impact of change efforts, the founders approached potential funders by arguing that "entrepreneurship has shown to enable peacebuilding, particularly in the Middle East (...) as entrepreneurship can contribute to conflict transformation" (WTSUP! 2019 Seed Funding Application). Anchored in entrepreneurship and entrepreneurial action, the founders made a group of stakeholders realize that they shared certain values and strongly identified with the WTSUP! mission. For example, being helped "to develop as an entrepreneur, regardless of what you do specifically" (Stakeholder #3) was highly valued by some stakeholders, while others shared the founders' reasoning that entrepreneurship could contribute to changing Lebanon into a more equal and just society for women:

The beauty about WTSUP! is that it is well catering to a niche of the Lebanese women entrepreneurs who would actually cut across the social structure. So, it was catering for women in tech entrepreneurship but as well for women from rural parts of Lebanon which could be disadvantaged in terms of skills, in terms of knowledge, in terms of access to opportunities. (Stakeholder #6)

Enacting values: Besides contextualizing values, the founders also placed great emphasis on making their values tangible and practicing them, which not only created positive experiences in interactions with stakeholders but also served to build trust. The group of stakeholders drawn to WTSUP! displayed great heterogeneity in terms of backgrounds, and they were captivated by the strong value-based community that the founders sought to build:

Almost every single individual that I met that was a part of WTSUP! is there, genuinely, because they really care about entrepreneurs and they really want to share the knowledge that they have. That was a beautiful, beautiful thing. (...). A lot like a family feeling, almost. (Stakeholder #5)

The value of inclusiveness was enacted by the leadership style of the founders. Stakeholder #10 stated that "what fascinated me the most is [Founder #1] and the way he leads projects, which is very unique in his sense, as he uses a completely nonaggressive style" that "creates a lot of trust and a lot of safety" (Stakeholder #10). Indeed, the founders believed that practicing those values crafted positive experiences that could help to establish the "WTSUP! team as a unit" (Founder #2) while also allowing each stakeholder to find his or her own role in WTSUP! because "when you can trust quite blindly, then you will find yourself in a role that makes sense in an occupational sense" (Founder #1).

Through processes of contextualizing and enacting, the values of the founders became essential elements in mobilizing stakeholders, especially those "people and organizations who share the same values and understand the bravely experimental, yet extremely high-quality nature of WTSUP!" (WTSUP! 2020 Executive Summary). Indeed, in our interviews many stakeholders reported that they felt magnetically drawn to the founders' values and change efforts:

I heard about this Beirut thing (...). I was instantly sold. Like, that is my thing, I wanted to be involved. It represents my worldview, my values and that is why I jumped instantly in. (Stakeholder #11)

Notably, the values were shared by diverse stakeholders from different backgrounds, such as investors, who stated that they “believe in the equality and rights and, you know, in opportunity” (Stakeholder #6), and volunteers who articulated “entrepreneurship education for women, supporting women, that is something I am really happy to help with” (Stakeholder #12). As stakeholders saw their own values reflected in WTSUP!, they grasped the “big potential for WTSUP! and big potential for slowly shifting the societies by doing this work” (Stakeholder #15), which we find initiated a change in sensemaking.

Change in Sensemaking

Our analysis shows that value-driven sensegiving and, in particular, the activation of values shared by stakeholders influenced how the heterogeneous group of stakeholders made sense of the founders’ aspirational vision of greater gender equality in Lebanese society through entrepreneurship education for female-led technology start-ups. In figuring out the meaning of an engagement with WTSUP! for them and by envisioning which role they could play in it, common ground and a shared sense of purpose was created among heterogeneous stakeholders.

Common ground: With the activation of their values, stakeholders began to envision the meaning of the founders’ change efforts for them in the context of Lebanese society. Stakeholders imagined themselves to be working “hand-in-hand to make this program a success” (Stakeholder #4) and “to continuously be part of and support everything that is going to help my country as a whole” (Stakeholder #3). In particular, the founders’ values and their vision to “create and support social progress and well-being between two regions unfamiliar with one another: Scandinavia and the Middle East” (WTSUP! 2020 Executive Summary) created common ground among heterogeneous stakeholders. Many stakeholders reported fascination with the founders’ efforts to provide entrepreneurship education and to foster cross-country collaboration between Finland and Lebanon, as they believed that entrepreneurs in developed and developing countries faced similar challenges when launching and growing their ventures:

What was really fascinating to see is what other people on other sides of the world are facing. Of course, we have bigger problems in Lebanon but, the problems that have to do precisely with start-ups, they are kind of the same: raising the capital, getting the tech talents, hiring the right talents, expanding into new markets. (Stakeholder #1)

Bridging those two geographical spaces was thought to generate the advantage of “bring[ing] the local entrepreneurial ecosystem a little bit closer together” (Stakeholder #14) while enabling stakeholders from both countries to learn from each other. Stakeholders who believed that “there is a lot that we can take and a lot that we can bring from Lebanon” (Stakeholder #2) highly valued this two-way knowledge exchange. The knowledge exchange was also prompted by stakeholders’ wish to learn from Finland as a leading Nordic country. For example,

business advisers admired Finland for its “very mature and well-established ecosystem for entrepreneurs” (Stakeholder #7), which shaped their interest in engaging in cross-border collaboration. Others expressed their desire to “bridge the gap” (Stakeholder #1) between Lebanon and more developed nations by transferring international expertise and creating exposure for Lebanese start-ups:

The more we can get international expertise to Lebanon, the better it is for entrepreneurs. One is to get the expertise, to learn from new faces, from new ideas, from new mentors, and two is to give exposure to Lebanese companies to external markets. This is what WTSUP! brought to the table. (Stakeholder #4)

Embracing diversity within the heterogeneous group of stakeholders was a core effort of the founders built into many WTSUP! activities. Hence, it also became key in building common ground between them. The conducted activities provided a lot of space to connect with people and praise their respective talents and skills. Such spaces were, for example, integrated in the WTSUP! event programme which included numerous slots for mentoring, networking, and social gatherings, both during the official programme and as part of inclusive and informal evening activities. In this way, stakeholders were able to develop an understanding for commonalities and shared interests, while creating respect and appreciation for one another. In a number of cases, stakeholders later reported that this established connection went beyond the professional domain and even developed into personal friendships:

Connecting with her and knowing the struggles that she has been through, how she thinks (...). I felt like this is an opening to either friendship or business opportunity and I think it is like a concrete example of what WTSUP! is trying to accomplish by bridging both ecosystems. (Stakeholder #2)

Shared sense of purpose: Besides the creation of common ground, stakeholders also ascribed meaning to sharing a sense of purpose by joining forces to create positive impact toward greater gender equality in Lebanon. Indeed, stakeholders perceived empowering women as a common global challenge, stating that “it is not only in Lebanon, I have to say – when I say empower women, it should be worldwide” (Stakeholder #9). Numerous stakeholders reported that they believed the initiative’s success was mainly driven by the commitment to a meaningful goal by a heterogeneous group of stakeholders who all shared a higher sense of purpose:

What makes it successful, I believe, is the commitment of a certain group of people who share the same purpose, share the same values and share the same kind of goal of meaningfulness. (Stakeholder #11)

Besides committing to an initiative with a meaningful goal, many stakeholders sought to understand the effect of their engagement in WTSUP! on themselves and which role they could play in it. Rooted in the initiative’s strong focus on co-creation activities, stakeholders reported envisioning an engagement in complementary activities that enhanced the contributions made by others. Through a “self-organized” (Founder #2) method of working together, stakeholders were able to revise their understanding of WTSUP! by actively bringing in new ideas. This approach was highly valued by the stakeholders as a form of inclusion and empowerment,

as pointed out by Stakeholder #10: “Whatever idea I have, if I can explain why, we do it – that is very powerful.” As such, some stakeholders envisioned themselves adopting “the role of the supporter, or the sponsor, and quite possibly an advisor” (Stakeholder #6), thereby enabling the implementation of programme activities, such as mentoring or networking, by providing funding for the event. Other stakeholders imagined contributing activities in event production and promotion or providing mentorships, local know-how, and access to stakeholders or premises. For example, both experienced and novice Lebanese entrepreneurs envisioned providing “access to stakeholders and partners here in Lebanon” (Stakeholder #5), while foreign stakeholders saw themselves “bring[ing] in companies and organisations from Berlin to join WTSUP! as partners” (Stakeholder #14).

Change in Joint Action

Our findings reveal that the change in sensemaking of stakeholders paved ways for tackling gender inequality in Lebanon collaboratively as joint action was initiated among them. Once heterogeneous stakeholders were united through common ground and shared a sense of purpose, they engaged in collaborative activities which allowed them to successfully create positive impact. At the same time, autonomous collaborative action was leveraged that led to the emergence of new impact initiatives, thereby tackling societal grand challenges in more holistic ways.

Engaging heterogeneous stakeholders in collaborative activities: By joining forces with stakeholders from diverse backgrounds, the founders were able to unify “people to work together who normally would not work together in Lebanon” (Founder #2). Indeed, both the founders and stakeholders engaged in boundary-spanning collaborative activities as they implemented a unique event in Beirut in February 2019 and a wildly popular side-event on “Entrepreneurship & Peace” co-hosted with United Nations representatives at SLUSH 2019 in Finland. At those events, stakeholders who had successfully launched and grown Lebanese technology ventures became active by “do[ing] a personal offer” (Stakeholder #8) and sharing entrepreneurial stories with the aim to give hope and inspire others. In providing guidance to entrepreneurs, Nordic and Lebanese experts were able to encourage local talent while developing its “brainpower and giving the opportunity [to entrepreneurs] to be of use to the country” (Stakeholder #13). This focus on the strengths of individuals allowed the event participants and, especially, the female entrepreneurs to recognize their potential and role in transforming Lebanese society, as one female entrepreneur explained:

You see how people are reacting. They are like “wow.” (...) “That is not how we thought,” you know, “[what] women in the Arab world do or are capable of.” (...) It gave me a lot of push to carry on because you feel like people are counting on your strength to do something. (...) You feel like you have a certain message to tell the rest of the world. No, that is not just what we do, it is not just wars and fighting. (...) We establish our own businesses, and we try to make it and we have the same problems as start-ups as you. (Stakeholder #1)

Stakeholders who demonstrated a “mindset of giving” (Founder #2) also engaged in communal volunteering. Volunteering became a unifying and leveling experience among the stakeholders that “put everybody on the same level and

even the speakers were taking in information rather than just trying to give it to the people – everybody tried to learn from each other” (Stakeholder #13).

As reported in many interviews, this “giving” generated numerous positive emotions, which were reinforced by the high valuation accredited by founders, organizers, and participants to notions of collaboration and openness:

It was so easy to collaborate and cooperate with the organizers. They maintained a policy of openness and open communication, and they very carefully managed the expectations of all parties involved. Everybody was into making this happen and turning it into success. (Stakeholder #6)

Notably, contributed skills, knowledge, contacts, and designated assets were complementary to one another, and this resulted in activities that tackled the actual aspirations which the founders had aimed to achieve with the WTSUP! mission. Many stakeholders also reported that they wanted to sustain and perpetuate the impact that WTSUP! had initiated and agreed to collaborate beyond the event in 2019. Concretely, “in 2020 and beyond, the goal [was] to increase the reach and grow outside of Lebanon to strengthen the impact of WTSUP!” (WTSUP! 2020 Partner Brief) by expanding into Saudi Arabia and Jordan, while the content of the event was planned to be extended so as to include *Youth and Senior Entrepreneurship*. This expansion was based on stakeholders’ complementary expertise, background knowledge and access, as well as on their common aim to strive for and engage in greater equality and economic development in the MENA region by furthering the initiative’s impact.

Leveraging autonomous collaborative action leading to new impact initiatives: Planning and implementing the WTSUP! event collaboratively enabled the development of close ties between stakeholders who “would like to maintain our friendships” (Stakeholder #6). The close ties between the stakeholders provided the grounds for the emergence of autonomous action because individual stakeholders could “reach out in the future” (Stakeholder #2) and “ask for help” (Stakeholder #1). Here, many stakeholders reported that they “met some people who then have been supporting me otherwise – I think that added a lot of value for all the WTSUP! people (...), as this exchange is quite beautiful” (Stakeholder #15).

Due to the fact that everyone involved agreed that “there is no single answer to a problem” (Founder #2), a broad landscape for creating solutions outside of Lebanon’s traditional normative practices and mindsets was established. Seen as a “breath of fresh air” (Founder #1) in Lebanon, autonomous collaborative action emerged in form of new activities among stakeholders who had previously been involved in WTSUP!. Selected stakeholders autonomously initiated new initiatives that strengthened individuals’ paths and concomitantly paved the way for positive societal change by tackling grand challenges in several spin-off projects:

I think it is a concrete example of what WTSUP! is trying to accomplish. She wants to translate her books into Arabic, and I want an entrance to the ecosystem in Finland. This way we can collaborate. Now that we know each other, I can actually reach out to her and she can reach out to me and that was one of the highlights to me. (Stakeholder #2)

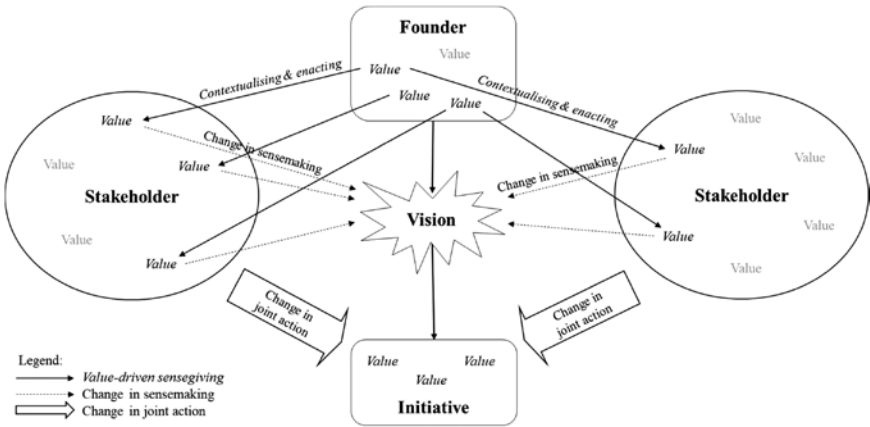


Fig. 3. A Conceptual Model of the Relevance of Values for Initiating Joint Action.

DISCUSSION

We set out to investigate how entrepreneurs can deploy their values to enable joint action of heterogeneous stakeholders to tackle grand challenges. In order to address this research question, we applied a sensegiving perspective and conducted an inductive single-case study of an entrepreneurial initiative that was launched to tackle gender inequality in Lebanon in a collaborative manner. Fig. 3 illustrates the relevance that values played in this process. Our findings contribute to research on sensegiving and new forms of organizations that tackle societal grand challenges collaboratively.

Sensegiving Through the Deployment of Values

We contribute to the sensegiving literature by demonstrating the important role of values in sensegiving processes. We introduce a new process of sensegiving, which we call “value-driven sensegiving” because it is facilitated by a strong influence of values. It describes a process of contextualizing and enacting values for attaining a vision of leaders. By contextualizing and enacting values in the spirit of their vision, leaders can proactively influence which values their stakeholders deem relevant. As a result, stakeholders who share those values can make sense of leaders’ aspirational change efforts and envision the role they could play in it for achieving the leaders’ vision. Value-driven sensegiving can thus pave ways for boundary-spanning collaborative activities of stakeholders from a great diversity of socioeconomic, ethnic, religious, geographical, political, and professional backgrounds towards tackling grand challenges. Our study thereby adds to current scholarly understandings of sensegiving as being conducted “through persuasive or evocative language” (Maitlis & Lawrence, 2007, p. 57). Our study furthermore demonstrates how values can play an important role in changing the sensemaking of others, even when they remain “unarticulated” (Hitlin & Piliavin, 2004, p. 364). Hence, value-driven sensegiving can facilitate forms of sensegiving such

as narratives (Maitlis & Lawrence, 2007), metaphors (Hill & Levenhagen, 1995), and gestures (Cornelissen et al., 2012). For instance, values can complement metaphors which can also cause a shared understanding of multiple and heterogeneous audiences and mobilize them to tackle grand challenges (Schoeneborn, Vásquez, & Cornelissen, 2022).

At the same time, it remains important to highlight that value-driven sensegiving only brings people together when values are deployed that resonate with, and are shared by, the targets of such sensegiving. Notably, value-driven sensegiving is not a way of convincing people to change their values, but rather a way to activate and thereby change the priority of existing, shared values of stakeholders in order to attain a leader's vision. This mechanism is in line with prior research that has found that the priority of values can change, yet the presence or absence of values does not (Sagiv & Schwartz, 1995; Schwartz, 1994). Value-driven sensegiving may also work for mobilizing stakeholders in the context of visions that do not tackle grand challenges. We can, for instance, imagine that leaders can instrumentalize value-driven sensegiving in order to promote their own, opportunistic interests.

Our findings also differ from the process of values work (Chatterjee et al., 2021; Daskalaki, Fotaki, & Sotiropoulou, 2019; Gehman, Treviño, & Garud, 2013). According to Gehman et al. (2013), the process of values work starts with “local, emergent pockets of concerns” (p. 102) of heterogeneous stakeholders, continues with “knotting these local concerns into larger action networks” (p. 102), and eventually ends in values practices that “actively intervene in situations, contributing to the enactment of normative realities” (p. 104). Hence, the process of values work describes the unveiling of values as driven by stakeholders. In contrast, value-driven sensegiving suggests a process of how leaders can actively influence the relevance of certain values for stakeholders.

Tackling Grand Challenges by Bridging Boundaries

Our study also contributes to research on grand challenges and new forms of organizing by suggesting that value-driven sensegiving can help bridge geographical, ethnic, religious, political, and sectoral boundaries. Grand challenges have an impact far beyond “the boundaries of a single organization or community” (Ferraro, Etzion, & Gehman, 2015, p. 365). Hence, establishing new forms of organizing across boundaries allows the tackling of grand challenges collaboratively by merging the efforts of large numbers of people and organizations (George et al., 2021; Günzel-Jensen & Rask, 2021; Martí, 2018). Our findings show that values can enable leaders to bring together stakeholders who otherwise would neither have met nor collaborated with each other. Although stakeholders may have different values, contextualizing and enacting the interface of those values can create common ground and a shared sense of purpose among stakeholders. However, a requirement for instrumentalizing values to bridge boundaries is that the values of those stakeholders overlap to some extent and thus unveil commonalities between their heterogeneous backgrounds. Otherwise, unveiling values may lead to a manifestation of contradicting positions and thereby accentuate boundaries (Sagiv & Schwartz, 1995).

Furthermore, Grodal and O'Mahony (2017) find that different communities which "grafted the grand challenge onto their existing interests" (p. 1820) were mobilized to tackle a grand challenge even when "some were only partially aligned with the grand challenge" (p. 1816). A similar mechanism was initiated through the value-driven sensegiving process of WTSUP!. By contextualizing and enacting shared values, value-driven sensegiving can contribute to expanding the thematic scope of stakeholders' joint action which would have remained more limited if they had acted within their individual peer groups and capacities. For instance, the founders' value of "Inclusiveness" became relevant for tackling gender equality in Lebanon for Stakeholder #6, while the value of "Human Well-being" was relevant for Stakeholder #15. Thus, collaboration between both stakeholders arose from the shared vision of tackling gender equality in Lebanon despite the different values they shared with the founders. Hence, WTSUP! was able to enlarge the scope within which to tackle related grand challenges. By arguing that grand challenges are reflected in the UN SDGs (George, Howard-Grenville, Joshi, & Tihanyi, 2016), scholars have highlighted that the SDGs are interdependent and, therefore, require considerations of complementarities and contradictions (Günzel-Jensen, Siebold, Kroeger, & Korsgaard, 2020). In our study, the necessary interdependence of the SDGs is reflected by the current political and socioeconomic crisis in Lebanon (Reuters, 2020), where the absence of economic growth and decently paid work prevents improvement in the quality of education and gender equality. By presenting a process of value-driven sensegiving, the WTSUP! case demonstrates how heterogeneous stakeholders can collaboratively tackle the interdependent grand challenges of "gender equality" (SDG5), "quality education" (SDG4), and "decent work and economic growth" (SDG8).

Limitations and Future Research

Our study carries limitations which, at the same time, proffer exciting future research opportunities. First, our findings may provide promising research avenues for research on interorganizational collaboration. Previous research has highlighted common values, goals, incentives, and interests as well as relational contracts and complementary resources as antecedents for creating successful interorganizational collaborations that can tackle social problems (Lazzarini, 2020; Murphy, Arenas, & Batista, 2015). Our study investigates collaborations at the individual level. It suggests processes of how latent stakeholder values can be activated and installed as a key element of collaboration toward a common goal, i.e., by contextualizing and enacting shared values. Future research may investigate if and how the mechanisms of value-driven sensegiving can be transferred and scaled from the individual to the organizational level (Dittrich, 2022). Furthermore, scholars may explore how those mechanisms influence narratives and their temporality in fostering the commitment of stakeholders to tackle grand challenges (Stjerne et al., 2022).

Second, the importance of values in our study also indicates that value-driven sensegiving can play an active role in implementing the three robust action strategies for tackling grand challenges outlined by Ferraro et al. (2015) in which values are inherent. Here, "participatory architecture" may reflect values such

as equality, recognition, sharing, and solidarity; “multivocal inscription” values such as compromise, reflectiveness, openness, flexibility, and tolerance; and “distributed experimentation” values such as persistence, patience, carefulness, and exploration. However, such values only tentatively describe the various strategies. Future research can be expected to reveal profound and evidence-based findings on which values characterize the different robust action strategies, and how the various strategies can be differentiated from each other on the basis of their values and specific processes of value-driven sensegiving.

CONCLUSION

This study demonstrates that values can be a powerful instrument for mobilizing heterogeneous stakeholders across boundaries, which is a critical endeavor in order to tackle grand challenges adequately. Due to their transsituational nature, values can be shared by heterogeneous stakeholders and activated for attaining a leader’s vision by processes of contextualization and enactment. Our study not only shows that values can be a central facilitator for setting up collaborations between heterogeneous stakeholders. It also demonstrates how this can be done, i.e., through processes of contextualizing and enacting values. Values may therefore serve as an important means for new forms of organizing so as to respond to the multi-faceted and interrelated effects of grand challenges. We remain hopeful that our study provides a fruitful basis for further investigation into the relationships between values, sensegiving, and new forms of organization that tackle societal grand challenges collaboratively.

NOTE

1. WTSUP! stands for Women Tech Start-UP

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BUILDING COLLECTIVE INSTITUTIONAL INFRASTRUCTURES FOR DECENT PLATFORM WORK: THE DEVELOPMENT OF A CROWDWORK AGREEMENT IN GERMANY

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ABSTRACT

Working conditions on many digital work platforms often contribute to the grand challenge of establishing decent work. While research has examined the public regulation of platform work and worker resistance, little is known about private regulatory models. In this paper, we document the development of the “Crowdwork Agreement” forged between platforms and a trade union in the relatively young German crowdworking field. We find that existing templates played an important role in the process of negotiating this new institutional infrastructure, despite the radically new work context. While the platforms drew on the corporate social responsibility template of voluntary self-regulation via a code of conduct focusing on procedural aspects of decent platform work (i.e., improving work conditions and processes), the union contributed a traditional social partnership template emphasizing accountability, parity and distributive

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matters. The trade union's approach prevailed in terms of accountability and parity mechanisms, while the platforms were able to uphold the mostly procedural character of their template. This compromise is reflected in many formal and informal interactions, themselves characteristic of a social partnership approach. Our study contributes to research on institutional infrastructures in emerging fields and their role in addressing grand challenges.

Keywords: Institutional infrastructure; governance; digital platforms; regulation; decent work; grand challenge

INTRODUCTION

Digital platforms are a new form of organizing which permeate many societal domains (Cusumano, Yoffie, & Gawer, 2019; Kenney & Zysman, 2016; Sundararajan, 2017). A particularly salient form are crowdworking platforms (henceforth called platforms) that intermediate between firms requiring a workforce for a specific task (e.g., designing a new logo) and individuals constituting a crowd that is willing to work on these tasks (Gegenhuber, Ellmer, & Schüßler, 2021; Kuhn & Maleki, 2017). Some platforms specialize in work that individuals can perform online, thereby creating global labor markets (“cloud work”) (Bauer & Gegenhuber, 2015; Howcroft & Bergvall-Kåreborn, 2018). In contrast, other platforms provide an infrastructure through which individuals offer spatially bound services (e.g., providing physical services, “gig work” or “peer-to-peer sharing”) (Kirchner & Schüßler, 2019; Reischauer & Mair, 2018b). Platforms tend to emphasize the advantages of their model for crowdworkers: they provide an alternative for individuals who cannot find jobs in traditional offline labor markets or have care responsibilities (Huang, Burtch, Hong, & Pavlou, 2020). Moreover, crowdworkers enjoy a high degree of flexibility and autonomy, especially with respect to when and (at least in the case of cloud work) where to work (Ghezzi, Gabelloni, Martini, & Natalicchio, 2017).

Despite these advantages, platforms have increasingly been criticized for fueling the grand challenge of establishing decent digital work (Cutolo & Kenney, 2021; Schor & Attwood-Charles, 2017). Three issues are critical. First, especially platforms with strong bargaining power tend toward exploitative work practices, unclear governance structures and ignorance of worker concerns because of their dominant position (Barzilay & Ben-David, 2017; Wood, Graham, Lehdonvirta, & Hjorth, 2019a). Second, platforms tend to nurture low-wage jobs that reinforce existing inequalities (Wood, Graham, Lehdonvirta, & Hjorth, 2019b). Third, platforms may follow a dominant pathway of venture-capital driven “ultra-fast growth at all costs,” thereby disregarding workers’ interests in to order reduce costs (Davis, 2016).

Different actors have responded to this criticism. Public regulators on the state and local level have used a variety of more accommodating (e.g., information exchange) and more restrictive responses (e.g., bans) (Frenken, van Waes, Pelzer, Smink, & van Est, 2020; Gorwa, 2019). However, researchers have

pointed to a delay in public reactions toward rapidly growing platforms (Hinings, Gegenhuber, & Greenwood, 2018; Kirchner & Schüßler, 2020). Another set of actors responding to platforms are associations and civil society groups that develop private regulations. Examples include business associations and trade unions in established markets such as transportation (Thelen, 2018), grassroots activism by workers, sometimes supported by consumer groups (Healy, Pekarek, & Vromen, 2020), and even collective action by workers, unions and platforms themselves (Cutolo & Kenney, 2021).

In the realm of global supply chains, sometimes seen as a precursor to the highly decentralized work relations organized by platforms (Davis, 2016; Kirchner & Schüßler, 2020), so-called private regulation of labor standards is widespread (Bartley, 2018). Whereas unilateral, voluntary self-regulation efforts of corporations are typically ineffective in ensuring decent work standards (Locke, 2013), more collective and union-inclusive governance approaches have gained traction, particularly in the garment industry (Ashwin, Kabeer, & Schüßler, 2020; Reinecke & Donaghey, 2015). To date, we know little about collective private regulatory initiatives for platform work; i.e., initiatives that go beyond the algorithmic work regimes developed by the platforms themselves (e.g., Kornberger, Pflueger, & Mouritsen, 2017), let alone collective initiatives involving trade unions. Following the call by Trittin-Ulbrich, Scherer, Munro, and Whelan (2021) to shed more light on the governance and regulation of platforms, in this article we aim to better understand how such initiatives can develop despite the facts that crowdworkers are typically not unionized, unions have little experience in organizing in non-traditional markets and platforms do not consider themselves employers and have little interest in collective work regulation.

To answer our research question, we draw on the institutional infrastructure concept. As recent advances have shown, nationally embedded actors and institutions play a strong role in governing platform work (Frenken, Vaskelainen, Fünfschilling, & Piscicelli, 2020; Hotho & Saka-Helmhout, 2017). Here a field perspective is particularly useful to understand the dynamics of contestation between platforms and established actors (Johnston & Pernicka, 2020; Kirchner & Schüßler, 2020; Wruk, Schöllhorn, & Oberg, 2020). Institutional infrastructures then point to the “cultural, structural and relational elements that generate the normative, cognitive and regulative forces that reinforce field governance” (Hinings, Logue, & Zietsma, 2017, p. 163). An institutional infrastructure is the “set of actors and structures, which have the role of judging, governing or organizing” a field (Hinings et al., 2017, p. 174). As the institutional infrastructure perspective focuses on both formal and informal rules of governance arrangements, it allows a holistic view of the purposeful actions used to reshape fields, not least those forming around platforms (Logue & Grimes, 2019).

We qualitatively examine the emergence of a collective institutional infrastructure to regulate platform work in Germany. This initiative, which we call the “Crowdwork Agreement,” was jointly developed by platforms and the German trade union IG Metall, making it a revealing case for how private collective platform regulation can develop. We trace the antecedents of this initiative

by triangulating interview, archival and observational data. We found that the Crowdwork Agreement was fueled by two drivers: platforms' motivations to avoid public regulation while, at the same time, differentiating themselves from exploitative American platforms, and the union's interest in playing a role in shaping new, digital work arrangements. In developing this agreement, the actors mobilized different "old economy" templates which were ultimately combined: the corporate social responsibility (CSR) template of voluntary self-regulation, and the social partnership template of cooperative relations between capital and labor (Behrens & Helfen, 2016). The Crowdworker Agreement is a compromise between the two templates (itself another characteristic of social partnership). We theorize these insights with regard to the literature on institutional infrastructures, platform work regulation and decent platform work as a grand challenge.

CONCEPTUAL BACKGROUND

Working Toward Decent Platform Work Through Governing Labor Relations

Decent work is one of the sustainable development goals (SDGs) developed by the United Nations and is increasingly debated with respect to working online (Berg, Furrer, Harmon, Rani, & Silberman, 2018). Introduced by the International Labor Office (ILO), this concept includes work that meets the conditions of freedom, equity, security and human dignity. As Ghai (2003) outlines, this involves distributive as well as procedural dimensions: employment, both to workers in the formal economy and unregulated wage workers or self-employed; fair remuneration, as well as social and income security; and workers' rights, particularly freedom of association, non-discrimination at work and social dialogue to negotiate work-related matters.

As noted, decent work is increasingly seen as a grand challenge that is fueled by platforms (Kirchner & Matiaske, 2020; Kaufmann & Danner-Schröder, 2021; Pittman & Sheehan, 2016). These downsides have prompted new governance approaches that address both distributive issues (such as minimum wages, social security independent of employment status and collective interest representation) and procedural issues (such as proper and transparent rules for work and remuneration processes) (Berkowitz & Grothe-Hammer, 2021; Howcroft & Bergvall-Kåreborn, 2018; Kirchner & Schübler, 2020). For each governance approach, platforms are the targeted actor as they are market organizers (Grabher & van Tuijl, 2020; Kirchner & Schübler, 2019). Two actors in particular have been important so far: First, public regulators have intervened in various ways (Frenken et al., 2020). Second, workers themselves are increasingly contesting the power of platforms by creating bottom-up associations or independent unions (Animento, Di Cesare, & Sica, 2017; Wood et al., 2019a), sometimes supported by consumer groups (Rahman & Thelen, 2019) and established actors; notably, industry associations (Thelen, 2018) and trade unions (Greef, Schroeder, & Sperling, 2020).

Private regulatory efforts are typically widespread in areas where both state regulation of work and worker power are weak, yet contestation of work practices is high (Helfen, Schübler, & Sydow, 2018; Reinecke, Donaghey, Wilkinson, &

Wood, 2018). In global supply chains, which started decentralizing and deregulating work relations long before digital platforms (Davis, 2016; Kirchner & Schüßler, 2020), private regulation has, at least in some industries, progressed from a voluntary self-regulation model toward collective and even union-inclusive governance approaches (Ashwin, Oka, Schüßler, Alexander, & Lohmeyer, 2020; Kaufmann & Danner-Schröder, 2021; Reinecke & Donaghey, 2015). Global union federations have played an important role in becoming a counterpart for multinational corporations and drafting global framework agreements (Fichter, Helfen, & Sydow, 2011). This research has shown that informal social dynamics play a key part in shaping such private, collective institutional infrastructures. Building an institutional infrastructure to achieve decent platform work thus not only involves reorganizing formal regulatory structures, but also informal interactions in common spaces to build trust among key players, develop a common understanding, and forge new coalitions between new and established actors, both public and private (Ashwin, Oka et al., 2020). As we show next, the institutional infrastructure perspective is a promising lens for examining both formal and informal governance mechanisms.

An Institutional Infrastructure Perspective on Governing Labor Relations

Examining settings such as forestry, impact investing or civic crowdfunding, scholars have adopted the perspective of institutional infrastructure to apprehend the conditions and dynamics of large-scale changes (Hinings et al., 2017; Logue & Grimes, 2019). Organizational fields consist of actors who consider one another in their actions; the “institutional infrastructure of organizational fields comprise the mechanisms of social coordination by which embedded actors interact with one another in predictable ways” (Zietsma, Groenewegen, Logue, & Hinings, 2017, p. 5).

Analytically, a field’s institutional infrastructures comprise both formal governance mechanisms and more informal templates and norms (Hinings et al., 2017). Examples of formal mechanisms include regulations, standards, rewards and sanctioning mechanisms, events in which these activities take place (e.g., proceedings, conferences, meetings) and associated actors, especially collective interest organizations such as unions, professional or industry associations, regulators or certification, standard bodies or media (Hinings et al., 2018; Schüßler, Ruling, & Wittneben, 2014; Mair & Reischauer, 2017). These actors vary in their governance role and can have different scopes and interests and shape dominant practices in a field (Heimstädt & Reischauer, 2019). Informal mechanisms (namely, norms, values and meanings) underpin and complement formal mechanisms (Hinings et al., 2017).

The institutional infrastructure perspective is useful for examining the governance of labor relations toward decent platform work for two reasons: First, the specifics of a field and the national configuration of the employment system shape labor relations (Frenken et al., 2020; Hotho & Saka-Helmhout, 2017); for example, countries such as the United States tend to have fewer institutionalized labor relationships compared to countries with a more elaborated tradition such

as Germany, where social partnership has a strong normative foundation based on informal interactions and experiences between employers and unions, among other factors (Behrens & Helfen, 2016). Thus, we can assume that institutional infrastructures from existing fields play a role in shaping how a platform operates in a given national context (Rahman & Thelen, 2019). In this regard, platform work differs from global supply chains in that platforms affect work relations in the regulated economies of the Global North as much as in the Global South (Vallas & Schor, 2020). Second, with its emphasis on the effects of formal and informal mechanisms, the institutional infrastructure perspective allows us to carve out how to achieve large-scale, sustainable changes over time in a given context. In fact, Hinings et al. (2017) call for research that zooms in on the creation of institutional infrastructures to better understand how these infrastructures arise and evolve in emerging fields, arguing they may stem from emerging categories and cultural codes or from cross-field relations. Against this background, we ask: *How do private, collective institutional infrastructures for regulating digital platform work develop in new crowdwork fields marked by weak public regulation?*

SETTING AND METHODS

In light of our research question, we chose a single case study design (Yin, 2009). The empirical context of our study is the crowdworking field in Germany. The term crowdworking is a shared category used by trade unions, industry associations, foundations and government alike, independently of any particular industry context (i.e., platforms operate in various industries). The core of the field's population, the platforms, share more or less similar organizing principles. For example, the German government defines services delivered by online platforms digitally for clients as "crowdworking" (German Parliament, 2014). In line with the institutional infrastructures view (Hinings et al., 2017), we conceptualize this field as having a low degree of coherence and low elaboration. There is a lack of governance at the field level and an undeveloped shared understanding about the various actors' roles and responsibilities. It is also quite young; the first crowdwork platforms emerged around 2007. This is in stark contrast to, say, the German automobile sector with its longstanding history and highly institutionalized actors such as trade unions or industry associations.

There were two actor groups behind the new institutional infrastructure: the German union IG Metall, on the one hand, and platforms and their industry association, founded in 2011, on the other. The participating platforms provide a technical infrastructure primarily for cloudworking tasks such as design, crowd-testing, content creation and micro-tasks (e.g., image tagging). With 2.27 million members, IG Metall is Germany's largest union. It has traditionally focused on organizing labor in the automobile, steel and other capital-intensive industries. In Germany, IG Metall, and, to a lesser extent, service sector union ver.di and the Hans Böckler Foundation, a foundation closely associated with trade unions, have engaged in the crowdworking field by publishing position papers, commissioning studies or offering consulting services for crowdworkers.

These actors launched a collective private regulation arrangement (i.e., an institutional infrastructure) which we refer to as the Crowdwork Agreement. As of 2019, nine platforms have joined the Crowdwork Agreement, equalling a crowd network of about 3.4 million people,¹ accounting for a significant share of crowdworkers in Germany. For certain activities of the Crowdwork Agreement, a crowdworker takes place on the side of the trade union.

Though currently in decline, social partnership models have a long tradition in many sectors of the German economy (e.g., [Doellgast & Greer, 2007](#)). Some of the participating platforms are still considered start-ups and come from the ICT sector with little or no social partnership tradition ([Hassel & Schroeder, 2018](#)). Hence, the idea of a social partnership model is new to platforms, who do not see themselves as employers. The same applies for the union, since the initiative departs from a legally codified means of organizing labor relations in Germany (e.g., participation in organizational governance, collective bargaining, working councils). This makes the development of the Crowdwork Agreement surprising. These features also make the case an ideal setting to explore how new institutional infrastructures for regulating work in digital work contexts emerge.

Data Collection and Analysis

We collected three types of data. First, we conducted interviews with all actor groups involved in developing the Crowdwork Agreement; specifically, actors representing the labor perspective (two union representatives (LUs) and one crowdworker) and the platform perspective (three platform representatives (PLs) and one representative of the crowdsourcing industry association). Note that we use the term PLs to refer to interview statements from platform management or the industry association and the term LUs for union activists or crowdworkers. Second, we conducted participant observations (obs.) of two meetings of the joint committee of the new initiative. Two authors participated in the meetings and held several informal conversations, while writing up two extensive research diaries. Third, we collected archival data from the participating actors' websites (e.g., ombudsoffice, platforms websites), official reports (the two published reports on the work of the ombudsoffice), and media reports (see [Table 1](#)). Since we collected from three types of data sources, we engaged in triangulation. For instance, to verify platforms' claims that other stakeholders consider the Crowdwork Agreement a role model, we consulted national and international policy documents, which corroborated this claim (see [Appendix 1](#)). Since two of the authors are closer to the empirical case, the other two authors served as devil's advocates challenging emerging findings and interpretations throughout the process ([Creswell & Plano Clark, 2011](#)).

To analyze our data, we deployed an inductive approach. In the first step, we interrogated our data with respect to our initial research question, which revolved around the regulation of crowdwork in Germany. After this, we refined our research question and turned to the literature on institutional infrastructures, labor relations and governance to inform the second round of our data analysis. In that round, we first sought to gain a more fine-grained understanding of the

Table 1. Case Database.

	Interviews	Observations	Documents
Labor Perspective (LUs & crowdworker)	3 interviews, totaling 78 pages transcript	6 pages research diary	7 media reports totaling 8 pages 4 press releases totaling 3 pages
Platform Perspective (PLs & crowdsourcing industry association)	4 interviews, totaling 84 pages transcript	17 pages research diary	10 media reports totaling 12 pages 20 press releases & blog posts totaling 16 pages 12 screenshots totaling 4 pages
Joint committee	–	8 pages observation journal	7 pages (reports & internal documents) 65 Screenshots totaling 21 pages
TOTAL	162 pages	31 pages	71 pages

events leading to the emergence of this institutional infrastructure and the rationales (i.e., complementary as well as conflicting goals) for each party to form the Crowdwork Agreement. Here we discovered the role of existing templates, the platforms’ “CSR” template focusing on voluntary commitment, and the union’s “social partnership” template consisting of accountability mechanisms, parity governance structures and focus on distributive labor relations issues. Second, we examined the formal governance as well as informal norms, values and practices of this institutional infrastructure. These considerations led to the development of a conceptual framework which we elaborate in the discussion section.

FINDINGS

Below, we first examine the events leading to the emergence of the Crowdwork Agreement as an institutional infrastructure. Afterwards, we discuss the formal governance and informal aspects of this institutional infrastructure and how they draw on templates of the “old” economy.

The Antecedents of the Crowdwork Agreement

In 2011, platforms established an industry association to facilitate knowledge exchange amongst themselves. As part of this association, Testbirds, a platform providing crowd-based testing services for clients, initiated a code of conduct outlining voluntary commitments to certain standards. Testbirds argues not only that treating workers well makes economic sense, but that a fair, productive culture amongst its workers is also a “*personal concern*.” The instrumental purpose of the platforms launching a code of conduct was to promote a more nuanced picture of crowdsourcing among the general public. The code was also fueled by a German trade union’s position paper on how crowdworking destroys jobs. A PL recalls:

Around 2012, the topic was really new and we noticed that crowdsourcing in general is depicted rather negatively in the media – the overall message was: crowdsourcing will reduce employment opportunities. [...] This bothered us, because this description stands in stark contrast to our perception and understanding of crowdwork as something positive. So, in response, we initiated the Code of Conduct and agreed on shared principles.

Another interview partner elaborates that the public often oversees that “crowdsourcing provides chances for those that face disadvantages on the traditional labor market (PL).” Another goal of the Code of Conduct was to distinguish themselves from what they considered the “tainted reputation” of major American competitors such as Amazon Mechanical Turk. One of the initiators explains:

Of course, there are platforms where crowdworkers suffer under extremely unfair working conditions, and in these cases, the criticism is appropriate. But crowdsourcing doesn't have to be like that and this is exactly the reason why we initiated the Code of Conduct: to show that some German platforms are different from American platforms such as Amazon Mechanical Turk.

On the trade union side, IG Metall began engaging with the platform economy in parallel. The starting point was a book published by the union's deputy chair, Christiane Benner, in 2014. IG Metall recognized that the “digital domain is a critical production facility of the future,” and that the union strives to ensure “fair working conditions along the entire value chain” (LU). Furthermore, IG Metall realized that focusing its efforts solely on its traditional target group (workers in the metal and steel industry) is too shortsighted. Many companies in these industries outsource tasks to platforms (e.g., some crowdsourcing platforms provide services to automobile corporations to train their AI for autonomous driving). Since the union pursues efforts to improve conditions for temporary workers in the automotive industry, it was a logical step to dedicate attention to the topic of platform-based work. The trade union pursues the goal of labor-friendly regulation of crowdworking across various industries. Additionally, engaging with this topic is part of a broader agenda of demonstrating to the wider public that a traditional trade union is fit to represent workers' interest in the digital age as well.

In 2015, IG Metall launched faircrowd.work, a website where legal practitioners evaluated the terms and conditions of platforms and the crowd could initially also submit reviews of platforms. This action initiated a conversation between platforms and the union. Because of the union's activities and the publication of Christiane Benner's book, the platform Testbirds (acting on behalf of the platforms that had adopted its code of conduct) contacted IG Metall. In this conversation, the platforms sought to convince the trade union that the two parties had overlapping interests. A PL recalls: “During the talks with the union, both sides realized that we share a common mind-set, which is profoundly different from the approach of many American platforms.” The union understood the platforms' rationales from early on (i.e., platforms' lack of legitimacy). A LU remembers: “The platforms wanted to demonstrate that they are different from the negative examples of crowdsourcing platforms.”

At the same time, the union recognized that pushing forward regulations addressing the workers' interest would take considerable time. By engaging in a dialogue with the platforms, IG Metall is pursuing “an immediate, pragmatic and small-step approach to improve the situation for crowdworkers.” Moreover, IG Metall saw a chance to gain direct access to the crowdworkers, which would otherwise be hard to achieve in a platform-mediated online context: “The direct contact to the crowdworkers allows us to gain an “on-the-ground” perspective.” Both parties agreed to engage in a social partnership-like dialogue. As we detail in the next section, both parties entered this dialogue with quite different templates

for governing labor relations in mind. We start by detailing the formal elements of the emerging institutional infrastructure.

Establishing the Formal Elements of the Crowdwork Agreement

The code of conduct initiated by the platforms prior to their interaction with the union was based on a template that focuses on voluntary corporate self-commitment to certain standards, well-known from the CSR debate (e.g., [Kinderman, 2012](#)). The first draft of the charter came from the platforms in 2015. Voluntary self-commitment would create standards making crowdwork more socially acceptable:

We wanted to create guidelines so that this phenomenon can arrive in society and in working life. So that not everyone pokes at it wildly and creates their own rules, but that we create some kind of standards.

Fear of overregulation was a second main motivator for the platforms to initiate the charter, as another PL adds:

We want to make sure that there is no platform regulation destroying our business model because we are put in the same category as Deliveroo or Foodora which treat some drivers badly.

The code of conduct encompassed domains such as *task management* (i.e. upstanding and motivating tasks, clear and transparent task definition, planning and task acceptance process); the *nature of the contractual relationship* (crowdworkers are contractors with their own tax and social insurance obligations; at the same time, they have freedom and flexibility with regard to whether they take on tasks; rejecting tasks must not result in negative consequences); *crowdworker rights* (platforms protect the data privacy of crowdworkers and include channels for crowdworkers to ask questions); and *payment* (decent payment; rapid transfer of payment; and clear communication in advance about how much they will earn for a task). For the union, this code of conduct was insufficient. As one LU put it: “Platform’s self-commitment to meet certain principles is a good start, but it was important for us to have some enforcement and feedback mechanism.”

During negotiations for a joint agreement, the platforms and the trade union agreed on three formal pillars of the institutional infrastructure: First, there is a *charter* outlining the standards for appropriate platform behavior. Second, an *ombudsoffice* would be set up, where crowdworkers can issue complaints (e.g., regarding payment or work processes) to those platforms that signed the Crowdwork Agreement. Third, a *joint committee* brings representatives together from the platforms, industry association, IG Metall and selected crowdworkers. This committee engages in decision-making (e.g., adapting the charter; deciding who qualifies for membership). Below, we describe how each of these pillars works and analyze to what extent each pillar originates in the platforms’ CSR template or the trade union’s social partnership template.

Charter: Setting Standards for Crowdwork. The basis of the charter was the aforementioned code of conduct put forward by the platforms. While this means that the platforms laid the framework for the negotiations (the domains the charter covers still remain the same), the union sought to expand this framework

during the negotiations by enriching certain elements. Consider the issue of fair payment. As one LU recounts:

When I first read the section on fair payment, it was really about transparent payment. That is a good start. But what does fair mean? We suggested to have a minimum wage and we discussed that intensively with the platforms. The platforms said: How do we assess a minimum wage at task level? And there are people who are not doing it for money as a primary reason? We moved forward in the discussion by organizing workshops with platforms and their workers and asked them what are the critical issues for them. Fair payment was always the most important. So we argued: the amount of money matters to the crowdworkers. We were not able to put a minimum wage into the [charter] because of the complexity of calculating it and platforms argued that their competitors outside Germany, such as Amazon, certainly do not care at all about this issue – which would give them a disadvantage. Ultimately, we at least agreed that the wages should reflect local income levels. It is better than what was there before, but we certainly want a better solution.

By comparing two different versions of the text, the difference becomes apparent. According to the first version of the code of conduct: “Platforms pay the crowdworkers corresponding to the value of the work a fair remuneration [the text continues with transparency issues] [...].” After the negotiation, the Crowdwork Agreement states:

A platform’s calculation of remuneration should include factors such as the complexity of task, the required qualification, location-dependent aspects, including local wage levels as well as the estimated time one needs to perform such a task [...].

Nevertheless, the example demonstrates that the platforms succeeded in maintaining the mostly procedural character of their template and avoiding commitments on substantive issues, such as wages. As such, a core element of the union’s social partnership template (namely, seeking to negotiate or increase wages), plays only a marginal role in the Crowdwork Agreement.

Ombudsoffice: Sanctioning Behavior That Violates Decent Work Principles. The union created the ombudsoffice to make the adopted standards more reliably enforceable: “With the ombudsoffice, we can assess whether the platforms really do what they signed up for” (LU). By establishing the ombudsoffice, the initiative created a direct and easily accessible channel for crowdworkers to voice their concerns and gain support. Another LU explained that although the Crowdwork Agreement is still a unique experiment to improve conditions for crowdworkers, the ideas behind the ombudsoffice were taking from the traditional social partnership template emphasizing parity between labor in capital in such arrangements:

We have experience with labour relations in the traditional world. Essentially, the structure of the ombudsoffice, such as that we have parity between employers and labour, comes from the traditional world. In this online world, we have new topics, new procedures, new technologies, but the structure for negotiating such issues is pretty traditional.

Indeed, the ombudsoffice consists of four members: one PL, one member of the industry association, one LU and one crowdworker. An arbiter specialized in labor law oversees proceedings and assists the two parties in the mediation process or in reaching decisions. The platforms confirm that the trade union played a

pivotal role in creating the ombudsoffice and admit that they had originally been reluctant to adopt this idea:

The suggestion for the ombudsoffice came from the union early on in the process. We were not enthusiastic [...], we were not sure whether we need this [...]. But we debated it at several meetings and found a *modus operandi* where we could say: yes, let's try this out, this does not take too much efforts [*sic.*], let's see whether it works or not.

The ombudsoffice publishes a yearly report documenting its activities. It presided over seven cases in 2017, 23 in 2018 and 14 in 2019. During the proceedings, the parties in dispute first attempt to reach an amicable, informal solution. If no consensus is possible or the case involves a fundamental topic, the ombudsoffice issues a formal decision. In 2018, the ombudsoffice reflected on the nature of its cases:

Many of the cases are about small sums of money [...] we also get cases regarding the work processes or technical problems [...] In some instances, the ombudsoffice suggested that platforms implement a crowd advisory board, so crowdworkers can participate in the process of improving work processes and functions of the platform.

A LU explains that while the cases often involve small sums of money, the crowdworkers are primarily motivated to turn to the ombudsoffice because “crowdworkers seek justice.” Cases may also arrive at the ombudsoffice simply due to technical issues.

We have cases from one platform where several workers complained that they did not get paid. We resolved this quickly, because it was clearly a bug in the system the platform was not aware of (LU).

Joint Committee: Improving Guidelines and Defining Membership. The joint committee is also staffed according to the parity principle: it provides a space for all parties involved (union, crowdworkers and platforms) to meet every six months. One task of the joint committee is to discuss issues arising from the activities of the ombudsoffice (e.g., discussing which conditions would be grounds platforms closing a crowdworker’s account). Aside from revising guidelines, the committee’s key responsibility is to decide who can become a member of the initiative. Despite the accountability mechanisms, the platforms and the union want to ensure that new members fit into the Crowdwork Agreement:

We don’t like it when platforms would try to create a green image for themselves by signing the Code of Conduct. It hasn’t happened yet, but if Uber or Airbnb would want to join, that would be an absolute no-go (PL).

The application process consists of the following elements: First, *the business model*, including the platform’s work organization, must be in alignment with the charter’s principles. For instance, one platform recalls that its use of a “winner-take-all” competitive model as a dominant work mode was a barrier to joining, but “once we changed our model to primarily working with selected creatives who receive a fixed income, we could join.” It is also not accepted for a platform to turn crowdworkers into quasi-employees, or, as a trade LU characterized it, that “they tell the people what they have to do when and where and how much money they get.” For instance, a delivery platform’s work organization forcing workers

into ex-ante time commitments violates the code of conduct, barring that platform from joining this infrastructure.

Second, platforms require *community management* or “some [other] form of participation or feedback channel, [such as] doing surveys” (PL) to communicate with crowdworkers. This is because the charter demands that platforms cannot purely rely on algorithmic management of its crowd like Amazon Mechanical Turk (LU).

Third, the union insisted on *freedom of association* as a key criterion. Platforms must accept that their workers may found a works council.

If a platform tries to prevent that its employees form a work council, then we are going to tell them: this is not the USA. You are going to get kicked out of our game (LU).

Fourth, the *terms and conditions as well as data privacy* must be aligned with the charter. To assure this, joint committee representatives check the terms of conditions of each platform.

When a platform applies, the joint committee screens its “internal forum or external forum to see whether there are issues that point to a red flag” (PL). Additional steps are doing an interview with the CEO of the platform, as well as “doing interviews with people that work on the platform as a re-check,” conducting a survey with the platform’s crowdworkers or organizing a workshop (LU; PL). If the committee identifies problem areas, the platform is given the opportunity to adopt its policies.

Ultimately, the joint committee decides whether a platform can become a member. Once a platform becomes a member, it can publicly announce its membership in the Crowdwork Agreement. “In the first year we more closely watch the platform, a kind of probation year” (PL). The platforms must also commit to participate in the joint committee sessions, which take place about twice annually. However, not all platforms show the same level of commitment. Some are more active (always sending their CEOs to represent them) and others less so (either not always attending, or sending lower-level representatives) (obs.).

The admission process based on predefined criteria also allows the members to exclude parties from the Crowdwork Agreement who violate the guidelines. A PL emphasizes that a major violation of the charter has consequences:

[Crowdworkers] shouldn’t be at a disadvantage if they do not accept tasks. [...] An algorithm that works like – if you do less than three tasks a month, then we put you in a different category that impacts your income – this must not happen. If we saw something like this happen, the platform would be kicked out.

The Informal Aspects of the Crowdwork Agreement

The second layer of the institutional infrastructure is informal norms, meanings and values emerging through interaction between both parties within the social partnership dialogue. These facilitate learning, trust, a consensus culture and the creation of a shared identity.

We found that regularly engaging in a space where platforms and the union met each other provides learning opportunities. A PL explained why the regular exchange with the other members was essential:

The interaction and exchange with the other members is definitely important, as it allows us to gain valuable insights into how the others deal with certain issues. You can learn a lot from that – and that change of perspective is certainly valuable.

This is echoed by another interview partner:

The interaction allows us to perceive things from a different angle, be it the union or the worker perspective. [...] For instance, we profited a lot from the union's experience in settling disputes [...] (PL).

A LU sees the regular interactions as a learning opportunity for them too:

It is very important for us to develop an understanding of the issues that the platforms are dealing with in their daily business and to gain insights into recent developments on their side. We already know from the traditional social partnership model that a regular exchange is very important, as it allows us to gain profound insights into their day-to-day practices.

Regular interaction also builds trust. Since the meetings last between one to two days, there numerous opportunities to interact informally during coffee breaks or dinners (obs.). Such activities strengthen trust, facilitating coordination beyond the formal meetings. “You meet each other at these meetings, so you develop a direct line of communication; if something comes up, you just call” (PL). This sentiment is shared by the union:

The exchange matters, you develop a relationship to people, so if there is a problem, we talk about it because we trust each other [...] Despite many differences or topics we disagree on, we know that we have a professional working relationship. This makes the whole thing work.

Both parties have also developed a consensus culture characterized by a constructive discussion climate. When reflecting on the discussion in the joint committees to improve the charter, a LU said:

Of course, there are lots of debates, but these discussions are based on facts and data. We make a proposal and evaluate in how far the platforms can implement it. The platforms evaluate internally if and how fast they can implement these changes and then we get feedback on how long it will take to implement these changes or why it is impossible to implement them. If we don't find a common ground, it usually takes six to twelve months and we re-evaluate the proposition.

A PL elaborated further: “It is always a compromise – you often meet in the middle. You evaluate the different needs from the platforms and the crowdworkers. This process is quite productive.” A LU agreed: “In many cases, we find a compromise.”

Certainly, the platforms and the union also have diverging values and interests (e.g., trade unions favor better social security and payments, which meets reluctance on the side of the platforms). Notwithstanding, their ongoing engagement as part of the Crowdwork Agreement has strengthened a shared identity, namely that both parties seek to represent the German or European way of conducting business, in contrast to the dominant American way of operating in platform markets. Observing the joint committee meetings, we noted that the union reported on their ongoing “Fairtube” campaign, which is unrelated to the work of the Crowdwork Agreement. Fairtube is a collaboration between the German union and the YouTubers Union. In this campaign, the bottom-up organizing

of the YouTubers Union, combined with the union's (legal) resources, forced YouTube to the negotiation table. The platforms acknowledged these efforts and made positive statements about this campaign (obs.).

Impacts of the Institutional Infrastructure

The institutional infrastructure has three (potential) impacts: First, it promotes good platform practices; second, it creates regulatory and isomorphic pressures within the German crowdworking field beyond the participating platforms; and third, it potentially serves as a template for regulating crowdwork in other countries.

The union states that it sees the exchange between the union and platforms, and even amongst the platforms themselves, as beneficial: "We foster the spread of good platform practices, this improves working conditions." At the same time, the union argues that platforms benefit too, namely from "a higher quality of work output." Achieving better quality through decent work is a fundamental principle inherent in German industrial relations; this is further evidence of "old industry" templates being transferred to new digital workplaces.

Regarding regulatory pressures, the ombudsoffice creates legal precedents and opportunities. When it arrives at a decision, it enters "a legal new territory, and we are the first ones paving a road to this territory" (PL). Although the ombudsoffice is not a court, the general assumption is that its decisions will inform regulators and possibly also the courts. As an example, the ombudsoffice ruled in 2019 in a case of location-based crowdwork in which a crowdworker complained that they needed to take a photo of a shop window. Consequently, they went to the shop location, but were unable to photograph the window because the shop was undergoing renovation. Although they submitted a photo of the shop under renovation, they did not receive payment for the task. The ombudsoffice ruled:

If a task is clearly described and it can be completed, a crowdworker only receives the payment if the task is completed in accordance of the task description. Based on the principles of the code of conduct, namely, fair payment and task planning, it does not seem appropriate to shift the entire risk to the crowdworker if a task happens to be undoable. (doc.)

Some complaints reach the ombudsoffice concerning platforms that are not members of the Crowdwork Agreement. In one case, the union responded by getting directly in touch with crowdworkers and then using its network to support them in filing a lawsuit based on the complaint. A German court recently ruled in favor of these crowdworker ([Legal Tribune Online, 2020](#)).

Another effect is that the Crowdwork agreement puts isomorphic pressure on other platforms in Germany. One PL said:

We know that those crowdworkers who were working on a competitor's platform often asked the other platform – hey, why don't you adapt your governance practices according to the [charter]? Ultimately, they even signed the charter and became an official member.

We also observe decision makers at national and international levels turning to representatives from the platforms or the union to hear about their experiences

with the Crowdwork Agreement, indicating its potential to serve as a template for other digital work sectors and countries. Both parties are invited to speak at governmental workshops and expert committees in Germany and abroad. Inside Germany, the platforms were already active before the Crowdwork Agreement started, even organizing a roundtable to discuss the topic “The Future of Work.” The difference is that the platforms can now use the Crowdwork Agreement as a vehicle to reach policymakers. In one of the first workshops they organized jointly, the platforms and the union also invited politicians, giving them an opportunity to learn about platform variety. As a PL notes: “The first workshop was a success, because policy makers realized that there is a difference. A food-delivery driver is just not a crowdworker.”

The Crowdwork Agreement model also gains attention internationally, including the International Labor Organization:

The ILO sees our initiative as a unique example, they asked us how we created it. And in South Korea they want to copy our model. So we are a kind of role model for the world (PL).

The union values the potential for the initiative to serve as a model:

We learned that the social partnership model can also work in the digital world. People said that for this type of technical, complex and global work it is impossible to have a system fostering dialogue and exchange. We proved that this is wrong.

Policy reports from various national and international institutions (e.g., European Commission, International Labor Organization, German Parliament; see Appendix 1) refer to the Crowdwork Agreement as a good example for regulating the platform economy. At the same time, many reports caution that it is too early to fully assess the impact of such models.

DISCUSSION

We set out to address how private, collective governance efforts emerge which seek to promote decent work on platforms. [Fig. 1](#) summarizes our conceptual framework for the creation of a new institutional infrastructure anchored in these findings.

Conditions for the Emergence of New Institutional Infrastructures

With our conceptual framework, we lay out the conditions that enable the development of a new institutional infrastructure in a relatively young field, thus responding to the call of [Hinings et al. \(2017\)](#) to scrutinize these emergence processes more closely.

The first condition was unfavorable public opinions and looming regulation. In our case, platforms faced a negative public opinion of crowdwork. The negative imagery of American-based platforms would likely lead to unfavorable regulation; i.e., a formal governance structure. The second condition is Germany’s national context for governing labor relations. Platforms perceived the trade union as a critical player worth engaging with, which cannot be taken for granted in other

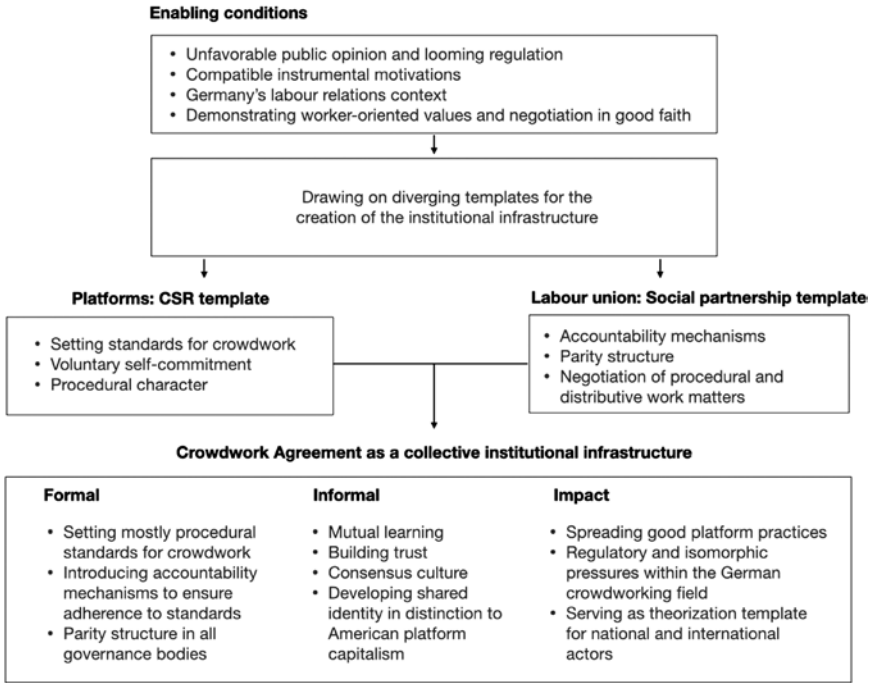


Fig. 1. The Role of Templates in the Creation of a Collective Institutional Infrastructure.

contexts. This is consistent with the unions’ desire to develop strategies for the digital economy in light of declining membership (Ilsoe, 2017). Although unions often face resistance from platforms rather than a willing negotiation partner (Vandaele, 2018), the existence of a social partnership tradition per se seems insufficient to bring about a new institutional infrastructure. The third condition, resulting from the first two, is thus compatible instrumental motivations on both sides to enter the negotiations to create a collective institutional infrastructure. Platforms saw the need to differentiate themselves from competing platforms to increase their reputation and decrease the risk of unfavorable regulation. Unions saw an opportunity to gain quick wins for improving working conditions and direct access to the new phenomenon, opportunities to learn about platforms business practices and to demonstrate to the wider public their relevance in a digital economy.

We also identified worker-oriented values as a crucial link to making interactions between unions and platforms work. The initiating platform was able to credibly communicate that it has worker-oriented values, which was crucial as both parties had no prior interaction history and platforms operate in sectors lacking a social partnership tradition. This resulted in “good-faith” negotiations. Our finding complements insights on industrial relations in small and medium enterprises (Helfen & Schüßler, 2009): management’s worker-friendly

value orientation plays an important role in shaping employee voice where such arrangements are not formally mandated. In sum, these conditions created fertile soil for talks between the platforms and the union, leading to a joint agreement.

The Role of Templates in Creating Collective Institutional Infrastructures

Our research highlights the importance of templates in the creation of institutional infrastructures. While new challenges and fields might be expected to require new institutional infrastructures, in this case, old templates have been transposed. A new institutional infrastructure, like many innovations, can be recombination of something old; in this case, a combination of templates originating in the old economy (namely, the CSR and the social partnership template) took place. Our findings thus contribute to research on private models of governance (Helfen et al., 2018; Reinecke et al., 2018).

The platforms initiating the original code of conduct, which, compared with major international platforms, are small- and medium-sized firms, were willing to fill a regulatory gap (Wickert, 2016). They did so in line with a CSR template. This template is prevalent in private self-regulation mechanisms such as standards or certification schemes, which have in common that they typically lack clear accountability mechanisms and require voluntary corporate cooperation and self-commitment (Bartley, 2018). This also applies to other examples of the platform economy regulations, such as the Charter of Principles for Good Platform Work created by the World Economic Forum, which was signed by several international platforms embracing the “ultra-fast growth at all costs” model, such as Uber or Deliveroo in 2020, yet lacks enforcement and accountability mechanisms (World Economic Forum, 2020).

The Crowdwork Agreement differs from these examples. The platforms set the tone with the CSR template accentuating formalized standards as key formal governance mechanisms, which are mostly procedural in character. While this improves working conditions for crowdworkers, platforms also have an interest in enhancing relationships with crowdworkers, because this positively impacts crowdworkers’ willingness to continue working on a platform, as previous research suggests (Gegenhuber et al., 2021). Since the platforms had no prior experience engaging in agreements with a union and relied on the union’s support, the union could contribute the social partnership template of cooperative relations between capital and labor. The social partnership template is a cornerstone of Germany’s industrial relations. It was the basis for creating a collective institutional infrastructure with accountability mechanisms and parity structure in all governance bodies. In terms of accountability, the Crowdwork Agreement deploys a combination of setting standards and creating a body to handle crowdworker complaints. The parity principle means that no party can overrule the others. A neutral arbiter overseeing the proceedings ensures that both parties can arrive at a decision. There are limits to self-regulation efforts (Ashwin, Kabeer et al., 2020; Reinecke et al., 2018), in this case, platforms make progress on procedural issues, though both parties generally “agree to disagree” on distributive matters. As such, a full degree of decent work has not yet been achieved (Ghai, 2003).

Informal Dynamics of Institutional Infrastructure and Impact

Our findings comport with prior work on institutional infrastructures as well as industrial relations literature suggesting that both formal and informal values were critical to making the Crowdwork Agreement effective (Hinings et al., 2017). Particularly relevant are the informal interactions between actors who have a stake in the infrastructure, as these enable learning, increase trust, develop a consensus culture and strengthen a shared identity. While learning was initially an instrumental motivation for the union, the platforms realized that regularly engaging in a dialogue was a learning opportunity for them too. This in turn promoted good platform practices beyond the formal standards outlined in the charter. Prior literature has neglected this aspect of informal learning; in our view, it is an essential justification for the commitment of both parties to enter such an agreement. Positive interactions between labor and capital were beneficial to establishing trust among the parties, while maintaining an atmosphere in which the interaction could continue in good faith. Moreover, both parties developed a consensus culture, an important informal dynamic sustaining a social partnership approach between labor and capital. Lastly, our study also reveals that both parties can develop a shared identity. In this case, the actors creating and maintaining the Crowdwork Agreement in the national context of Germany are pioneers in the crowdsourcing domain, and both pride themselves on the Crowdwork Agreement being different from the “ultra-fast growth at all costs” of American platforms. This shared identity has reinforced commitment to the agreement.

In terms of impact, we find that the agreement not only promotes good platform practice in the German crowdworking field, but has regulatory relevance beyond this context. We observe that relevant policymakers theorize the Crowdwork Agreement, rationalizing its institutional infrastructure and spelling out cause-effect relationships (Lounsbury & Crumley, 2007). This in turn strengthens the informal elements of the infrastructure (namely, that the parties involved see themselves as recognized pioneers in a platform economy). Our data also indicates that other platforms want to join, which suggests that the Crowdwork Agreement can make a difference by exerting isomorphic pressures toward achieving decent work, thereby mitigating the “dark sides” of the platform economy (Trittin-Ulbrich et al., 2021).

CONCLUSION

Our findings suggest that the collaborative creation of an institutional infrastructure can be pivotal to addressing the grand challenge of achieving decent platform work in an online world. We thereby offer insights for literature on institutional infrastructures (Hinings et al., 2017; Logue & Grimes, 2019), as well as for literature on regulating or governing platform work, particularly on shaping online work beyond a sole governmental regulation approach (Gegenhuber et al., 2021; Greef et al., 2020; Kirchner & Schübler, 2020; Reischauer & Mair, 2018a; Vallas & Schor, 2020).

Our study comes with the usual limitations stemming from a single case study. We emphasize that one limitation is that we examined actors focused on the regulation of platform work in a national context with relatively strong labor relations, at least in some sectors, questioning to what extent elements of this institutional infrastructure can be transferred and scaled up in other contexts (Dittrich, 2021). Further research should examine how infrastructures for platform work regulation emerge in other national contexts and also extreme contexts (and on other levels of analysis, examining the role of templates (e.g., on a municipal or a transnational level). Furthermore, research should examine whether and how such infrastructures that use specific locally or nationally embedded templates can be transposed to other contexts (e.g., from the Global North to the Global South and vice versa) and how they utilize intermediaries when doing so (Reischauer, Güttel, & Schüßler, 2021). These questions are particularly important in the context of grand challenges, which must be addressed in different contexts simultaneously.

Another limitation is that the governance model might not fit for all crowdworkers. In our case, crowdworkers are also formally part of the Crowdwork Agreement. The union thereby mobilizes them. However, a potential concern is that the appointed crowdworkers constitute the core (i.e., the most active workers) of the platforms for which they work. Since crowds are quite heterogeneous, this could lead to decisions that are less attentive to the interests of peripheral crowdworkers (Gegenhuber et al., 2021). However, our data does not suggest that this negatively impacts the crowdworkers' representation work. Nevertheless, some platform workers may continue to feel unfairly treated (Fieseler, Bucher, & Hoffmann, 2017). Further research should take these differences into account.

We must also consider that an informal norm of the Crowdwork Agreement is "agreeing to disagree." Both parties engage in action outside the Crowdwork Agreement, especially in those areas where labor and capital disagree. Through the ombudsoffice, the union contacted a crowdworker of a platform that is not part of the Crowdwork Agreement and helped organize a court case through its network. The court ruled that this crowdworker should effectively be considered an employee. Time will tell how this ruling impacts the Crowdwork Agreement – at least one of the platforms has a similar organizing process – and whether it poses a potential threat to the Crowdwork Agreement.

Digital platforms more broadly, and crowdwork platforms specifically, are reshaping the world of online labor and driving the grand challenge of decent work in a digital economy. As our analysis of an emerging institutional infrastructure with roots in the social partnership template of governing industrial relations shows, collaborative attempts (in our case by unions and platforms) can be a powerful vehicle for achieving decent work, particularly regarding procedural issues. Yet, it is too early to tell whether this experiment within a niche can be scaled up to a European, if not global level. Still, we hope to provide a basis for future research that fleshes out the details of building institutional infrastructures which support decent online work, and the role established actors and institutions can play in such newly emerging fields of work.

NOTE

1. This number is based on desk research adding up the reported crowd sizes on each platform. As astute observers of the platform economy would point out, there is a discrepancy between the reported size of the crowd network on a platform and the actual number of active users for each year. If, say, 5–10% are active workers in a given year, we would arrive at a sum of 170,000–340,000 crowdworkers.

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APPENDIX 1. CROWDWORK AGREEMENT MENTIONED AS EXAMPLE IN POLICY REPORTS

Source	Institution	Link
2020, EU-IPOL	European Parliament	https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/652721/IPOL_BRI(2020)652721_EN.pdf (p. 10)
2019, ILO	International Labor Office	https://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_713378.pdf (p. 6)
2020, Bundestag	German Parliament	https://www.bundestag.de/resource/blob/808030/73c0b424c40f18fa94df0a5b5e94b1f7/19-11-878-SN-Wenkebach-data.pdf (p. 9)
2020, EU Commission	European Commission	https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8280 (p. 19, 123)
2020, Hans-Böckler-Stiftung	Hans Böckler Foundation	https://www.mitbestimmung.de/html/formen-der-beteiligung-in-der-14375.html
2019, ILO	International Labor Office	https://unctad.org/system/files/non-official-document/CSTD2018_p09_DamianGrimshaw_en.pdf
2019, IAQ Report	Institute for Work, Skills and Training University Duisburg Essen	https://www.uni-due.de/iaq/iaq-report-info.php?nr=2019-05
2019, Eurofund	European Foundation for the Improvement of Living and Working Conditions	https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef19045en.pdf (p. 15)
2018, ILO	International Labor Office	https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_645337.pdf (p. 99)
2018, ETUI	European Trade Union Institute	https://www.etui.org/topics/health-safety-working-conditions/hesamag/the-future-of-work-in-the-digital-era/crowd-work-and-the-on-demand-economy
2017, FES	Friedrich Ebert Foundation	http://library.fes.de/pdf-files/wiso/13164.pdf (p. 24)
2017, EU-OSHA	European Agency for Safety and Health at Work	https://osha.europa.eu/en/publications/protecting-workers-online-platform-economy-overview-regulatory-and-policy-developments (p. 69)
2017, BMAS	German Federal Ministry of Labor and Social Affairs	https://www.bmas.de/SharedDocs/Downloads/DE/PDF-Publikationen/Forschungsberichte/fb499-plattformoekonomie-eine-literaturauswertung.pdf?__blob=publicationFile&v=1

2017, BMAS	German Federal Ministry of Labor and Social Affairs	https://www.bmas.de/SharedDocs/Downloads/DE/ PDF-Publikationen/Forschungsberichte/fb500- plattformoekonomie-und-crowdworking.pdf?_ blob=publicationFile&v=1
2017, IZA	IZA Institute of Labor Economics	http://ftp.iza.org/report_pdfs/iza_report_86.pdf (p. 30)
2016, ILO	International Labor Office	https://www.onlabor.org/wp-content/uploads/2016/05/ wcms_443267.pdf (p. 23)

THEORIZING THE ROLE OF METAPHORS IN CO-ORIENTING COLLECTIVE ACTION TOWARD GRAND CHALLENGES: THE EXAMPLE OF THE COVID-19 PANDEMIC

Dennis Schoeneborn, Consuelo Vásquez and
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ABSTRACT

This paper adds to the literature on societal grand challenges by shifting the focus away from business firms and other formal organizations as key actors in addressing such challenges toward the inherent organizing capacity that lies in the use of language itself. More specifically, we focus on the organizing capacities of metaphor-based communication, seeking to ascertain which qualities of metaphors enable them to co-orient collective action toward tackling grand challenges. In addressing this question, we develop an analytical framework based on two qualities of metaphorical communication that can provide such co-orientation: a metaphor's (a) vividness and (b) responsible actionability. We illustrate the usefulness of this framework by assessing selected metaphors used in the public discourse to make sense of and organize collective responses to the Covid-19 pandemic, including the flu metaphor/analogy, the war metaphor, and the combined metaphor of "the hammer and the dance."

Organizing for Societal Grand Challenges

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Our paper contributes to extant research by providing a means to assess the co-orienting potential of metaphors in bridging varied interpretations. In so doing, our framework can pave the way toward more responsible use of metaphorical communication in tackling society's grand challenges.

Keywords: Communication; co-orientation; Covid-19; grand challenges; metaphors; organization theory

The field of management and organization studies has seen an increasing interest in addressing societal grand challenges in recent years, thus inspiring a rich set of theoretical and empirical inquiries into some of the most pressing issues of our times, including climate change, social inequalities, and pandemics (for an overview, see [George, Howard-Grenville, Joshi, & Tihanyi, 2016](#)). The majority of these studies tend to be focused first and foremost on formal (business) organizations and their role in tackling grand challenges (e.g., [Bowen, Bansal, & Slawinski, 2018](#)). In view of the scope and complexity of such challenges, however, the case has been made by [Ferraro, Etzion, and Gehman \(2015\)](#) that mounting effective responses to them necessitate the co-operation of a broad range of actors beyond business firms and governmental organizations. In accepting this premise, however, it must also be recognized that such multi-actor efforts tend to generate difficulties in collective sensemaking, especially in striking a balance between the need for establishing common ground among different actors and the need to allow for the multivocality of perspectives involved ([Ferraro et al., 2015](#)).

In this conceptual paper, we argue that organizing efforts to tackle grand challenges will remain limited as long as our understanding of organization is confined to a formal understanding of organizations only. As an alternative, we seek to show there is significant value in considering the agency and organizing capacities that lie in language use itself. Accordingly, we believe it is important to extend the arguments developed by [Ferraro et al. \(2015\)](#) or [Ferraro and Beunza \(2018\)](#) even further by building on the communicative dimensions underlying some of their work. In a nutshell, we suggest adopting a wider notion of organization as a communicative process of co-orientation ([Taylor & Van Every, 2000](#)). This theoretical move enables us to explain how both common ground and multivocality, which are key for tackling grand challenges ([Ferraro et al., 2015](#)), take shape in and through processes of co-orientation. This process is crucial to highlight in view of the fact that grand challenges typically necessitate collective action across multiple layers of actors ([Ansari, Wijen, & Gray, 2013](#)).

To unpack the organizing capacity of communication for co-orienting collective responses to grand challenges, this paper focuses specifically on the role of metaphorical communication and its potential to bring actors together across various levels of communication, including interpersonal, organizational and wider societal levels. As a “way of referring to and thinking of one term or concept (the target) in terms of another (the source), with the latter stemming from a domain of knowledge [...] that is not typically associated with the target” ([Schoeneborn, Vásquez, & Cornelissen, 2016](#), p. 916), metaphors have been

shown to play an important role in collective sensemaking about grand challenges (see also Kroeger et al., in this volume). For example, previous studies of communication have explored the importance of metaphors in communication about climate change (e.g., Nerlich, Kotevko, & Brown, 2010; Thibodeau, Frantz, & Berretta, 2017). While acknowledging the key role of metaphor as a rhetorical tool for shaping how we think and orient our actions toward complex issues, however, thus far these studies have primarily focused on various metaphorical frames in public discourse and how these influence individual and collective behavior. What is still lacking in the literature to date is a deeper understanding of the *organizing* capacities of metaphorical communication itself for tackling grand challenges.

Accordingly, in this paper, we elaborate the key role of metaphors as framing devices in fostering a shared understanding around societal issues and thereby bridging multiple interpretations and discourses toward collective action (van der Hel, Hellsten, & Steen, 2018). More specifically, we aim to answer the following research question: Which qualities of a metaphor facilitate to co-orient collective action toward tackling grand challenges? To address this question we develop an analytical framework that enables researchers to examine the co-orienting properties of metaphors in the context of grand challenges in relation to two main dimensions: (1) the *vividness* of a particular metaphor, that is, the extent to which it allows for novel and surprising insights across domains; and (2) the *responsible actionability* of a metaphor, that is, the degree to which the metaphorical connection of two domains opens up specific, tangible, and ethically responsible forms of coordinated action. While these two dimensions are largely independent of one another, we argue that the co-orienting potential of metaphors in tackling grand challenges is likely to occur only when both of these criteria are fulfilled.

We substantiate these theoretical considerations by relating them to the context of the (currently still unfolding) Covid-19 pandemic, one of the most dramatic grand challenges of recent decades, especially in terms of the numbers of fatalities worldwide. More specifically, we focus on how different forms of metaphorical framing and sensemaking about the Covid-19 pandemic offer varying capacities for co-orientation and thus varying potentials for coordinated action to tackle this grand challenge (see also Oswick, Grant, & Oswick, 2020). We illustrate the usefulness of our framework by analyzing three metaphors that have been prominent in the public debate around the Covid-19 crisis: (1) the *flu* analogy/metaphor; (2) the *war* metaphor; and (3) the combined metaphor of the *hammer and the dance*. Our paper thereby contributes to extant research by providing a means to assess the co-orienting and bridging potential of metaphors. We furthermore hope it can serve to help pave the way toward more responsible use of metaphorical communication in tackling societal grand challenges.

GRAND CHALLENGES AND THE NEED FOR COMMON GROUND

The field of management and organization studies has lately directed its focus of attention beyond business firms and other organizations and their performance

toward questions of how to address societal grand challenges (for an overview, see [George et al., 2016](#)). As “complex problems with far-reaching societal implications that lack a clear solution” ([Grodal & O’Mahony, 2017](#), p. 1801), grand challenges have been studied in relation to the capacities of organizations to tackle large-scale and persistent societal issues such as climate change ([Wright & Nyberg, 2017](#)), social inequality ([Mair, Wolf, & Seelos, 2016](#)), or the refugee crises ([Kornberger, Leixnering, Meyer, & Höllerer, 2017](#)).

The majority of debates have thus far tended to focus first and foremost on business firms and their relation to grand challenges (e.g., [Bowen et al., 2018](#); [Wright & Nyberg, 2017](#); [Wry & Haugh, 2018](#)). For example, in a recent call for papers by the *International Journal of Management Reviews* ([Kunisch, zu Knyphausen-Aufsess, & Bapuji, in preparation](#)), the editors of the special issue invite submissions addressing questions such as: “To what extent are *businesses* responsible for the emergence, aggravation, and alleviation of various grand societal challenges?” (p. 4; own emphasis added).

Other studies in this area have argued that tackling grand challenges will require multi-layered efforts of “robust action” involving a range of actors across society, without business firms necessarily being in the driving seat of these efforts ([Ferraro et al., 2015](#); [Ferraro & Beunza, 2018](#)). As [Ferraro et al. \(2015\)](#) explain: “our approach [...] suggests that corporations need not necessarily be prioritized as the focal organizations; these also can be governments, communities, NGOs, or any other entity” (p. 380). However, the complex, multi-layered, and “wicked” character of grand challenges ([Grimm, 2019](#); [Pradilla et al., in this volume](#)) necessitates the adoption of commensurately complex and multi-layered responses involving a range of different societal actors (cf. the law of requisite variety in [Ashby, 1956](#); see also [Schneider, Wickert, & Marti, 2017](#)). Accordingly, the question then arises as to how to ensure that the “robust action” of these various actors are consistent with a shared aim and do not work against each other. In responding to this question, [Ferraro et al. \(2015\)](#) as well as [Ferraro and Beunza \(2018\)](#) have emphasized the importance of achieving *common ground*, that is, a “set of presuppositions that actors, as a result of their ongoing sensemaking and interaction with others, take to be true – and believe their partners also take to be true” ([Cornelissen & Werner, 2014](#), p. 212). Applying this definition to the context of tackling grand challenges, such “common ground” does not necessarily require agreement on all definitions, means and ends as long as agreement can be reached on certain baseline premises, including a shared acknowledgement that a certain grand challenge is salient and needs countering. Such basic recognition of a grand challenge can then serve as a shared reference point toward which present and future actions can be oriented.

Somewhat counter-intuitively at first sight, [Ferraro et al. \(2015\)](#) link the idea of common ground closely to the notion of *multivocality*, that is, “discursive and material activity that sustains different interpretations among various audiences with different evaluative criteria, in a manner that promotes coordination without requiring explicit consensus” (p. 375). The authors further elaborate on the relation between common ground and multivocality by highlighting the role of ambiguity of language use to create common ground for action around the notion of sustainability:

Key to the success of this concept [...] has been its ability to enable different groups to interpret it in very different ways [...] This multivocality in turn has provoked additional engagement, providing “some common ground for discussion among a range of development and environmental actors who are frequently at odds” (Sneddon, Howarth, & Norgaard, 2006, p. 254). It has proven highly useful in a complex, evaluative context. (Ferraro et al., 2015, p. 375)

Here it is important to note that multivocality in the sense of different interpretations of the same issue of course does not automatically lead to common ground but rather requires ongoing efforts aimed at “finding points of agreement despite having different frames of the same issue [...], culminating in a common ground” (Ferraro & Beunza, 2018, p. 1188). In this regard, however, organizational scholarship lacks a sufficient theoretical understanding of what kind of framing activities are most likely to help facilitate the achievement of such common ground or how to gain agreement on a joint reference point toward which actions to counter a grand challenge can then be oriented. In this paper, therefore, we explore a particular framing activity, that is, communication via rhetorical figures such as metaphors. As elaborated below, this focus on metaphors is based on the unique capacity of figures of speech to help achieve common ground by allowing for multiple interpretations, i.e., multivocality (see also Ungar, 2000).

METAPHORS AND GRAND CHALLENGES

Within research on the role of metaphors in the context of grand challenges, the study of metaphors has been developed particularly in the literature on climate change (e.g., Nerlich et al., 2010). Such studies have shown that metaphors play a key role in climate change communication as rhetorical tools that can anchor novel phenomena in familiar terms and widely shared ideas (Shaw & Nerlich, 2015), by communicating complex issues in simpler terms (Väliverronen & Hellsten, 2002), thereby serving to legitimize normative claims about the impacts of global warming (Nerlich & Jaspal, 2012), and to attract and maintain the attention of the audience. This research has furthermore highlighted the diversity and ubiquity of metaphors about climate change in media, political and organizational discourses. To cite just a few examples, climate change has been framed by drawing on metaphors from the lexis of “war” (Cohen, 2011) and “(winning the) race” (Nerlich & Jaspal, 2012), as well as from the language of finance (Shaw & Nerlich, 2015) and religion (Nerlich & Koteyko, 2009). Such rhetorical repertoires offer a range of linguistic resources from which consumers, journalists, politicians and others “can construct their own arguments about climate change and which may lead to different “logical” conclusions about the need for behavior change” (Nerlich et al., 2010, p.103). A common research agenda in this scholarship has thus been that of seeking to understand how climate change is framed by various stakeholders, how people’s attitudes and perceptions are shaped, and how metaphors can be used to support proposed solutions to climate change (Nerlich & Koteyko, 2009). For example, two studies by Brigitte Nerlich and her colleagues (Koteyko, Thelwall, & Nerlich, 2010; Nerlich & Koteyko, 2009) have highlighted the creation of compound words by drawing metaphorically from

various semantic fields and to combine them with the term “carbon,” such as in the areas of finance (e.g., “carbon currency”), lifestyle (e.g., “carbon diet”), or religion (e.g., carbon “morality” and carbon “indulgences”); thus they were able to show how these metaphorical compounds serve as effective framing devices in communication on the complex issue of climate change by the use of language understandable to multiple stakeholders and discourses.

Another prominent stream of metaphor analysis, primarily in the field of cognitive linguistics (Thibodeau & Boroditsky, 2011, 2013), argues that the power of metaphors to influence behavior stems from their activation of existing conceptual schemata by which people can reason about a new and unfamiliar target domain and hence orient collective action. For instance, a study by Thibodeau et al. (2017) has shown how certain metaphors such as “the Earth is our home” can lead people to adopt a more nuanced and responsible conception of their place in the natural world.

The extant literature on metaphorical communication about climate change has thus far mainly paid attention to the various metaphorical framings of this grand challenge in media representations, policies, and in the public discourse more generally in order to identify and understand the ways in which metaphors orient public debate and influence individual and collective behavior. While recognizing and emphasizing the need for collective action and shared orientations among the many different stakeholders engaged in and affected by climate change, however, such scholarship has so far mostly overlooked the *organizing* capacity of metaphor that is the focus and basis of our argument. A notable exception is Ungar’s (2000) pivotal article “Knowledge, ignorance and the popular culture: Climate change versus the ozone hole,” which showed how coordinated action and effective organizing to address the threat to the ozone layer only took place once it had been framed metaphorically as an instance of “penetration,” that is, by the use of a metaphor that people from all walks of life could relate to and which for this reason, importantly, they could then take coordinated action to address this issue. Ungar described how the grand challenge became a “hot” issue after being effectively referred to in metaphorical terms as a “hole” in the “protective shield” of the ozone layer exposing the Earth to intense bombardment by life-threatening “rays” (see also Ungar, 1998, on Ebola as a “hot crisis”). By resonating with different publics, Ungar (2000) argues, this “shield” metaphor served to “bridge” different understandings, offering very simple referential schema as well as a clear set of pragmatic cues for action to close the “hole” and restore the strength of the protective ozone layer, or “shield.”

The literature on metaphors and climate change is part of a wider body of scholarship on the role of metaphors in making sense of major societal issues, including studies on metaphoric conceptualizations of poverty (Dodge, 2016), terrorism (Hülse & Spencer, 2008), or – more closely related to the focus of this paper – the use of metaphorical communication in the context of diseases and pandemics (Sontag, 1978, 1989). Without going into any great detail, three main ideas for addressing grand challenges should be highlighted here, all of which originate from prior research on the use of metaphorical communication about diseases.

First, these studies emphasize that specific imaginations of diseases became consequential because they offer a range of resources from which political and scientific authorities, as well as other actors, including organizations, the media and citizens, can orient their actions and those of others (Nerlich et al., 2010). In terms of the negative potentiality of metaphors, Susan Sontag (1989) showed how communication around HIV/AIDS constituted a paradigmatic example of the stigmatization of the gay community through the use of “plague” and “pollutant” metaphors. Second, these works strongly criticize the use of military metaphors in discourses on diseases and illness (in some cases including Western-centric and racist connotations), showing how such metaphors tend to promote shame and guilt among the diseased, further serving to reinforce the dominance and control of governments by creating a rhetoric of fear and exclusion (Sontag, 1978; see also Rahman, 2020). As Wallis and Nerlich (2005) conclude in their study of metaphors in the framing of the 2003 SARS epidemic, moreover, military metaphors are limited, fragmented and hackneyed and thus incapable of fully capturing the complexity of grand challenges. Third, and following on from the previous two arguments, scholarly work on metaphors and diseases call for a shift in metaphorical framing from “dead” and over-used metaphors to more attractive and *vivid* analogies that can influence perceptions and policing of an emergent disease (Wallis & Nerlich, 2005) as well as collective responses (Oswick et al., 2020).

As noted earlier, Ferraro and Beunza (2018) have argued that an effective way of co-orienting collective responses to grand challenges is to seek ways of creating common ground while maintaining multivocality. In this respect, the use of metaphors as framing devices can play an important role in achieving this goal. Like boundary objects, metaphors can provide a shared understanding around societal issues, bridging multiple interpretations and discourses conducive to collective action (van der Hel et al., 2018). Exploring these bridging and organizing properties of metaphors is precisely the task undertaken in this paper. In order to further conceptualize the role of metaphors in tackling grand challenges, therefore, we turn our focus in the next section onto the theory of co-orientation.

FROM CO-ORIENTATION TO BRIDGING THROUGH METAPHORICAL COMMUNICATION

Having argued that tackling grand challenges first requires finding common ground by which to orient multiple perspectives in a collective response, and further having shown how this process can be facilitated by metaphors, in this section we further elaborate on the bridging role of metaphors by drawing on Taylor and Van Every (2000) notion of *co-orientation*. Simply put, co-orientation is a communicative process by which people align their actions toward a shared object in order to coordinate collective activities. For Taylor and Van Every (2000), co-orientation entails the involvement of two people in an interaction (A and B) agreeing on a shared reference point, such as an object of concern (X), toward

which they then orient their actions, as well as an agreement on the ways in which they will attain this object (thus also labeled “ABX model.”) Since co-orientation is a contextual and interactional process, the commitments of the parties are always up for negotiation. This negotiated character is explained by the linkages between at least two worldviews (those of A and B). As Taylor explains:

When as few as two people engage in communication each participant must independently foreground what is occurring but, in doing so, each brings to the encounter their own background frame, depending on their purpose, their expectations, their previously established assumptions about what to expect. They literally see the conversation in contrasting ways. Thus, although both participate in the “same” event they never experience it as the same. Each interprets it through a different lens. (Taylor, 2000, p. 1)

While the ABX model centers on just two actors interacting, Taylor and colleagues have emphasized that co-orientation operates across society and can link groups of people representing different worldviews and organizational domains. Indeed, a paper by Taylor, Groleau, Heaton, and Van Every (2001) goes even further in arguing that co-orientation “is the building block of all organizational processes and structures” (p. 26). In this view, organization already emerges as soon as (at least) two participants in an interaction (A + B) co-orient their sense-making toward a common reference point (X) (see also Taylor & Cooren, 1997). The overall argument is that organization, in the basic sense of co-orientation, is *built-in* to communication, understood here in the sense of an ongoing and dynamic processes of negotiating and transforming meaning (see Ashcraft, Kuhn, & Cooren, 2009).

In the same line of thinking, a central assumption is that in ongoing processes of discourse and communication about topics as complex as grand challenges, individuals tend to build “common ground” between each other, at least in the sense of a shared point of reference, i.e., the “X” in the ABX model, and can subsequently make use of this common ground as a resource for deriving pragmatic inferences (as well as a way to cut the costs of ongoing speech production). In other words, with common ground the idea is that participants of a speech community tend to settle on a set of joint references, such as a set of key terms or metaphors to describe a topic, and then use these references not only as a “model of” the situation they have jointly described but also as a “model for” that situation by pragmatically fueling further inferences (in talk) and coordinated action (Cornelissen, Mantere, & Vaara, 2014). Common ground thus essentially refers to a stock of shared presumptions that is established in ongoing communication and which in turn fuels ampliative inferences (Grice, 1989).

Common ground serves both to facilitate co-orientation – such as a collective response to a grand challenge – and at the same time is affected by such co-orientation. Participants cannot interact without presupposing at least some kind of common ground about the phenomenon they are jointly addressing, while by the same token the more common ground they share the easier it will be for them to co-orient and thus to respond to the addressed phenomenon. Indeed, in groups and communities that share extensive common ground, interactions often proceed smoothly with little need for further talk (adjustments, repairs, etc.) to coordinate activity. Common ground is also itself affected

by co-orientation, however, as people incrementally expand common ground through the process of interacting and may even shift the basis of their common ground altogether.

When a new situation is encountered by members of a large and heterogeneous community, such as the outbreak of the SARS-CoV-2 virus (hereafter Coronavirus), research has found that people will first try to create a provisional sense of the new situation through the use of analogies and metaphors, that is, by referring to the novel phenomenon in terms they already understand and can relate to. Such rhetorical figures are powerful ways of ascribing meanings to an initially new and thus empty signifier such as the Coronavirus. Metaphors and analogies have accordingly been used since the outbreak of the pandemic, portraying the Coronavirus either as similar to or dissimilar from other viruses and/or as a killer or enemy invading our countries and our lives. This use of metaphors to form an initial sense of something new or unfamiliar is a response that has been observed across various settings (e.g., [Thibodeau & Boroditsky, 2011](#)). Studies in the management and organizational domain, for example, have shown that metaphors are a key resource for teams and groups collaborating on new tasks and innovations, providing participants with a familiar reference that cuts across specialized domains and thus affords a scaffolding on which to build ([Biscaro & Comacchio, 2018](#)) or a boundary object that makes ideas understandable to anyone ([Seidel & O'Mahony, 2014](#)).

Thus far in this paper we have discussed a model for co-orientation based on the process of building common ground around a grand challenge as a means of providing a meaningful “model of” a grand challenge as well as a pragmatically useful “model for” organizing and co-orienting collective action. Metaphors, as we have highlighted above, constitute a key resource in this process. While metaphors are typically used at the start of a process of grounding, they may also further evolve to become the key conceptual resource for making sense of a grand challenge, as in the case of the ozone hole for example ([Ungar, 2000](#)). Given the prominence of metaphors in this process (as evidenced by prior research), it is crucial to ascertain which qualities of a metaphor make it more (or less) likely to achieve common ground and collective action toward tackling grand challenges. Accordingly, in the following section we identify two central qualities of metaphors that contribute to the specific functions of establishing common ground and of “bridging” understandings in co-orienting responses to grand challenges.

ANALYTICAL FRAMEWORK: THE VIVIDNESS AND RESPONSIBLE ACTIONABILITY OF METAPHORICAL COMMUNICATION

Based on the considerations above, this section elucidates the organizing capacities of communication, focusing particularly on metaphor-based communication. As prior research has demonstrated, the degree to which metaphors can fulfill a co-orienting function tends to depend at least in part on the characteristics of the particular metaphor being deployed, including the type of relation the

metaphor establishes between the source and the target domain. From the wealth of research on metaphors since Lakoff and Johnson's (1980) foundational book *Metaphors We Live By*, we can derive some key dimensions of relevance for their co-orientating potential. In particular, we propose to focus on (a) the *vididness* of a metaphor, that is, the extent to which the connection between source and target domain it establishes is novel and surprising and offers new insights and implications; and (b) the capacity for *responsible actionability* of a metaphor, that is, the degree to which the metaphorical connection of the two domains opens up specific, tangible, and ethically responsible forms of coordinated action. Here it is important to note that this framework primarily serves the purpose of analyzing metaphors and their qualities per se rather than the performative effects of their use in broader discursive fields (the latter, however, would constitute an empirical research question that goes beyond the scope of this paper).

First, a metaphor's degree of *vididness* tends to depend on the distance between the source and the target domain, with greater distance generally increasing the likelihood of generating surprising and fresh insights. If this distance is too large though the metaphorical connection may be considered too loose or even absurd, hence the need for balance between proximity and distance (see Cornelissen, 2006). Conversely, a metaphor can be considered "dead" if the connection between the source and the target domain has become so established and taken-for-granted that the metaphor's imaginative capacity figuratively "runs dry" (Cornelissen & Kafouros, 2008; Schoeneborn, Blaschke, & Kaufmann, 2013; see also Deutscher, 2005). In assessing a metaphor's co-orientating capacities, therefore, we argue that researchers need to consider the *vididness* of the relation between the source and target domains as established by the metaphor. The higher the degree of *vididness* the greater the likelihood that the metaphor can provide an important precondition for co-orientation by loosening up established ascriptions of meaning to a signifier.

Second, the *vididness* of a metaphor does not by itself guarantee the potential to change individual or collective behavior. This potential is rather a matter of the degree to which the metaphorical connection of the two domains opens up *responsible actionability* in the sense of specific, tangible, and ethically agreeable forms of coordinated action. Assessing the *actionability* of a metaphor in terms of the pragmatic inferences it provides thus entails considering the capacity of the metaphor to co-orient any kind of action as well as exploring the degree to which the metaphorical image can help generate ethically responsible capacities for action in response to a grand challenge.

With the term "responsible *actionability*" we refer to the extent to which a metaphor implies (and potentially inspires) forms of collective action that would avoid harm and serve to advance common interests. To conceptualize the dimension of *responsible actionability*, we turn to Habermas's (1984) theory of communicative action (see also Ferraro & Beunza, 2018). Communicative action can be defined as the interactive process through which "actors achieve a mutual understanding of a situation via the exchanges of utterances and thus coordinate their actions" (Rasche & Scherer, 2014, p. 161). Importantly, in communicative action, "participants are not primarily oriented to their own individual successes; they

pursue their individual goals under the conditions that they can harmonize their plans of action on the basis of common situation definitions” (Habermas, 1984, p. 285). The medium of language, and in our particular case the use of metaphors, can frame communicative action in order for the “speaker and listener [to] keep the conversation going with a pragmatic commitment to mutual respect and attention to a common text or issue” (Arnett, 2001, p. 321). This triple focus on maintaining an open conversation, respecting the Other, and acting in concert enables an assessment of the degree to which metaphors can generate ethically responsible collective action.

The “shield” metaphor examined in Ungar’s (2000) article on the hole in the ozone layer well illustrates the responsible actionability of metaphorical communication, since in this case providing a simple referential schema and a clear program of action proved consequential in creating a joint understanding of the stakes involved in this environmental challenge. Moreover, the capacities of this metaphor to serve as a bridge between different worldviews facilitated mutual understandings of the challenge and the need for collective action. Indeed, the “shield” metaphor not only served as a bridge but also respectfully involved others and their interests as part of a common metaphorical framing of shielding the earth from lethal rays. On this basis, we argue that the responsible actionability of a metaphor is directly related to its capacity to bridge different worldviews toward a common goal. While the use of other figures of speech such as metaphors based on war and race do offer specific and tangible applications, as well, these metaphors tend to divide rather than “bridge” different understandings and are thus less capable of co-orienting imagination and organizing collective action in a responsible manner (see also Oswick et al., 2020). In the following section, we illustrate the usefulness of our two-dimensional framework by assessing selected metaphors used in public communication about the Covid-19 pandemic.

ILLUSTRATING OUR ANALYTICAL MODEL IN THE CONTEXT OF THE COVID-19 PANDEMIC

Context: The Covid-19 pandemic

In December 2019, the Chinese government alerted the world to cases of pneumonia in the city of Wuhan, the capital of China’s Hubei province. Initially referred to as 2019-nCoV and later named Covid-19, the disease spread quickly in the Hubei province and from there to the rest of the world. On March 11, 2020, the World Health Organization declared the outbreak a pandemic and many countries around the world responded by enacting essential protective measures to prevent the saturation of intensive care units and to reinforce preventive hygiene. The Coronavirus has since affected millions of people and countries all over the world. At the time of writing this paper (May, 2021), over 150 million cases and 3 million deaths had been registered. Containment measures have repeatedly been implemented by authorities to slow the contagion, including the shutting of schools, the cancelation of sporting and cultural events, and the closure of

borders. Many workers have lost their jobs or are working from home, locked down at home and leaving only for basic necessities. The pandemic has also exacerbated (existing) social inequalities and economic instability.

Assessing Selected Metaphors in the Context of the Covid-19 Pandemic

(1) *The flu metaphor/analogy.* Politicians, health experts and journalists around the world have framed the Coronavirus as comparable with the flu. Most notably, former US president Donald J. Trump and Brazilian president Jair Bolsonaro persistently used this framing in communication to their citizens, primarily as a way of downplaying the severity of the virus and creating support for their government's response (or lack thereof) to the resulting health crisis. It is only fair to add that many medical and health experts also used this comparison at the onset of the pandemic, albeit in a more provisional (as opposed to declarative) sense based on their best guesses about the virus and as a way of describing what the experience of Covid-19 would mean for the majority of people with no comorbidities if they contracted the virus. Importantly, it can be presumed that many contributors to the public debate in the early stages did not use this framing as a way of categorizing the virus wholly as such, nor as a frame or basis for policymaking. Rather, as soon as more details of the virus became available to these experts through research and direct experiences in hospitals, their references to the flu as a more general model for considering the Coronavirus were abandoned.

However, because the analogy was used repeatedly by a number of high-profile experts, as well as state leaders, it nevertheless became a fixture and a common reference for talking about the virus in the public domain, including on the traditional news media, online, or in other informal settings. Part of the reason for the continued use of this metaphor in informal settings, such as in interpersonal interactions within families, on the street, etc., is that it mediates emotions in ways that makes something novel, unfamiliar and threatening more bearable or even comforting (Cornelissen, 2012). The virus becomes less threatening by reference to a common seasonal flu from which everyone tends to recover and which typically has no lasting impact on most individuals. Although the comparison thus might have personal relevance and use for individuals, however, we argue that the metaphor did not serve to foster concerted and collaborative efforts within societies to combat the virus but actually may have limited the sense of urgency about the pandemic and downplayed its dramatic impact on communities and countries. This is evidenced in the case of the United States and Brazil, for example, where both presidents staunchly in 2020 clung onto this metaphor as an antidote to alternative framings and as a way of rationalizing what were seen by many as their botched attempts and fatal failures to combat the virus (Weir, 2020).

The limited effects of the flu metaphor can be explained in relation to the two dimensions of our analytical framework. When assessing the effectiveness of the comparison of Covid-19 with flu in terms of vividness and actionable responsibility, it is important first to recognize that this comparison is more of an analogy than a *figurative* metaphor; in other words, the comparison is literal, merely

conflating two viruses from within the same domain of diseases. With so little distance between the two domains the comparison thus fails to fulfill the criterion of vividness in the sense of evoking novel connections and associations and thus potentially new readings toward combatting the virus, instead merely highlighting a limited number of commonplaces. In fact, the focus of the analogy is more on how Covid-19 is like the flu than vice-versa, thus positioning the target as an example of the source. [Glucksberg \(2008\)](#) defines many metaphors of this kind as “class-inclusion statements” that position the target as a typical instance of a broader source category or class. From this perspective, the framing works through inductively extrapolating from the known symptoms of Coronavirus (sore throat, cough, fever, etc.) to generalize the new virus as an instance of the flu or flu-like diseases. The source term (flu) is thus understood here as referring to a category that its literal referent exemplifies (on the basis of the Coronavirus having similar symptoms) and hence may plausibly include the target concept as a member (or suggests that it does). When such a category is further used to characterize the Coronavirus on an ongoing basis it solidifies this reading over time and functions primarily as an attributive category in that it provides properties that can be attributed to the topic. A further interesting point to note here, and one that also contributes to the limited vividness of the flu metaphor, is that the comparison is not only initially from the source to the target (with the asymmetry between target and source that is common to most metaphors as a way of understanding the novel and abstract in more concrete and familiar terms) but then also back from target to source, with the target being seen as simply embodying the properties of the broader class or category.

Besides a lack of vividness, the flu metaphor also falls short in prompting responsible collective action. For while the analogy may have emotional value for certain individuals, the metaphor downplays the severity of the pandemic as a grand challenge. It thus offers little to unpack that is conducive to collaborative work and coordinated action. Indeed, the metaphor may even serve as a guide to *inaction* insofar as it suggests that with Coronavirus being (fully) like the flu there is no need to do anything other than what we are already currently doing in relation to a disease that is largely under “control” from a public health perspective (albeit leading to a limited number of seasonal deaths, mostly amongst the elderly).

(2) *The war metaphor.* Military metaphors are abundant in public discourses about many grand challenges (e.g., [Atanasova & Koteyko, 2015](#); [Cohen, 2011](#)), including diseases (e.g., [Sontag, 1978, 1989](#); [Wallis & Nerlich, 2005](#)), and the Covid-19 pandemic is no exception ([Bates, 2020](#); [Craig, 2020](#); [Oswick et al., 2020](#)). Leaders around the world brandished war-like rhetoric in the wake of the pandemic. Former US president Donald Trump declared “war” on Covid-19, for example, while President Emmanuel Macron of France used similar framing when he declared France to be “at war” against an “invisible enemy.” While many other examples could be given of political leaders who have mobilized war-related metaphors, it should be noted that this military rhetoric is not exclusive to the political realm. International organizations such as the United Nations and the World Health Organization, as well as journalists, have also embraced the war

metaphor, as in the Canadian *Globe and Mail's* headline “We are at war with [Covid-19]. We need to fight it like a war” (Potter, 2020).

Researchers have noted that the use of war metaphors tend to create a sense of urgency, which itself has the potential of uniting people around an issue by foregrounding the seriousness of a problem and calling for action in response (Atanasova & Koteyko, 2015). The use of war metaphors in relation to the Coronavirus, for example, instills effective commands to “stay at home,” “self-isolate,” “quarantine,” and “curfew.” At the same time, this military rhetoric pays tribute to “frontline” and “essential” workers by proclaiming them “soldiers” and “warriors” who are “fighting this battle for us” (Transcript Library, 2020). The effectiveness of military rhetoric in framing grand challenges has been demonstrated in an empirical study by Flusberg, Matlock, and Thibodeau (2017), who attribute this effectiveness primarily to the fact that such war analogies and metaphors succeed in capturing people’s attention, leading them to infer serious risks (e.g., of loss of life and livelihoods), and forcefully convey the need to form a united front to avoid destruction. Over time, however, war metaphors tend to lose support, and their effectiveness as a long-term messaging strategy for grand challenge remains to be seen. Moreover, as empirical research on communication about climate change has shown (e.g., Atanasova & Koteyko, 2017; O’Neill & Nicholson-Cole, 2009), the use of fear-inducing representations of the challenges of climate change as a means of increasing public engagement can actually be counterproductive, leading to denial and apathy and ultimately contributing to general sense of “climate fatigue.” In addition, war metaphors tend to be divisive in that they identify certain “actors” as enemies to be fought and overcome (Chapman & Miller, 2020). As Shaw and Nerlich (2015) aptly conclude: “war metaphors make clear you are either with us or against us” (p. 39).

In the case of Coronavirus, it is the virus itself that has been targeted as the “invisible enemy” or “invisible menace.” The personalization and anthropomorphization of epidemics is somewhat problematic, however, as noted also by Wallis and Nerlich (2005), since it portrays the virus in misleading ways as a singular entity and “actor” with its own intentions and motivations. Furthermore, Donald Trump’s not-so-subtle shift from the Coronavirus to “Chinese virus,” “Wuhan flu” (Coleman, 2020), or even “Kung flu” added a yet further layer of implication by racializing the virus and identifying China as the actual enemy in the “battle.” With the later emergence of the “British variant” of the Coronavirus, assumed to be “more contagious” and “more lethal” than other variants (Associated Press, 2021), the association of the enemy with a specific country or nation has persisted, reinforcing expressions of nationalism.

In line with our analytical framework, we observe that the prevalence and generalization of military rhetoric in framing the challenge of Coronavirus and other diseases ultimately decreases the *vividness* of the war metaphor as the connection between the source (war) and the target domain (the virus) is by now so well established that it leaves little space for re-imagination (e.g., Sontag, 1978, 1989; Wallis & Nerlich, 2005). As mentioned above, military rhetoric is commonplace in the political arena, particularly with reference to diseases. Even though

the domains of war and disease are quite distant, linguistically speaking at least, the mere fact that this comparison has been repeatedly used over time has to some extent brought them closer together, thereby reducing the chance of the metaphor generating any further surprising insights (see [Cornelissen, 2006](#)) or for the metaphor to be leveraged in new and potentially actionable ways. Following [Atanasova and Koteyko \(2017\)](#), we can say that the war metaphor is thus a “dead metaphor,” that is, “figures of speech that have lost their force and imaginative effectiveness through frequent use” (p. 466).

Regarding the dimension of *responsible actionability*, the war metaphor does make sense at least for some people as a way of capturing the empirical reality of Covid-19 by offering more tangible symbols (“frontline workers,” “soldiers,” “warriors,” “curfew,” etc.) that can be translated into prompts for collective action. This is particularly the case when war as the source domain is associated with the target domain in relation to countermeasures against the pandemic or with the global scale of the crisis. Military-style commands such as “stay at home,” “wash your hands,” and “maintain social distancing” to combat the “enemy,” combined with the militaristic terminology deployed to describe further personal restrictions of freedoms and sacrifices such as “curfews” and “states of emergency” that echo wartime experiences and discourse, do serve to help people make sense of these exceptional times to some extent. In our assessment, however, the metaphorical connection between war and the coronavirus pandemic, while suggesting concrete forms of action, nonetheless falls short of conveying responsible actionability, particularly when the target domain (the enemy) is depicted as another country or nation state. As [Bates \(2020\)](#) aptly noted, identifying the enemy as the “Chinese flu” serves to divide rather than ally international forces. In this sense, therefore, the dimension of mutual respect for responsible communicative action is unlikely to be attained by deploying militaristic metaphorical communication. The divisive and combative character inherent in such military rhetoric severely limits the capacity of war metaphors to bridge different worldviews and therefore co-orient action responsibly, as illustrated in current debates regarding “vaccine nationalism” ([CBS, 2021](#)). In sum, metaphorical domains like war are not very likely to succeed in serving the dual function of creating a common ground while maintaining multivocality since their capacity to evoke new forms of imagination is rather low (i.e., they lack vividness), as is their likelihood of leading to responsible collective action.

(3) *The combined metaphor of the hammer and the dance*. The metaphorical combination of “the hammer and the dance” was coined by the French engineer and tech blogger [Tomas Pueyo \(2020\)](#) in a blogpost at [medium.com](#) at the outset of the Covid-19 pandemic. Even though the author does not fall into traditional categories of an “opinion leader” in pandemic contexts, being neither a politician nor a medical expert or journalist, his blogpost has been viewed by millions across the globe and has been translated into more than 30 languages. The metaphor was also picked up by various governmental leaders and chief epidemiologists in various countries, including Norway, Denmark, Germany, or the Philippines, and can be presumed to have played a facilitating role in helping people to make sense of governmental measures to counter the spread of the Coronavirus in these countries (cf. [Nacey, 2020](#)).

The hammer-and-dance metaphor refers to a two-phase process. The first phase, “the hammer,” involves the rapid application of strict restrictive measures such as lockdowns of schools and the closure of shops, etc., with the aim of pushing down the infection rate as much as possible in a short space of time. The second phase, “the dance,” rests on the assumption that the hammer strategy cannot be maintained for long, amongst other reasons because of the economic and social costs of such measures. Hence, the “dance” phase involves moving back and forth between medium-level restrictions (e.g., contact-tracing, wearing face masks, hand hygiene, etc.) and more restrictive lockdown measures.

In the light of our analytical framework it is relevant to observe that the hammer-and-dance metaphor does not establish a *bilateral* relation between a source domain and a target domain but rather establishes a *trilateral* relation between two source domains and one target domain (i.e., between handicrafts and the medical/epidemiological domain as well as between leisure and the medical/epidemiological domain). Assessed in terms of *ividness*, therefore, the metaphorical combination and the trilateral relation it establishes can be considered as rather unusual and thus likely to facilitate the transfer of novel insights across domains (see also Schoeneborn et al., 2013). Some further indications of the relatively vivid and fresh character of this metaphorical blend are that it has given rise to a number of associated spin-off metaphors. Danish Prime Minister Mette Frederiksen, for instance, recurrently referred to the hammer-and-dance metaphor in public announcements to lend meaning to her government’s measures. Later on in the crisis (actually during what Tomas Pueyo described as the “dance” phase), the Prime Minister used the notion of many “little hammers” (Braagard, 2020) that would help the Danish population keep up with the right dance rhythms needed to deal with the pandemic. Similarly, the German epidemiologist Professor Christian Drosten who served as an advisor to the German government and who gained widespread public attention during the crisis, especially with his regular radio podcast, further developed the metaphor by employing the expression “dance with the tiger” (Ärzteblatt, 2020). With this image Drosten referred to the need to find a way of living with the “tiger” (i.e., the virus) and of seeing how far the “leash” (i.e., the restrictions) could be loosened without getting “bitten” by the tiger (i.e., without leading to an exponential rise of infections and deaths).

With regards to *responsible actionability*, the metaphorical combination of the hammer and the dance draws on two source domains (handicrafts and leisure) that are intuitively understandable and concrete. Furthermore, the combined image allows for an unusual bridging of two discourses otherwise considered incompatible in the polarized public discourse (Allcott et al., in press). This unusual metaphorical blend both acknowledges the need for strict actions, i.e., “the hammer,” in the form of closed schools, shops, and restaurants, while also accommodating for the economic necessities of opening up, i.e., “the dance.” In other words, the apparent contradiction between the two discourses is dissolved through the combined metaphor by bringing them in a processual/temporal order while maintaining multivocality. Another quality of this combined metaphor is that by upholding the tension between the hammer and the dance it not only provides co-orientation on these back-and-forth movements but also suggests that

the conversation be kept going about the appropriateness of collective actions – a key consideration in communication aimed at gaining consent for certain courses of action (cf. Arnett, 2001).

It will be worthwhile exploring in future research to what extent metaphorical blends like the hammer and the dance succeed in practice, at least in certain country contexts, with lending meaning to the strict and swift measures in response to the pandemic and in increasing acceptance of these measures. Indeed, initial evidence seems to suggest that this is the case, at least if we consider the comparably high acceptance rates for such measurements in countries such as Denmark and Germany (TheLocal.dk, 2020). Another point that remains uncertain but is worthy of further investigation is whether the metaphor only unfolds its co-orienting effects on account of its particular combination of the two images of the hammer and the dance or whether these images are also effective as separate stand-alone images, for instance, in news media statements that voice concerns about “hammer-like” restrictions while leaving out the (hope-giving) dance element of the metaphorical blend.

DISCUSSION AND CONCLUSION

In this paper, we have developed an analytical framework that can be used to assess the role of metaphorical communication in facilitating co-orientation as a basis for collective action in response to societal grand challenges, such as the Covid-19 pandemic. In this framework, the two dimensions that are critical for metaphors to be effective are their *vividness* and *responsible actionability*. By drawing on selected examples of the use of metaphors in rhetoric surrounding the Covid-19 pandemic, we argued that the effectiveness of metaphors diminishes if it is deficient in either or both of these dimensions. Thus, if a metaphor lacks vividness and/or only encourages responsible action to a limited extent, as in the case of the “flu” and “war” metaphors used to describe the Covid-19 pandemic, then it is less likely to become a formative concept that lends meaning to a grand challenge in a generative and amplifying manner and that can facilitate a coordinated response.

The key process that constitutes the capacity of metaphors to co-orient collective responses around grand challenges is identified here as ensuing from their potential vividness and actionable responsibility, since it is these attributes of metaphors that can facilitate and foster a shared understanding, thereby establishing common ground by bridging different interpretations of grand challenges among individuals and collectives (see also Stjerne et al., in this volume). In theoretical terms, this underlying process is one in which the initially idiosyncratic conventions generated in the course of small-scale interactions – for example around what might initially be a relatively obscure metaphor like “the hammer and the dance” – can spread from one interaction to another, leading to the emergence of cultural conventions and communal common ground around such shared metaphors as a basis for sensemaking and dealing with the crisis (Fay, Garrod, & Roberts, 2008; Garrod & Doherty, 1994). Research in the

field of sociolinguistics has shown how repeated interactions among members of a community can lead to the emergence of linguistic conventions that are more robust than the conceptual pacts elaborated by dyads (Brennan & Clark, 1996). A study by Fay, Garrod, Roberts, and Swoboda (2010), for example, demonstrated how entire symbolic systems (such as coded vocabulary for a certain referent) can emerge from communication that is initially iconic (e.g., highly idiosyncratic, with ad hoc metaphors) via social collaboration and co-orientation as opposed to simple linear transmission (Fay et al., 2010). As we have shown in the case of the “hammer and the dance” metaphor, key opinion leaders, such as the Prime Minister of Denmark, can provide and seed key metaphors and idiomatic expressions which, if taken up and elaborated by others in the community, may proceed to become the foundation of common ground established at community level.

The two dimensions of our framework for assessing the potential of metaphors can further serve as an important guide for establishing fertile common ground that “encourages [a] new way of thinking; one which is inclusive, caring, supportive, collaborative, democratic and connects people, has the potential to facilitate new ways of acting and being in society” (Oswick et al., 2020, p. 287). This is not to claim, of course, that the combination of vividness and actionable responsibility of a metaphor can in itself ensure that a society will harness its potential for establishing common ground. Depending on the linguistic choices of opinion leaders and the motivated reasoning of individuals in society, other figures of speech may prevail – including war-like rhetoric – that are more divisive and do not lead to responsible actionability. Within this mediated process, however, we argue that it is the degree of accessibility and broader resonance of a metaphor itself that determines its conduciveness for responsible action. As Ungar (2000) has shown in the case of communication around the hole in the ozone layer, for example, it was the broader resonances between the metaphor of a “protective shield” and popular imagery (e.g., from *Star Wars* and *Star Trek*) that ultimately led to the uptake of this metaphor and thus to a collective response to this crisis.

These and other examples demonstrate that in assessing a metaphor’s performative potential and its capacity to inspire and co-orient follow-up actions it is important to look not only at the characteristics of the metaphor as such (as our analytical framework suggests) but also, in future research, at the ways in which a metaphorical image is interpreted in different societal contexts (in this regard, see also the argument by Austin (1962) that a speech act needs to match certain “felicitous conditions” in order to unfold its performative potential). Accordingly, we hope our conceptual considerations can inspire future empirical inquiries into the organizing and co-orienting capacity of metaphors and other rhetorical figures such as metonyms and synecdoches (Sillince & Barker, 2012) in the context of identifying and responding to grand challenges.

Overall, this paper makes two main contributions to research. Based on a communication-centered understanding of organization (Ashcraft et al., 2009), with a specific focus on the capacity of metaphors for co-orientation, our study shows how research at the intersection of communication and organization can add to

our understanding of the role of language in promoting a collective response to grand challenges (e.g., [Ferraro et al., 2015](#); [George et al., 2016](#)). Our findings imply that in order to understand organized efforts to counter grand challenges such as the Covid-19 pandemic, researchers should focus not only on the responses of national governments and other formal organizations but also consider the organizing capacities of metaphorical communication. Effective metaphorical communication has the potential to spread rapidly within and across societies, facilitating shared understandings and co-orientation toward a common reference point and thus providing a basis for “organizing” coordinated responses to counter grand challenges. In addressing the need to understand more precisely how metaphorical communication can succeed in playing such a key role, we have drawn on insights from research on metaphorical communication (e.g., [Shaw & Nerlich, 2015](#)) while linking these findings to contemporary debates on organization and organizing. Taking into account the organizing capacities of language use more generally ([Cooren, 2000](#)), including communication at public and/or interpersonal level, is especially crucial in the context of the Covid-19 pandemic, since countering such grand challenges requires the responsible and caring behavior not only of institutional actors but on the part of a wide variety of individual and collective actors.

In this respect, our co-orientation framework further extends the considerations elucidated in studies by [Ferraro et al. \(2015\)](#) or [Ferraro and Beunza \(2018\)](#) by arguing that when metaphors succeed in becoming picked up across various areas of societal communication they can thereby provide orientation for individual and collective action, thus enabling society to come closer to achieving the “requisite variety” ([Ashby, 1956](#)) to counter complex, “wicked” and “grand” challenges. This is not to suggest, of course, that organizations do not play a pivotal role in tackling grand challenges, especially business firms and governmental organizations; however, our considerations suggest there is also a need to trace the organizing capacity of language use itself (cf. [Schoeneborn, Kuhn, & Kärreman, 2019](#)).

A second key contribution of this conceptual paper is the development of an analytical framework which allows to evaluate the vividness and responsible actionability of metaphorical communication, thereby providing researchers with a tool to assess the capacity of a metaphor to be useful for achieving common ground and multivocality when responding to grand challenges. This framework has both theoretical and practical implications. In terms of theory, it can complement other frameworks that offer criteria for assessing of the qualities of metaphors, including [Cornelissen’s \(2004\)](#) call for the aptness and heuristic value of metaphors to be taken into account. However, the framework further extends prior work by combining such criteria with the dimension of “responsible actionability,” which is especially relevant in the context of grand challenges.

In practical terms, the framework can be applied by policymakers and other opinion leaders in their considerations of the most effective language to use in seeking to elicit a collective response to social challenges, and in particular can serve to encourage more effective and responsible use of metaphors in public

discourse. As we have seen in several examples of communication around Covid-19, the use of metaphorical communication can only lead to concerted efforts if the metaphor itself has a co-orienting and bridging potential (cf. [Oswick et al., 2020](#)). The analytical framework developed here not only applies in the specific context of the Covid-19 pandemic, of course, but also to the assessment of metaphorical communication on other pressing grand challenges, such as climate change. Also in such contexts, our framework can help to ascertain whether, how, and when the use of certain metaphors is likely to be conducive to novel ways of imagining and thereby co-orienting collective and responsible responses to the large-scale and complex problems we face.

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WICKED PROBLEMS AND NEW WAYS OF ORGANIZING: HOW FE Y ALEGRIA CONFRONTED CHANGING MANIFESTATIONS OF POVERTY

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ABSTRACT

Wicked problems are causally complex, lack definite solutions, and re-emerge in different guises. This paper discusses how new ways of organizing emerge to tackle changing manifestations of wicked problems. Focusing on the wicked problem of poverty, we conducted a longitudinal study of Fe y Alegria (FyA), one of the world's largest non-governmental organization, which provides education for the poor across 21 countries in Latin America and Africa. Drawing on archival and ethnographic data, we trace the historical narratives of how FyA defined poverty as a problem and developed new ways of organizing, from its foundation by a Jesuit priest in 1955 to its current networked structure. Our findings reveal the ongoing cycle of interpretive problem definition and organizing solutions for wicked problems. First, since there is no "true" formulation of a wicked problem, actors construct narrative explanations based on their understanding of the problem. Second, organizational solutions to a wicked problem are thus reflections of these narrative constructions. Third, emerging

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and changing narratives about what the problem is inspire new organizational responses. Our findings provide insights into the dynamic relationship between organizing for wicked problems, narratives, and the changing manifestations of wicked problems and grand challenges more broadly.

Keywords: Narratives; wicked problems; grand challenges; poverty; education; ways of organizing

INTRODUCTION

Recent years have seen increasing interest in understanding how organizations deal with wicked problems (Dorado & Ventresca, 2013; Ferlie, Fitzgerald, McGivern, Dopson, & Bennett, 2013; Grint, 2014; Reinecke & Ansari, 2016). Wicked problems are defined as societal issues that are extremely difficult or maybe even impossible to solve due to their incompleteness, ambiguity, and changing nature (Rittel & Webber, 1973). Previous studies on wicked problems have revealed the importance of framing the problem and its root cause(s) in ways that mobilize action amidst conflicting stakeholder values (Reinecke & Ansari, 2016), as well as the challenge of knowledge uncertainty when information regarding the problem and its solutions is incomplete (Brook, Pedler, Abbott, & Burgoyne, 2016; Camillus, 2008).

However, scholars have recently begun to explore how organizations manage the dynamic complexity of wicked problems, which results from the unpredictable and unexpected ways in which wicked problems unfold due to interdependencies between known and unknown factors (Dentoni, Bitzer, & Schouten, 2018). Contextual complexity requires organizations to adapt and increase their own complexity accordingly (Schneider, Wickert, & Marti, 2017). Thus, organizing for wicked problems cannot be static, as wicked problems continually change and re-emerge in new guises. Therefore, this paper aims to explore the following question: How do organizations deal with the changing manifestations of wicked problems?

The exploratory scope of the research question called for a qualitative inquiry. We chose to conduct a historical narrative analysis of the multinational non-governmental organization Fe y Alegria (which literally translates as “Faith and Joy,” and is hereafter abbreviated as “FyA”). Since its creation in 1955 in Caracas, Venezuela, FyA has been attempting to alleviate poverty through education in developing countries. We combined archival documents with semi-structured interviews of FyA members and ethnographic observations in FyA schools. This data set enabled reconstruction of the historical narratives defining poverty at different periods in the organization’s history, the changing organizational responses, and the organizational contexts in which these responses were elicited.

Our findings reveal three critical insights on organizing for the changing manifestations of wicked problems. First, wicked problems such as poverty are constructed based on actors’ confrontation and interpretation of the problem in concrete action contexts. Second, how a wicked problem is constructed is intertwined with how responses are organized. Third, emerging and changing

narratives about what the problem is inspire new organizational responses. These three points explain why the cycle of problem definition and organizing solutions is ongoing.

This paper contributes to the literature on organizing for complex societal problems such as grand challenges and wicked problems by challenging us to rethink our objectives and understandings when studying them. Whereas these problems are currently studied as single entities whose solutions can be standardized and deployed, we emphasize their uniqueness and the narrative construction that shapes organizational responses, encouraging scholars and practitioners to embrace the dynamic complexity of the problem.

THEORETICAL CONTEXT

Wicked Problems

Organizational scholars have recently focused on large-scale problems that are extremely complex, present little clarity, and involve multiple stakeholders (Ferraro, Etzion, & Gehman, 2015; George, Howard-Grenville, Joshi, & Tihanyi, 2016). Unlike the concept of grand challenges, which encompasses the possibility of solving an important societal problem through widespread implementation (George et al., 2016), the class of problems classified as “wicked” (Reinecke & Ansari, 2016) have no solution by definition. To illustrate, overcoming COVID-19 by developing a vaccine is very challenging but achievable in principle (and thus a grand challenge), whereas the wider problem of providing equitable access to medicine and vaccines across the world is wicked because it involves collaboration and interaction between multiple actors with different interests and priorities. Notwithstanding debates about whether wicked and tame problems can be ontologically demarcated (Alford & Head, 2017), the notion of “wickedness” provides a conceptual challenge to the ideology that all problems are solvable through proper managerial interventions.

First introduced by Rittel and Webber (1973, p. 106), the concept of wicked problem denotes a social problem which is “ill-defined” and “never solved.” Examples of wicked problems include poverty (Dorado & Ventresca, 2013), inequality (Reinecke, 2018), climate change (Ansari, Wijen, & Gray, 2013; Schüssler, Rüling, & Wittneben, 2014), humanitarian crises (Reinecke & Ansari, 2016), illegal drug use (George et al., 2016), and health inequalities (Ferlie et al., 2013).

Rittel and Webber (1973) introduced the notion of wicked problems to critique systems theory and two of its tenets: the belief in the possibility of establishing “explicit goals” (p. 156) and the belief in the “makeability” (p. 158) of the future. According to Rittel and Webber (1973), these two tenets of modern systems theory apply only to tame problems. Wicked problems, by contrast, always manifest a set of characteristics which all point to the impossibility of clearly defining the problem and, consequently, of solving it. For Rittel and Webber (1973, p. 161), “problem understanding and problem resolution are concomitant to each other.” This means we can only solve the problems which we can fully define. However,

wicked problems have multiple explanations, with none being completely accurate. This complicates attempts to create diagnostic frames that define their cause, prognostic frames that identify possible solutions, and motivational frames that mobilize action if the problem seems intractable (Reinecke & Ansari, 2016).

Therefore, it is impossible to determine whether a wicked problem has been solved. Because there is no way of testing eventual solutions to wicked problems, they can only be “re-solved” (Rittel & Webber, 1973, p. 160) once the consequences of eventual solutions unfold over time. The unfolding of an eventual solution always produces collateral effects or unintended consequences, which may be irreversible, thereby generating new eventual solutions. The fact that this cycle repeats indefinitely points to the uniqueness of the wicked problem.

Organizing for Wicked Problems

The implication of Rittel and Webber (1973) definition is that there is no single way of organizing for a wicked problem. Tackling a wicked problem entails facing the unknown, requiring the ability to organize for constant changes and increased levels of conflict among stakeholders. Hence, wicked problems require delving into social processes and collective dynamics (Weber & Khademian, 2008) that are extremely complex and impossible to simplify.

Moreover, “solutions to wicked problems are not true-or-false, but good-or-bad” (Rittel & Webber, 1973, p. 162). Multiple actors will always “differ widely” about any solution, not least because of their differing “value-sets” (p. 163). The proposed solutions for wicked problems are therefore highly normative and emotional (Grint, 2014), and might emerge from “a dynamic dialogical process in which relations between moral schemes are constantly (re-)negotiated through dynamic exchange” (Reinecke, van Bommel, & Spicer, 2017, p. 33). Such a dialogical approach can lead to normative compliance (Grint, 2014), resulting in some form of alignment of the multiple actors’ value regimes (Levy, Reinecke, & Manning, 2016). However, this normative alignment can only be achieved where all involved actors want to tackle the problem: “you cannot force people to follow you in addressing a Wicked Problem because the nature of the problem demands that followers have to want to help” (Grint, 2014, p. 245).

For these reasons, organizations must resist the temptation to try to convert complex problems “into tractable managerial challenges” (George et al., 2016, p. 1887). Instead, organizations must find ways of dealing with three interlinked challenges that stem from the nature of wicked problems (Dentoni et al., 2018): (a) organizing for the unknown, (b) constantly (re-)aligning the value regimes of multiple actors, and (c) tackling the dynamic complexity that results from the unfolding character (i.e., constant change) of the wicked problem. We expand on these three characteristics below.

First, wicked problems challenge an organizational design approach because “one cannot first understand, then solve” (Rittel & Webber, 1973, p. 162). In a complex problem setting, actors confront new problems that are unforeseen and possibly unforeseeable at the time they begin attempting to tackle the original problem. Drawing on pragmatist philosophy, scholars have conceptualized this

as a problem of uncertainty. Grounding on Dewey, James, Mead, and Peirce, uncertainty diminishes as experimentation in the heart of social processes provides truth-value meanings for practical consequences. In this sense, organizing for wicked problems occurs not through abstract planning and theorization but, instead, through responding to concrete, situational problems that require engagement in problem-solving activities. A continual problem means that organizational solutions are always works in progress, rather than final products. Hence, organizing for wicked problems is a process of dynamic, ongoing interactions between emerging challenges and attempts to address them in concrete situations (Ansell, 2011).

Second, organizations tackling wicked problems must find ways of accommodating different values and interests. This is important as the multiple actors involved may differ widely about the cause of the problem, possible solutions, and who should be held responsible for addressing it. Scholars have argued that “responsibility can be attributed to a target by framing an issue and its root cause in ways that allow such an attribution” (Reinecke & Ansari, 2016, p. 299). This can lead to framing contests and definitional struggles. Moreover, some actors are more likely to engage with wicked problems, for instance, when public awareness provides specific advantages in terms of reputation or sales and when there are clear benefits resulting from collective action (Dorado & Ventresca, 2013).

Theoretically, drawing on pragmatist ideas, Ferraro et al. (2015) propose that accommodating different values and interests can be achieved through a participatory architecture and multivocal inscriptions. A participatory architecture comprises a structure and a set of rules that enable constructive interaction over time, while multivocal inscriptions privilege discursive and material activities representing a wide range of heterogenous actors, thus promoting coordinated action. By providing a degree of common ground, participatory structures guide the plurality of projects and goals of different constituents in a common direction.

Finally, organizations tackling a wicked problem must address its unfolding nature, namely its constant changes over time. Rittel and Webber (1973) suggest it is impossible to determine whether a wicked problem has been solved. This poses challenges in terms of the allocation and exhaustion of resources. Moreover, the solutions deployed can create unintended consequences changing the nature or understanding of the original problem. The infinite cycle of responding to what the problem was and creating unintended consequences means that the problem to tackle is never the same.

Some scholars have focused on the role of organizational forms and structures in tackling wicked problems. Schneider et al. (2017) argue that organizations may respond to environmental complexity by creating internal complexity or also collaborative complexity. One form of collaborative complexity are networked governance structures, which enhance opportunity discovery, innovation, and decentralization by promoting inter-organizational learning and joint problem-solving (Ferlie et al., 2013). It may also be argued that hybrid organizations, which combine different institutional logics (Gümüşay, Smets, & Morris, 2020), are better equipped to deal with value plurality and adapt faster to internal and

external changes. Our study expands on the organizational challenge by exploring how organizations deal with the changing manifestations of wicked problems.

Poverty as a Wicked Problem

Poverty is a good example of a wicked problem, not least because it is hard to find agreement on its definition, cause(s), and solution(s) among academics. As reflected in Goal 1 of the United Nations Sustainable Development Goals (“End poverty in all its forms everywhere”), poverty is a widely recognized social problem. Yet from a historical perspective, the social and material conditions that we today associate with “poverty” had to be first transformed into an identifiable social problem through historical frames and narrative explanations before they could be problematized (Wadhvani, 2018).

What we term “poverty” is rooted in multiple social, historical, structural, political, geographic, economic, and other patterns and conditions (Woodward & Abdallah, 2010). It has many symptoms and can be the consequence of other problems. Poverty is commonly conceptualized in terms of measurable income or resources (Townsend & Gordon, 2000). The United Nations Development Programme (UNDP, 2016) defines poverty as the lack of necessary goods and services for an individual’s well-being, leading to material and physical deprivation. Based on this income-based definition, international agencies have defined poverty in terms of poverty lines, average household income, and international comparatives for the price of goods (Woodward & Abdallah, 2010).

Scholars have increasingly challenged defining poverty in economic terms. Most prominently, Sen (2000) redefined poverty as lack of freedom, rather than income, focused on the deprivation of basic capabilities or genuine opportunities that an individual has reasons to value. Others such as Hills and Stewart (2005) define poverty as the conditions that exclude individuals from the normal functioning of society. Finally, Woodward and Abdallah (2010) describe poverty as the absence of individual human rights. This array of competing definitions indicates that there may be no ultimate definition. Instead, each definition rests on specific interpretive accounts to make sense of social and material conditions.

Relatedly, there is no consensus on how to “solve” poverty. The specific interpretive accounts or frames defining poverty as a social problem motivate and legitimate certain institutional and organizational solutions (Reinecke & Ansari, 2016). If the poverty problem is interpreted as a lack of income, then solutions target increasing income through employment, entrepreneurship, and market-based strategies. These strategies can be seen in terms such as “inclusive capitalism” or “inclusive markets” that integrate the *aspiring poor* into the market economy through “bottom of the pyramid” approaches (Prahalad, 2004).

If the problem is further broken down and framed as a lack of capital, which prevents the poor from increasing their income through entrepreneurship, then micro-finance seems a plausible solution to lift people out of poverty by providing access to capital resources. Conversely, if the problem is seen as norms that prevent market access, such as gender norms obstructing women from pursuing employment or entrepreneurial opportunities, then the solution could be to change these norms.

However, attempts to ameliorate poverty often backfire. [Hall, Matos, Sheehan, and Silvestre \(2012\)](#) study of entrepreneurial tourism ventures in poor communities in Brazil shows how these often led to destructive outcomes for the communities, rather than empowerment. Many solutions do not work because the problem they target is only a symptom or manifestation of another problem. Thus, there are no “one-size-fits-all” or even “right” solutions to wicked problems: for such problems, solutions can only be better or worse.

Following [Rittel and Webber \(1973\)](#) characterization of wicked problems, [Table 1](#) details poverty as a wicked problem and identifies which dimensions of the problem account for the three ways of organizing we advanced above: for the unknown, for constant (re-)alignment of differing value regimes, and for dynamic complexity.

METHODS

To explore how organizations deal with the changing manifestations of wicked problems, we draw on a longitudinal case study of FyA, which has been devoted to education for poverty amelioration for over 60 years. Two main reasons motivated our approach. First, and as explained above, poverty is a paradigmatic example of a wicked problem: it is impossible to fully identify “the nature of the poverty problem” ([Rittel & Webber, 1973](#), p. 161) or its solution. Second, FyA’s longevity makes it a “revelatory” case ([Eisenhardt & Graebner, 2007](#), p. 27) that allows us to understand the changing nature of the wicked problem over time, and to examine the complex interplay with ways of organizing.

Research Setting

FyA is a satellite organization of the Society of Jesus, a Catholic religious order commonly known as the Jesuits. Founded by a Jesuit priest in the outskirts of Caracas, Venezuela, FyA’s core purpose has always been to alleviate poverty through education. Embracing the spirit of popular education ([Freire, 1968/1996](#)), FyA is premised on the belief that education empowers the poor and excluded. FyA expanded in the 1960s and 1970s into other Latin American countries. In 1987, the national autonomous nodes of FyA formed the International Federation of Fe y Alegria to bundle and coordinate their efforts. FyA currently operates more than 2,500 schools and technical centers in 21 countries. Though most of their operations are in Latin America (16 countries), FyA has recently expanded into Africa (3 countries) and Europe (2 countries). In total, FyA provides education for circa 1.5 million individuals ([Federacion Internacional Fe y Alegria, 2016](#)).

Data Collection

We assembled a longitudinal data set that spans from 1955 to 2017. We used historical methods, conducted semi-structured interviews, and analyzed the notes from ethnographic observations made during our visits to FyA locations.

Archival data: We gathered 224 documents produced by FyA from 1960 to 2017. We were granted access to the FyA’s official archives in Bogota, Colombia,

Table 1. Characterizing Poverty Using Rittel and Webber's Dimensions of Wicked Problems.

Dimension	Explanation	Way of Organizing
1. There is no definitive formulation of a wicked problem	Defining poverty is impossible. Moreover, there will always be incomplete information about the causes	For the unknown
2. Wicked problems have no stopping rule	Poverty is an ongoing problem. The challenge of tackling poverty has never stopped, and many actors have always had different understandings of the problem	For the unknown
3. Solutions to wicked problems are not true-or-false but good-or-bad	There are different ways of ameliorating poverty, like education, but it is not possible to fully determine the truthfulness of such a claim. We can only say that educating the poor is good	For the unknown Differing values
4. There is no immediate and ultimate test of a solution to a wicked problem	No clear-cut cause-effect link can be established between a solution and an alleged poverty amelioration. Solving poverty is not about testing hypotheses but about constant improvement	For the unknown
5. Every solution to a wicked problem is a "one-shot" operation; because there is no opportunity to learn by trial and error, every attempt counts significantly	Every time an eventual solution for poverty is implemented, there will be unintended consequences which cannot be undone	Dynamic complexity
6. Wicked problems do not have an enumerable set of potential solutions	There are no criteria to determine that all possible solutions to poverty have been identified	Differing values
7. Every wicked problem is essentially unique	Poverty manifests according to specific, local circumstances. Therefore, there are no "one-size-fits-all" solutions	Dynamic complexity
8. Every wicked problem can be a symptom or consequence of another problem	Poverty is a phenomenon involving social, historical, geographical, institutional, and economic problems	Dynamic complexity
9. The choice of explanation of a wicked problem determines the nature of its resolution	Poverty can be explained in numerous ways. For instance, the UNDP (2016) addresses poverty in terms of health, education and income, while Woodward and Abdallah (2010) address it as a human right issue	Differing values
10. The planner has no right to be wrong	Eventual solutions implemented to ameliorate poverty generate consequences, with great impact on those affected	Dynamic complexity

which contain many original manuscripts recording FyA's history. These include letters by the founder, in which he explains his journey of tackling poverty across 10 Latin American countries, documents from each FyA national office, educational materials, strategic and operative plans, and promotional materials. Using archival documents produced at different points in time provided valuable insight into the evolving narrative constructions of the poverty problem.

Interviews: We conducted 10 semi-structured interviews with the following individuals: the former and current secretaries of the International Federation FyA, with respective tenures of 5 and 15 years; the three longest-serving country managers of FyA; the FyA's coordinator; and four project managers with over 10 years' experience each. Interviews lasted from 45 minutes to 2 hours and focused on interpreting the challenge of poverty alleviation and FyA responses.

Ethnographic observations: Observational data were derived from visits to seven countries where FyA has been operating: Bolivia, Brazil, Colombia, Ecuador, Paraguay, Peru, and Spain. We conducted observations at 22 schools in remote rural areas, slums, high-security prisons, and areas controlled by drug cartels and guerrillas. Visiting these places provided first-hand experience of the different challenges encountered and the types of organizational responses deployed to deal with the wicked problem of poverty in concrete local action contexts.

Data Analysis

Our data were subjected to narrative analysis (Riessman, 1993), which is particularly useful for examining efforts to create plausible accounts of a wicked problem, such as telling a "causal story" about what it is and how it can be made amenable to intervention (Reinecke & Ansari, 2016; Stone, 1989). Narratives contribute to the construction of social problems and their solutions because the narrative form inherently establishes causal claims regarding the objects and actions they represent (Wadhvani, 2018). By analyzing the case of FyA through a narrative perspective, we not only explored what happened and when but also revealed how events and experiences may relate to one another (Rhodes & Brown, 2005).

Our narrative analysis involved four stages. First, to develop an understanding of FyA's organizational development, we chronologically ordered key historical events, such as the foundation of FyA, the creation of a network of radio stations, and the expansion of FyA's portfolio of activities. Second, we analyzed the narratives that evolved around each of these major events and explored their impact on the story's plot (Riessman, 1993). This helped us to identify and locate shifts in the meaning of the wicked problem over time. For instance, the period from 1950 to 1970 favored an economic conception of poverty, whereas the years from 2000 to 2016 emphasized discrimination and exclusion as the major forms of poverty. We refer to the periods as the "economic poverty phase," "invisible poor phase," and "new forms of poverty phase." Third, we focused on FyA's responses to the changing manifestations of poverty over time, and the narrative explanations of the need for each specific response. Table 2 presents six key organizational responses deployed across the three phases; three of these responses will be

explored in the Findings section. Fourth, to refine our understanding of how FyA responded to the changing manifestations of the wicked problem, we drew on classic pragmatist ideas such as James's (1904) notion of experience as "a process of change." We traced how experience shaped the narrative constructions of the problem and affected FyA responses. Table 2 summarizes our findings.

FINDINGS

The Process of Organizing for Tackling the Dynamic Complexity of Wicked Problems

In our analysis of FyA and its ways of organizing for managing the dynamic complexity of poverty, we uncovered that the process followed the following steps. Initially, actors define a problem based on their confrontation and understanding of it. When they agree on a preferred definition of the problem, a form of organizing is deployed. However, when external conditions put pressure on the preferred definition, a new definition emerges. This new definition causes the organization to find a new way of organizing, thus creating an ongoing cycle.

Phase 1: Poverty as the Lack of Education

Location: Venezuela.

Defining poverty as the lack of education: The first step when dealing with dynamic complexity is characterized by constructing a definition based on actors' confrontation and understanding of the problem. In our case, this step emerged in December 1954 when the Jesuit priest José María Velaz and some of his students started to frequently visit an urban slum in Caracas called "Gato Negro" (Black Cat) (Saez, 1999). According to Velaz, the Gato Negro was a forgotten place where "there was nothing...garbage piled up everywhere and black water running down the hill guided only by the law of gravity. The air was filled with dirt and stench" (Perez Esclarin, 2010, p. 100).

During his visits, Velaz offered Mass and First Communion to the neighborhood children. However, throughout his interactions with the inhabitants, he realized that religious exercises could not change anything. In the words of Velaz:

It was a horrible picture of degradation and social debasement. What at first sight caught my eyes was only the purulent skin of a deep disease whose most tragic symptoms were generalised unemployment, undernourishment, family disintegration, abandoned childhood, un-healthiness and ignorance before all the demands of life. (Perez Esclarin, 2010, p. 100)

Gato Negro residents frequently asked Velaz and the university students why they visited such an abandoned neighborhood, devoid of services (Perez Esclarin, 2010). The closeness that Velaz showed through his frequent visits generated dialogues in which people aired some of their problems. Recurrent complaints concerned the lack of water and electricity. However, as Velaz engaged with the villagers, a new way of perceiving poverty unfolded: "after afternoon of contemplating the landscape of horrifying poverty, we think about its causes...

Table 2. Data Analysis.

PHASE	ECONOMIC POVERTY		THE INVISIBLE POOR		NEW FORMS OF POVERTY	
PERIOD	1954-1961	1961-1976	1980-1996	1984-1986	2000-2017	2008-2017
LOCATION	Venezuela - urban slums and rural areas	Ecuador, Bolivia, Panama, Peru, El Salvador, Colombia, Nicaragua, and Guatemala	Venezuela, Paraguay, Ecuador, and Bolivia	Latin America	Latin America	Chad, Madagascar, DR Congo, and Guinea
POVERTY PROBLEM	Absence of public services (water, electricity, education, health, etc.) in the urban periphery of Venezuelan cities	Latin American countries experience a lack of governmental investment in rural areas, an increase in the population of urban slums, and high rates of violence and illiteracy among poor people	Cuts in social welfare make it difficult to educate prisoners and adults with no knowledge of work skills	Countries with high levels of social disparities and lack of social policies	Changes in the meanings of poverty to reflect systemic and historical issues of social exclusion and lack of equality and opportunities	People of different ages, genders, and demographic profiles are illiterate; governments cannot sustain public investment; rural areas are left behind in development
RESPONSE	Construction of primary and secondary schools	Empower communities to construct their own schools	Build radio stations that provide complementary education	Design an international federation	Projects focused on gender, minorities, and violence topics	Creating small, medium, and large initiatives
ORGANIZATIONAL CONTEXT	Autonomous schools in urban slums and rural abandoned areas	Autonomous local and national organizations	Independent radio stations with strong links to autonomous local and national organizations	A federation of independent organizations that aim to propose local and national policies	Autonomous organizations start to work based on a project methodology	A network of independent organizations that work collectively to support and learn from one another

Everywhere we found the correlation of misery and ignorance” (Perez Esclarin, 2010, p. 102). Velaz concluded that the most serious problem for Gato Negro inhabitants was a lack of agency and freedom of spirit, which could not be addressed through material things but required a change in people’s mindset and, hence, education (Perez Esclarin, 2010). He then “discarded aids in form of food or sanitary type... and decided to create a school” (Saez, 1999, p. 32).

Organizing to tackle poverty as the lack of education: Viewing education as a much more powerful tool for social change than handouts or economic aid, Velaz decided that the best way to tackle poverty was through constructing autonomous primary and secondary schools. However, how to construct those schools posed a massive challenge. Velaz’s problem was disclosed after one of his last catechisms exposing the need for impact by turning these catechisms into a real school (Perez Esclarin, 2010). A local bricklayer called Abraham Reyes, together with his wife Patricia, approached Velaz and told him: “look father, I have a ranch here that I built with my wife. It is yours if you want to see it” (Perez Esclarin, 1992, p. 5). For Velaz, that simple place, with the rustic concrete floor that Abraham Reyes had built with his own hands, burying in it the savings of seven years, represented an example of tenacity and generosity (Vilda, 1987).

The next step was to look for teachers. Diana and Carmen, who had just finished high school, offered their services as unpaid teachers (Saez, 1999). On March 5, 1955, a small poster was displayed outside Abraham’s house: “school: we admit boys” (Saez, 1999, p. 32). On that day, around 100 young boys attended school for the first time in their lives, even though they all had to sit on the rustic concrete floor (Vilda, 1987). Days later, Abraham donated half of his house for a girls school (Saez, 1999). Responding to the new call, 75 girls joined. These boys and girls were the first students of FyA. Velaz observed the joy of giving and receiving education and the faith of believing that we all have more good than bad in our hearts (Lazcano, 2013).

This organic and community-driven way in which the first FyA school was founded was repeated numerous times. Throughout Latin America, FyA expanded through the will, work, and donations of the same poor that the schools were supposed to serve. In his letters, Velaz remembered that most of the schools opened in Venezuela

started in hired ranches, in sheds that grew on precipices and ravines, next to garbage dumps or rivers of black water, in inhospitable mountains, namely in those places that nobody cares about. (Perez Esclarin, 1992 p. 10)

For the inhabitants of these places, forgotten by the government, Velaz made them see that they were worth it, that they were not garbage, that they were not a thing thrown out there, worthless (Vilda, 1987).

Overall, the way of organizing deployed by FyA aimed to create autonomous schools that not only provided education for the economic poor living in slums but also empowered young people to become agents of change. More important, however, is the process that explains how responses are highly linked to the preferred definition of the problem. This might represent a double-edged sword, as it includes certain causes but leaves others untouched.

Phase 2: Poverty as Reaching the Invisible Poor

Location: Venezuela, Paraguay, Ecuador, and Bolivia.

The evolution of poverty outside FyA's initial definition: By the 1980s, most of the Latin American countries where FyA operated were experiencing critical economic situations. Their economies were growing less than in previous decades and debt levels were becoming untenable. Consequently, most of these countries' governments executed strict cuts in social welfare. This new panorama unveiled problems for other actors, such as prisoners and people without any skills education for work, outside the scope of FyA's original definition of poverty.

(Re-)Defining poverty as the invisible poor: The construction of over 500 schools had allowed FyA to reach impoverished communities in 13 countries across Latin America. Yet this had not solved the poverty problem in any of those countries. The massive financial cuts executed by governments across Latin America made visible some other neglected social actors. Among the newly identified communities, two received attention from FyA: adults without education and prisoners. According to Velaz, parents were a crucial cornerstone in changing reality as if they did not have the means for feeding young people, children will need to find a job and stop their education (Vilda, 1987). Also, for other Jesuits who directed FyA operations in Bolivia and Panama, government cuts exposed and compounded the lack of opportunities for prisoners: though most would return to society after serving their time, they could not be considered as productive members of society.

This shift that made visible some actors neglected by the economic definition of poverty and the educational alternative preferred by FyA influenced a (re-)definition of poverty. In this sense, the original definition gradually transformed to reflect the need to account for invisible actors.

(New) Organizing to tackle poverty by reaching the invisible poor: A particularly unusual, but probably the most successful, response to the above problem was the implementation of distance learning through educational radio stations. Radio stations could bring education to a much greater population of the poor. The creation of radiophonic education was driven by both FyA's founder Velaz and some national nodes. Velaz saw the radio as a way to expand FyA without increasing pressure on already deprived schools. In his words, "if Fe y Alegria was born on a ranch, the radio would allow us to convert each ranch into a school" (Perez Esclarin, 2010, p. 197). The main source of inspiration to embrace radio learning came from "Radio ECCA," a cultural broadcaster in Islas Canarias, Spain. Velaz was amazed by the station's innovative educational programme, which complemented radiophonic classes with books and monthly personalized assistance (Vilda, 1987). For Velaz, the already operating network of schools in Latin America could offer classes at night or on weekends to provide education for most of the illiterate adults living in slums, or for those who had abandoned their studies (Perez Esclarin, 2010).

The second process was initiated by the national directors of FyA in Bolivia, Guatemala, and Panama, who had worked at Jesuit radio stations before joining FyA. The radio had played a significant role in Jesuit evangelization in some Latin American countries during the 1960s and 1970s. The Jesuit directors of

FyA had thus experienced the radio's benefits in terms of coverage and impact (Perez Esclarin, 2010). Still, the FyA's structured response of delivering radiophonic education only materialized in the early 1980s. The initiative was launched in Venezuela. The new "Instituto Radiofonico FyA" (IRFA) had a clear aim: to offer access to education each semester to people aged 15 and above at primary, high school, and complementary levels (Saez, 1999).

For Velaz, the FyA could alleviate poverty by not only empowering children but also meeting the learning needs of adolescents and adults who could not study in conventional ways (Lazcano, 2013). Although IRFA started with classes from primary to high school level, it found that most listeners preferred the complementary courses. By 1992, IRFA was providing classes in carpentry, masonry, electricity, and knitting. One of the most popular broadcasters was located in Guasualito (East Venezuela) and reached nearly 25,000 inhabitants. Velaz commented that providing people with small tools will allow them to be productive in the society (Vilda, 1987). IRFA thus reached a population that the schools could not address. More importantly, it made FyA members aware that tackling poverty was a complex process of intertwined activities aimed at addressing several causes and actors.

Inspired by the success of radio broadcasts in Venezuela, FyA launched similar initiatives in other countries. The radio soon became FyA's primary medium to provide education to prisoners (Perez Esclarin, 2010). The fact that one simple broadcast could reach multiple homes, restore people's dignity, and contribute to reducing geographical distances was a reality beyond imagination (Vilda, 1987). The next country where FyA adopted the radio as an educational tool was Ecuador, followed by Bolivia and Paraguay. In each country, the radio was used to address specific problems. For instance, in Paraguay, it was used in penitentiaries as a means to reintegrate prisoners into society. Courses aimed to not only develop skills but also inculcate values. In Ecuador, radiophonic education focused on technical education for (among others) rural workers, which was complemented by some FyA educational centers offering additional training (National director, 2016 – interview).

Overall, using radio was an organizational experiment that moved beyond traditional forms of organizing. Through radio stations, FyA found a new way to reach people who were "invisible" but could be considered as poor according to economic definition. This experience revealed the need to change the previous definition of poverty in order to continue tackling it. In this sense, the organizational experiment highlighted that poverty was a highly complex challenge that required not only providing education but also reaching out to as many actors as possible and addressing several causes simultaneously.

Phase 3: Poverty as Social Exclusion and Marginalized Actors

Location: Latin America.

The evolution of poverty outside FyA's definition of invisible poor: The beginning of the twenty-first century brought many changes to Latin America. Among the most important is the change in the meaning of poverty. Identifying the timing of this change is difficult, although it mostly manifested at the end of the

1990s, when new discourses moved poverty from a pure economic phenomenon to a socio-political one. This new conceptualization of poverty emphasized different causes of the marginalization of social actors. Poverty came to reflect systemic and historical issues involving lack of equality, the marginalization of people with disabilities, and social exclusion. Exemplar cases are the fights for disability rights, women's equality, and protection of minorities.

(Re-)Defining poverty as exclusion and marginalization: Although FyA had been offering formal and technical education, most target communities still experienced high levels of undernourishment, broken families, social violence, and exclusion of specific actors. FyA's (re-)definition of poverty was informed by the local experiences of its employees and teachers in the various operating locations. The following ethnographic vignette illustrates that even if economic deprivation still dominates, FyA now confronted other and potentially more threatening forms of poverty:

Alexis (pseudonym) and I were driving through El Chaco in Paraguay, one of the most sparsely inhabited areas in South America. At some point, Alexis, who runs the local FyA school where we were heading, tells me, "*you see how the asphalt here comes to an end? We will now drive many kilometres without asphalt.*" Even though the end of the asphalt seemed to symbolise the beginning of poverty, our conversation as we drove was centred on other types of problems. We were heading towards an area controlled by some guerrilla groups and drug cartels. "*Money here is not necessarily the problem. Violence is,*" Alexis told me. Interestingly, that is not what I saw. I saw the end of the asphalt and poor neighbourhoods. However, as I started speaking with people, it was not poverty that they mentioned but the fact that many school pupils worked for the cartels at night. [...] It was getting dark, and we were rushed to the car: "*we have to leave while we have sunlight; after that it's too dangerous.*"

Based on new experiences of poverty, FyA started to analyze the manifold related challenges that actors faced in their communities. Through a long process of reflection, which started with the design of the first federative strategic plan in the 2000s, the organization's approach was evaluated and questioned. After several meetings in different countries, and the production of multiple documents in yearly congress since 1995, a new conceptualization of poverty emerged. This explicitly acknowledged a wider range of forms of exclusion, including marginalization, gender violence, gang-related violence, drug consumption, and forced migration. In this process, FyA managers and other actors realized that poverty now referred to inequality and systemic exclusion.

(New) Organizing to tackle poverty as exclusion and marginalization: Up to this point, FyA had been a network of autonomous schools and radio stations that provided formal and technical education. However, addressing the new definition of poverty demanded a radical organizing. This resulted in emphasizing more decentralized projects focused on nutrition, peace and citizenship, gender, and minorities, as seen in the federative strategic plans from 2000 to 2015. The construction of those decentralized projects followed two processes.

The first process involved FyA members starting to include the community more formally in constructing agendas and visions for development, with discussions focused on the needs of the community and ways to improve it. This led to the emergence of several social development projects, which have been seen as ways to learn about life and the world by establishing social and natural relations.

From 2000 to 2016, FyA developed four federative strategic plans (i.e. Plan Global de Desarrollo y Fortalecimiento Institucional I (Global Plan of Development and Institutional Strengthening), 2000; Plan Global de Desarrollo y Fortalecimiento Institucional II, 2005; Plan Estrategico de la Federacion Internacional Fe y Alegria (International Federation Fe y Alegria's Strategic Plan) III, 2009; Plan de Prioridades Federativas (Federative Plan of Priorities) IV, 2015) that pay special attention to nutrition, health, and citizenship construction. For example, nearly 350 projects emerged that aimed to address drug abuse, lack of aspiration, domestic violence, sexual abuse, and child exploitation (International Federation secretary, 2016 – interview), while also emphasizing the construction of ethical citizens. These projects have underscored the importance of dialogue, negotiation, and construction of socially desirable values ([Federacion Internacional Fe y Alegria, 2016](#)).

The second main process undertaken by FyA focused on tackling the discrimination confronted by social actors with cognitive and physical disabilities when trying to access education. In this endeavor, FyA Bolivia has played a particularly meaningful role, accumulating more than 16 years of experience dealing with education for the blind and the deaf. For this purpose, it has created six centers of special education and adapted 47 schools to incorporate inclusive policies (former national director, FyA Bolivia, 2016 – interview).

To summarize, organizing to tackle poverty in this period demanded a new understanding of the problem based on contextual readings of the situation. Accordingly, organizing involved a series of small- and medium-sized projects that aimed to be one-shot operations in which the response was determined by the communities experiencing poverty.

DISCUSSION

Societies face wicked problems that are extremely complex and may not have a definite solution ([Rittel & Webber, 1973](#)). Even though widespread consensus may emerge that highlights probable causes, advocates plausible solutions, and assigns responsibility for tackling wicked problems ([Reinecke & Ansari, 2016](#)), there are often many possible ways of addressing such problems. This makes it extremely difficult to formulate organizational responses.

Theoretical Contributions

To understand the process through which organizations deal with the changing manifestations of wicked problems, we conducted a longitudinal study documenting the narratives that shaped how FyA organized to respond to poverty in Latin America. This case yields three important discoveries. First, a wicked problem is always constructed based on experiences as there is never a “true” formulation. Second, how a wicked problem is constructed is intertwined with how responses are organized. Third, emerging narratives about what the problem is inspire new organizational responses as the cycle of interpretive problem definition and organizing solutions is ongoing (see [Fig. 1](#)).

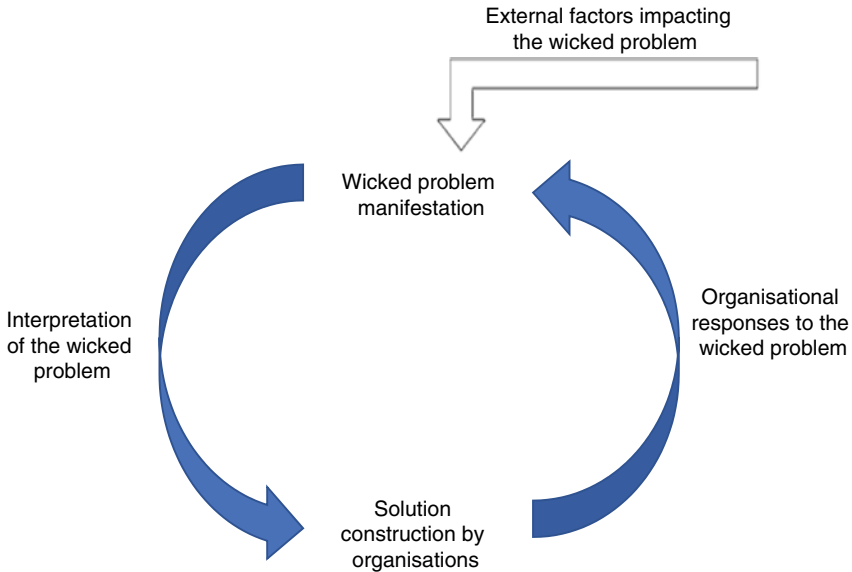


Fig. 1. Organizing for Gaps Between Policies and Practices: Dynamic Complexity of Wicked Problems.

There is never a true formulation, only a narrative construction that informs the interpretation of a wicked problem. Recent studies on complex problems tend to propose frameworks (George et al., 2016), theory-based solutions (Ferraro et al., 2015), and a more detailed understanding of the variables of these social issues (Alford & Head, 2017). However, our case study of FyA challenges us to rethink how to understand the particularities of wicked problems. For example, the fact that wicked problems can have up to 10 identifiable dimensions (Rittel & Webber, 1973) does not mean that these can be standardized to foster a problem's understanding and possible solution.

Our study shows how a wicked problem is defined based on a narrative construction, which establishes causal claims regarding the objects and actions that the narrative construction represents (Wadhvani, 2018). Since there is no one true and objective formulation of a wicked problem (Rittel & Webber, 1973), organizations construct certain narratives about what they understand as the problem. Thus, wicked problems are defined not just by identifying certain material conditions at different points in time but also through the construction of narratives that establish links between certain causes and consequences. These narratives may not fully capture the problem, focusing on only one of its multiple causes and consequences.

The case of FyA highlights that narrative constructions of wicked problems are mediated through actors' involvement while acting in contexts where the problem is embedded. In line with the classic pragmatism of Dewey and James, there is no absolute way to access immediate knowledge of a matter and it is only

through experience that primary awareness of raw givens can be gained. Hence, it is through experience that reality becomes meaningful; as [James \(1904\)](#) postulates, it is within the stream of experience that knowledge is created which generates expectations for action.

The importance of the narrative construction that sustains the wicked problem and its intertwinement with the responses deployed. Theoretically, the literature tends not to distinguish between complex problems, treating them as if a single entity (e.g., climate change, global hunger, poverty) to narrow their focus. However, given the contextual, social, historical, and economic roots of these problems, the way that each is experienced cannot result in one comprehensive construction explaining all contexts. Here, we highlight the need to avoid dominant narratives about how to deal with or respond to wicked problems. Each manifestation of a wicked problem will involve a unique narrative construction that reflects different experiences and language games.

Thus, responses to wicked problems are neither “right” nor “wrong,” but “good” or “bad.” In this sense, the construction of the problem frames actors’ understanding of responses by temporalizing experience ([Rorty, 1982](#)) while projecting the expected future through the unfolding nature of the narrative. A “good” response will be one that offers a plausible way of acting to impact on the causes identified in the constructed narrative. Conversely, a “bad” response will be one that is imposed by external agents or does not consider the experience of the actors involved. For example, moving to address the problems of marginalization and exclusion while leaving behind an economic understanding of poverty represented a good response.

Finally, if responses are intertwined with narrative constructions, it is easier to highlight the small wins achieved, as suggested by [Ferraro et al. \(2015\)](#). One of the core postulates when attempting to tackle wicked problems is the ability to avoid failure. Recent alternatives that have failed, or are in a deadlock underscore the mismatch between the experience/interpretation of the problem and the solutions deployed.

An ongoing cycle between the external environment and the construction of new narratives. The way a wicked problem is defined changes over time. This mainly happens because actors encounter new manifestations of the problem, new causes are discovered, or new experiences confront organizations with new realities. In this regard, most changes in the narrative construction relate to changes in the external environment. Hence, new narratives are constructed, such that problem definition and organizing solutions is an ongoing cycle. This aligns with [James \(1904\)](#) fundamental fact that experience is a process of change and, although built on the past, constantly progresses forward.

In this regard, most studies on organizations responding to wicked problems ([Dorado & Ventresca, 2013](#); [Ferlie et al., 2013](#)) use a static frame, obscuring that wicked problems are not “definition static” and so responses cannot “solidify” in time ([Dentoni et al., 2018](#)). The relationship between the external environment and what is experienced, and then narratively constructed, is dynamic and fluid. This highlights the importance of understanding change and time when dealing with wicked problems.

Future Research

As organizational scholars, we are only beginning to understand the types of re-organizing toward the new forms of coordinated, collaborative, and collective efforts (Aslan Gümüşay & Haack, 2020) needed to tackle wicked problems and other grand challenges. By focusing on the important interplay between problem definition and organizational response in a context of dynamic complexity, our study suggests the need to focus more on how ideas, discourse, and understanding of issues are interrelated with modes of organizational design and collective action. Two future research avenues seem likely to be particularly fruitful. First, we call for research into how the dynamics of the external environment affect problem definition. As the case of FyA demonstrated, how a wicked problem is defined is fundamental to addressing its dynamic complexity. Institutional contexts differ widely as they reflect the attempts of governments, non-governmental organizations, supranational entities, and communities to impose a desired narrative construction of the problem. Hence, examining power struggles between actors' competing narratives and how one of these narratives solidifies, or perishes, can explain what leads to the transition from one dominant definition to another. We contend that a closer look at antenarratives can explain these definition changes. Antenarratives constitute fragmented, unplotted, and pre-narrative speculations that serve to mediate between actors' localized experience and external narratives (Boje, Haley, & Saylor, 2016). Hence, antenarratives have the power to differentiate and reconcile new characteristics and minimize old ones. Relatedly, we suggest focusing on the concept of constitutive-polyphony (Trittin, & Schoeneborn, 2017) and narratives' temporalities (Stjerne, Wenzel, & Svejenova, 2022) to understand the discursive representation of different voices, opinions and viewpoints when tackling a wicked problem.

Second, we suggest focusing on the diagnostic tools, heuristic devices, and other methods that actors use to analyze and produce knowledge about wicked problems, and how this influences narrative constructions of definitions and solutions for wicked problems. Since "wickedness" requires the creation of some cognitive shortcut to grasp the problem's complexity and inspire collective action (Camillus, 2008; Reinecke & Ansari, 2016), the type of heuristic tools employed to facilitate this are consequential. For example, the UNDP's Human Development Index deliberately moved away from sole focus on economic growth to include a much wider range of indicators, including education and health. Nonetheless, by capturing statistical data, it creates a rather static measure that oversimplifies what human development entails. Ethnographic methods, as employed in our case, or diary studies (Rauch & Ansari, 2022) would lead to a very different focus and understanding. Another pressing question is the significant impact of AI and algorithmic data in re-wiring forms of knowledge production and thereby understanding of wicked problems and social challenges. Thus, studying the role of diagnostic tools in shaping problem definitions and collective organizational efforts is another promising area for future research.

Practical Implications

Tackling wicked problems and causal narratives. Despite our specific focus on FyA, cases provide opportunities to elucidate more general principles, with implications for a wider set of phenomena. Because there is no ultimate definition of a wicked problem, the processes of narrative construction are central to determining what comes to be seen as a major social problem, what is assumed to be its root cause, and what might come to be seen as a plausible solution. This insight is important for practitioners who seek to tackle wicked problems and motivate other actors to support their efforts. Practitioners must acknowledge their active role in the social construction of a wicked problem, and the associated responsibility. The framing and definition of wicked problems is, therefore, a challenging task that requires a skillful balancing act. If wicked problems are seen in their full complexity, they might appear as intractable and a “lost cause,” thus complicating actors’ ability to mobilize wider action. To avoid a sense of powerlessness, practitioners have to offer causal narratives that identify plausible causes and solutions. These need to be framed in ways that have wide appeal and generate consensus among multiple stakeholders and audiences, motivating widespread support for and commitment to tackling the problem.

Tackling wicked problems and the flaws of “one-size-fits-all.” Some narratives might oversimplify a wicked problem and associate it with a single cause, even if there might be many. While it is necessary to create narratives that portray the problem as solvable, this can also lead to narrow solutions that only treat a problem’s symptoms, or in the worst case aggravate it over time. The well-known problem of “one-size-fits-all” also results from the oversimplified framing of complex problems. Similarly, mission-driven organizations may become so invested in their narrative of the problem and its solution that it becomes difficult to revise approaches and well-worn solutions.

It may then be tempting to find problems that fit existing solutions, rather than seeking new solutions. Our study encourages scholars and practitioners to recognize the dynamic complexity of wicked problems, for which solutions are at best preliminary attempts. This calls for greater reflexivity to examine our own values, beliefs, and assumptions in the process of constructing wicked problems and practices of organizing (Stjerne et al., 2022), so as to be open to revising our own definitions and solutions. In sum, organizing for wicked problems requires ongoing encounters with manifestations of the problem in concrete action contexts, and willingness to revise frames and adapt organizing efforts as these manifestations change.

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FROM A CLASH OF SOCIAL ORDERS TO A LOSS OF DECIDABILITY IN META-ORGANIZATIONS TACKLING GRAND CHALLENGES: THE CASE OF JAPAN LEAVING THE INTERNATIONAL WHALING COMMISSION

Héloïse Berkowitz and Michael Grothe-Hammer

ABSTRACT

Meta-organizations are crucial devices to tackle grand challenges. Yet, by bringing together different organizations, with potentially diverging views on these grand challenges, meta-organizations need to cope with the emergence of contradictory underlying social orders. Do contradictory orders affect meta-organizations' ability to govern grand challenges and if so, how? This paper investigates these essential questions by focusing on the evolution and intermeshing of social orders within international governance meta-organizations. Focusing on the International Whaling Commission and the grand challenge of whale conservation, we show how over time incompatible social orders between the meta-organization and its members emerge, evolve and clash. As our study shows, this clash of social orders ultimately removes the "decidability" of certain social orders at the meta-organizational level.

Organizing for Societal Grand Challenges

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We define decidability as the possibility for actors to reach collective decisions about changing an existing social order that falls under a collective's mandate. We argue that maintaining decidability is a key condition for grand challenges' governance success while the emergence of "non-decidability" of controversial social orders can lead to substantial failure. We contribute to both the emerging literature on grand challenges and organization theory.

Keywords: Social order; meta-organization; grand challenges; governance; marine ecosystem; decidability

INTRODUCTION

Grand challenges denominate fundamental problems of modern society – e.g., climate change, aging societies, exploitative labor, biodiversity loss – which can be understood as “specific critical barrier(s) that, if removed, would help solve an important societal problem” (George, Howard-Grenville, Joshi, & Tihanyi, 2016, p. 1881). We suggest that to better understand these fundamental problems, we can relate these to one of sociology's most fundamental research objects, i.e., the problem of social order (Abercrombie et al., 2006; Hechter & Horne, 2003). The notion of social order refers to the general “ordering” of the world, which can be broadly defined as relatively stable social structures or temporarily fixed meanings – such as values, norms, rules, hierarchies, rituals, or acquaintances – that lend the world a degree of expectability (Johnson, 2000; Morgner, 2014). Grand challenges affect existing social orders, are often produced, reproduced and reinforced by these, and can be tackled only through the changing of social orders so that these contribute to solving the problem at hand. At the same time, social orders provide the basic context in which grand challenges unfold and solutions for these challenges can be developed.

We draw on Ahrne and Brunsson (2011) and their distinction between two fundamental forms of social order, i.e., purposefully constructed social order that is created through decisions, and self-emergent social order that is non-decided. Social orders constantly intermesh, particularly in the context of organizations. Organizations are social systems that couple and shape a multiplicity of social orders (Laamanen, Moser, Bor, & den Hond, 2020). Many organizations moreover tend to organize in so-called meta-organizations, i.e., organizations that have other organizations as their members (Ahrne & Brunsson, 2008). Hence, through meta-organizations, organizations and social orders are “layered” since these integrate (on a meta-level) not only multiple forms of social order but also multiple organizational levels of social order as well (Grothe-Hammer, Berkowitz, & Berthod, 2022). Meta-organizations provide a space for their member organizations to make decisions collectively on social orders such as rules, regulations, or monitoring programs that serve as structures for their members (Ahrne, Brunsson, & Seidl, 2016). Hence, these meta-organizations serve as global governance devices that produce certain social orders through

collective decisions, often intertwined with certain contradictory, emergent – in particular institutional – social orders stemming from their members.

Recent literature has emphasized the crucial role international meta-organizations play when it comes to tackling global societal challenges (Berkowitz, Crowder, & Brooks, 2020). Examples such as the United Nations Environment Programme or the European Women's Lobby have been quite successful in tackling the ozone hole or promoting women's rights (Andersen & Sarma, 2002; Karlberg & Jacobsson, 2015). Yet, we still understand relatively little about how the embeddedness of social orders affects meta-organizations and their ability to tackle grand challenges.

This paper investigates how different kinds and levels of social order are handled in international meta-organizations dealing with grand challenges. Specifically, we are interested in how different social orders interfere with each other in the process of meta-organizing, and which problems can occur that might prevent a meta-organization from effectively tackling a grand challenge. To do so we take a look at the International Whaling Commission (IWC), which is an international governance device dedicated to sustainably managing whaling and conserving whales on a global scale. Whales play an important part in the functioning of marine ecosystems. Unsustainable whaling practices have been proven to trigger ecosystems' collapse (Springer et al., 2003), and can thus have broader impact on humans (Pörtner et al., 2019). In the context of increased pressures on marine resources, ocean acidification, warming and pollution, and more generally climate urgency, marine ecosystems' conservation constitutes a grand challenge, in which sustainable whale population management plays a key role (Estes, 2016).

In the past decades, the IWC has been crucial in successfully tackling this global challenge of whale management. Since 1982 when the IWC decided to pause commercial whaling, some whale populations have recovered significantly. However, in 2018, Japan, one of the major pro-whaling nations, left the IWC to resume commercial whaling in its territorial waters. Therefore, the multi-national management of whale conservation and sustainable whaling practices suffered a major setback. While Japan is still bound to international law and regulations, it is now reopening and managing commercial whaling autonomously (Kojima, 2019). Japan's exit from IWC membership has disrupted the internal IWC order as well as global orders. This withdrawal significantly undermines international governance efforts to tackle such a global societal challenge and poses global threats to marine ecosystems. Through a better understanding of the organizational challenges that the IWC faced in globally governing sustainable whaling and whale conservation, we can gain important insights into what factors might be relevant in successfully governing grand challenges on a global scale.

By engaging with theories of social order and specifically putting on a meta-organizational lens, we show how, in the IWC's case, different types of social orders on the different organizational levels at play evolve and interact over time. Our paper illustrates how over time incompatible social orders between the meta-organization and its member organizations as well as among those member

organizations ended up clashing. This clash of orders led to abrupt, decided changes of meta-organizational orders that ultimately rendered some crucial orders unchangeable. Social orders that had remained decidable for decades were abruptly rendered non-decidable and instead locked permanently as they were.

We contribute to the literatures on both grand challenges and the sociology of organization by conceptualizing decidability and non-decidability as properties of existing social orders. In the context of a meta-organization, decidability, hence, means the possibility of concretely reaching collective decisions about changing an existing social order that falls under the collective's mandate. Non-decidability, on the other hand, describes the absence of the possibility to reach collective decisions about changing a social order that falls under the meta-organizational mandate. We argue that meta-organizational decidability is necessary to ensure the continuity of collective action in governance-mandated meta-organizations. Decidability enables members' implementation and compliance with meta-organizational rules even if there is no consensus about them. Non-decidability, however, may force members to exit and may lead to meta-organizational failure to govern grand challenges.

THEORETICAL FRAMING

In this section, we want to relate the problem of social order in the context of meta-organizations with the fundamental grand challenges of modern society. To motivate our research question, we present three basic assumptions: first, that social orders can be either emergent or decided, second, that social orders are embedded in organizations and meta-organizations, and third, that grand challenges both require social orders to be solved and raise specific issues.

Decided and Non-decided Social Orders

The question of what social order is and how it comes about has virtually always been an integral part of sociological research (Abercrombie et al., 2006; Hechter & Horne, 2003; Turner, 2013). A widely-accepted assertion is that it is possible to distinguish between two fundamentally different forms of social order, i.e., some kind of spontaneously and unintentionally formed order on the one hand and some kind of consciously constructed order on the other (Elster, 1989; Hechter, 2018, p. 24; Luhmann, 2020; von Hayek, 1991; Williamson, 1991). Ahrne and Brunsson (2011) recently added to this theory tradition by proposing a similar binary typology of social orders, i.e., the distinction between “decided order” and “emergent order.” They assert that it is possible to ground the distinction between the two forms of social order in the question of decisions. According to them, the consciously constructed form of social order is always one that is created through decisions (decided order), while the other form of social order is one that is basically not decided, i.e., when it emerges on its own or when it is taken for granted as a behavioral premise (emergent order).

One of Ahrne and Brunsson's main contributions to sociological theory has been not only to outline and describe these two fundamentally different forms

of social order, but moreover to offer a novel and innovative meta-theoretical foundation for the classic binary distinction. Moreover, Ahrne and Brunsson's conceptualization of social order implies that social order is processual in nature – i.e., social structure is produced and reproduced in social operations. Social order as such exists only in the process. Social orders enable and facilitate certain activities while these very activities produce, reproduce, and change these orders in the process.

Emergent orders emerge either spontaneously – e.g., in unplanned face-to-face interactions (Goffman, 1967) – or develop slowly over time, thereby becoming taken for granted and constantly reproduced without being questioned – e.g., traditions, beliefs, taken-for-granted status orders. The latter variant of emergent orders can thus be called “institutional orders” (Czarniawska, 2009), since they are accepted as premises for behavior without having their validity questioned (Jepperson, 1991). Institutional orders can emerge from spontaneous orders as well as from originally decided orders. Something that developed spontaneously in an instant (e.g., a nickname) might become taken for granted over time; and what once was decided (e.g., a new product) might also become so taken for granted that it is not a possibility anymore to redecide it.

Decided orders can be characterized as explicit, specific, potentially abrupt, accountability-producing, and inherently provocative. Decided orders represent those decisions that become accepted by others as behavioral expectations for at least some time. They often take the form of rules, goals, hierarchies, memberships, monitoring instruments, and sanctioning mechanisms (Ahrne & Brunsson, 2011). Decisions about such orders can be made in an instant and can become quite specific. However, a decision always implies the selection of a course of action among several alternatives. Decisions therefore by nature require that one must justify the selection of one alternative over another (Brunsson & Brunsson, 2017).

Decisions and decided orders are paradoxical: upon being made, a decision discloses discarded options (Luhmann, 2018). Hence, one peculiarity of decided social orders is that in their making they are always accompanied by the simultaneous creation of disorder (see Vásquez, Schoeneborn, & Sergi, 2016). Deciding on certain elements of social order always fixes and opens up meaning at the same time, for a decision selects one option while making other options visible as well (Grothe-Hammer & Schoeneborn, 2019). As a result, decisions and decided order run the inherent risk of remaining mere “attempts” (Ahrne & Brunsson, 2011, p. 8). So how do decided orders become accepted as premises for behavior in the first place? One general answer to this question is: through organizations.

Organizations are social systems consisting of distinctive processes of action or communication processes (Luhmann, 2018, 2020). Organizations can be seen as nexuses of social orders. Many different kinds of social orders come together in an organization. On the one hand, they serve as premises for the organizational processes while, on the other hand, they are being produced, reproduced, maintained, changed, or discarded in these processes as well. Thus, all kinds of social order are being coupled within organizations and via organizations and their

processes (Laamanen et al., 2020). For instance, decided orders build on institutionalized orders and facilitate spontaneous orders that in turn might facilitate new decisions on decided orders, which might become institutionalized over time, and so on.

Organizations are faced with the challenge to cope with this myriad of social orders through their decisions. Through decisions, organizations can couple or change certain orders or create new (decided) ones. Think of the example of a university course. The course is a combination of decided orders (combining certain decisions about place and time, the teacher, the admitted students, the course theme) that builds on institutionalized orders (e.g., the general understanding of what a course is, or the taken-for-grantedness of having chairs in a room with a board). Based on this combination of orders, other spontaneous orders emerge (e.g., certain interaction orders and statuses, running gags, etc.), and so on. Organizations can make decisions on some social orders that affect which social orders are coupled in which way. However, organizations cannot decide everything and they cannot prevent non-decided orders from appearing or make them disappear. In some cases, organizations can also lose their ability to decide on certain forms of social order at all, i.e., when social orders become overly fixed to one meaning (Grothe-Hammer & Schoeneborn, 2019).

Meta-organizations as Complex Nexuses of Embedded Social Orders

The complexity of intermeshing orders increases even more in cases in which organizations organize each other in a meta-organization. In such cases, another layer of social orders is put on top of the already existing social orders. Most importantly, meta-organizations bring in a layer of “meta-organizational decided orders,” which we define as those decisions that are collectively acknowledged as activity premises by member organizations and which concern and guide the activities on the meta-level.

Meta-organizations are organizations in which members are themselves organizations. As organizations, members maintain their own identities, agendas, resources, or organizational values (Ahrne & Brunsson, 2008). By nature, meta-organizations may therefore constitute multi-referential organizations, that bring together non-convergent or even contradictory references and logics (Apelt et al., 2017). In addition to and resulting from these two central parameters – i.e., being an organization and having organizations as members – meta-organizations present other features that may distinguish them from organizations that have individuals as members, thus requiring a different theoretical apparatus (Ahrne et al., 2016; Berkowitz, Bor, et al., 2018).

Meta-organizations are more often than not partial organizations, i.e., they lack one or more decided orders that are otherwise typical of organizations such as hierarchy or central sanctioning power (Ahrne et al., 2016; Berkowitz et al., 2020). They also create a forum among members, consisting in an inter-organizational space in-between, where decision-making is possible (Berkowitz, 2018; Berkowitz et al., 2020). Because they gather potentially competing organizations, meta-organizations also facilitate cooperation among members (Berkowitz, 2018; Berkowitz et al., 2020).

Meta-organizations constitute a peculiar decided order because through them, members internalize their organized and institutional environment (competitors, stakeholders, governments) (Ahrne & Brunsson, 2008; Valente & Oliver, 2018). Yet at the same time, members still maintain their proper decided, organizational boundaries, their specific internal coordination mechanisms, their social norms that may vary from one organization to the next and may even conflict with one another.

Meta-organizing collective action raises very specific issues in terms of joint decision-making capabilities, accountability, and the maintenance of internal social order. These issues are even more salient in governance-mandated meta-organizations dedicated to grand challenges, because grand challenges themselves raise obstacles – such as changing social norms – to collective decision-making.

Grand Challenges and Their Implications for Meta-organization

Grand challenges such as climate change, aging societies, or gender discrimination are always at least partly a result of existing social orders – and perhaps even the manifestation of these. As such, they can be tackled only by changing existing orders effectively. Simultaneously, social orders provide the basic context in which grand challenges unfold and solutions for these challenges can be developed. Yet grand challenges are themselves conceived differently by different stakeholders. These conflicting views and values may therefore affect how knowledge and solutions for the transition are developed (Caniglia et al., 2021).

Because of their complexity and interdependencies, grand challenges are unlikely to be solved through traditional forms of organization (Arciniegas Pradilla, Bento da Silva, & Reinecke, 2022; Doh, Tashman, & Benischke, 2019; Ferraro, Etzion, & Gehman, 2015; George et al., 2016; Kaufmann & Danner-Schröder, 2022). Recent works have emphasized the multiple contributions of meta-organizations as one innovative mode of organization to tackle grand challenges and sustainability issues (Berkowitz, 2018; Berkowitz et al., 2020; Carmagnac & Carbone, 2019; Chaudhury et al., 2016). Indeed, meta-organizations like the IWC, the World Meteorological Organization, the United Nations Environment Programme, or the European Women's Lobby, have been crucial in tackling such diverse challenges as the ozone hole, environmental pollution, species extinction, and gender inequality. Tackling social and environmental problems seems to have become an objective of certain meta-organizations only in the second half of the twentieth century (Berkowitz & Dumez, 2015). These meta-organizations enable member organizations to develop joint solutions, self-regulation or capacity building for sustainability (Berkowitz, Bucheli, & Dumez, 2017; Chaudhury et al., 2016; Karlberg & Jacobsson, 2015).

Multi-stakeholder meta-organizations are particularly well positioned to address grand challenges because they allow member organizations to draw directly on diverse expertise and reflect diverse interests and complementary perspectives (Berkowitz et al., 2020; Berkowitz & Souchaud, 2019; Carmagnac & Carbone, 2019). These multi-stakeholder meta-organizations gather players

from different spheres of society, e.g., public administrations, nongovernmental organizations (NGOs), economic players, and scientific institutions. Yet from that perspective, meta-organizing for grand challenges also poses complex organizational problems, such as geopolitical roadblocks, disagreement on priorities, or free rider issues (Berkowitz et al., 2020).

Grand challenges will be conceived differently by different stakeholders but require collective action at different levels if problems are to be solved. If meta-organizations in particular are needed to govern grand challenges but at the same time the underlying social orders have different views on these, how do meta-organizations cope with the emergence of contradictory social orders and how does that affect their ability to meet grand challenges? Few works have examined closely how governance-mandated meta-organizations cope with contradictory social orders among their members, how different social orders may interfere with each other in the process of meta-organizing, and how this might prevent a meta-organization from effectively tackling a grand challenge.

METHODOLOGY

Our objective is to investigate the creation and maintenance of social orders in meta-organizations, and more specifically how meta-organizations cope with the development of contradictory social orders. We focus on this issue in the context of grand challenges governance. Given the nature of this pervasive phenomenon, an in-depth single case study aimed at theory building appears to be the most appropriate methodology (Eisenhardt, 1989; Yin, 2012). In-depth single case studies can be fruitfully used to analyze how organizations contribute to the mitigation and solution of grand challenges (Arciniegas Pradilla et al., 2022; Karlberg & Jacobsson, 2015). In addition, focusing on a single case study enables us to investigate this complex phenomenon from different viewpoints without having to choose beforehand which types of data to collect (Eisenhardt, 1989; Yin, 2012).

Case Selection

To address our research question, we chose to focus on the IWC and the issue of whaling, which has environmental, social, political, and economic implications, as it provides an exemplar of social order challenges. This case is particularly appropriate for two reasons. First, whales play a crucial role in the functioning of marine ecosystems, and unsustainable whaling practices can potentially trigger a collapse of these ecosystems (Springer et al., 2003). Recent research also demonstrates that whales contribute significantly to climate change mitigation (Chami, Cosimano, Fullenkamp, & Oztosun, 2019). Second, the IWC is a long-standing meta-organization that has successfully contributed to whales' population recovery but had recently faced significant organizational challenges, culminating in Japan's exit, thus undermining global governance efforts.

The IWC is a meta-organization with 88 nation states as members and seeks to address one specific grand challenge, the overexploitation of whales. The

protection of whales is crucial for ecosystem-level marine conservation and sustainable management and therefore for humans (Springer et al., 2003).

Founded in 1946, the historical goal of IWC has been, until recently, the sustainable global management of whaling stocks based on scientific evidence. In other words, the collective goal was initially to facilitate the exploitation of whale stocks. Over the past years, however, and as we will discuss in the analysis, the collective goal has implicitly changed both to whale conservation, preventing the exploitation of whales at all, in seeking answers to environmental issues (overexploitation and the effects of whaling on ecosystems) and to social change toward the protection of whales.

Any country can become a member of the IWC and there is no membership requirement apart from formally agreeing to the 1946 convention (IWC, 1946). Members have a status of “Contracting Government” and delegate a “Commissioner” who represents them (IWC, 2018). Members pay a fee to the IWC (IWC, 2018). In addition, scientists participate in the Scientific Committee to provide scientific evidence for global management. They meet annually and produce an annual report (Vernazzani et al., 2017). While direct members are states, this meta-organization can be characterized as a multi-stakeholder due to the participation of both scientific institutions and government representatives from diverse countries (Gillespie, 2001).

Data Collection and Analysis

Data Collection. This paper relies on a qualitative, in-depth analysis of the evolution of social orders in the IWC. To conduct this analysis, we seek to identify when collective decisions can be made, what they are about, when they can no longer be made, and under which conditions.

We collected primary and secondary data to triangulate our results (Eisenhardt, 1989; Gibbert, Ruigrok, & Wicki, 2008). We first collected primary data drawing on different types of decision archives available on the IWC website: minutes of meetings, formal decisions, scientific reports, press releases, and other documents that allow one to observe the decision-making process at the meta-organizational level (see Table 1). Different bodies in the IWC are taking decisions or informing them, from the “Commission” to the “Scientific Committee,” and we collected documents from these different bodies. These documents are ideal to review historical decisions, especially in a historical perspective like ours, where it would prove difficult to reconstitute the evolution of decisions and the constitution of social orders based on the memory of individual participants. Besides, individual participants are regularly renewed and would therefore lack a holistic comprehension of the case. In addition, the meta-organizational nature of the case raises specific methodological issues that cannot be solved by interviews with individuals (Berkowitz & Dumez, 2016).

We also collected existing and peer reviewed analyses of the IWC, which is a well investigated meta-organization (as synthesized in Table 1), allowing us to enrich our analysis and to triangulate our sources. In total, we collected 35 IWC archives, one International court of justice report of judgment, 12 existing

Table 1. Types of Sources.

Types of documents	Reference	Description
Commission Meeting Reports	https://archive.iwc.int/?c=29604	Reports of IWC Commission Meetings
Commission Meeting Papers	https://archive.iwc.int/pages/themes.php?theme1=01+++The+Commission&theme2=Commission+Meeting+Papers	Archives of the Commission Meeting Documents since 2011
Commission Resolutions	https://archive.iwc.int/?c=72	List of IWC Resolutions adopted since 1976
Commission Workshops	https://archive.iwc.int/pages/themes.php?theme1=01+++The+Commission&theme2=Special+%26+Other+Meetings	Archives of Adhoc Commission workshops
Scientific Committee Meeting Papers	https://archive.iwc.int/pages/themes.php?theme1=03+++IWC+Scientific+Committee&theme2=Scientific+Committee+Meeting+Papers	Scientific Committee Meeting Documents since 2012
Scientific Committee Reports	https://archive.iwc.int/pages/search.php?search=collection73&bc_from=themes	Archives of Scientific Committee meeting reports since 1971
Scientific Committee Workshops	https://archive.iwc.int/pages/themes.php?theme1=03+++IWC+Scientific+Committee&theme2=Scientific+Committee+Workshops	Archives of adhoc scientific committees workshops
Media Resources	https://archive.iwc.int/pages/themes.php?theme1=11+++Media+Resources	IWC newsletter, press releases and other documents
Justice case	<i>(Case concerning Whaling in the Antarctic (Australia v. Japan: New Zealand Intervening), 2014)</i>	Justice case about Japan scientific whaling program
Case study	(Gogarty & Lawrence, 2017)	Justice decision analysis (Japan Scientific Whaling)
Case studies	(Kojima, 2019; Normile, 2019)	Analysis of 2018 Japan exit
Case studies	(Heazle, 2004)	Analysis of the use of scientific uncertainty in IWC
Case studies	(Burns, 2000; Gillespie, 2001; Punt & Donovan, 2007; Reeves, 2002; Vernazzani et al., 2017)	Case studies of the IWC functioning
Case studies	(Bailey, 2008; Kalland, 1993; Mulvaney, 1996)	Case studies about the roles of NGOs in raising social awareness about whaling and in affecting the IWC membership

analyses of IWC, for a cumulative number of 2,420 pages. The richness and diversity of documents were sufficient per se to facilitate a rich reconstitution of our case, without needing additional information through interviews.

Data Analysis. Our analytical strategy aimed to identify and frame the emergence and evolution of social order(s) in the meta-organization. To do so, we made an inventory of key decisions over time and identified to which specific form of social order they belonged. We first selected decisions that are connected to the official goals of the meta-organization, with the assumption that growing votes in favor of a decision against the existing goals hinted at the emergence or reinforcement of a new social order. For that purpose, we listed the number of votes in favor of each key decision. We then sought potential “tipping points,” i.e., the point when the order seemed to tilt from one type to another.

To analyze, structure, and present our findings, we developed a historical narrative of the case, i.e., a “construction of a detailed story from the raw data” (Langley, 1999, p. 695). This narrative is the first main output of our analysis: it enables us to understand ourselves and then to show the reader the dynamics of the meta-organization’s decided order, while at the same time revealing and breaking down the complexity of the case (Lincoln & Guba, 1985).

To build this narrative, we read the collected material about the IWC individually, separately, and repeatedly. We met several times to discuss the different milestones in the IWC history, the key decisions and tipping points of the social orders in the meta-organization. We also discussed our analysis of the key events and of the different orders emerging from the material and how to interpret them. An early key event was Japan’s exit from the organization in 2018. Starting from there, we moved back in history and sought to understand what had led to this exit and how it related to various forms of social order within the meta-organization.

Constructing the narrative also served as a “data organization device” that then guided our more conceptual analysis (Langley, 1999). Based on the narrative, the next step was to unpack (1) the initial social order in the meta-organization, (2) the emergence of an institutional order within the meta-organization that contradicts the social order, (3) the clash of orders within the meta-organization that leads to 4) the creation of “non-decidability” and the exit of Japan. The next section starts with the narrative and then follows these three points.

FINDINGS

Our paper seeks to draw a picture of the different social orders within the IWC and how these orders were created and related in the organizational processes over time. To do so, we make a crucial distinction between decided and institutional social order within the IWC. Our findings are organized in three parts. First, we present the historical narrative of the case by describing the IWC’s history where decisions on whaling are concerned, with some key elements of context. Then we analyze the dynamics of the creation and evolution of social orders in the meta-organization. Finally, we unpack the notions of decidability and non-decidability of social orders.

*IWC History: Pro Versus Anti-whaling Nations and the Evolution of
the IWC's Decisions on Whaling*

Looking back at the meta-organization's decisional history, i.e., the key decisions taken by the meta-organization, the [IWC was established in 1946](#) for the purpose of the “proper conservation of whale stocks” and the “development of the whaling industry” ([IWC, 1946](#), p. 1). It holds annual meetings as well as some special sessions for working groups. [Table 2](#) synthesizes the key dates that are then analyzed in the remainder of this section.

Putting Whaling on Hold Until Further Notice in the 80s. In the period 1973–1981, many whale species were identified as endangered species ([Convention on International Trade in Endangered Species of Wild Fauna & Flora, 1973](#)). At the time, the IWC was repeatedly criticized for unsustainable whaling management. Non-Whaling and even Anti-whaling nations joined the meta-organization and started to gain a majority. The United States in particular, historically a pro-whaling country, became one of its strongest opponents.

In 1982, the IWC approved the first “Moratorium” on commercial whaling with full effect from 1986. It set commercial catch limits to zero to allow whale species to recover:

Notwithstanding the other provisions of paragraph 10, catch limits for the killing for commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero. This provision will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of this decision on whale stocks and consider modification of this provision and the establishment of other catch limits. ([International Convention for the Regulation of Whaling, 1946, Schedule, 2018](#) paragraph 10 (e) page 5)

The decision is not consensual, as 25 countries voted in favor, seven against (Brazil, Iceland, Japan, Norway, Peru, South Korea, Soviet Union), and five

Table 2. IWC Key Social Order's History Timeline.

Date	Description
1946	IWC established for the “conservation of whale stocks” and “development of the whaling industry”.
~1975–	Many whale species are identified as endangered.
1981	IWC is repeatedly criticized for unsustainable whaling management. Non- and Anti-whaling nations become members and gain a majority.
1982	“Moratorium” on commercial whaling, i.e., setting commercial catch limits to zero to allow whale species to recover. Decision is not consensual (25 pro / 7 against / 5 abstention votes)
1994	The RMP for calculating sustainable catch limits is adopted – with the condition of the development of an inspection & observation scheme (RMS)
2007	RMS debate reaches impasse
2018	Publication of an IWC scientific report showing that some species have recovered. Japan proposes a new committee for setting whaling quotas to make catch limits decidable again. Proposal is rejected (41 against / 27 pro votes). Change of main goals is decided. New goal is the recovery of all whale populations to pre-industrial whaling levels (40 pro / 27 against votes). Japan exits the IWC and resumes whaling.

abstained (Chile, China, Philippines, South Africa, Switzerland). While different factors came into play, the moratorium left open the possibility that catch limits might be increased in the future:

There were a number of factors involved in this decision. These included difficulties in agreeing what catch limits to set due to scientific uncertainties in the information needed to apply the management procedure then in place, and differing attitudes to the acceptability of whaling. The wording of the moratorium decision implied that with improved scientific knowledge in the future, it might be possible to set catch limits other than zero for certain stocks. (The Revised Management Scheme, 2020)

Japan, Norway, the Soviet Union, and Peru filed a formal complaint, arguing that the moratorium was not based on scientific evidence delivered by the Scientific Committee of the IWC – beyond the sole identification of endangered species. Forced through international political pressure by the United States of America, Japan soon withdrew its complaint and later began scientific whaling, which remained an authorized form of whaling. The successful implementation of the moratorium was due mostly to the United States, which threatened to sanction countries engaged in illegal whaling, especially by cutting down fish importations. Simultaneously, NGOs such as the World Wildlife Fund (WWF) contributed to raising awareness about the impact of commercial whaling in society. They did so by developing a strategy of “totemization” of whales, beyond any scientific rationale about whaling (Kalland, 1993). After the 1970s, whales “turned into totems, thus dichotomizing mankind into “good guys” (protectors of whales) and “bad guys” (whalers) (Kalland, 1993, p. 124), so that “‘Not killing whales’ became the *default* option” for the anti-whaling nations (Bailey, 2008, p. 299). In other words, NGOs highlight a symbolic value of whales and the necessity of stopping whaling. Furthermore, NGOs also play an active role in increasing the membership composition toward anti-whaling nations (Mulvaney, 1996).

Failed Attempts at Re-organizing Whaling Internationally in the 90s. In 1994, the IWC adopted the Revised Management Procedure (RMP) to calculate sustainable catch limits while developing an inspection & observation scheme (Revised Management Scheme, or RMS for short). A working group for the RMS was established to develop a monitoring system and to ensure that total catch limits are respected. But the negotiations appeared to be extremely difficult. Over the next few years, several new working groups were created to work on different problematic areas, such as catch verification and compliance. However, in 2007 the RMS development reached an impasse due to political disagreements regarding the question whether whaling can be sustainable at all. Over the previous two decades several issues had been introduced as possibly relevant in this respect, such as environmental and climate change during the 50th annual meeting of the IWC in 1998, as well as chemical pollution, ozone depletion, and marine noise (Burns, 2000, p. 336).

Parallely, Japan continued to develop a legal program of scientific whaling. A caveat is in order here. The IWC has allowed two types of whaling: aboriginal and scientific. Indigenous people can conduct aboriginal whaling for cultural

reasons. Aboriginal whaling is strictly monitored to ensure the sustainability of as well as a minimal respect for animal welfare (Reeves, 2002). Scientific whaling is authorized for research purposes at the discretion of the member countries. However, there were growing doubts concerning Japan's use of the program for research purposes. In 2010, two anti-whaling countries that are members of the IWC, Australia and New Zealand, accused Japan of breaching its obligations vis-à-vis the IWC. In 2014, the International Court of Justice ordered Japan to stop its program in the Antarctic Ocean (*Case concerning Whaling in the Antarctic (Australia v. Japan: New Zealand Intervening)*, 2014; Gogarty & Lawrence, 2017). Japan resumed the program in 2016, albeit with a drastic reduction of catches.

Recent Developments at the IWC: From Whaling Management to Whale Conservation. Since 2018, certain whale species have recovered and are no longer considered endangered. This is acknowledged by the Scientific Committee of the IWC¹ for Minke Whales and Bryde's Whales² as well as for parts of the Humpback Whales population:

In central and western areas [Humpback Whales] have recovered to perhaps pre-exploitation levels and number over 12,000 animals. Less is known of the abundance in eastern regions but almost 5,000 animals are estimated in the Norwegian and Barents Seas. They have been increasing off West Greenland...They are vulnerable to entanglement. (*Intersessional Report of the International Whaling Commission, 2018*, p. 15)

As a consequence, in Florianopolis, Brazil, at the 2018 IWC summit, Japan initiated a proposal to create a new committee for setting whaling quotas to make catch limits decidable again. The objective was to make commercial whaling possible again. The proposal was rejected (with 41 against the proposal, 27 pro). At the same summit, the IWC decided to change its main goals, with 40 votes in favor and 27 against. The new goals are the recovery of all whale populations to pre-industrial whaling levels and the implementation of non-lethal management of whale species:

NOW THEREFORE THE COMMISSION:

AGREES that the role of the International Whaling Commission in the 21st Century includes inter alia its responsibility to ensure the recovery of cetacean populations to their pre-industrial levels, and in this context REAFFIRMS the importance in maintaining the moratorium on commercial whaling;

ACKNOWLEDGES the existence of an abundance of contemporary non-lethal cetacean research methods and therefore AGREES that the use of lethal research methods is unnecessary. (IWC/67/13.Rev1.1, 2018, p. 2)

By changing IWC goals to pre-industrial levels, the key function of the meta-organization changes from whaling management to whale conservation and protection. At this point, Japan decided to leave the IWC. The pro-whaling nation then announced that it would resume commercial whaling. This exit highlights a governance failure as the IWC has lost any influence on whaling in Japanese waters. It now needs to achieve sustainable management and whale conservation without Japan, a key player and major contributor to the organization since its creation.

Dynamics of Social Orders Within the Meta-organization

Definition of the Decided Social Order in the Meta-organization. From this history, we identify the following key decisions circumscribing the meta-organizational decided social order:

- The IWC has a standing decision that catch limits can be set to other than zero, which is also still implied in the 1982/86 moratorium.
- The IWC has accepted a management tool for calculating catch limits other than zero (the aforementioned RMP).
- The IWC scientific committee has decided that certain whale species are no longer endangered.
- The IWC has historical (before 2018) overarching goals of management of whaling and development of the whaling industry.
- Only the RMS has been blocked for more than a decade. It is decided that an impasse has been reached.
- Setting the objective of the IWC in 2018 to restore whales to pre-industrial levels mechanically denies the possibility of resuming commercial whaling.

Against the backdrop of these existing meta-organizational social orders, it becomes increasingly obvious for the involved actors that zero catch limits for certain whale species are becoming hard to justify in the internal and scientific logic of the meta-organization. The IWC has explicit goals to support the whaling industry, an implemented management tool for calculating catch limits, an evidence-based assessment that certain species are not endangered anymore, and in general is responsible for *managing* whaling – not simply forbidding it.

Hence, in the logic of the meta-organizational decided orders, there is good reason to argue for setting catch limits to other than zero again. Explicitly referring to this meta-organizational decision history, Japan finally made a fresh attempt to make catch limits re-decidable to values other than zero. By creating a new internal committee responsible for deciding on catch limits, it wanted to make catch limits manageable again. However, the proposal was rejected by the majority of the members, and the IWC stuck to the decision to leave all catch limits at zero. Moreover, the majority of the other members then pushed forward the setting of a new major goal of whale recovery to their pre-industrial levels. This brings us to the role of the member organizations, specifically of those member organizations that have repeatedly blocked all attempts by pro-whaling members to set catch limits to other than zero. In the following section, we will specifically look at the institutional orders which are effective for the anti-whaling members and guide their actions and decisions within the IWC.

Emergence of an Institutional Order of Anti-whaling Members The original moratorium decision in 1982 was grounded in extensive and concrete scientific justifications of whale overexploitation. At that stage, the scientific evidence took priority over commercial and economic interests which had been more present at the time of the creation of the IWC. Whaling catch limits were set to zero because all species for which the IWC was responsible were endangered and hence their potential extinction posed a severe threat to the stability of oceanic ecosystems.

The new decision to change the IWC's goals to restore all whale populations to pre-industrial levels has not been justified in a science-based way as was the case with the arguments advanced in the 1986 moratorium. On the political level, a variety of reasons have been brought up and introduced in the meta-organization over the decades. However, these consist mainly of rather abstract value-laden references such as environmental change. Accordingly, the anti-whaling members refer only to such abstract values but offer no concrete reasons for this new goal. It seems that the anti-whaling members that voted for this resolution did not see the need to justify this decision within the meta-organization or to the public. This lack of justification hints at an institutional order in the form of implicit norms relevant for the pro-whaling members that contrast with the explicit norm buttressing actual decisions.

Institutional orders are those that are taken for granted. They are assumed to be right without questioning that they are. This seems to be the case with the conviction that whaling is per se a bad thing, which is prevalent in anti-whaling countries. While in these countries there was a debate in the 1970s that featured several arguments against commercial whaling (e.g., cruel catch methods, whales' high intelligence), nowadays whaling is seen as "simply inhumane" (Normile, 2019, p. 110). For anti-whaling nations, there should be no whaling whatsoever (Bailey, 2008; Kalland, 1993), and hence, in principle no decidability on whaling catch limits. In the context of such an unquestioned implicit norm that rejects any kind of whaling, the whole idea of making collective decisions about catch limits or sustainable thresholds becomes unthinkable, since catch limits should all and always be set to zero.

The 2018 decision to change the overall goals of the IWC can be considered an act of enshrining the institutionalized "not killing whales"-norm in the IWC statutes. As outlined above, a decision implies alternatives among which one may choose, and hence, decisions require the actualization of more or less rational reasons to justify the selection of one alternative over another. The absence of any justification for the decided goal change indicates that, for the anti-whaling nations, there is no alternative to this change. The decision of the IWC to set a goal for the restoration of all whale populations to pre-industrial levels can be understood as the logical fulfillment of an underlying institutional order on the level of anti-whaling member nations.

This is in sharp contrast to the pro-whaling members of the IWC, especially Japan, Iceland, and Norway, which seek to legitimate their whaling through traditions – and hence also refer to a deeply institutionalized social order relevant for their nations. They indeed defend their right to commercial whaling to perpetuate a cultural heritage, which clearly relates to the continuation of an institutional order rather than a decided one. Even if the consumption of whale meat has decreased substantially in these countries in the past decades, there is still no general disapproval of whaling as unethical, probably due to their history of whaling (cf. Bailey, 2008). On this basis, pro-whaling nations advocate the principle that commercial whaling is not something that should per se be prohibited.

The Clash of Social Orders in the Meta-organization. As long as all concerned whale species were listed as endangered based on scientific evidence, the

institutionalized order of the anti-whaling member organizations (i.e., whaling is to be rejected) was in line with the decided order of the meta-organization (i.e., zero catch limits). However, with the de-endangering of certain species, the institutional anti-whaling order of many members increasingly clashes with the decided orders of the IWC. To certain members, the zero catch limits increasingly appear unjustified in the evidence-based meta-organizational logic buttressed by an explicit scientific norm. To the anti-whaling nations, whaling seems by nature unacceptable, which has become a shared implicit norm, beyond the issues of climate change and depletion of stocks themselves. Fig. 1 synthesizes the evolution of institutional and decided orders in the meta-organization.

In 2018, this clash of contradictory orders finally triggered two significant attempts to change existing social orders within the IWC. First, Japan suggested that a committee be tasked with determining catch limits. Second, the anti-whaling nations conversely offered to define new goals of whale conservation. Both attempts can be interpreted as a result of the clash of social orders at the level of the meta-organization and between levels of the meta-organization and its members. Thereby, on the one hand, Japan’s proposal aimed at building on the existing internal meta-organizational logic of decided orders. On the other hand, the anti-whaling proposal aimed at changing fundamental aspects of the meta-organizational order profoundly in order to ensure congruence with their existing institutional orders at the member level. Finally, the latter proposal was accepted, which induced Japan to leave the IWC.

The Significance of “Decidability” and “Non-decidability” in the Meta-organization

Setting new goals for the meta-organization from sustainable whaling to whale conservation ultimately rendered whaling “non-decidable” since there could no longer be any collective decision about new catch limits. Before 2018, IWC decision-making processes seemed to make raising catch limits possible, at least in principle, even though members always reached a roadblock. Before setting new

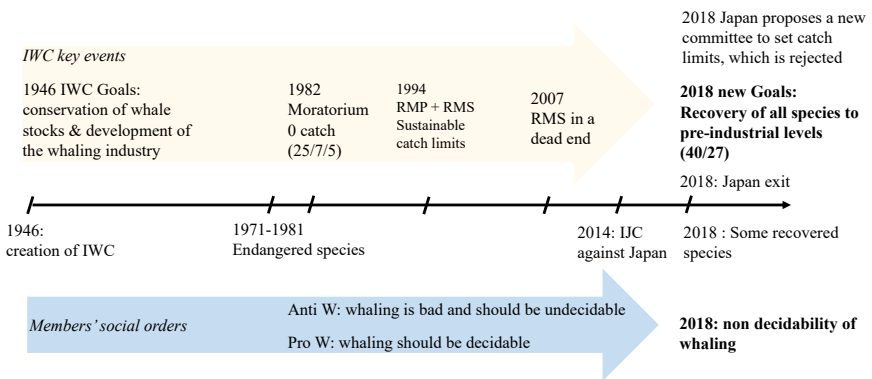


Fig. 1. Evolution of Orders in the Meta-organization.

goals, Japan had never been in favor of the IWC moratorium, and yet it submitted to this decision for decades. In contrast, for instance, to Iceland that simply ignored the moratorium, Japan accepted it and changed its whaling activities mostly in accordance with IWC regulations (which included the possibility of Scientific Whaling). Japan always wanted to change the commercial catch limits again to other than zero and for decades tried on multiple occasions to achieve that. These attempts have always been rejected. And yet, Japan remained in the IWC and accepted the moratorium.

We argue that this can be partly explained by the fact that although the catch limits have remained at zero since 1986, they still appeared to be “decidable.” The decidability of whaling can be understood as a major condition for Japan to remain in the meta-organization. For instance, as already mentioned, in 1994 the IWC adopted the RMP to calculate sustainable catch limits. Moreover, contrary to common belief, whaling has never been prohibited by the IWC. Internally, the IWC simply decided to set catch limits to zero to allow whale species to recover from endangerment. This is the reason why the moratorium is indeed called a “moratorium” and not a “ban” or something similar.

However, the 2018 change of goals, which have become specifically anti-whaling as such, effectively put a new decided order (new goals) on top of the old decided order (zero catch limits) and thereby have cemented the latter and rendered it non-decidable. In other words, the once decided order of zero catch limits has been “locked” in place by the new goals, which make the catch limits virtually unchangeable. In practice, commercial whaling can be considered banned without a chance of redeciding this ban because if anyone would want to change the catch limits, they would from now on have to first challenge and change the new collective goals. Only through a collective decision to change these new goals, could the catch limits become decidable again. Hence, Japan can no longer assume the possibility of making a new decision on the catch limits since there is no decidability any longer. The consequence is that, for Japan, the newly non-decidable order has no legitimacy anymore since this order has no institutionalized grounds.

DISCUSSION

Our work contributes to the debate about essential questions of how social order is achieved and maintained (Ahrne & Brunsson, 2011; Luhmann, 2020; Turner, 2013). It also connects with recent debates about the intertwining and compatibility of social orders (Laamanen et al., 2020). Our paper provides a better understanding of how the layering of social orders in meta-organizations may affect their functioning and ultimately their ability to tackle grand challenges. We combine sociological theories of organization and business studies’ perspectives on grand challenges with the fundamental social theory of social order.

Our study shows (1) how different kinds of social orders may clash in a meta-organization, (2) how certain meta-organizational decisions may render existing decided orders virtually unchangeable in future decisions, and (3) how such a radical transformation may affect membership inclusion.

Regarding the first point we illustrate how the decided orders on the meta-organizational level are highly contradictory to institutionalized orders of parts of the member organizations. With the decision on the moratorium, pro-whaling members' institutionalized order of approving commercial whaling stands in direct opposition to the decided order of the moratorium. Nevertheless, over decades, pro-whaling countries have continued to participate in the IWC and especially, even Japan voluntarily accepts the moratorium as a binding premise for her national policies. However, over time, other meta-organizational decided orders – i.e., especially the scientific outputs of the IWC that question the legitimacy of the zero catch limits – are increasingly at odds with the anti-whaling members' institutional orders of “not killing whales.” This ultimately leads these member organizations to change the meta-organizational orders to match these to their own institutional orders. This comes at the cost of permanently cementing these orders in significant contradiction to pro-whaling members' institutional orders, leading to Japan finally leaving the IWC. We derive from this insight the following proposition:

P1: In a meta-organization that features joint decision-making, meta-organizational decided orders can be accepted by member organizations for long periods even if the members feature fundamentally contradictory institutional orders, as long as the meta-organizational orders remain in principle changeable by decision, i.e., decidable.

In that regard, we define decidability as a parameter of social orders, describing the possibility of successfully reaching collective decisions about an object that belongs to the collective's mandate, at the meta-organizational level. In other words, by decidability, we do not mean that a meta-organization needs to constantly achieve consensus about something, but only that a decision can be in principle made by the collective about certain issues within the parameter of its mandate.

Correspondingly, non-decidability describes the inability of a meta-organization to reach collective decisions about its own mandate. In the case of the IWC, recovering pre-industrial levels of whale stocks means concretely that commercial whaling can no longer be the object of meta-organizational decisions. So, as we have also seen, meta-organizational orders might also be changed in cases in which they contradict member organizations' institutional orders while some member organizations hold a majority.

P2: If a majority of member organizations see a “clash” between their institutional orders and the meta-organizational decided orders, they might abruptly change the meta-organizational orders through majority decisions to match the institutional orders.

As we have seen, this abrupt change of the meta-organizational order can take rather extreme forms. In our case the majority of anti-whaling members introduced the new overarching goal to restore all cetacean populations to pre-industrial levels, which provided an entirely new rationale for the existing moratorium on commercial whaling. We argue that this new goal factually “locked” the decided order of zero catch limits in place. In more formalized terms, order A (the rule that all whaling quotas are set to zero) is fixed permanently in place and can from now on only be changed if the new order B (the new organizational goal

of restoring whale populations to pre-industrial levels) is changed beforehand – hence, only by removing the obstacle that “locks” order A. Hence, we derive our next proposition:

P3: In a meta-organization that features joint decision making, a certain decidable social order A can be made non-decidable by changing or creating another decided order B as a premise for A that no longer allows a decision on A.

We argue that maintaining decidability can be an organizational condition of governance success. Here, we understand governance success not only as concrete outcomes, e.g., restored whale stocks, but also as retaining members in the meta-organization and implementing and following collectively decided rules at the meta-organizational level. When there is no shared consensus among members but the meta-organization maintains decidability about an issue, members can voice their dissent but they may remain loyal to the meta-organizational decided order, in [Hirschman's \(1970\)](#) terms. In these cases, the acceptance of decided orders is maintained through inclusive decision-making, even if the decision outcome might not be what the participating actors desired ([March, 1994](#), pp. 167–168).

Non-decidability, however, may lead to dissident members' exits, because these members now do not have even a remote possibility any longer of adjusting the meta-organizational order to their own institutional order. For them, the contradiction between orders suddenly becomes permanent and indefinitely insoluble. From a membership composition perspective, homogenization of members can be achieved by creating non-decidability, which leads to either the exit of misaligned members or the conversion of the remaining members.

Therefore, we argue that the abrupt emergence of the non-decidability of meta-organizational social orders can have a negative impact on membership, and ultimately on governance success:

P4: The non-decidability of a meta-organizational decided order that strongly contradicts the institutional orders of a member organization, may motivate a member organization to leave the meta-organization, because of the factual impossibility of eventually resolving the contradiction.

Our work complements recent works in communication and political science literature that have analyzed drivers of Japan's withdrawal from an economic or international relations perspective ([Holm, 2019](#); [Kojima, 2019](#); [Yuya, 2019](#)). These media analyses and some political science literature offer valuable insights into some factors which probably have contributed to Japan's withdrawal and the IWC's recent governance failure. However, to the best of our knowledge, no work has focused on the significance of social orders in these matters. By investigating whether and how meta-organizations might cope with the emergence of contradictory social orders, we argue that the sudden establishment of non-decidability, may constitute a key challenge for governance success and membership loyalty.

In that same line, these results finally complement recent works on grand challenges ([Arciniegas Pradilla et al., 2022](#); [Eisenhardt, Graebner, & Sonenshein, 2016](#); [Ferraro et al., 2015](#); [George et al., 2016](#); [Kaufmann & Danner-Schröder, 2022](#)) by highlighting the relevance, importance and difficulties of maintaining

decided social orders for governance. In that perspective, we more specifically contribute to the meta-organizational literature. Recent works have emphasized the value of meta-organizations as an innovative mode of organization to collectively tackle grand challenges at a meta-level (Berkowitz, 2018; Chaudhury et al., 2016). In particular, the literature has highlighted the significance of multi-stakeholder membership to jointly design solutions, i.e., by gathering members with different or even contradictory views that, however, bring the diverse expertise needed to address the complexity of grand challenges (Berkowitz et al., 2020; Carmagnac & Carbone, 2019). This, however, complexifies not only decision-making but also the creation and maintenance of social orders. Little work had examined the effects of the “layering” of organization in meta-organizations closely (Grothe-Hammer et al., 2022), especially on the collective’s ability to govern grand challenges. Layering organization implies both multiple decision processes and multiple social orders that may interfere with each other. We contribute to this issue by showing the significance of decidability of social order as a boundary condition for meta-organizational governance of grand challenges. While contradictory, institutional, and decided social orders may coexist, their layering would not prevent governance as long as the premise for collective action remains decidable.

Here the main limit of our findings lies in the specificities of the single case study of an international meta-organization, with countries and scientific representatives as members. We believe our results can apply to other settings, such as meta-organizations with even more diversified membership, or on the contrary homogeneous meta-organizations, tackling other types of grand challenges, and at different levels of action, whether local, regional, national, or international. However, our assumptions need further testing in these various settings, which provide many new research perspectives. Future research could fruitfully investigate whether and how decidability is easier to maintain depending on the degree of membership’s cohesiveness, or of the specificity of the challenge (Berkowitz et al., 2017). One major effect of non-decidability was membership exit. It could prove interesting to further investigate whether the locking of a social order can be solved or bypassed through other means, for instance by drawing on other elements of organizationality, relative to decision-making, actorhood, or identity construction at the level of the meta-organization (Grothe-Hammer et al., 2022).

NOTES

1. It is noteworthy that the Scientific Committee had acknowledged this in general since the early 1990s but only to a very limited degree. In 1993, the Chairman of the IWC Scientific Committee even resigned in protest against the IWC’s refusal to resume commercial whaling (Bailey, 2008).

2. <https://iwc.int/status>

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COMMITMENT TO GRAND CHALLENGES IN FLUID FORMS OF ORGANIZING: THE ROLE OF NARRATIVES' TEMPORALITY

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ABSTRACT

Organization and management scholars are increasingly interested in understanding how “fluid” forms of organizing contribute to the tackling of grand challenges. These forms are fluid in that they bring together a dynamic range of actors with diverse purposes, expertise, and interests in a temporary and nonbinding way. Fluid forms of organizing enable flexible participation. Yet, they struggle to gain and sustain commitment. In this case study of the SDG2 Advocacy Hub, which supports the achievement of zero hunger by 2030, we explore how the temporality of narratives contributes to actors' commitment to tackling grand challenges in fluid forms of organizing. In our analysis, we identify three types of narratives – universal, situated, and bridging – and discern their different temporal horizons and temporal directions. In doing so, our study sheds light on the contributions by the temporality of narratives to fostering commitment to tackling grand challenges in fluid forms of organizing. It suggests the importance of considering “multitemporality,” i.e., the plurality of connected temporalities, rather than foregrounding either the present or the future.

Organizing for Societal Grand Challenges

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INTRODUCTION

Organization and management scholars are increasingly interested in gaining an understanding of “grand challenges,” defined as multidisciplinary “barrier(s) that, if removed, would help solve an important societal problem with a high likelihood of global impact through widespread implementation” (George, Howard-Grenville, Joshi, & Tihanyi, 2016, p. 1881). Such interest also involves the generation of insights on how the tackling of grand challenges is organized and managed across organizational boundaries, with what challenges, and with what effects. One example is the Sustainable Development Goals (SDGs) adopted by the United Nations (UN) in 2015, which constitute “a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030” (UN, 2020a). What makes achieving SDGs such as “zero hunger” (SDG2), “decent work and economic growth” (SDG8), and “responsible consumption and production” (SDG12) grand challenges is their large-scale, complex, and intractable nature. The tackling of grand challenges, therefore, requires actors with different expertise and goals to commit to finding ways forward together (Mair, Wolf, & Seelos, 2016). As the UN (2020b) affirms, “to make the 2030 Agenda a reality, broad ownership of the SDGs must translate into a strong commitment.”

Promoting and sustaining commitment to tackling grand challenges is a complex organizational problem (see Kanter, 1968), as it involves transcending organizational, disciplinary, and geographical boundaries (George et al., 2016; Grodal & O’Mahony, 2017). Enabling commitment is particularly challenging in contexts involving fluid forms of organizing due to their flexible, open, and boundary-spanning nature “based on relentlessly changing templates, quick improvisation, and ad hoc responses” (Schreyögg & Sydow, 2010, p. 1251). Although fluid forms of organizing enable diverse actors to participate in tackling important issues (Seidl & Werle, 2018), such issues are often detached from actors’ core tasks (du Gay, 2005) and everyday work (e.g., Brès, Raufflet, & Boghossian, 2018) in their respective organizations, which is where commitments to the future must be made to successfully tackle grand challenges.

Examining narratives and storytelling constitutes one promising approach to understanding how commitment to tackling grand challenges can be achieved in contexts involving fluid forms of organizing. As prior research shows, narratives enable actors to find joint ways forward amid divergent understandings, expertise, and interests (e.g., Chreim, 2005; Cunliffe, Luhman, & Boje, 2004; Hernes, Hendrup, & Schäffner, 2015), especially with regard to sustainability initiatives (Haack, Schoeneborn, & Wickert, 2012). Narratives bring together actors’ different experiences and interpretations of the past, present, and future, thus contributing to strong bonds between actors within present actions (Hernes & Schultz, 2020). Yet, despite the recognized importance of narratives in driving

actors' commitment to tackling important large-scale issues, we know little about the types of narratives involved in this process or the roles of different temporalities therein. Hence, the guiding question of our study is: *How does the temporality of narratives contribute to actors' commitment to tackling grand challenges in contexts involving fluid forms of organizing?*

THEORETICAL BACKGROUND

Grand Challenges

Grand challenges have been a topic of academic debate for at least a century. The original aim was to spur interest in “solving” particular problems to generate breakthrough insights within specific disciplines of the natural sciences (George et al., 2016; Howard-Grenville, 2020). Organization and management scholars have begun to focus on grand challenges rather recently (Ferraro, Etzion, & Gehman, 2015; Gehman, Etzion, & Ferraro, 2022; George et al., 2016; Gümüşay, Claus, & Amis, 2020). In contrast to earlier literature, the emergent organizational literature highlights that it is difficult, if not impossible to “solve” grand challenges as if they were mathematical problems with unambiguous solutions. grand challenges are “seemingly ‘intractable puzzles’” (Howard-Grenville, 2020, p. 3) for at least two reasons.

First, although varying definitions of grand challenges exist, organization and management scholars generally view grand challenges as large-scale, complex, and intractable societal problems (e.g., Ferraro et al., 2015; Mair et al., 2016). As such, grand challenges “‘resist’ easy fixes” (Porter, Tuertscher, & Huysman, 2020, p. 248) on a local scale and “lack a clear solution” (Grodal & O’Mahony, 2017, p. 1801) that would ensure their complete disappearance. Therefore, involved actors must sustain their commitment (George et al., 2016) to “tackling” grand challenges on a continuous basis in order to counteract repercussions that may emerge along the way.

Second, the large-scale, complex, and intractable nature of grand challenges emerges partly because these problems typically affect and are produced by multiple groups of actors with heterogeneous interests (Mair et al., 2016). This plurality implies that grand challenges defy unidimensional and unilateral approaches, and “require collaborations across multiple parties” (Schad & Smith, 2019, p. 56). Such collaborations involve “working across [organizational] boundaries” (Martí, 2018, p. 969), bringing together actors with different backgrounds, expertise, and interests, and enabling the creation of shared understandings of a specific grand challenge (Seidl & Werle, 2018). Such shared understandings enable actors to envision, articulate, and potentially commit to joint paths forward because they “build on and apply knowledge generated in multiple disciplines” (Mair et al., 2016, p. 2023).

The multidisciplinary, heterogeneous, and boundary-spanning nature of tackling grand challenges raises questions about how such efforts can be organized effectively and how commitment to shared courses of action can be achieved (Kaufmann & Danner-Schröder, 2022). Conventional forms of organizing,

characterized by hierarchical and entrenched structures and processes, and guided by self-referential strategic goals (see [Puranam, Alexy, & Reitzig, 2014](#)) are potentially unproductive for tackling grand challenges due to two interdependent reasons. First, these forms of organizing are partly responsible for producing and sustaining grand challenges, as they often continue to rely on unsustainable managerial and organizational practices ([George et al., 2016](#)). Second, the primacy of self-referential strategic goals that permeate conventional forms of organizing implies that it is difficult, if not impossible to engage in and generate commitment to shared interests and boundary-spanning activities if such activities do not contribute to achieving these goals ([Grodal & O'Mahony, 2017](#)).

Fluid Forms of Organizing

A recent yet growing literature delves into the nature, dynamics, and possibilities of fluid forms of organizing, shedding light on promising alternatives for organizing multidisciplinary, heterogeneous, and boundary-spanning efforts directed toward tackling grand challenges. Fluid forms of organizing circumscribe ways of coordinating activities that have been loosely referred to as “new” ([Palmer, Benveniste, & Dunford, 2007](#)), “postbureaucratic” ([Ashcraft, 2005](#)), and “unconventional” ([Brès et al., 2018](#)), among others. The identified array of and notions associated with such forms of organizing are broad. Among others, these forms of organizing relate to the coordination of activities in social collectives that defy common definitions of “organization,” such as hacker collectives ([Dobusch & Schoeneborn, 2015](#)), digital work platforms ([Gegenhuber, Ellmer, & Schüßler, 2021](#); [Gegenhuber, Schüßler, Reischauer, & Thäter, 2022](#)), terrorist groups ([Schoeneborn & Scherer, 2012](#)), and grassroots initiatives ([Daskalaki, Fotaki, & Sotiropoulou, 2019](#)).

Despite their empirical plurality and diverse labels, fluid forms of organizing have a shared conceptual core that sets them apart from conventional forms of organizing. Specifically, whereas fluid forms of organizing may partly involve governance structures and/or roles, the majority of their participants or contributors are not bound to them through formal commitment mechanisms, such as contracts or hierarchies ([Brès et al., 2018](#)). This conceptual core of fluid forms of organizing manifests in at least four important ways.

First, unlike the rigid, entrenched, hierarchy-based nature of conventional forms of organizing, fluid forms of organizing are more flexible in character ([Schreyögg & Sydow, 2010](#)). This flexibility is carried out by more distributed ways of coordinating work that are rarely aligned with hierarchy-based coordination and control. Hence, instead of focusing attention on formal position and status, fluid forms of organizing typically put actors' expertise in the coordination of activities center stage ([Kornberger, 2017](#)).

Second, fluid forms of organizing typically transcend organizational boundaries. This is enabled by greater openness ([Dobusch, Dobusch, & Müller-Seitz, 2019](#)). That is, fluid forms of organizing typically allow actors to participate even if they are not formal members ([Dobusch & Schoeneborn, 2015](#)). In doing so, they provide the means for bringing together actors with different disciplinary backgrounds and expertise, even across organizational boundaries, to accomplish common goals and objectives.

Third, fluid forms of organizing are not bound exclusively to the achievement of unidimensional, self-referential goals and objectives. Instead, they are often driven by social (Arciniegas Pradilla, Bento da Silva, & Reinecke, 2022), religious (Gümüşay, 2015), and ecological purposes (Schüßler, Rüling, & Wittneben, 2014), among others, many of which extend beyond the realms of conventional organizations. This does not mean that goals and objectives pursued through fluid forms of organizing may not partly be self-referential, especially when oriented toward achieving greater flexibility for the production and distribution of innovations (e.g., Carroll & Morris, 2015). However, the flexibility and openness of fluid forms of organizing imply that actors can pursue various interests, many of which extend beyond those driven by their organizations' specific strategic goals.

Fourth, in contrast to their conventional counterparts, fluid forms of organizing at best incentivize, but do not obligate participants to contribute to collective activities. Hence, organizational fluidity also comes into being through the nonbinding nature of actors' participation (Schreyögg & Sydow, 2010). Thus, the ongoing renewal of actors' commitment becomes a critical coordination task when fluid forms of organizing dominate.

Enabling Commitment Through Narratives

In tackling grand challenges, fluid forms of organizing experience a tension. On one hand, they can make important contributions to coordinating activities aimed at tackling grand challenges. In contrast to conventional forms of organizing, fluidity makes it possible to cross organizational boundaries to bring together a shifting heterogeneous set of actors with different areas of disciplinary expertise and varied interests. This fluid coming together enables ongoing collective sense-making of what grand challenges mean and what addressing them entails, and the envisioning of joint courses of action.

On the other hand, fluid forms of organizing may partially undermine efforts to tackle grand challenges. In contrast to conventional forms of organizing, actors' participation in activities coordinated via fluid forms of organizing is non-binding. Tackling grand challenges, however, is a process that requires ongoing commitment from actors to participate in finding and maintaining sustainable ways forward. Fluid forms of organizing thus face an important difficulty in enabling and sustaining commitment among actors with diverse interests and flexible participation.

Commitment is defined as "the willingness of social actors to give their energy and loyalty to social systems" and as a "process through which individual interests become attached to the carrying out of socially organized patterns of behavior which are seen as fulfilling those interests" (Kanter, 1968, p. 499). Commitment to collective action involves engagement in consistent lines of activity (Becker, 1960). In the context of voluntary associations, commitment has been found to increase with communication and involvement in decision-making (Knoke, 1981). As Salancik (1977, p. 63) explained,

behavior is what is being committed, because behavior is a visible indicator of what we are and what we intend to do. Our behavior leads to expectations about what we will do in the future.

As prior research shows, narratives play an important role in gaining and sustaining such commitment (e.g., Barry & Elmes, 1997; Hernes et al., 2015; Sonenshein, 2010), especially when implementing sustainability initiatives (Arciniegas Pradilla et al., 2022; Haack et al., 2012; Kroeger, Siebold, Günzel-Jensen, Saade, & Heikkilä, 2022; Schoeneborn, Väsques, & Cornelissen, 2022). Narratives are “temporal, discursive constructions that provide a means for individual, social, and organizational sensemaking and sensegiving” (Vaara, Sonenshein, & Boje, 2016, p. 496). They support the gaining and sustaining of commitment due to their built-in temporality, i.e., their often implicit references to and connections between the past, present, and future (Polletta, 1998). The temporal orientation of narratives enables actors to construct interpretations (Meretoja, 2017) and joint paths forward amid plural understandings and interests (e.g., Chreim, 2005; Cunliffe et al., 2004; Kaplan & Orlikowski, 2013), thereby enabling them to “respond to questions pertaining to the very meaning of acting together” (Hernes et al., 2015, p. 127).

In the collective meaning-making processes underlying sustainability initiatives, narratives foregrounding the future are often essential for generating commitment, yet are worked with in different ways (Wenzel, Krämer, Koch, & Reckwitz, 2020). Specifically, actors may shorten the time horizons by referring to the present and near future; or they may reach out into the distant future (Hernes & Schultz, 2020). Relatedly, actors may formulate and project a shared future goal that guides, motivates, and legitimizes action in the present, or they may work toward a shared future goal (Crilly, 2017). The main difference between these approaches is, again, temporal in nature. That is, narratives make connections in two directions: backward, thereby linking the future with concerns of the present; and forward, thereby linking the present with projections of the future. As Reinecke and Ansari (2015) showed, such temporalities collide at times, and suggested the notion of “ambitemporality” to denote actors’ efforts to work through conflicts between temporalities.

Actors make sense of these temporal dynamics through storytelling activities in the present (Hernes & Schultz, 2020). Yet, despite the importance of these dynamics in sustainability initiatives in particular, and in organizing more generally (e.g., Haack et al., 2012; Hernes et al., 2015), we still know little about the role that the temporality of narratives plays in fostering actors’ commitment in fluid forms of organizing. Thus, the guiding question for our paper is: *How does the temporality of narratives contribute to actors’ commitment to tackling grand challenges in fluid forms of organizing?*

METHODS

The setting for our case study was the SDG2 Advocacy Hub, which seeks to bring together and amplify the work of diverse key actors such as NGO representatives, advocacy groups, civil society, private sector, and UN agencies to support the achievement of zero hunger by 2030. The hub provides a platform that enables actors to meet, share expertise and ideas, and collaborate on campaigns. In this

sense, the SDG2 Advocacy Hub is characterized as a fluid form of organizing given the characteristics elaborated above: (1) with only three permanent employees, a lack of hierarchy-based forms of governance and control, and a reliance on distributed ways of coordinating work, the hub is flexible in nature; (2) the bulk of actors involved as “hub members” work for and are driven by goals and interests of other organizations; (3) in doing so, these actors engage in jointly pursuing a plurality of goals and interests; and (4) engagement in the hub’s activities is voluntary and nonbinding, thus requiring continual efforts to gain and sustain the hub members’ commitment. Finding ways to gain and sustain these diverse actors’ commitment to tackling the food challenge is a difficult task. Therefore, according to a “new game plan” (Hub Website, July 2020), the main task of the hub was to build commitment to tackling SDG2.

Our interest in the role of the temporality of narratives arose in the field. Specifically, we were intrigued by the observation that, despite the flexibility and nonbinding nature of the hub’s activities, the hub members displayed continuity concerning their participation in these activities. Among others, this manifested in many hub members’ reappearance in the hub’s monthly meetings with active contributions to tackling SDG2 as joint overarching interest. Thus, they displayed commitment in [Kanter’s \(1968, p. 499\)](#) sense, namely, as “socially organized pattern [...] of behavior which [is] seen as fulfilling those interests.” Importantly, the hub’s members focused almost exclusively on creating, sharing, and disseminating future-oriented narratives that sought to ensure and amplify diverse actors’ commitment. Given the lack of plausible rival explanations, we became interested in the activities of the SDG2 Advocacy Hub as a revelatory case that renders salient the role of the temporality of narratives in gaining and sustaining actors’ commitment to tackling grand challenges.

Background: SDG2 “Zero Hunger” – For a Better Food Future

As part of a broader vision to create “peace and prosperity for people and the planet, now and into the future” ([UN, 2020b](#)), one of the key goals that the UN member states aim to achieve by 2030 is SDG2: Zero Hunger. The aim is to “end hunger, achieve food security and improved nutrition, and promote sustainable agriculture” by ([UN, 2020c](#)): (2.1) providing safe, nutritious, and sufficient food for all people on a continuous basis; (2.2) ending all forms of malnutrition; (2.3) doubling agricultural productivity and income of small-scale food producers; (2.4) ensuring sustainable food production systems and implementing resilient agricultural practices; and (2.5) maintaining genetic diversity of seeds, cultivated plants, and farmed and domesticated animals and their related wild species. Each of these five targets is addressed by different sets of actors from diverse organizations, including: advocates from humanitarian aid organizations (SDG2.1); representatives from the United Nations System Standing Committee on Nutrition (UNSCN), Harvest Plus, the International Fund for Agricultural Development, Power of Nutrition, and other nutrition-oriented foundations (SDG2.2); members of research collectives on agriculture, humanitarian aid, and CEO sustainability, and representatives of various foundations (SDGs 2.3 and 2.4); and

policymakers who regulate food systems such as the EAT Lancet Commission on Food, Planet, Health; The Food Forever Initiative; and Integrated Seed Sector Development (SDG2.5).

Setting: SDG2 Advocacy Hub

The origins of the SDG2 Advocacy Hub date back to 2016 when several service firms explored the viability of a hub for addressing issues of hunger in informal back-and-forth dialogues. They secured funding for a research report which, together with a landscape analysis, was developed in consultancy with What World Strategies and Vision Campaign Works, two experienced professional service firms specialized in designing and driving policy campaigns. Because this report was commissioned as “a project for” the UN branch organization World Food Program (WFP), we refer to it as the WFP report in the remainder of the text. The 2016 WFP report revealed an overcrowded hunger and nutrition sector, with over 20 global networks already in place and little space for additional initiatives organized through conventional workshops and meetings; the report also highlighted a need for a new approach, quoting one interviewee as saying: “Please no, not another workshop!”

In the recollections of the Director of the SDG2 Hub Secretariat, establishing the hub was “like setting up a start-up” and in 2017, it involved incubation at the WFP. By the nature of its mandate on food, the WFP agreed to hold the hub

in trust for a bigger group of people, which represented civil society, private sector, UN, ... because you need to have some organizing entity to start with ... especially if donor funds are involved. (interview)

The WFP provided some initial funding to manage the SDG2 Advocacy Hub, but subsequent funding sources remained anonymous, as part of the hub’s strategy was to remain unbranded in order to provide “neutral ground” for engagement of diverse actors. The hub leader, who worked as a consultant to the WFP communications team during the incubation period, began coordinating digital and public engagement for SDG2 advocacy. In 2018, the SDG2 Advocacy Hub became an independent entity managed by its own secretariat and a governance body with advisory competences on strategy and resource allocation, referred to as “the Bridge.” Currently, the Bridge consists of 12 organizations, including WFP, EAT, the Bill & Melinda Gates Foundation, Save the Children, etc., and takes a long-term view of advocacy, working with a 10-year time horizon. Importantly, the hub director does not have formal power to obtain and sustain relevant actors’ commitment; he needs to persuade and inspire additional actors to participate in an initiative that is worth realizing.

Data Collection

During a one-year study of the SDG2 Advocacy Hub’s initiatives, we collected data through participant-observation of live and online events, as well as from relevant documents.

Participant-observation. Our primary data source consisted of observations recorded while participating in events organized by the SDG2 Advocacy Hub.

The hub leader and the so-called “SDG2 hub advocates,” i.e., members who, by signing up, implicitly agreed to support and amplify actions toward achieving SDG2 goals in their respective fields, initiated these events to bring together different organizational agendas in order to create a shared narrative for SDG2 and formulate a strategy for the year to come. In August 2018, the first and third authors of this paper negotiated field access by participating in an event related to SDG2.5. We conducted an interview with the hub leader, which was recorded. In this interview, we asked to follow other important events. Among others, he recommended that we participate in an SDG2 strategy event in Washington, DC in the spring of 2019 to gain insights into how the hub is organized.

The first author participated in the Washington, DC event as well as other key events suggested in the interview. In addition, she participated in follow-up events in 2019 to develop strategies based on agreements negotiated during live events. Observations were recorded in extensive field notes, which detailed actors’ conversations and behaviors throughout the events, as well as impressions formed during informal interviews with advocates during breaks. In these nine recorded interviews, she asked about their backgrounds, why they were part of the hub, what they gained from it, and what they thought about the event in which they were participating. Through these informal interviews, we gained an in-depth understanding of participants’ expertise and interests, the hub’s challenges and opportunities, and, most importantly, the ways in which the hub leader fostered participants’ commitment to tackle the grand challenge despite the fluid, non-binding nature of this form of organizing. Overall, we collected detailed field notes from five live events and four online events, amounting to 10 full days of participant-observation.

Documents. We supplemented our participant-observation data with documents from SDG2 and the hub websites. These documents included reports detailing initiatives and successes, videos from global meetings, SDG2 promotion materials, invitations, and pictures. In addition, we collected the hub’s newsletters, promotion videos, meeting notes, and initiative statements. From February 2019 to February 2020, we also downloaded the hub’s online calendar, which was shared with all actors to coordinate their activities. Overall, we gathered 172 documents.

Data Analysis

We simultaneously engaged in data collection and analysis, following an abductive process of shifting back and forth between data and theory. At the first event we attended, the underlying politics of participants representing different interests attracted our attention. This initial point of access led us to note differences between participants’ behaviors. Whereas the hub leader’s speeches seemed rehearsed and the materials that were distributed seemed professional, other participants voiced a desire to enact change in presentations that were relatively unrefined. As a result, several themes stood out in this initial phase: the “advocacy hub” itself and how it was organized, hunger issues, as well as “the need to fix the broken food system,” “amplify change,” and the hub’s motto “act now.”

Participating in the event in Washington, DC enabled us to develop additional insights into the hub’s political realities as well as the broader context and

complexity of SDG2. The most prominent theme that emerged when analyzing field notes and documents was the importance of advocacy, narratives, and communicative spaces, and the need to unite the diverse actors operating in the SDG2 field. Given the prevalence of narratives, we decided to explore these further. Revisiting prior literature (Vaara et al., 2016), we came to appreciate the temporal aspects inherent in narratives. Overall, “the intertwining of the past, present, and future – in different forms – is germane to all narratives” (Meretoja, 2017, p. 50). Of particular relevance for change-directed collective efforts, such as mobilization for tackling grand challenges, is their “temporally configurative capacity ... to integrate past, present, and future events” (Polletta, 1998, p. 139). Examining the narratives and their underlying temporalities, we identified three main types of narratives – universal, situated, and bridging – that differed in terms of their temporal horizon and direction.

In analyzing the data further, we focused on the commitment to tackling hunger issues constructed in relation to the temporal directions of these narratives. Hence, we interpreted commitment and narrative creation as co-constitutive. Similar to others (Vaara et al., 2016), we view narratives as actions, rather than mere words that do not commit actors to future actions. From this perspective, commitment to narratives occurs through their influence on our understandings; simultaneously, actors co-construct narratives’ social, ethical, or temporal boundaries (Dittrich, 2022; Hernes et al., 2015; Meretoja, 2017). Based on this understanding of narratives and commitment, we zoomed in on how the identified narratives contributed to actors’ commitment to tackling SDG2.

FINDINGS

The Importance of Narratives for Commitment

The SDG2 Advocacy Hub brought together actors that, except for sporadic overlaps of interests, took part in different networks and lacked longer-term commitment for coordination:

For example, most groups working on nutrition are also working on hunger, however not all those working on hunger are active on nutrition [and] ... many of the hunger-focused groups are more likely to be involved in networks around poverty and climate change, than nutrition networks. (WFP report)

The working groups for specific targets were somewhat profession-bound, further complicating the achievement of coordinated efforts toward achieving SDG2, despite tremendous expertise. The WFP report detailed these coordination problems in light of the profusion of networks and initiatives:

There is not one specific campaigning messaging or narrative taking hold in the sector at the moment ... and in particular the communication space that covers global hunger and malnutrition is not as high as it could be despite a growing interest and funding for this grand challenge.

The discussions related to envisioning the SDG2 Advocacy Hub concluded that, in order to make an impact on policymakers, it would be essential to unite the polyphony of expertise and interests inherent in the fluid character of the

hub to establish a joint and enduring commitment for tackling SDG2 as a grand challenge. It was agreed that the establishment of shared narratives could constitute such commitment. A discussion paper which included a landscape analysis defined the overarching goal and opportunity for the SDG2 Advocacy Hub: “The right messaging could find fertile ground in one of a number of forthcoming political opportunities.” Therefore, for all initiatives aimed at achieving the five SDG2 targets, the hub organized its activities around the creation and dissemination of narratives, seeking to “amplify and share messages” (SDG2.1) and to “develop a narrative and toolkit for advocates [to] support ... mobilization efforts” (SDGs 2.3 and 2.4).

Two firms, What World Strategies and Vision Campaign Works, provided professional support in working with narratives, such as expertise and training. They advised the advocates to focus language on the “crowded communication space” and to develop a “combined narrative and messaging.” The intention of this narrative strategy was to “weave together a top-line message that combines the policy objectives of the broader networks.” The WFP report concluded that

adapting the Zero Hunger Challenge would be enough of a policy platform for the initiative and would allow it to have boundaries to its focus while not excluding partners or getting bogged down in detailed policy debates.

In collaboration with experienced consultants from the two agencies, the SDG2 Advocacy Hub leader involved various actors of the SDG2 field, seeking to build a framework that could bring together the loosely connected field actors’ narratives into broader narratives that would resonate with the SDG2 goal of zero hunger. During an interview, he explained: “part of the value of this [SDG2 hub] process is building a framework ... [that] actually helps them connect to these kinds of broader narratives and conversations.”

Hence, the hub’s activities were organized around “the power of narrative” (interview) – the collective creation and dissemination of stories that would continually bring people together and gain their commitment for tackling SDG2 across organizations. Some of the central participating organizations that later became SDG2 advocates include the Alliance to End Hunger, AGRA, Save the Children, Global Citizen, the Eleanor Cook Foundation, the Bill & Melinda Gates Foundation, World Vision, Scaling Up Nutrition, IFAD, the EAT Foundation, 1,000 Days, and the International Fund for Agricultural Development.

In our analysis, we identified three narratives and their underlying temporalities – universal, situated, and bridging – which together contributed to the commitment of a heterogeneous set of actors to work toward achieving SDG2. [Table 1](#) provides an overview these narratives, their temporal horizon and direction, and their contributions to commitment to tackling grand challenges. Next, we elaborate on each of these narratives.

Commitment Through Universal Narratives

Universal narratives are stories about grand challenges and their widespread impact that construct the future as “coming upon us.” The temporal direction of universal narratives thus brings a longer time horizon of a distant future back

Table 1. Narratives, Temporality, and Commitment to Grand Challenges in Fluid Forms of Organizing.

	Universal Narratives	Situated Narratives	Bridging Narratives
Type	Grand stories that describe and reflect a grand challenge and its widespread impact	Stories that describe and reflect actors' lived experiences with the grand challenge, as well as their specific local initiatives	Stories that span universal and situated narratives
Temporal horizon	Distant future: A centrally-defined, large-scale future target	Present and near future: The here-and-now carries the present forward into the future	Multi-temporality: Connections between present and near future as well as the distant future
Temporal direction	"Coming upon us": Backward, from the distant future into the present	"Us moving forward": Forward, from the present into the future	"Moving toward what's coming upon us": Both forward and backward
Contribution to commitment	Articulate a universal call to act that is difficult to ignore	Create a collective sense of change being under way by demonstrating distributed local efforts	Give meaning to local initiatives by embedding them in broader campaigns for tackling the grand challenge
Potential challenges	Detachment of distant future from the experienced present	Bringing together the present and near future with the distant future	Sustaining commitment by continually connecting temporalities

into the present. Specifically, universal narratives build on all-encompassing future goals and projections, such as doomsday scenarios and paradisiac visions. They disseminate a universal call to act in the present that all actors would find difficult to ignore. Hence, by articulating grand challenges as a "future coming upon us," universal narratives constitute a call to participate in collective action as a way of committing actors to tackling grand challenges.

As all the actors working to achieve zero hunger had different foci and goals and no shared history to draw on, the starting point for driving commitment to tackling SDG2 was to bring a shared distant future into the present. With professional support from consultants, universal narratives were developed for the SDG2 Advocacy Hub as an umbrella for diverse actors' initiatives in relation to hunger. These narratives centered on SDG2's goals for a sustainable future in 2030 as part of the overall SDG narrative legitimized by a document signed by 193 states. This legitimacy is reinforced on the website:

Adopted by all countries on September 25th 2015, the Sustainable Development Goals, otherwise known as the Global Goals, are a universal call to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. For the goals to be reached, everyone needs to do their part: governments, the private sector and civil society. ... The SDG2 Advocacy Hub coordinates global campaigning and advocacy to achieve Sustainable Development Goal 2: To end hunger, achieve food security and improved nutrition, and promote sustainable agriculture by 2030.

As illustrated here, the universal narratives that the hub members developed and shared highlighted the *all-encompassing status* of the SDGs (“Global Goals”), stating that everyone’s *commitment* is mandatory if the overarching purpose is to be achieved. They, thus, issued “universal[s] call to act” that were *difficult to ignore*. These narratives drew a both hopeful (“end hunger,” “food security,” etc.) and daunting (e.g., needs for “protect[ing] the planet”) big picture of the *distant future* (“2030”), one that comes upon humanity (e.g., “sustainable agriculture by 2030”) and requires everyone “to do their part.”

The CEO of Save the Children reinforced this message:

Ending hunger, and achieving food security and better nutrition, is one of the most important building blocks of a world in which every child can survive, learn and be safe. The 2030 food and hunger targets can be reached, but only if governments, civil society and the private sector work together to drive proven solutions, and create accountability for results. (SDG2 Advocacy Hub website)

Given their all-encompassing status, the developed universal narratives deliberately avoided addressing specific sectors, brands, or localities, which could impede or prevent actors from seeing connections between themselves and a universal narrative. As the hub director explained:

Our role was to see how do we convene all the different brands. And so, in order to do that, you’ve got to be unbranded. But the challenge of that is that it’s harder to raise money or it’s harder to do sometimes those sorts of things [events] because you are unbranded. (interview)

To enable different sectors and localities to participate in the SDG2 Advocacy Hub, the universal narratives avoided the specificity of idiosyncratic pasts or local challenges. Therefore, universal narratives around the SDG2 Advocacy Hub instantiated a big picture of the distant future that was to invoke commitment to action in the present. For example, the hub leader articulated the importance of distancing from the past and committing to sustainability as a goal to be reached in the distant future: “If we continue to do what we are doing now, we are going to be in big, big trouble” (field note). In doing so, universal narratives contributed to actors’ commitment to tackling SDG2 by articulating a universal call to act that is difficult to ignore.

Nevertheless, universal narratives carried a potential to spur resistance to commit to SDG2. These narratives were abstract and, as such, detached from actors’ idiosyncratic local challenges, interests, and goals. Consequently, it was *difficult* for some hub members *to attach the distant future* conveyed through universal narratives *to the experienced present* in their day-to-day activities. Therefore, the hub leader highlighted that telling these grand stories alone is not enough for generating commitment to tackling SDG2. As he argued, achieving sustainable future can only happen:

if we [also] align our goals and combine our expertise ... partner in new ways within and outside of our sectors ... campaign effectively, engage a wider community and advocate for governments to commit to policy decisions, funding, and actions that will provide a measurable impact. (SDG2 Advocacy Hub website)

This created need for sharing situated narratives, which we turn to next.

Commitment through Situated Narratives

Situated narratives are fragmented stories about actors' manifold lived experiences with, and local initiatives to tackle a grand challenge that construct the future as "us moving forward." The temporal direction of situated narratives thus brings the present forward into the future. Compared to universal narratives, these stories have a shorter time horizon, focusing attention on the present and near future of actors' idiosyncratic local initiatives. Hence, through the articulation of local initiatives and here-and-now experiences as "moving us forward" into the future, situated narratives contribute to actors' commitment to tackling a grand challenge by accomplishing a collective sense of change being under way thanks to a distributed actors' local engagement.

The mobilizing potential of universal narratives spurred great hopes to have an impact concerning the achievement of SDG2. However, uniting the manifold experiences of actors under the umbrella of SDG2 was a great challenge, as discussing them using the language in the UN document did not help local actors connect to the goals in any meaningful way. The hub director explained:

How do we create ways for them to understand more what they can contribute, and how they can contribute, and what that looks like? So, the idea [the role of the advocacy hub] there is to host participation ... [to provide a platform that enables them] to describe what they're doing. (interview)

Therefore, an important function of the SDG2 Advocacy Hub's events and shared materials was to provide a forum for participants to share situated narratives. Specifically, the hub members reflected their lived present and near future in their respective organizations and local initiatives by highlighting actions being taken, events taking place, reports being launched, and other resources being put to use while working on hunger issues.

The SDG2 Advocacy hub website regularly disseminated situated narratives in which actors from various fields described their local initiatives and more recent achievements, adding up to approximately 150 local narratives in two years. For example, hub members would share their story about their local initiatives under the compelling heading "1 in 3 children are under-nourished or overweight." Another situated narrative displayed on the hub's website highlighted specific change efforts at a forthcoming event in Stockholm:

Save our food. Invest in female farmers. Right now. Stockholm is the place to be for anyone interested in solving one of the biggest challenges of our time: How do we transform our food system so that it nurtures both human health and our environment? This week, thousands of leaders and innovators are gathering for the annual EAT Food Forum. With ideas as varied as lab-grown meat, climate-smart agriculture and innovative financing, participants will tackle the question of how to transform our food system to accomplish both goals.

As illustrated here, the fragmented, situated narratives generated by different actors affiliated with the hub provided examples of *local initiatives* ("EAT Food Forum") with limited to the present and near future ("this week") time horizons that aimed at *moving toward a sustainable future* (e.g., "accomplish both goals" of nurturing "both human health and our environment"). In doing so, they reinforced calls to *commit to tackling the grand challenge* ("Save our food. ... Right

now”) by showcasing the breadth of support for extant work on SDG2 (“thousands of leaders and innovators”).

However, the situated narratives were highly pluralistic, given that they shared insights into idiosyncratic local efforts. This “create[d] a very flexible and fluid kind of conversation” (Interview). This fluidity made it difficult for actors involved in the hub’s events weave the narratives together as in a unified effort that is directed toward achieving SDG2. It, thus, constantly sowed seeds for actors’ commitment to break down, as they lost sense of the contributions that local initiatives could make for a sustainable future to arise.

Commitment through Bridging Narratives

The hub had to find a way to bring together the universal and situated narratives to establish a collective, shared commitment to tackling SDG2. To that end, the hub developed and shared bridging narratives, i.e., stories that interweave universal and situated narratives. Bridging narratives thus relate the focus of the local initiatives on the present and near future to the distant future of the overarching SDG2 2030 time horizon. Consequently, bridging narratives are “multitemporal” in that they bring together the present and near future as well as the distant future; and they are both forward- and backward-oriented in that they connect the local initiatives that “move humanity toward” reaching the future that is “coming upon humanity.” In doing so, bridging narratives contribute to actors’ commitment to tackling a grand challenge by giving meaning to local initiatives as important components of broader efforts aimed at achieving sustainable development.

The hub members created bridging narratives based on several critical questions:

Given these goals are here, what does that look like on the ground? [Who] are the people doing great work? How do we connect and highlight what they’re doing? How do we bring that together? ... Let’s think how we can do that so that we can bring a conversation that connects the two. (interview)

Making such connections was a challenge, as it meant working through multiple, complementary, and partially contradicting temporal dimensions at once. Bringing together actors’ local experiences of the present and near future with a broader distant future was essential to ensuring the relevance and effectiveness of the hub’s advocacy by solidifying participants’ commitment to tackling the grand challenge.

The hub, therefore, constituted a space for the negotiation of temporalities between universal and situated narratives. For example, the hub’s website served as a key platform for presenting bridging narratives and making them visible. The following bridging narrative on 1,000 Days, published on the website in 2019, serves as a paradigmatic example. This narrative described the organization as driving:

greater action and investment to improve nutrition for women and children in the U.S. and around the world. 1,000 Days serves as the Secretariat of the International Coalition for Advocacy on Nutrition (ICAN). ... ICAN includes a broad range of international NGOs, advocacy organizations, and foundations all working around the shared goal of ending hunger and malnutrition in all its forms by 2030. Through ICAN, organizations collaborate on

advocacy efforts focused on securing political and financial commitments to end malnutrition in all its forms everywhere ... To build on the success of the 2013 N4G, 1,000 Days will be leading ICAN in its global advocacy efforts as we work towards the 2020 Nutrition for Growth Summit, which will be hosted by the Government of Japan in Tokyo. Not only will many of the commitments made in 2013 be running out, but 2020 will mark the start of the final decade to reach SDG 2. The 2020 N4G Summit will be crucial to mobilize new SMART commitments in response to the ongoing global need, bringing us closer to achieving SDG2 by 2030.

This bridging narrative interweaves a *situated narrative* about 1,000 Day's local initiatives ("serves as the Secretariat of...") and a *universal narrative* about SDG2 ("shared goal of ending hunger and malnutrition in all its forms"). Hence, the bridging narrative is "*multitemporal*," as it brings together the *present and near future* of the organization's local initiatives ("the 2020 Nutrition for Growth Summit") with the *distant future* attached to SDG2 ("2030"). Furthermore, the narrative is *forward-oriented* by positioning the organization's local initiatives as moving humanity forward ("bringing us closer to achieving SDG2 by 2030"); and it is *backward-oriented* by referring to the future that is coming upon humanity ("ending hunger [...] by 2030"). Consequently, the bridging narrative contributes to actors' *commitment* by *giving sense* to 1,000 Day's local initiatives as important components of collective efforts aimed at tackling SDG2.

Despite these contributions to actors' commitment, doubts remained if actors' individual and collaborative efforts will suffice for reaching the goal and the positive future it captured. The continual emergence of local initiatives under the umbrella of SDG2 created an *ongoing need for connecting and reconnecting local and situated* narratives so as to gain and sustain hub members' commitment. In response, the hub launched an online event calendar. In this calendar, the hub members shared and described their local initiatives. Users of the calendar could learn about these initiatives based on categorization functions, which grouped initiatives around their contributions to SDG2's sub-goals. Thus, the calendar became a central (and highly visible) connecting point for weaving together situated narratives about local SDG2 initiatives at specific points in time with the big picture, universal narratives about SDG2.

DISCUSSION AND CONCLUSION

Our findings from a case study of the SDG2 Advocacy Hub reflect the importance of crafting and disseminating narratives in gaining and sustaining commitment for tackling grand challenges. Narratives have the power to continually attract and engage actors with varied expertise and interests across organizational boundaries, thereby promoting collective sensemaking and way-finding. In doing so, they contribute to continually (re)gaining actors' commitment to tackle the grand challenge in a context of fluid participation.

Based on our analysis, we identified three types of narratives with distinct temporalities through which commitment to tackling grand challenges through fluid forms of organizing is constituted: universal, situated, and bridging. *Universal narratives* refer to grand stories that describe and reflect a grand challenge and its widespread impact. Inherent in these stories are distant futures, i.e., anticipated

large-scale events with a longer time horizon. These distant futures cast a shadow on the present in that they “come upon humanity,” i.e., they gleam backward from the distant future into the present. Because universal narratives depict the universal impact of a grand challenge on social life, they contribute to actors’ commitment to tackling the grand challenge by issuing a call to act that is difficult to resist. However, they also instill potentials for resisting commitment in that abstract stories about events happening in the distant future remain largely detached from the experienced present.

Situated narratives are partially fragmented stories that describe and reflect actors’ lived experiences of the grand challenge, as well as their own initiatives, which are bound to their specific local situations. These stories build on actors’ experienced present and the near future by instantiating locally shared, in-the-moment understandings of the yet-to-come, as well as small-scale initiatives that aim to move humanity toward overcoming the grand challenge. Therefore, they have a forward-oriented “present toward the future” framing of tackling grand challenges. Situated narratives thus contribute to actors’ commitment to tackling the grand challenge by conveying widespread efforts to move forward as each local actor attempts to provide idiosyncratic solutions. However, they also spur doubts concerning the extent to which these situated efforts are sufficient to tackle the grand challenge as a complex, large-scale challenge, given that their experienced present and near future appear rather disconnected from the distant future produced in universal narratives. Therefore, such stories may potentially undermine actors’ commitment.

Bridging narratives are stories that interweave universal and situated narratives. In doing so, these stories are “multitemporal,” i.e., they reflect, reproduce, and connect actors’ experienced present with near and distant futures. As a result, bridging narratives are both backward- and forward-oriented. They are backward-oriented when the aimed future is brought toward and accounted for in the present activities and forward-oriented when the present activities are aimed toward future. The back-and-forth connection points to how the different efforts to “move humanity toward” the overcoming of the grand challenge contributes to tackling, and thereby modifying, “what is coming upon humanity.” Bridging narratives thus contribute to actors’ commitment to tackling a grand challenge by giving sense to their local efforts by embedding these within broader efforts, and by imbuing grand challenges with local meanings. However, these stories are effortful in that they must be (re)told so as to underline connections between temporalities. Therefore, a key challenge is to sustain commitment through an ongoing sharing of bridging narratives.

Our findings make several contributions at the intersection of grand challenges and fluid forms of organizing. Next, we elaborate on these contributions.

Temporality of Narratives and Commitment to Grand Challenges in Fluid Forms of Organizing

Prior research on grand challenges highlights the limits of conventional forms of organizing as ways to coordinate efforts to tackle these complex, large-scale, and

intractable societal problems (e.g., [George et al., 2016](#); [Grodal & O'Mahony, 2017](#)). In doing so, this literature directs our attention to fluid forms of organizing (e.g., [Brès et al., 2018](#); [Schreyögg & Sydow, 2010](#)) aimed at bringing together heterogeneous sets of actors with diverse expertise and interests to foster a shared understanding of grand challenges and to collectively find ways forward. However, juxtaposing grand challenges and fluid forms of organizing also reveals a challenge: whereas their nonbinding nature enables these important preconditions for tackling grand challenges, it may also undermine such efforts due to a lack of commitment.

Our paper shows how the temporality of narratives produced actors' commitment to tackling grand challenges in a hub as a fluid form of organizing. Specifically, our findings unveil the important role of future-oriented stories in mobilizing actors' "movement toward" addressing grand challenges that are "coming upon us." Universal, situated, and bridging narratives attract actors to collective efforts to address grand challenges, embed actors' situated efforts in a broader stream of activities, and give sense to continuing these efforts. In doing so, narratives foster and reinforce actors' commitment without compromising the fluidity required to tackle these large-scale problems through local initiatives.

These observations are important because they provide insights into an essential component for tackling grand challenges through fluid forms of organizing. Left unaddressed, the fluidity inherent in less conventional forms of organizing can undermine the commitment needed for collective efforts to tackle grand challenges. By surfacing the important role of narratives for gaining and sustaining commitment in fluid forms of organizing, our findings enable a better understanding of how fluid forms of organizing can contribute to tackle grand challenges.

These insights have significant implications for organization and management research more generally. Specifically, they indicate ways forward concerning the relevance of our discipline. That is, if organization and management researchers want to contribute to tackling grand challenges by identifying ways to coordinate such efforts ([George et al., 2016](#)), and if fluid forms of organizing are promising candidates in this regard (see [Brès et al., 2018](#); [Grodal & O'Mahony, 2017](#)), it follows that we should explore more fully the dilemmas, challenges, and paradoxes that surface around more fluid forms of organizing in change processes. Drawing on [Meretoja's \(2017, p. 50\)](#) assertion that "narratives are inevitably ethically and politically charged," and as such, "do not merely open up, ... [but] also close down possibilities," our findings invite reflection on the two-sided power effects of narratives in organizing commitment to change, not just for grand challenges, but also for other problematic causes and ideas. As powerful tools for spanning temporal differences across diverse actors, narratives are not neutral: they provide "certain evaluative, affectively colored perspectives to the world" ([Meretoja, 2017, p. 50](#)). We encourage researchers to examine these power dynamics in greater detail in future research.

The Temporality of Narratives in Tackling Grand Challenges

Extant research on grand challenges has begun to unravel the temporality involved in tackling these problems, yet has produced inconclusive findings. On one hand,

this research largely relates to the SDGs, which direct attention toward grand challenges by establishing large-scale targets for the achievement of sustainable futures in 2030 (George et al., 2016). On the other hand, nascent work highlights small-scale orientations toward the present as important contributors to the tackling of grand challenges, given that they vividly direct attention toward grand challenges as a matter of actors' lived day-to-day experiences (Kim, Bansal, & Haugh, 2019).

Our findings suggest that the tackling of grand challenges requires both large-scale future targets *and* here-and-now, in-the-moment experiences. Specifically, our findings unveil the complementarity in creating narratives of “distant futures” that highlight large-scale goals and events that are “coming upon us” to attract widespread attention to and participation in tackling grand challenges, as well as narratives of “situated futures” that highlight locally shared understandings and enactments of the yet-to-come that “move us toward” overcoming grand challenges by acting in the present. Yet, our findings also indicate that, despite their complementarity, these temporal dimensions alone may be insufficient for tackling grand challenges because local initiatives that are embedded in the present and near future may remain largely disconnected from universal visions based on distant futures. This disconnect may cause actors to attach a fatalist sense of meaninglessness to these initiatives, thereby undermining their commitment to tackling the grand challenge.

These observations are important, because they point to a critical but underappreciated task involved in tackling grand challenges: connecting multiple temporalities through various forms of organizing. As our findings show, tackling grand challenges involves considering both the future and the present through universal and situated narratives, and linking them through bridging narratives. Thus, our findings extend burgeoning work on the temporality of tackling grand challenges (e.g., George et al., 2016; Kim et al., 2019) by highlighting the complementarity of partly competing temporalities involved in this process as well as the importance of connecting these temporalities.

These insights imply that researchers who are interested in the temporality of tackling grand challenges should consider “multitemporality,” i.e., the plurality of connected temporalities, rather than foregrounding either the present or the future. Prior work has referred to “ambitemporality” to denote efforts to work through conflicts between competing temporalities (Reinecke & Ansari, 2015). In contrast, our paper shows how narratives allow connecting competing temporalities in ways that give sense to both locally relevant and broader cross organizational aims to tackle grand challenges. Hence, narratives enable the bringing together of competing temporalities into a coherent multitemporal whole, as in our case, without conflicts arising. In this sense, the notion of multitemporality extends understanding of how temporalities unfold in the tackling of grand challenges. We hope that future research will reveal additional, perhaps not only discursive or narrative, but also visual, material, spatial, bodily, and other multimodal practices (Höllner et al., 2019) that connect temporalities, thereby facilitating commitment to the tackling of grand challenges in fluid forms of organizing.

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SECTION II

SCHOLARSHIP & SOCIETAL GRAND CHALLENGES

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ADDRESSING GRAND CHALLENGES THROUGH DIFFERENT FORMS OF ORGANIZING: A LITERATURE REVIEW

Leo Juri Kaufmann and Anja Danner-Schröder

ABSTRACT

We conduct a literature review on forms of organizing that address grand challenges, which are operationalized as the Sustainable Development Goals of the United Nations, as this framework is universal and widely adopted. By analyzing the articles that match our criteria, we identify six differentiable organizational forms: movements, temporary organizations, partnerships, established organizations, multi-stakeholder networks, and supranational organizations. These six forms are differentiated based on the two following categories: organizing segment and communicational technological approach. Our analysis shows that tackling a grand challenge often starts with collectives as a protest culture without any expected goal, besides sending an impulse to others. This impulse is received by criticized institutionalized organizations that have the capacity and resources to address the problem properly. However, new challenges arise as these organizations inadequately resolve these problems, thereby leading to conflict-laden areas of tension, wherein emergent organizations complement institutionalized organizations that have created the first infrastructure. To solve the most complex problems, a trichotomous

Organizing for Societal Grand Challenges

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relationship between different forms of organizations is necessary. Moreover, communicational technological approaches become more sophisticated as grand challenges increase in complexity.

Keywords: Grand challenges; forms of organizing; organizing segments; communicational support; technological support; process model; movements; temporary organizations; partnerships; established organizations; multi-stakeholder networks; supranational organizations

INTRODUCTION

Grand challenges are formulations of complex, large-scale, and global problems, which are sought to be solved through collaborative and social efforts (George, Howard-Grenville, Joshi, & Tihanyi, 2016). The essence of encouraging dialogues and innovative solutions has thus driven multilateral agencies, foundations, and governments to solve such grand problems collectively (George et al., 2016). Recent research covers several grand challenges, such as climate change, exploitative labor, famine, and poverty, “perhaps the most universal and widely adopted grand challenges are the Sustainable Development Goals (SDGs) of the United Nations (UN)” (George et al., 2016, p. 1881). In 2015, all 195 member countries of the UN agreed upon the 17 goals to “end poverty, protect the planet, and ensure prosperity for all as part of their new global ‘Agenda 2030’” (Howard-Grenville et al., 2017, p. 107).

From an organizational perspective, the interest in grand challenges is aimed toward forms of organizing to tackle grand challenges. Some researchers even argue that existing organizational forms are unsuitable (Ferraro, Etzion, & Gehman, 2015). However, the call for institutional and organizational change toward novel forms and mechanisms (Luo, Zhang, & Marquis, 2016) has been confronted by other scholars based on existing organizational forms of addressing vast social problems (Puranam, Alexy, & Reitzig, 2014).

This paper aims to reveal different forms of organizing to address grand challenges by analyzing and outlining previous studies. We conclude that six organizational forms – movements, temporary organizations, partnerships, established organizations, multi-stakeholder networks, and supranational organizations – can be differentiated based on two categories. First, three different segments are differentiable: designed organizations, emergent organizations, and collectives (Puranam et al., 2014); second, these forms depend on communicational technological approaches.

METHODS

We conducted a literature review to analyze different forms of organizing addressing grand challenges that have been previously studied. To operationalize grand challenges, we decided to follow the definition by George et al. (2016), who stated that the SDGs are “the most universal and widely adopted grand challenges”

(p. 1881). To ensure thoroughness and rigor, this review began with planning the architecture (Tranfield, Denyer, & Smart, 2003). Basic building blocks were established, stating inclusion and exclusion criteria (Denyer & Tranfield, 2009; Tranfield et al., 2003).

Using the EBSCOhost database (<http://www.ebscohost.com>) solely English language peer-reviewed articles were considered without restrictions based on July 2019 publications. According to the Boolean phrase, all SDGs were applied to titles, abstracts, and full texts, thereby resulting in an intentionally high number of 31,510 hits. To increase the consistency and robustness of the analysis, editorial volumes (Colquitt & George, 2011; George, 2016) and special issues (Howard-Grenville et al., 2017) with similar foci were surveyed. This survey and discussions with experts in the field added 11 additional articles. Initially, most of the 31,510 studies contained foci that were irrelevant herein. To exclude irrelevant hits, such as philosophical and solely technological discourses, legislation, jurisdiction, and treaties, EBSCOhost operators were applied (AND “Sustainable Development Goals,” AND “social,” AND “organization”). This application yielded 412 relevant organization-related articles, meeting the inclusion criteria and manifesting none of the exclusion criteria. The abstracts of all the 412 organization-related articles were initially examined, followed by an in-depth appraisal of the remaining articles to exclude studies that neglected the interplay of grand challenges (SDGs) and organizational structures for a more comprehensive evaluation.

Using this procedure, 40 journal articles matched the defined criteria, combined with the 11 added by experts, thus constituting the core of this review. Therein, the common foci and significant differences were scrutinized via an in-depth analysis (Tranfield et al., 2003).

RESULTS

Upon evaluation, we realize that six organizational forms are differentiable: movements, temporary organizations, partnerships, established organizations, multi-stakeholder networks, and supranational organizations. Moreover, we notice that these forms vary according to organizing segments (Puranam et al., 2014) and communicational technological support. As both categories are extremely important toward differentiating the six organizational forms, we briefly introduce them before outlining the various forms.

Organizational Segments

The following three segments are distinguishable: designed organizations (e.g., established corporations); emergent organizations [e.g., emergent non-governmental organizations (NGOs)]; and collectives (e.g., social movements). Designed organizations maintain the prerequisite to have a certain expectation of contribution toward a common goal. Emergent organizations seem to have some agents' contributions toward a common goal. Furthermore, collectives can neither be expected nor seem to contribute toward a common goal and hence are not

considered as an organization but remain a separate case of organizing (Puranam et al., 2014).

Designed organizations include a conglomeration of persons, some hierarchical level, division of labor, structural arrangements, common goals, and varying bureaucratic or procedural viewpoints, of which outcomes are expected (Katz & Gartner, 1988; Puranam et al., 2014). Conversely, emergent organizations have challenged this view to share a common technostucture and information infrastructure but do not have the prerequisite of pre-existing group memberships, tasks, roles, and expertise (Danner-Schröder & Müller-Seitz, 2020; Majchrzak, Jarvenpaa, & Hollingshead, 2007). However, they seem to contribute toward a certain goal (Puranam et al., 2014). While both segments are classified as organizations, collectives neither seem nor can be expected to contribute toward a common goal and hence are not categorized as organizations (Puranam et al., 2014). They are often defined as loosely organized with the sole purpose of provoking social change (Akemu, Whiteman, & Kennedy, 2016). Nonetheless, arguably, the promotion of new social ventures through media and professional associations by social movement organizations (SMOs) is an emergent organizational form and hence does not violate the condition of Puranam et al. (2014) (Akemu et al., 2016). In this case, SMOs are emergent organizations according to Puranam et al. (2014), and thus seem to contribute toward a certain goal, while social movements in their most basic forms are not organizations.

Communicational Technological Approach

The communicational approach is analyzed regarding not only the degree, closeness, and betweenness of centrality, which focuses solely on tie weights, but also the number and construction of ties, including formal and informal channels, pertaining to the interconnectedness and complexity (Opsahl, Agneessens, & Skvoretz, 2010). Hence, nodes can represent individuals in formal or informal contexts, organizations, or even countries with ties referring to formal/informal cooperation, friendship, and trade (Opsahl et al., 2010). The extent of communication approaches and organizational interaction among people increases due to complex interconnectedness, as does the emphasis on boundary or bridging organizations (BOs) and technological infrastructure (Herlin & Pedersen, 2013; Zarestky & Collins, 2017). Notably, BOs facilitate relationships between concerned parties, convene and build frameworks of trust, translate and enable comprehensible resources and information in all spheres, and mediate disputes and conflicts (Herlin & Pedersen, 2013). Technological infrastructure enables and supports organizational processes for information technology (IT) as “both an antecedent and a consequence of organizational action” (Orlikowski & Robey, 1991, p. 13). Technological support reflects digitalization, the technical specialization of functional structures, sophisticated tools, information systems (IS), dynamic market responsiveness, and the inclusion of new generation technologies (e.g., social media), thereby depicting a key component of organizational communication (Fernando, 2018; Miles & Snow, 1986). Technological support describes the use of devices for all functions. These include paying bills

(Warnecke & Houndonougbo, 2016), transforming energy resources (Thakur & Mangla, 2019), learning necessary entrepreneurial skills (Noske-Turner & Tacchi, 2016), or being updated owing to cloud computing or open data portals (Corbett & Mellouli, 2017; Wright & Nyberg, 2017).

ORGANIZATIONAL FORMS

Throughout the analysis, six organizational forms have emerged, and they are classified according to the defined categories that distinguish each form from another. Table 1 provides an overview.

MOVEMENTS

The first organizing form – movements – represents the least institutionalized and cross-sectoral form. This form not only solely consists of voluntary members but also has its administrative control entailed in external entities, such as government agencies, which can restrict the pursuit of such forms (King, 2004).

Empirical Studies

King (2004) analyzes sustainable city development in Albuquerque, USA, emphasizing the leadership role of neighborhood associations, which are a type of grassroots associations/movements in urban decision-making, bridging community members, and providing citizen input. Kumar and Chamola (2019) depict a developed social movement that has evolved into a fair trade organization (FTO), establishing new governance mechanisms in many food industries (e.g., the case of Dehradun, India) and examining production and consumption behavior. While the neighborhood associations remain a social movement, the grassroots fair trade movements do not (Kumar & Chamola, 2019).

Organizational Segment

Movements are seen as local actors' intelligent efforts to achieve local legitimacy via periodically challenging moral and material impacts, involving periods of pain, protests, and discursive translations (Lawrence, 2017). Both early movements without any degree of corporatization and institutionalization can be seen as collectives (Puranam et al., 2014). The outcome of these forms cannot be anticipated and may even be disruptive, hence framing these early forms as “alternative culture” (Kumar & Chamola, 2019, p. 79). However, the fair trade movement has developed into an FTO, stating expected outcomes, and transformed into a designed organization (Puranam et al., 2014).

Communicational Technological Approach

As the least institutionalized form with a one-way interaction stream, this form has the least sophisticated communication technological approach, stating

Table 1. Overview of Organizational Forms.

Organizational Forms	Movements	Temporary Organizations	Partnerships	Established Organizations	Multi-stakeholder Networks	Supranational Organizations
Characteristics	<ul style="list-style-type: none"> • Solely voluntary members • Administrative control is external • Meetings and protests as main mean of coordination 	<ul style="list-style-type: none"> • No permanent structure intended • Focus on few or one SDG • Promotion of one agenda 	<ul style="list-style-type: none"> • Lasting contributions toward SDG achievement • Focus on one SDG • Agreement of common purpose, specific task and shared risks & resources • Public value governance instead of traditional administration 	<ul style="list-style-type: none"> • Institutionalized contribution to address one or many SDGs • Reconsidered and developed strategies of existing structures • Changing education and attitudes • Quantify progress via eco-labels and certifications 	<ul style="list-style-type: none"> • Democratic and ecological decision-making apparatus as core principle • Respond to failed initiatives of designed organizations • Social processes as mean of coordination • Instead of traditional command and control 	<ul style="list-style-type: none"> • Meta-governed inclusion of all stakeholders: collectives, designed and emergent organizations • Ambivalent: supporting flexibility & stability, agglomeration & individual variation, hierarchy & heterarchy • Collaborative platforms • Open innovation platforms • Collaborative ecosystems • 4 Industrial Revolution • organizations • Interscalar networks
Empirical examples	<ul style="list-style-type: none"> • Neighborhood associations • Grassroots movements 	<ul style="list-style-type: none"> • Projects • Consortiums • Programs • Initiatives 	<ul style="list-style-type: none"> • Public-private partnerships (PPP) • Information communication technology for development partnerships (ICT4D) • Multi-stakeholder partnerships (MPS) • Cross-sectoral partnerships (CPS) • Community partnerships 	<ul style="list-style-type: none"> • Project poverty alleviator (PPA) • Micro finance institutions (MFIs) • Social enterprises • Green economies/energy networks • Ecological citizenships • Communicative ecologies • Resilient networks 	<ul style="list-style-type: none"> • Networks of Labour Activism (NOLA) • Self-helping groups of micro-entrepreneurs • Social network facilitators • Green economies/energy networks • Ecological citizenships • Communicative ecologies • Resilient networks 	<ul style="list-style-type: none"> • Collaborative platforms • Open innovation platforms • Collaborative ecosystems • 4 Industrial Revolution • organizations • Interscalar networks

Organizational segments	Collectives	Designed (for one purpose by the UN)	Designed	Designed	Emergent & designed	Emergent (continuously evolving through interactions making outcomes hard to expect or predict)
Communicational technological approach	<ul style="list-style-type: none"> • Only one-way interaction stream of BOs • Indifferent toward ICT 	<ul style="list-style-type: none"> • Temporary stream of communication designed by the UN • Platforms as bridging tool to bring partners together, no particular organization • Consumer of ICT 	<ul style="list-style-type: none"> • Increased long-lasting interactivity to achieve sustainable objectives among equally important partners • Introduction of BOs to function as incubator and decision-influencer, building trust, translate and enable comprehensive information • Reciprocal interaction with ICT 	<ul style="list-style-type: none"> • Higher rate of interaction among state-like public administration and social entities • Established organizations function as promoter towards balance between global economy, green markets and national political systems • Reformation of ICT 	<ul style="list-style-type: none"> • Higher rate of interaction throughout institutions, sectors, states, industries and communities via long-lasting institutionalized nodes and ties • Fluid role assessment of BOs: decision-making and responsibilities are completely open and diffusive • Developer of ICT 	<ul style="list-style-type: none"> • Most intertwined and complex interactions • BOs are crucial and become backbone organizations to foster communication; can function with or without lead organizations • Melting pot of ICT and human interaction with digital structures as central nervous system

indifference toward ICT, with sole personal meetings – mostly provoking change via critique – and no particular need for mediators and moderators among the stakeholders. This depicts the lowest degree of interconnectedness and complexity, following a usual phase of energizing via protests, exploring via disruptive translations, and ultimately integrating embedded practices (King, 2004; Lawrence, 2017; Opsahl et al., 2010).

TEMPORARY ORGANIZATIONS

The second form – temporary organizations – is characterized by an organizational structure that is not conceptualized to be permanent and is “[...] able to handle only a few problems, or in the extreme case, only one” (Lundin & Söderholm, 1995, p. 447). This form is not only characterized by the mere focus of one SDG but also is an umbrella term for projects (Fernando, 2018), consortiums (Watson, 2016), declarations or programs (Wysokińska, 2017), and especially initiatives (Anders, 2018; Calderón, 2018; Weidenkaff, 2018) to promote certain agendas (Jones, Comfort, & Hillier, 2016).

Empirical Studies

Anders’ analysis (2018) of the organization Global Reporting Initiative (GRI) fosters transparency concerning environmental aspects, with European organizations being provided with concepts and standards to disclose sustainability-related data. Calderón (2018) places the responsibility of climate action toward the global economy, urging global players to invest in new technologies for sustainable infrastructure, such as new mobility services in a multi-partner global initiative. The UN policy initiative, “Business Leaders Initiative on Human Rights” (Arnold, 2010, p. 371), incorporates human rights policies that have been reported to exist as soft law guidelines before they become hard law, committing transnational corporations to human rights protection. Jones et al. (2016) analyze the “Common Ground” initiative consisting of institutional stakeholders, such as the UN General Secretary and six of the world’s leading marketing companies, to promote health, education, and human rights. This designed initiative advertises environmental strategies to protect and create social value (Jones et al., 2016). Similarly, the initiative “Decent Jobs for Youth” (Weidenkaff, 2018, p. 26) in 2016 functions as a platform to integrate various partners – governments, youth, and civil society – to provide partner organizations with expertise and offer youth networking possibilities (Weidenkaff, 2018).

Furthermore, in targeting youth unemployment, Fernando (2018) examines the UN Program “Youth Empowerment Project [...] the first-ever multi-stakeholder alliance on action for youth” (Fernando, 2018, pp. 14–15), a global initiative to support young digital natives with skills via technical and vocational training. Wysokińska (2017) analyzes SDG implementation in a constitutional framework, a Polish program involving all key stakeholders to implement the Post-2015 SDG agenda into Polish legislature – a well-designed cooperation with allocated roles to address various SDGs (Wysokińska, 2017). The development intervention “corporate community development” (McEwan, Mawdsley, Banks, &

Scheyvens, 2017, p. 28) in South Africa is another institutionally designed interventive form, which has transformed from a simple subordinate to the private sector to a stakeholder among other actors (McEwan et al., 2017).

Similarly, in the 1990s, the US Congress established the empowerment zone and enterprise community initiative (EZ/EC), partnering with religious organizations, private industries, and community development organizations (CDCs) to revitalize distressed neighborhoods in urban US communities (Oakley & Tsao, 2007). The EZ/EC initiatives failed to meet the expectations of increasing professional and technical occupations in the service sector and hence were replaced by US CDCs, which accumulated more capital, had a stronger impact on SDGs, and were slowly rooted in urban community involvement (Oakley & Tsao, 2007). Similarly, the Nepali state disaster risk management has formed a consortium to bring humanitarian and development partners together to build resilience to external risks and hazard exposure with new modes of coordination mechanisms, such as emergency operation centers or early-warning systems (Watson, 2016).

Organizational Segment

All temporary organizations have been clearly designed and mostly part of the UN or state program to address the SDGs. However, some of them are rooted in societal structures – administrations, public governance, or foundations – and can institutionalize (McEwan et al., 2017; Watson, 2016, Wysokińska, 2017). Others remain to be examined to determine whether they have fulfilled the temporary function (Fernando, 2018; Weidenkaff, 2018) or even failed to fulfill expectations (Oakley & Tsao, 2007). Nevertheless, these outcomes are expectable and can thus be addressed as designed organizations.

Communicational Technological Approach

This organizing form depicts a temporary radial stream of communication between those that the UN is responsible for and the consortiums, initiatives, etc. (Anders, 2018; Calderòn, 2018; Watson, 2016; Weidenkaff, 2018). The platform, provided by the UN, bridges partners and facilitates working relationships without BOs, but with the use of IT (Fernando, 2018; Herlin & Pedersen, 2013).

Technological support is immanent for temporary organizations to address SDGs as they use digital transformational change by developing digital skills and green jobs (Fernando, 2018). This mere *consumption of ICT* can be considered as both the strength and weakness of such organizing forms because initiatives are based upon already existing platforms and ICT infrastructures (Jones et al., 2016), mobility services (Calderòn, 2018), open internet access (Anders, 2018), simulations, and new generation technologies (Watson, 2016).

PARTNERSHIPS

Partnerships, as the third form, correspond with the 17th SDG “Partnerships for the Goals” (George et al., 2016). This organizing form aims at lasting contributions toward SDG achievement through revitalizations, thus embedding the

collaborative action of various parties with a common purpose, specific tasks, shared risks, responsibilities, and resources (George et al., 2016; Ismail, Heeks, Nicholson, & Aman, 2018).

Empirical Studies

Pinz, Roudyani, and Thaler (2018) examine public–private partnerships (PPPs) in South Korean restructuring ports, Sri Lanka’s textile industry, and infrastructure projects in Spain. Thus, they state PPPs as an appropriate instrument to achieve sustainable objectives by shifting the paradigm in public management from traditional administration to new public value governance. This designed PPP heavily relies on another organization – the GRI – to provide sustainability-balanced scorecards for improved public service delivery (Pinz et al., 2018). The heavily technocratic form of information and communication technology for development (ICT4D) has been studied by Ismail et al. (2018), mostly focusing on the progress of digital harmony. This technology-focused partnership combines material elements – organizations, technologies, and processes – and symbolic elements – values, ideas, and discourses. Based on a Malaysian PPP, the ICT4D is considered an evolution of partnerships to address SDGs, which NGOs and governments have failed to solve in the past. One partnership in western Uganda underlying the concept of corporate social responsibility (CSR), which has evolved from “purely philanthropic actions and focus on second generation CSR” (Adiyia & Vanneste, 2018, p. 220), depicts community partnerships as linkage creators between the accommodation sector and poor neighborhood communities.

Organizational Segment

This designed organizational form can be considered an organizational instrument to achieve sustainable objectives – PPPs (Pinz et al., 2018) – or an organizational form in itself, such as ICT4D. Both perspectives, from instrumental or institutional perspectives, can be categorized as designed, contributing toward an articulated and communicated goal, thus increasing public value (Ismail et al., 2018; Pinz et al., 2018).

Communicational Technological Approach

The increased interaction can be observed through the multinational partnerships analyzed by Herlin and Pedersen (2013), examining the importance of BOs in a Danish corporate multinational foundation. Herlin and Pedersen (2013) state the role of foundations as incubators, while NGOs act as decision influencers. BOs are designed organizations that facilitate relationships between other organizations – the founding companies or established NGOs and emergent partners – resulting in a tri-part relationship of BO–foundation–NGO (Herlin & Pedersen, 2013). Aiming at a lasting partnership for the goals according to reports in India, ICT4D has previously failed due to its high complexity and conflict potential, thus emphasizing the importance of conflict management and BOs (Herlin & Pedersen, 2013; Ismail et al., 2018).

As the degree of interaction increases, the need for technological support and digital infrastructure becomes more important. Partnerships emphasize and use existing ICT infrastructure (Herlin & Pedersen, 2013; Pinz et al., 2018). However, in the process, ICT4D partnerships also provide IT, business processes, and digitally enabled services and develop a digital framework (Ismail et al., 2018). Hence, partnerships develop and advance the digital infrastructure in a *reciprocal manner*.

ESTABLISHED ORGANIZATIONS

The fourth form – established organizations – embodies a more institutionalized character developing existing strategies rather than building structures from scratch. Established organizations are characterized with a higher rate of interaction among levels of state-like public administration (Scherer, 2018), eco-innovation (Ma, Wang, Skibniewski, & Gajda, 2019), and social entities (Beck, 2017; Murisa & Chikweche, 2013; Warnecke & Houndonougbo, 2016).

Empirical Studies

Organizations, especially microfinance institutions (MFIs), have recalibrated the operational focus of shareholder value and economic growth with the emergence of SDGs (Murisa & Chikweche, 2013; Wright, Nyberg, & Grant, 2012). While MFIs have aimed at poverty reduction since the 1970s (Murisa & Chikweche, 2013), the efficiency and impact have been challenged by refocused agendas, thus importing grand challenges concerns into daily business (Wright & Nyberg, 2017). Beck (2017) elaborates on development strategies for microfinance NGOs in Guatemala with feminized policies to ensure gender equality, quality education, and the end of poverty. These policies can either solely focus on monetary aid or a rather holistic approach, providing women with cultural, financial, and environmental education, similar to the tools applied in rural Bangladesh communities (Mair, Marti, & Ventresca, 2012). Women are empowered through basic math and accounting training and lessons about citizens and property rights (Mair et al., 2012).

Similarly, Murisa and Chikweche (2013) analyze micro-entrepreneurs in Zimbabwe, with a new role being introduced – the project poverty alleviator (PPA) – imitative entrepreneurship driven by sustainable services in rural areas where traditional banks find markets extremely unattractive or risky. Furthermore, PPAs, as the holistic MFIs examined by Beck (2017), strongly emphasize education and attitude transformation to address poverty reduction, (gender) equality, and financial sustainability (Murisa & Chikweche, 2013). Social enterprise accelerators, a social enterprise with a pay-as-you-go business model, combat the low electrification rate in Sub-Saharan Africa (Warnecke & Houndonougbo, 2016). The products of such enterprises range from sophisticated grid projects, with extremely high initial costs, to home system kits that can be installed off-grid or even a pico-solar system, the easiest installation even for non-specialists. Social enterprises may not solve all developmental problems but function as

an accelerator for the public sector and institutional investments, providing an initial boost to the development of a functioning infrastructure (Warnecke & Houndonougbo, 2016).

Organizational Segment

Altered strategies, such as sustainability specialists, developed guidelines, and frameworks of existing organizations, imply a refocused contribution toward a certain sustainable goal (Wright et al., 2012). Business plans and strategies define thresholds to combat poverty (Murisa & Chikweche, 2013) or gender inequality (Beck, 2017), thus formulating an outcome to be expected and stating a designed organization (Puranam et al., 2014; Wright & Nyberg, 2017).

Communicational Technological Approach

According to Scherer (2018), the production and purchasing of public goods and environmental components of products should be internalized as fixed costs when doing business, thus being translated into organizational practice, underlying the concept of CSR (Scherer, 2018; Testa, Russo, Cornwell, McDonald, & Reich, 2018; Wright & Nyberg, 2017). Shifting the business value toward sustainable business innovation (Raith & Siebold, 2018) or eco-innovation, new frameworks guide this shifted designed organization via eco-labels, environmental certifications, and sustainable consumption and production strategies (Ma et al., 2019). Organizations with shifted or altered frameworks are sought to promote balance and communications between the global economy, green markets, and national political systems via soft policies and persuasion (Testa et al., 2018). This structure is integrated into the established firm for environmental risk reduction and value creation, incorporating SDG concerns in internal communications (Bansal, Kim, & Wood, 2018; Ma et al., 2019; Raith & Siebold, 2018). Each established organization functions as a promoter and hence a boundary element to balance global economies, green markets, and national political systems.

Established organizations addressing SDGs use and consume existing technological infrastructures, which mostly focus on mobile-based technologies to surmount infrastructural inefficiencies (Murisa & Chikweche, 2013; Warnecke & Houndonougbo, 2016). Consequently, mobile phone devices are used not only for communication purposes but also for electricity payments (Warnecke & Houndonougbo, 2016). Therefore, technological usage also drives a complete *technological reformation* and shift toward clean energy.

MULTI-STAKEHOLDER NETWORK

Responding to failed initiatives of designed organizations, multi-stakeholder networks – the fifth form – seek to address more complex SDGs with a democratic approach. Multi-stakeholder networks rely on developed or established systems (ASCI., 2018), surmounting institutions (Piper, Rosewarne, & Withers, 2017), sectors (Acelandu, Șerban, Tîrcă, & Badea, 2018), states (Noske-Turner &

Tacchi, 2016), industries, and communities (Venkatesh, Shaw, Sykes, Wamba, & Macharia, 2017) or communitarian ties (Islar & Busch, 2016). Networks are characterized “as a set of goal-oriented independent actors that come together to produce a collective outcome that no one actor could produce on their own” (Echebarria, Barrutia, Aguado, Apaolaza, & Hartmann, 2014, p. 29). Although the range of addressing SDGs varies considerably, all variations of multi-stakeholder networks have a democratic and ecological decision-making and participation apparatus as the core principle (Arnold, 2010; Islar & Busch, 2016; Ricciardelli, Manfredi, & Antonicelli, 2018).

Empirical Studies

Piper et al. (2017) scrutinize migratory flows in inter- and intra-regional directions revealing causes of forced labor, trafficking, child labor, and informal employment in Asia and Global South colonies. Networks of labor activism (NOLA) have been formed to integrate human and labor rights into societal frameworks (Piper et al., 2017). This emergent organizational form responds to fragmented institutional structures of migrant policies and failed initiatives, hence former temporary organizations (Anders, 2018; Weidenkaff, 2018) to fulfill the standards of decent work, maneuvering between migrant organizations and labor unions (Piper et al., 2017).

ASCI. (2018) and Mair, Wolf, and Seelos (2016) analyze a formed network of women micro-entrepreneurs and self-helping groups in rural households in Madhya Pradesh and rural villages in India to combat gender inequality and poverty with a business development strategy called the “gender energy” (ASCI., 2018, p. 65), overcoming the critique of solely focusing on a single dimension of inequality. The social network facilitators with ICT interventions, as studied by Venkatesh et al. (2017), depict network enablers, mostly ICT kiosks in rural India, to support women’s entrepreneurship and facilitate information access to combat discrimination against women. ICT kiosks, or social network facilitators, are centrally located and train women in entrepreneurial activities to ensure gender equality and create synergies with other grand challenges, such as poverty eradication. These networks surmount traditional cultural community ties and jointly use ICT to uncover institutional voids, which exclude women from market participation (Mair et al., 2012; Venkatesh et al., 2017).

When properly established, institutions are implemented, women have equal access to organizational resources, and typical functioning markets may emerge. However, if such institutions are missing, compensatory structures are needed, as depicted in the form of multi-stakeholder networks, including emergent response groups (Mair et al., 2012; Williams & Shepherd, 2016). Aceleanu et al. (2018) describe a far-reaching green economy, a local community in rural Romania, depicting an energy network involving schools, universities, NGOs, and governmental actors to reduce greenhouse gas emissions and energy dependency. This established network is directly generated by the Romanian renewable energy sector as a prompt answer to the untouched potential of Romanian developmental possibilities (Aceleanu et al., 2018). Another green economy is analyzed by

Thakur and Mangla (2019), who focus on recycling and reusing electrical waste. This circular economy in India is based on sustainable operations management, identifying key drivers along the supply chain to process eco-friendly green products among leading established Indian firms in the home appliance sector (Thakur & Mangla, 2019). The decision-making and responsibilities of ecological citizenship are completely open and diffusive. They broaden the former definition of citizenship to the new understanding, depicting social processes through which individuals and groups engage in their rights, surmounting mere legal engagements (Islar & Busch, 2016).

Considering the study of the eco-driven communities in Germany and Denmark, traditional command and control have been substituted with a certain degree of peer pressure to follow the sustainable agenda while maintaining an open dialogue that accelerates change (Islar & Busch, 2016). Communicative ecology, an intertwined designed organization of communication and informational flows, studied by Noske-Turner and Tacchi (2016), is crucial for unique projects in the Pacific Islands. Small grants for media and development projects are offered to provide new frameworks, mobilize media for sustainable outcomes, and integrate diverse networks within the Pacific context. This collaborative approach toward sustainability can also be observed in the highly democratic and self-organized networks of emergency management organizations in Macerata, Italy, as studied by Ricciardelli et al. (2018). Such resilient networks are designed to withstand external shocks via dynamic processes and community-based actions with means of self-organizing, flexibility, inclusiveness, and integration. SDGs are considered the major global instrument for reducing disaster risks, thus transforming the dynamics of traditional emergency management from simply shielding to accept and manage risk via resilience building (Ricciardelli et al., 2018).

Organizational Segment

Multi-stakeholder networks react to a failed or inadequately successful attempt to solve an SDG via established organizations or partnerships. More complex SDGs demand flexible, fluid, and democratic solutions among various stakeholders. Initially, the outcome is derived from predefined failed outcomes of established organizations and partnerships and thus could be classified as designed. However, such fluid solutions make it difficult to expect a certain result but seem to contribute to an outcome. Therefore, multi-stakeholder networks can be regarded as designed organizations because the outcomes are derived from previous failed outcomes but emerge throughout the lifespan and various processes to an emergent organization (Puranam et al., 2014).

Communicational Technological Approach

Multi-stakeholder networks seek social connectedness, dialogue, and collaborations within geographical boundaries but may also try to find consensus among divided conflict-laden spaces within political boundaries (Islar & Busch, 2016). Surmounting such boundaries, multi-stakeholder networks depict a fluid role

assessment of BOs whereby parties moderate within cross-sectoral cooperations and institutions. Owing to the increased degree of interaction, communicative ecologies, a manifestation of multi-stakeholder networks, transcend communication and information flows in a democratic decision-making apparatus (Noske-Turner & Tacchi, 2016; Ricciardelli et al., 2018).

By improving technological support, multi-stakeholder networks are characterized by not only using technology and providing computable data but also *optimizing and developing*. Available power supplies for gender equality are optimized via technical assistance software and training (ASCI., 2018). Interactive and intelligent systems support coordination mechanisms in resilient networks (Ricciardelli et al., 2018). Furthermore, clean technologies and technological innovations to process electronic waste become an irreplaceable part of the human–operational–technological components (Thakur & Mangla, 2019). Additionally, grid infrastructures for renewable energy technologies are becoming more efficient in transforming fuel-based energy supply up to 100% renewable energy (Islar & Busch, 2016). Mobilized media – the agglomeration of all social media – integrate digital technologies, using and developing both newer and older technologies. These are connected through communication modes and require high costs of learning the necessary media skills (Noske-Turner & Tacchi, 2016). Not only do digital technologies enable entrepreneurs to receive information and communicate with clients, but they also form a central location of social network facilitators (Venkatesh et al., 2017).

SUPRANATIONAL ORGANIZATION

The sixth organizational form – supranational organization (Ansari, Wijen, & Gray, 2013; Corbett & Mellouli, 2017) or interscalar network (Echebarria et al., 2014) – depicts the most digital and global approach to tackle SDGs. A supranational organization relies almost solely on sophisticated IS platforms to perform the most intertwined and complex interactions within new inter-organizational architectures, fields, and coordination mechanisms (Bogers, Chesbrough, & Moedas, 2018; Grodal & O'Mahony, 2017; Picciotti, 2017; Pollitzer, 2018). This form exhibits ambivalent support for both flexibility and stability and the inclusion of all stakeholders operating in one common central nervous system – the most sophisticated ICT infrastructure (Ansell & Gash, 2017; Picciotti, 2017).

Empirical Studies

Ansell and Gash (2017) distinguish between various platforms as collaboration modes. These platforms, which can be highly adaptive and flexible, support both stability and flexibility, with the ambivalent characteristic serving as an umbrella term to agglomerate individual action into one stream, while promoting variation as open innovation platforms depict (Ansell & Gash, 2017; Bogers et al., 2018). Open innovation platforms accumulate internal and external ideas from small- and medium-sized enterprises, multinational teams, and not-for-profit

organizations. Thus, they establish an internet infrastructure upon which social networking sites are developed, adopted, and transferred into the realm of regulated sectors such as health, energy, and transport, with the SDGs being the primary impetus (Bogers et al., 2018; Williams & Shepherd, 2016).

When engaging with public policy decision-making, collaboration platforms may evolve into collaborative governance and further into whole collaborative ecosystems (Ansell & Gash, 2017). Referring to wide-range and meta-governed platforms integrated into sophisticated information ecosystems, Corbett and Mellouli (2017) identify such cross-sectoral platforms as supranational organizations with collectives or communities, emergent organizations (e.g., formed NGOs), and public management to strive for smart water management and public green spaces. The organizational form in Q-City, a large urban area in the province of Quebec, Canada, operates from a common central nervous system – the IS infrastructure (Corbett & Mellouli, 2017). The supranational organization not only optimizes the use of scarce resources such as water but also links the three interrelated spheres – administrative, political, and sustainable – with various segments of organizing – collectives, emergent, and designed organizations (Corbett & Mellouli, 2017).

Another inter-organizational and inter-sectoral collaborative network is analyzed by Picciotti (2017) to elicit coordination mechanisms beyond community boundaries. The network of social enterprises reveals a new inter-organizational architecture with different institutions, public administrations, and enterprises to liberate land from mafia structures via the Associazione Libera Terra, an Italian social cooperative, to plead for cultural and social change (Picciotti, 2017). This “metamorphosis” (Picciotti, 2017, p. 248) of a network omits a lead organization but heavily relies on IS infrastructure as the central nervous system (Corbett & Mellouli, 2017). Such a development of networks with dynamic or no lead organizations represents the evolution of organizing caused by SDGs. It is difficult to cluster supranational organizations because hierarchy and heterarchy exist simultaneously with partial groups following a certain order and other groups operating dynamically and strictly democratically, solely bound together and orchestrated via the common nervous system.

Fourth Industrial Revolution organizations have been analyzed by Pollitzer (2018), who explores the progressive digitalization of the economy and society with ICT as its core but SDGs as the direction. Organizations aim to stop a digital divide ensuring e-sustainability to directly contribute to poverty reduction, quality education, gender equality and industry, innovation, and infrastructure through sophisticated mobile devices (Pollitzer, 2018). Through interscalar networks vis-à-vis SDGs, Echebarria et al. (2014) analyze various clusters – other innovation networks, agencies, universities, culture, policy, and technical institutes – and integrate pre-existing and emergent resources from interaction. The term scalar refers to the vertical, scalar hierarchy of relationships among this form (Lawrence & Dover, 2015). This interconnected form extracts knowledge from all the aforementioned clusters for learning regions (e.g., local councils or municipalities) functioning best in countries with high sustainability traditions such as Norway, Sweden, Italy, and Spain (Echebarria et al., 2014).

Organizational Segment

This network form involves various, perhaps all, considered stakeholders: collectives, such as groups of citizens (Corbett & Mellouli, 2017), showing no intention or expectation to contribute toward a greater goal; emergent organizations, such as those that emerged as non-profit partners (Picciotti, 2017), seemingly to contribute toward an SDG; and designed organizations, such as social enterprises (Picciotti, 2017), administrative organizations (Ansell & Gash, 2017), or city managements (Corbett & Mellouli, 2017). Thus, it solidifies the expectation of the outcome of the contribution (Puranam et al., 2014). In this open structure, beginnings of organizational lifecycles are difficult or even impossible to trace back. The involvement of all stakeholders across all organizing segments and the mere reliance on digital structures as the core of organizational existence – the “central nervous system” (Corbett & Mellouli, 2017, p. 441) – make it difficult to categorize the structures according to collectives and emergent or designed organizations. However, although supranational organizations comprise organizing forms of various segments, such organizing forms arguably seem to contribute toward the achievement of the most complex goals that continuously evolve, thereby forcing supranational structures to evolve similarly. This continuous evolution parallel to the dynamic changes of intertwined problems complicates the prediction or expectation of outcomes, although it seems to contribute toward an evolutionary fit between organization and problems, and thus, can be arguably classified as emergent.

Communicational Technological Approach

Supranational organizations are characterized by the most intertwined and complex interactions among stakeholders and sectors at all levels – social, economic, and environmental (Zarestky & Collins, 2017). This organizational form allocates projects and roles (e.g., lead organizations) but is solely meta-governed by intermediation rather than control (Ansell & Gash, 2017). Every variation of supranational organization emphasizes the importance of BOs. However, some BOs also function as critical lead organizations promoting variation, as open innovation platforms show (Ansell & Gash, 2017; Bogers et al., 2018). Such organizations must mobilize shared issues and goals to foster collaborations (Grodal & O’Mahony, 2017). Either with or without a lead organizational role, backbone organizations are crucial for the existence of supranational networks, providing strategic directions and fostering communication and dialogue in a highly dynamic and complex environment.

Technological support forms the core of supranational network activities and operations. The meta-governed collaborative platform relies on e-governance and hence distinctive software, crowdsourcing platforms, and web portals to transfer knowledge (Ansell & Gash, 2017). New major waves of technology – machine learning, quantum computing, and the Internet of Things – are constituted as future integral parts of regulated spheres in networks of energy supply and healthcare (Bogers et al., 2018). IS communities see IS or digital technology as the central nervous system with emergent technologies – simulation models, open

data portals, cloud computing, augmented reality, big data analytics, and Web 2.0 – which are essential. Mobile technologies provide highly granular information to enable seamless communication flow, which is an indispensable prerequisite for this supranational network to function (Corbett & Mellouli, 2017). Notwithstanding flawless communication flows, interscalar networks focus on learning regions to reach high sustainability standards (Echebarria et al., 2014). Supranational networks do not function without IS, not only because of automated processes, as in some established organizations, but also because emergent digital technologies are indistinguishably intertwined with this organizational form. It is impossible to separate IS from supranational networks because not only are all functions based on digital technologies but also involve the organizing form – all communication and coordination. Supranational networks can be seen as *melting pots*, merging inextricably social and digital elements into a highly complex organizational form to tackle the most intertwined societal and environmental problems.

DISCUSSION

The organizational segments become more intertwined because communicational and technological support become more sophisticated as grand challenges increase in complexity, whereas organizational segments signify a certain process to tackle grand challenges.

Starting as a protest culture, first, rudimentary movements sense a societal or environmental problem that has not been (or inadequately) addressed by institutionalized structures such as the early fair trade movement (Kumar & Chamola, 2019). No contribution could have been expected to direct the problem except for aiming criticism – which is not necessarily constructive – at the lack of properly addressing the problem. This non-organizational form, although a form of organizing, is neither expected nor seems to contribute toward a goal (and can even worsen a problem). It is thus stated as collective, sending at least a diffuse impulse, thereby triggering the process of organizational awareness and change (Puranam et al., 2014; Wright & Nyberg, 2017).

This impulse is received by institutionalized organizations, which are criticized as unsuitable for tackling SDG concerns owing to their short-term objectives and narrow attentional structures (Bansal et al., 2018; Wright & Nyberg, 2017). However, they have the capacities and resources to duly address the problem, thereby altering infrastructures or even creating new ones to fulfill the need for change, such as UN programs or initiatives in the form of temporary organizations (Anders, 2018; Calderòn, 2018; Jones et al., 2016; Weidenkaff, 2018), partnerships (Pinz et al., 2018) or established organizations (Beck, 2017; Murisa & Chikweche, 2013; Warnecke & Houndonougbo, 2016). Contributions are expectable when the organizational focus is directed toward SDGs regarding the establishment or development of sustainable infrastructure and thus be referred to as designed organizations tackling grand challenges (Puranam et al., 2014). However, problems and conflicts arise as designed organizations inadequately solve problems or provide sustainable opportunities, thus leading to conflict-laden areas of tension.

Within these areas of tension caused by insufficiently addressing problems, emergent organizations fit in to complement designed organizations and fill gaps in institutional systems that have provided first infrastructures, such as digitally enabled services (Ismail et al., 2018) or even grid connections (Warnecke & Houndonougbo, 2016; Williams & Shepherd, 2016). Upon existing infrastructures, organizations that focus on the most complex problems seem to contribute toward a sustainable goal by providing highly specialized expertise in societal rights, such as NOLAs (Piper et al., 2017) or technological knowledge (Islar & Busch, 2016), and thus can be classified as emergent (Puranam et al., 2014). The more complex the problems (Wright & Nyberg, 2017), the higher the degree of necessary interaction and technological sophistication across industrial, national, and cultural borders. Furthermore, there will be more specialized knowledge of provided expertise fitting into the trichotomous relationship: a meta-governed supranational organization, of impulse sender–receiver–complement or simply put, collective – designed organization – emergent organization, as depicted in Fig. 1. Understanding this relationship contributes toward supporting political agencies, managers, and policymakers by promoting practical change agendas, alternative possibilities, and environmental awareness, thereby maneuvering organizational interventions where they are most effective and needed (Berkowitz & Grothe-Hammer, 2022; Grodal & O’Mahony, 2017; Wright et al., 2012; Wright & Nyberg, 2017).

FUTURE RESEARCH

Our findings open two research avenues that seem likely to be fruitful: organizational forms and organizing processes between organizational forms.

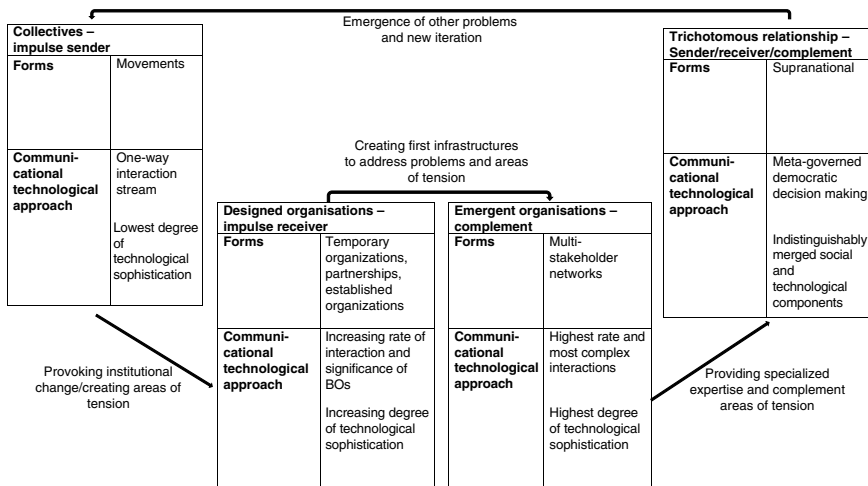


Fig. 1. Process Model of Addressing Grand Challenges Through Different Organizational Forms.

First, we call for more research on six different organizational forms. As our findings indicate, movements are essential in sending an impulse to induce grand challenge awareness. Noticeably, movements, and hence collectives, gain importance and media presence, such as civil groups fighting refugee crises or the pupils and students of “Fridays for Future.” Future research can elaborate on why and how an increasing number of movements emerge with more public presence than hitherto. While we have shown that movements make less use of technological sophistication (King, 2004), the movements fighting refugee crises and Fridays for Future indicate that technology is considerably important in organizing their ideas (Danner-Schröder & Müller-Seitz, 2020). Thus, future research can elaborate on how movements use technological resources to achieve their goals and which technologies are required. Moreover, as these rather loose connections of social interactions gain an increasing number of members in a rather short time span (e.g., Fridays for Future), it would be interesting to see how these groups develop a sense of purpose and a shared identity. Furthermore, it would be fascinating to understand how decision-making processes are established (e.g., in terms of a strategic direction) as movements usually omit traditional command and control mechanisms. Thus, which routines, scripts, templates, logics, and practices emerge? Or are they used in these groups to coordinate their purpose?

Although temporary organizations are designed for a limited amount of time (Lundin & Söderholm, 1995), it can be interesting to research processes before and after the lifespan of such organizations. Therefore, how are temporary organizations brought to life and what happens after the goal has been reached? Future research can elaborate if and how knowledge, practices, and resources can be used later by other organizations.

Supranational organizations reveal a final and trichotomous relationship within a socio-technological framework. However, little is known about how such complex forms sustainably emerge. Thus, research on how diverse organizations interact and how engagements between these organizations are ensured is essential. The core principle of supranational organizations is rather democratic. However, future research can explore these democratic processes and their sustainability or potential power struggles within these supranational organizations. Hence, we suggest focusing on coordination processes within supranational organizations.

Second, we suggest focusing on the organizational processes between the different organizational forms. Our findings indicate that collectives create areas of tension for designed organizations that consequently create the first infrastructure. Emergent organizations provide specialized expertise for trichotomous relationships. These findings suggest that one form triggers a response from other organizations. However, future research could further elaborate collaborative forms of organizing between different forms.

Therefore, studying how networks of actors from public, private, and third sectors and emerging collectives orchestrate collaboration outside and beyond formal organization (Kornberger, Meyer, Frey-Heger, Gatzweiler, & Martí, 2020) might be a promising future research area. Based on collectives, future research could analyze how movements emerge and are further transformed and

momentarily institutionalized. Thus, research could explore how institutional arrangements between different forms foster or hinder such a collective action.

Existing research acknowledges the need to link all dimensions of stakeholders (Gegenhuber, Schüßler, Reischauer, & Thäter, 2022; Kroeger, Siebold, Günzel-Jensen, Philippe Saade, & Heikkilä, 2022; Stjerne, Wenzel, & Svejenova, 2022) via various tools, such as scaffolding (Mair et al., 2016), sustainable value chain linkages (Adiyia & Vanneste, 2018), and platforms (Fernando, 2018). However, future studies should further integrate the dimensions of time and goal orientation. While traditional organizations are criticized as being too short-term oriented, new sustainable agendas, usually over a long-term goal, need to be adopted within corporate frameworks (Wright & Nyberg, 2017). Owing to their long-term nature, established organizations discount grand challenges in favor of immediate problems, while short-term effects may be neglected by social movements, thereby solely increasing existing societal tensions (Wright & Nyberg, 2017). It remains to be researched how organizing forms solve grand challenges in an ambidextrous manner, thereby satisfying both seemingly contradictory goals – short-term benefit and long-term sustainability – while also uniting actors from different cultures and standards that can complicate common understanding (Grodal & O'Mahony, 2017; Lawrence, 2017). This specifically implies the extremely fluid role and stakeholder dynamics of the most complex forms of organizing (Grodal & O'Mahony, 2017; Berkowitz & Grothe-Hammer, 2022; Kroeger et al., 2022; Stjerne et al., 2022).

We have shown that technological support is deemed to be an integral part of grand challenge solutions. However, it also remains to be examined which risks and problems are caused by more sophisticated technology in socially interwoven networks, especially where technological and social components are indistinguishably intertwined relative to supranational organizations (Ansari et al., 2013; Wright & Nyberg, 2017). Future research could explore how organizing forms combine social media with offline sites. Moreover, the management of the extensive information between different organizations and the question of when organizations suffer from wrong or extensive information because of fake news could be interesting. The question of how organizations' networks interpret such information overloads, weighing their importance and relevance, needs further exploration. Thus, it might be relevant to analyze how networks manage the high initial costs of learning the necessary digital and media skills (Gatzweiler, Frey-Heger, & Ronzani, 2022).

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SCALE IN RESEARCH ON GRAND CHALLENGES

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ABSTRACT

Scalar terms, such as “local” and “global,” “big” and “small” are fundamental in how academics and practitioners make sense of and respond to grand challenges. Yet, scale is so taken-for-granted that we rarely question or critically reflect on the concept and how it is used. The aim of this paper is to identify scale as an important concept in research on grand challenges and to point out why taking scale for granted can be problematic. In particular, I suggest that to date most research on grand challenges sees scale as a fundamental ontological feature of the world. Yet, scalar categories and hierarchies are not as self-evident and given as they may seem. Moreover, taking scale as an ontological fixed category limits our ability to make sense of, theorize and respond to grand challenges. As an alternative, I suggest seeing scale as an epistemological frame that participants employ in their everyday practices to make sense of, navigate and develop solutions to grand challenges. The chapter concludes with a research agenda for studying scale as socially constructed in practice.

Keywords: scale; grand challenges; ontology; epistemology; micro; macro

INTRODUCTION

Scale is a fundamental category of how academics and practitioners make sense of, navigate and respond to grand challenges (George, Howard-Grenville, Joshi, &

Organizing for Societal Grand Challenges

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Tihanyi, 2016). It is already implied in the very word “grand” challenges, describing issues such as climate change, inequality and poverty (see also Pradilla, Bento da Silva, & Reinecke, 2022, this volume) as issue of large-scale or global importance. In recent years, the use of scalar terms, such as “global” and “local,” “large” and “small,” have proliferated in organizations, in public discourse, in politics and in academia. In addition, the idea of scale is at the origin of one of the most heated discussions in organization and management scholarship, that is, the debate between micro and macro levels of analysis. Thus, it is about time to reflect on the use of the concept and what barriers and opportunities it might present to academic scholarship.

In the most abstract sense, scale is simply a measure of the relative size, extent or degree of something and can thus be used to refer to time scales, geographic space, volumes of goods, number of people, levels of analysis and so forth (Marston, Jones, & Woodward, 2005). Here, I define scale how it is commonly used in research on grand challenges, that is, as a relative measure of geographic and jurisdictional space (e.g., local, regional, national and global) (Ferraro, Etzion, & Gehman, 2015) or number of people and organizations impacted (George et al., 2016).

Scale is such a taken-for-granted category in how we think about organizational and management issues that we rarely question or critically reflect on the concept itself. Thus, the first aim of this paper is to identify scale as an important category in how we make sense of, theorize and respond to grand challenges. For example, scale is embedded in the very definition of grand challenges as “global,” “large-scale” and “system-wide” problems (Ferraro et al., 2015; George et al., 2016; Jarzabkowski, Bednarek, Chalkias, & Cacciatori, 2019) and is implicated in discussions about whether grand challenges need to be addressed at the global level through a central authority and transnational agreements (Schüssler, Rüling, & Wittneben, 2014; Wright & Nyberg, 2016) or at the local level through situated experimentation and adaptation (Ferraro et al., 2015). Scale is so deeply embedded in how we think about grand challenges that the local, national and global appear to exist as given and pre-determined ontological realities. This is also consequential for how we design and conduct research on grand challenges, for example, the need for collecting data at multiple levels of analysis (Jarzabkowski et al., 2019).

The second aim of this paper is to problematize this taken-for-granted use of the concept of scale. Scalar categories and hierarchies are not as self-evident and given as they may seem. For example, the idea of small wins (Weick, 1984; Wickert & de Bakker, 2018) suggests that “big” societal issues can be recast as smaller ones (e.g., recasting the global problem of water pollution as cleaning up a local lake). This indicates that scalar categories participate in the construction of the problem rather than being pre-defined. In addition, different accounts of grand challenges construct scale differently. Sometimes the global level is constructed as the most powerful and decisive one; at other times, the local level is seen as more significant to tackling grand challenges because it affords experimentation and local adaptation. Finally, traditional scalar thinking assumes that power and authority are located at the top and from there flow down to impact the bottom, that is, local actions. This thinking can present obstacles to tackling

grand challenges. For example, individuals may feel they can't do anything about "big" problems, small-scale solutions are marginalized because they can't match the global scale of the problem, and global solutions frequently get stuck in trying to satisfy the concerns of all stakeholders.

Against this background, the third aim of this paper is to outline an alternative way of engaging with the concept of scale. In particular, I suggest seeing scale as a category that is socially constructed in practice, that is, as an epistemological frame used by ordinary social actors to apprehend the world. For example, we can investigate how a group of stakeholders involved in strategizing on a grand challenge use the frames of "national" and "city" to make sense of the problems they are facing and to devise solutions to them (Pop & Seidl, 2019). I draw on human geography (Jones, 1998; Marston et al., 2005; Moore, 2008) that has a long history of examining scale as a category itself and uncovering its socially constructed nature. I will show how this approach allows us (1) to see how scalar categories and hierarchies are not fixed, but more flexible and fluid than previously thought; (2) to theorize how scalar categories and hierarchies are implicated in defining problems and solutions to grand challenges and what consequences these constructions have for collective action; and (3) to respond differently by developing "new spatial grammars" (Bulkeley, 2005) and alternative scalar constructions which may help to tackle grand challenges, in new ways. As Cameron and Hicks (2014, p. 60) argue, "bricolage, manoeuvrability and a willingness to take action in the first place are [...] only possible when thinking and action are not limited by a hierarchical scalar imaginary."

IDENTIFYING SCALE AS AN IMPORTANT CATEGORY IN RESEARCH ON GRAND CHALLENGES

Scalar categories and hierarchies are implicated in research on grand challenges in four important ways: (1) defining what grand challenges are; (2) responding to grand challenges; (3) taking action on grand challenges; and (4) conducting research on grand challenges. First, scale is used in all definitions of grand challenges, indicating how central the concept is to understanding grand challenges. According to George et al. (2016, p. 1880; emphasis added), grand challenges are "formulations of *global* problems that can be plausibly addressed through coordinated and collaborative effort." They are "barrier(s) that, if removed, would help solve an important societal problem with a high likelihood of *global* impact through *widespread* implementation" (George et al., 2016, p. 1881; emphasis added). At the same time, as a grand challenge plays out globally, it comprises a set of nested local challenges within and across organizations (Jarzabkowski et al., 2019). For example, inequality is a global problem that manifests locally in a variety of different ways (Mair, Wolf, & Seelos, 2016; Tilly, 1998). Climate change is a global challenge, but also a local problem in the flooding of rivers and coastal regions, wild fires and droughts. Thus, as Krauss (2012, p. 150) puts it, "climate change is simultaneously constructed as a universal and localized as a

particular.” This indicates that grand challenges play out at multiple levels of scale, ranging from global to local.

In the above description, scale is primarily used as a vertical measure in terms of levels (Marston et al., 2005). The vertical measure implies a hierarchical ordering of geographic or jurisdictional space, ranging from localities and municipalities, to regions and departments, to nations and the international global community. Scale can also be used as a “a horizontal measure of ‘scope’ or ‘extensiveness’” (Marston et al., 2005, p. 420), for example, describing grand challenges as “*system-wide* problems that extend beyond the boundaries of a *single* organization or community” (Jarzabkowski et al., 2019, p. 121) and as *large-scale* problems that affect many people and communities. Most research – and here research on grand challenges is no exception – does not clearly distinguish between vertical and horizontal measures of scale (Marston et al., 2005).

What is important is that both vertical and horizontal measures of scale imply nested levels and a hierarchical ordering of the relations between levels. Levels are nested in terms of a linear progression from local, regional, national to global and from small to large. The hierarchical ordering often implies that the global level is at the top and the local at the bottom, as “as if society really had a top and a bottom” (Latour, 1996, p. 371). For organization and management research this has meant that studies of local phenomena have been accused of “micro-isolationism” (Seidl & Whittington, 2014) and of little relevance outside academic circles, while studies of macro-level dynamics and processes are accused of lacking practical relevance. The micro/macro debate seems to be at an impasse. In addition, traditional scalar thinking assumes that top levels are endowed with more authority and decision-making power than lower levels. Similarly, changes on the large-scale are seen as more powerful and important than on the small-scale because they impact a greater number of people, communities and geographies.

These scalar categories and their assumptions are central in discussions of how to respond to grand challenges. In particular, there is disagreement about what is the most appropriate level at which to tackle grand challenges. Some argue that because of their scale, grand challenges need to be tackled on the global level by means of a central authority (e.g., Wright & Nyberg, 2016), meta-organization (e.g., Berkowitz & Grothe-Hammer, 2021, this volume) or transnational agreements (e.g., Schüssler et al., 2014). For example, Wright and Nyberg (2016, p. 1656) argue that “meaningfully responding to many of the grand challenges facing the world requires systemic intervention based around central authority.” Similarly, Schüssler et al. (2014) describe the importance of field-configuring events, such as the United Nations (UN) Climate conference, in transnational policy-making on climate change. In contrast, others argue that because grand challenges are so complex, attempts at solving them at the global level paralyze people (Weick, 1984), create problems of the commons (Olson, 1965; Ostrom, 1990), prevent effective collaboration (Bowen, Bansal, & Slawinski, 2018), and make it impossible to identify in advance how to best proceed (Ferraro et al., 2015). Distributed actions at the local level are thus seen as more effective because they enable small wins, rapid experimentation,

learning and adaptation, and sensitivity to local contexts. For example, [Ferraro et al. \(2015\)](#) describe how in the United States in the absence of top-down commitment, there have been numerous “bottom up” state and regional policy initiatives to reduce greenhouse gas (GHG) emissions. Similarly, [Calderon \(2017\)](#) shows how across the world local communities, cities, firms and regions have taken action to address climate change. Recognizing the importance of both global efforts and local actions, [Ostrom \(2012, p. 353\)](#) argues for “polycentric systems” where actors at various levels take action. In this context, multi-stakeholder partnerships try to coordinate actions across multiple scales ([Pinkse & Kolk, 2011](#)). For a review of how different forms of organizing address grand challenges, please see [Danner-Schröder and Kaufmann \(2021, this volume\)](#).

Scale is also important when participants take action on grand challenges. In particular, two processes, that is, scaling down and scaling up, stand out. Scaling down or localizing refers to moving down from higher levels to lower levels, that is, from the global challenge to local problems and/or local solutions. For example, [Krauss \(2012\)](#) describes how climate scientists need to scale down from global climate models to coastal regions of the North Sea to identify the local effects of climate change. Similarly, [Wright and Nyberg \(2016\)](#) describe how Australian firms localize climate change in specific firm practices, for example, by identifying local opportunities to reduce GHG emissions. In this process of scaling down, larger problems are recast as smaller ones for which people can identify tangible solutions that quickly produce visible results – this is what [Weick \(1984\)](#) refers to as small wins. For example, the head of the US Environmental Protection Agency in the 1970s did not attempt to clean up all aspects of the environment, but narrowed “his practical agenda for the first year or two to ‘getting started on water pollution’” ([Weick, 1984, p. 42](#)). Similarly, [Wickert and de Bakker \(2018, p. 63\)](#) describe how CSR managers proceeded with a series of small wins instead of overwhelming other organizational members with an issue “that is perceived as overly complex and unwieldy and may fill people with anxiety.”

In turn, scaling up refers to moving up from lower/smaller levels to higher/larger levels, for example, when local experiments and solutions are turned into large-scale changes. Scaling up has long been an important idea in social entrepreneurship research (e.g., [Alvord, Brown, & Letts, 2004](#); [Perrini, Vurro, & Costanzo, 2010](#)). [Seelos and Mair \(2017\)](#), for example, emphasize that if social enterprises want to achieve impact, they need to prepare for and engage in scaling up. The authors examine the efforts of the NGO Gram Vikas that started out with a water and sanitation program in a few villages in rural India and then scaled up to 1,140 villages ([Mair et al., 2016](#); [Seelos & Mair, 2017](#)). Here, scaling up refers to providing effective solutions to more people. In turn, [Ferraro et al. \(2015\)](#) identify a slightly different way of scaling up. They suggest that through distributed experimentation “different prototypical solutions [emerge and can be combined] in ways that complement their differential strengths and weaknesses” ([Ferraro et al., 2015, p. 378](#)). Another important means of scaling up are additional stakeholders that bring with them additional knowledge and resources to pursue larger successes ([Ferraro et al., 2015](#); [Weick, 1984](#)). In order to scale up faster, [Porter, Tuertscher, and Huysman et al. \(2020, p. 277\)](#) suggest that engaging

other stakeholders that operate at different scales can be useful to “building upon local knowledge and developing global solutions.”

Lastly, scale is also a key concept in conducting research on grand challenges. Some argue that the fact that grand challenges operate at multiple scales is an opportunity because this means scholars can study a grand challenge at every scale – from the individual, to the firm, to the inter-organizational and even transnational scale (Howard-Grenville, Buckle, Hoskins, & George, 2014). Others highlight that scale can also perplex scholars – as Krauss (2012) puts it, how to localize climate change in specific instances, while at the same time keeping a hold of the “bigger picture”? To deal with this conundrum, Jarzabkowski et al. (2019) suggest two strategies for studying grand challenges: (1) collecting data from multiple stakeholders and multiple sites – this allows the “local immersion into specific manifestations of the problem while also looking at global variation” (Jarzabkowski et al., 2019, p. 122), and (2) using zooming in and zooming out (Nicolini, 2009) as an analytical technique to shift between local contexts and the wider systemic nature of the grand challenge. These methodological techniques then may also help in better theorizing the connection between different levels of analysis (Cloutier & Langley, 2020).

PROBLEMATIZING SCALE

Existing research on grand challenges takes scale for-granted by assuming that local, regional, national, and global “exist” as fundamental ontological realities. However, the current literature already indicates that scale may not be as self-evident as it seems. For example, Latour (1983) describes how scientists reverse the scale of a problem, that is, they transform the large-scale or macro-problem of anthrax disease – a common disease of livestock in the nineteenth century – to small-scale experiments in the lab. Similarly, the idea that “big” problems can be recast as smaller ones (Weick, 1984; Wickert & de Bakker, 2018) and that different accounts of grand challenges appear to construct scalar categories differently indicates that scale is not as fixed and pre-determined as previously thought.

Moreover, traditional scalar thinking significantly limits our ability to tackle grand challenges. Assumptions about authority and power flowing from the top to the bottom can present obstacles and barriers to effectively tackling grand challenges (Cameron & Hicks, 2014). For example, individuals may take no action at all, assuming that their local actions can’t do anything about the global problem and thereby emotionally detaching from the problem (Gatzweiler, Frey-Heger, & Ronzani, 2021, this volume). In this way, scalar assumptions disempower individuals and local communities. Similarly, local solutions may be marginalized and neglected because they cannot match the global scale of the problem. At the same time, negotiations at the global level often stall and achieve little impact because of the impossibility to satisfy the interests and concerns of all stakeholders; yet, a global solution is often seen as the only way to cope with a global challenge, such as climate change (Ostrom, 2012). In other words, both local and global efforts can easily get stuck because of traditional scalar thinking.

Traditional scalar assumptions also lead to defining “impact” in rather narrow terms. Greater impact is typically associated with “global initiatives” (compared to “local initiatives”) and being able to scale up (Seelos & Mair, 2017). Assumptions such as these may thus “act as a brake on political possibilities” (Cameron & Hicks, 2014, p. 57) because they prevent a willingness to take action in the first place and they are blind to openings and possibilities outside traditional scalar thinking.

OFFERING AN ALTERNATIVE: SCALE AS SOCIALLY CONSTRUCTED IN PRACTICE

An alternative way of engaging scale is to see it as an epistemological concept that participants use to make sense of and respond to grand challenges. Such an approach can be found in human geography that has a long-established interest and tradition in examining “the processes of scale-making, rescaling and the politics of scale” (Moore, 2008, p. 204). In the 1980s, human geographers started to examine how “scales are not preexisting, stable structures of the social world but they are instead socially constructed” (Papanastasiou, 2017a, p. 41). As a result of this research, various scholars have called for examining scale as an epistemological frame that is deployed by ordinary social actors as a way of apprehending and knowing the world (Jones, 1998; Moore, 2008; Papanastasiou, 2017a, 2019). They argue that by taking scale for granted, academics have turned what used to be an epistemological concept in everyday practice into an ontological concept that is seen as a fundamental feature of our social world (Jones, 1998; Moore, 2008).

In research on grand challenges, the article by Bowen et al. (2018) illustrates how scale may turn from an epistemological frame in practice to an ontological feature of the world. The authors analyze how a consortium of 12 Canadian oil sand companies address three environmental issues: tailing ponds, water pollution and fresh-water usage, and GHG emissions. In the research setting, these issues were referred to as local, regional and global issues, respectively. Bowen et al. (2018) assume that these scales are an ontological feature of the issue, given and pre-determined. Thus, they theorize that the scale of the environmental issue influenced the effectiveness of the organizing rules that the consortium used and thereby shaped how the companies were able to respond to these issues. In particular, they find that the organizing “rules were more effective for smaller scale issues than larger scale ones” (Bowen et al., 2018, p. 1428) and that “issues of different scale alter the balance between collaboration and competition” (Bowen et al., 2018, p. 1426). In their account, Bowen et al. (2018) thus use scale as the independent variable to explain outcomes of collective action (the dependent variable).

In turn, examining how scale was used as an epistemological frame in the negotiations of the consortium might have revealed a different picture. Instead of a priori assuming that these environmental issues were inherently local, regional and global, the authors could have looked at how the companies used the concepts of local, regional and global to make sense of the issues they were facing.

For example, the author's empirical account suggests that the water issue *became framed* as a regional issue because scientists emphasized that three regional river basins were affected by water pollution and water usage and "critics saw the water issue as regional without clearly demarcated boundaries" (Bowen et al., 2018, p. 1422). Yet, this construction of water as a regional issue was not at all given. As the informants of the research argued "water is an area that you deal with everywhere in the world. You deal with it around the globe" (Bowen et al., 2018, p. 1423). Thus, water could have also easily been constructed as a global issue and therefore seen as more difficult to tackle. Similarly, the informants of Bowen et al. (2018) saw GHG emissions as a global issue and hence found it difficult to tackle. In contrast, there are many examples in which GHG emissions become seen as a local or regional issue that needs to be addressed by local or regional initiatives. Examining how the companies used local, regional and global as scalar categories in their negotiations may have led to the opposite conclusion, that is, that scalar constructions are the *outcome* of competitive and collaborate dynamics rather than the *antecedents* to these. Rather than arguing that scale alters the balance between collaboration and competition, we might see how the balance between collaboration and competition on particular issues shapes scalar constructions.

The study by Mair et al. (2016) on inequality helps to further demonstrate the importance of scale in defining problems and solutions to grand challenges. The authors studied inequality in villages in rural India where patterns of inequality are deeply entrenched and shaped by the caste system, class and gender. Mair et al. (2016) produce very useful insights about how to tackle inequality, but they do not examine the use of scale in this process.

A closer reading of their study, however, reveals that the construction of the village as a central level for taking action was key to enabling this process. In rural India, access to water and sanitation is typically controlled by individual households, in particular the powerful elites in the village. In turn, the water and sanitation program that the NGO Gram Vikas proposed involved a "100% inclusion" rule that required all households in the village to participate in the program. Initially, there was resistance to this rule, but Gram Vikas was able to convince local leaders to participate in the program by showing them that their wish for pure and clean water could only be fulfilled if all households in the village had access to proper sanitation and clean water (Mair et al., 2016, p. 2033). In this way, they constructed the water and sanitation issue as a village-level problem that can only be solved by a village-wide solution that cut across all social, religious and economic groups. The new scalar category was further institutionalized through forming a Village General Body that served as a basis for organizing meetings and making decisions. It also enabled villages to access resources and funds at higher levels, such as the government level. Thus, while inequality is often seen as a system-wide problem (Mair et al., 2016; Tilly, 1998), here the construction of the village as an important level for authority and decision-making enabled transforming deeply entrenched patterns of inequality.

The study by Pop and Seidl (2019) indicates that scale as an epistemological frame is not only an important device in how participants make sense of grand challenges, but also that there is flexibility in how participants employ scalar terms

and categories. In their study of two Smart City initiatives in Northern Europe, the authors show how “national, local, big city vs small city” (Pop & Seidl, 2019, p. 28) were important frames through which participants made sense of the Open Data approach “which is considered a wicked problem in itself” (Pop & Seidl, 2019, p. 25). For example, in one initiative, participants initially discussed Open Data at the level of the municipality, but at one point a participant shifted to seeing it as national issue: “When we think of open data in the municipalities, we should think it nationwide. So it is the whole country that has to go through the process” (Pop & Seidl, 2019, p. 16). This shift to the national scale was consequential because it meant that instead of working with all municipality data, participants agreed to focus on a few selected data points. As Pop and Seidl (2019) argue, making sense of grand challenges is inherently difficult because neither their full scope nor their detailed nature can ever be fully understood. Thus, scale as an epistemological frame is an important device that participants employ to make sense of problems and develop solutions (other important sensemaking devices for grand challenges include, for example, temporality (see Stjerne, Wenzel, & Svejenova, *this volume*), metaphors (see Schoeneborn, Vásquez, & Cornelissen, *this volume*) and values (see Kroeger, Siebold, Günzel-Jensen, Saade, & Heikkilä, 2021, *this volume*)).

Shifting from scale as a fixed ontological category to scale as an epistemological frame used in practice also reveals that scalar categories and hierarchies may change over time. As the human geographer Jones (1998, p. 26) argues, the

construction [of scale] is continually contested – in fact, scale is the result of contestation, and how it is resolved at one moment may be quite different from how it is resolved at some later time. Scale is therefore both historically specific and subject to change.

For example, Papanastasiou (2017a) describes how in the context of England’s educational policy, scalar categories and their relations changed significantly over time. Initially, individual schools were controlled by and accountable to local authorities such as city councils, which in turn were accountable to the central government. In 2000, England’s government introduced a new policy that “clos[ed] down failing secondary schools and reopen[ed] them as academies. Academies [...] receive funding directly from central government [...] and have greater individual autonomy, becom[ing] free from local authority ‘control’” (Papanastasiou, 2017a, pp. 45–46). Thus, the new policy endowed the individual school level with greater power and autonomy vis-à-vis the local authority level and it changed the relation to the national level. However, the Northwestern City Council (a pseudonym), that Papanastasiou (2017a) studied, again changed scalar categories and hierarchies when they implemented the policy. In particular, the local authorities deliberately dissolved the boundaries of scale between the individual school and the local city authority, constructing it as one composite rather than different levels. In doing so, they also constructed the local authority as the most important level of authority and decision-making and the national scale as distant and disconnected. Thus, within a short time frame, scalar categories and hierarchies changed significantly through struggles over educational policy.

Investigating how scale is used as an epistemological frame in practice reveals how alternative scalar constructions outside traditional scalar thinking are

possible. For example, in Papanastasiou (2017a), constructing the local authority level as the most powerful and important level is directly opposed to the scalar hierarchy that is commonly taken-for-granted. In a similar vein, Cameron and Hicks (2014) provide an example where the organizers of a large renewable energy project in Australia overcame the obstacles created by traditional scalar thinking by constructing alternative scalar relations: The organizers encountered a major impediment when they were not able to secure government funding. According to traditional scalar thinking, this obstacle would have put an end to their initiative because large infrastructure projects should be funded by government-level funds. However, the organizers were able to reimagine their strategy by reconceptualizing the relations with local individual households: they decided to collect all necessary funds through a vast number of local members.

By not taking scalar categories and hierarchies for granted, we are able to see “countless alternate political possibilities and actualities [that] transpire beneath the radar” (Woodward, Jones, & Marston, 2010, p. 272). For example, it becomes possible that a 15-year-old Swedish girl, Greta Thunberg, actively criticizes government and world leaders for their failure to take action on climate change – something that according to the traditional scalar hierarchy is not possible. It also becomes possible that in Switzerland a group of retired senior women sues the Swiss government for not taking sufficient action to prevent climate change. If we look closely, we are likely to see many more examples of sidestepping traditional scalar thinking.

Examining scale as socially constructed in practice also help us to reimagine what “impact” may mean in tackling grand challenges. For example, Cameron and Hicks (2014, p. 61) suggest that “impact scale can also operate outside of a scalar hierarchy.” They show that impact can also be achieved by a multiplicity and diversity of disparate and disconnected actions, what they refer to as “a geography of ubiquity” (Cameron & Hicks, 2014, p. 62). These small-scale endeavors tackle climate change in localized ways, but through their ubiquity they build a significant response. Here, impact is not achieved through “scaling up” but through “multiplying” and “broadcasting,” such as, inspiring others by writing and talking about a local model of tackling climate change. In other words, impact is not achieved by coordinating and accumulating actions into a larger-scale solution but by initiating and fostering disparate and disconnected actions. If we want to understand how organizations can make a difference in tackling grand challenges we also need to see and develop a language for generating impact beyond traditional scalar thinking.

Taken together, the previous examples suggest that considering scale as socially constructed in practice has the potential to contribute to research on grand challenges in three ways: (1) It allows us to *see differently* because it shows that scale in grand challenges is not fixed and pre-determined, but more flexible and fluid than previously thought (e.g., Papanastasiou, 2017a, 2017b; Pop & Seidl, 2019). (2) It allows us to *theorize differently* because instead of using scale as the independent variable to explain grand challenges with, we can begin to uncover how scalar categories, their construction and use are implicated in defining problems and devising solutions to grand challenges (e.g., Mair et al., 2016). (3) And it allows us

to *respond differently* because we can take actions that sidestep traditional scalar thinking and we can reimagine how to achieve impact in tackling grand challenges (e.g., [Cameron & Hicks, 2014](#)).

METHODOLOGICAL CONSIDERATIONS

Seeing scale as an epistemological concept in everyday practices directs our attention to how scale shapes the way we see, know, think and act in the world. We can ask how issues, people, places, events, actions and social relationships get classified in scalar terms (e.g., as global, local, regional, etc.) and what are the consequences of such classifications. This requires that the researcher put aside their own a priori assumptions about whether something is small- or large-scale, micro and macro, and instead attend to the way participants use scalar concepts in practice. Actor-network theory exemplifies such an approach. As [Latour \(1996, p. 371\)](#) argues, actor-network theory

is ideally suited to follow the change of scales, since it does not require the analyst to partition her world with any a priori scale. The scale, that is, the type, number and topography of connections, is left to the actors [i.e., the participants] themselves.

If researchers want to understand how participants employ scalar categories in their work, they need to get close to this work through, for example, case studies, interviews or ethnography. For example, [Papanastasiou \(2017a\)](#) employs a case study approach to study England's educational policy and to analyze how participants use scalar categories and arguments in their policy work. She describes how she

did not identify and code "national scale" by exclusively considering any instance that her informants uttered the word "national." Instead, [her] analysis took an interpretive approach to understand the "national" as being associated [... with] a range of categories and concepts. "Central Government," "the Department for Education" and "National Inspectors" are all examples of categories and institutions which actors use[d] when they refer[ed] to their conception of a national scale. ([Papanastasiou, 2017a](#), p. 47)

Concepts and categories were grouped together or distinguished from each other (e.g., the individual school, the local authority and the national government) when the use of these concepts and categories indicated that they occupied similar positions in a scalar hierarchy that people invoked in their everyday practice.

Scholars may also investigate the scalar constructions inside the firm that are implicated in tackling grand challenges. Many companies have a corporate level at which strategies are developed, but these then need to be translated to specific practices within business units and regional offices. For example, [Wright and Nyberg \(2016\)](#) describe how some companies establish carbon councils at the business unit level, while others introduce centralized sustainability teams at the corporate level that provide knowledge and expertise to other units in the company. Thus, we can expect that organizational members also use scalar categories, such as business units, corporate level or department level, in their efforts to tackle issues related to grand challenges.

Finally, letting go of scale as an ontological fixed category also means that instead of collecting data at different levels of analysis or investigating the interactions between different levels, scholars direct their attention to the relationships and interactions among different “sites” without presuming that the world is structured and organized in a scalar hierarchy. For example, [Cameron and Hicks \(2014\)](#) studied the relations between and interactions of the Australian renewable energy initiative with multiple other sites by “put[ing] to one side the assumptions about flows of power and influence that characterize scalar thinking” and instead “explore[ing] the site-specific relationships that comprise several grass-roots renewable energy initiatives” ([Cameron & Hicks, 2014](#), p. 58).

A RESEARCH AGENDA: SCALE AS AN EPISTEMOLOGICAL CATEGORY IN TACKLING GRAND CHALLENGES

Managers, employees and other stakeholders in organizations use scale as an epistemology frame to apprehend the world. I have argued here that by studying how practitioners employ scale to make sense of, construct and respond to grand challenges, we can see differently, theorize differently and respond differently to grand challenges. It also allows us to ask new questions of grand challenges. In particular, I highlight three areas that are particularly promising: (1) how scale shapes the construction and response to grand challenges; (2) how scalar categories and hierarchies may change over time; and (3) alternative constructions of scale that help to overcome the limits of traditional scalar thinking. [Table 1](#) summarizes the differences between seeing scale as an ontological feature of the world and seeing it as socially constructed in practice.

1. How Scale Shapes the Construction of and Response to Grand Challenges?

The starting point for this paper was the observation that scale plays an important role in describing grand challenges, in identifying possible ways to solve grand challenges and in accomplishing change. Yet, scale is not a fixed, pre-determined category but becomes defined through the interactions of various actors. As a result, in practice, scale can be used in more flexible and fluid ways than previously thought. Future research can thus investigate how practitioners use scalar categories and hierarchies to frame problems and to design and implement solutions. What strategies do they employ to make sense of grand challenges in scalar terms? How are scalar categories and hierarchies shaped by the interests and concerns of specific actors?

In addition, [Fraser \(2010\)](#) and [Papanastasiou \(2017b, 2019\)](#) draw attention to the skills, efforts, and innovations involved in constructing scale, what they refer to as “scalecraft.” Thus, we can examine how practitioners may have more or less expertise and experience in crafting scale. What practices and strategies for employing scale are more successful and which ones are less successful in tackling issues? Lastly, scalar categories and hierarchies are also often built into

Table 1. Scale in Research on Grand Challenges.

	Scale as an Ontological Feature of the World	Scale as Socially Constructed in Practice
Conceptualization of scale	<ul style="list-style-type: none"> The scale of issues is fixed and pre-determined 	<ul style="list-style-type: none"> Scale as an epistemological category deployed by participants as a way of apprehending and tackling grand challenges Scale can be used more flexibly and fluidly than previously thought
Research methods	<ul style="list-style-type: none"> Collecting data at different levels Zooming into the local level and zooming out to the global level 	<ul style="list-style-type: none"> Collecting data on how people construct, employ, maintain and alter scalar categories in their everyday work Study relationships and interactions between different sites without presuming that the world is structured and organized in a scalar hierarchy
Theorizing	<ul style="list-style-type: none"> Use scale (as independent variable) to describe and explain grand challenges with Reinforce traditional scalar categories and hierarchies, for example, global at the top and local at the bottom 	<ul style="list-style-type: none"> Explain scalar categories and hierarchies as outcomes of struggles to tackle grand challenges Identify alternative scalar constructions
Research questions	<p><i>Developing solutions for grand challenges</i></p> <ul style="list-style-type: none"> What is the appropriate level at which to take action to tackle grand challenges? How to localize global problems in corporate practices and concrete actions? <p><i>Collaboration across scales</i></p> <ul style="list-style-type: none"> How do problems change as they are translated across levels? How can actors operating on different levels of scale collaborate and coordinate their actions? <p><i>Achieving impact</i></p> <ul style="list-style-type: none"> How do actions at the local level connect to changes on the global level? How are local solutions scaled up for large-scale change? 	<p><i>How scale shapes the construction of and response to grand challenges</i></p> <ul style="list-style-type: none"> How is scale implicated in the construction or definition of a grand challenge? How is it implicated in designing a solution? How are scalar categories and hierarchies built into technologies, models and measurement tools? What is the consequence for how practitioners tackle grand challenges? <p><i>The enactment of scalar categories and hierarchies over time</i></p> <ul style="list-style-type: none"> How do scalar categories and hierarchies change over time as participants take action on grand challenge? Are there rhythms, jumps or returns as scalar constructions change over time? <p><i>Alternative constructions of scale</i></p> <ul style="list-style-type: none"> How do practitioners overcome obstacles and barriers created by traditional scalar thinking? What alternative scalar constructions and hierarchies emerge that do not follow the traditional scalar constructions?

technologies, models and measurement tools, such as global models of climate change, local models of extreme weather events and so forth. How is scale built into these models and measurement tools? And what is the consequence for how people engage with grand challenges?

2. The Enactment of Scalar Categories and Hierarchies Over Time

Once we shift to seeing scale as an epistemological frame employed in practice, it becomes apparent that scalar categories and hierarchies are also subject to change over time. As Jones (1998, p. 26) pointed out, how scale “is resolved at one moment may be quite different from how it is resolved at some later time.” Thus, we can ask: How do scalar categories and hierarchies change over time as participants take action on a grand challenge? For example, both Wright and Nyberg (2016) and Grodal and O’Mahony (2017) identify a process of translation through which ambitious goals and strategies for grand challenges are translated into action in terms of specific corporate practices and inter-organizational initiatives. Grodal and O’Mahony (2017) show that when scientists took action to tackle the grand challenge of molecular manufacturing, gradually the ambitious goals were replaced by more short-term projects and initiatives. These processes of translating goals and strategies into action and taking action over time can involve not only redefining problems and solutions, but also redefining the scalar categories and their relations themselves, as the example by Papanastasiou (2017a) above showed. In addition, there may be patterns and rhythms in how issues, actors and actions are scaled, rescaled and rehierarchised over time. Identifying these patterns may be useful in understanding how responses to grand challenges unfold over time.

3. Alternative Constructions of Scale

A very promising area for research is investigating alternative scalar constructions that defy the assumptions of traditional scalar thinking. By uncovering alternative scalar categories and relations, management research can contribute to identifying opportunities and possibilities for overcoming obstacles and barriers that are created by traditional scalar thinking. For example, Bulkeley (2005) investigates a transnational municipal network that challenges accounts of environmental governance along a traditional scalar hierarchy from the municipality to the state and international regimes. She explores a “new spatial grammar” (Bulkeley, 2005, p. 875) that such networks employ.

Management scholars have started to explore new forms of organizing, such as crowdsourcing (Brunswick, Bilgram, & Fueller, 2017; Porter et al., 2020), that are increasingly used to encourage collaborative problem-solving on societal issues; yet, the implications for scalar constructions in such forms of organizing has not yet been explored. For example, it appears that crowdsourcing initiatives sidestep the traditional scalar hierarchy by connecting individuals and participants from different organizations, irrespective of the level at which they ostensibly operate. Porter et al. (2020) describe how a crowdsourcing initiative connected individuals, entrepreneurs, small, medium and large private firms, governmental institutions, NGOs, and industry associations. Such initiatives are likely to

create different kinds of connections, knowledge and solutions than other forms of organizing, such as the UN Climate conference where traditional scalar hierarchies in terms of international agreements, nation states, and other organizations still play a greater role. Thus, future research can explore how new forms of organizing (Danner-Schroeder & Kaufmann, 2021, this volume) create alternative scalar constructions and how this impacts taking action on grand challenges.

CONCLUSION

If the aim of management research is to contribute to a better understanding of grand challenges and how these problems can be tackled, then shifting from taking scale for granted to how it is constructed, employed and altered in practice can reveal new and important insights. Making this shift entails three important moves: (1) recognizing that scalar categories and relations are socially and materially constructed in action and interaction; (2) being sensitive to how scalar categories and relations change over time; and (3) being open for alternative scalar constructions that defy the assumptions of traditional scalar thinking. These three moves allow management scholars to adopt a more reflective and critical stance toward scale.

As numerous scholars have pointed out (Cameron & Hicks, 2014; Law & Urry, 2004), social research is a generative and performative practice. For example, Law and Urry (2004, p. 390) argue that “social inquiry and its methods are productive: they (help to) make social realities and social worlds. They do not simply describe the world as it is, but also enact it.” This means that by adopting scale as a taken-for-granted ontological category, we are reinforcing the assumptions of traditional scalar categories and hierarchies. Yet, Law and Urry (2004, p. 390) continue, “if social investigation makes worlds, then it can, in some measure, think about the worlds it wants to help to make.” Thus, we have a choice in how we want to engage and enact scale. For example, by shifting to identifying and creating alternative constructions of scale we can participate in bringing new realities into being.

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DIARIES AS A METHODOLOGICAL INNOVATION FOR STUDYING GRAND CHALLENGES

Madeleine Rauch and Shahzad (Shaz) Ansari

ABSTRACT

We illustrate the potential of diaries for advancing scholarship on organization studies and grand challenges. Writing personal diaries is a time-honored and culturally sanctioned way of animating innermost thoughts and feelings, and embodying experiences through self-talk with famous examples, such as the diaries written by Anne Frank, Andy Warhol, or Thomas Mann. However, the use of diaries has long been neglected in organization studies, despite their historical and societal importance. We illustrate how different forms of analyzing diaries enable a “deep analysis of individuals’ internal processes and practices” (Radcliffe, 2018) which cannot be gleaned from other sources of data such as interviews and observations. Diaries exist in different forms, such as “unsolicited diaries” and “solicited diaries” and have different purposes. We evaluate how analyzing diaries can be a valuable source to illuminate the innermost thoughts and feelings of people at the forefront of grand challenges. To exemplify our arguments, we draw on diaries written by medical professionals working for Doctors Without Borders as part of our empirical research project conducted in extreme contexts. We show the value of unsolicited diaries in revealing people’s thought world that is not apprehensible from other modes of communication, and offer a set of practical guidelines on working with data from diaries. Diaries serve to enrich our methodological toolkit by capturing what people think and feel behind the scenes but may not express nor display in public.

Keywords: diaries; grand challenges; extreme context; silence; emotions; methodology

Organizing for Societal Grand Challenges

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Miss Prism: Cecily, I really don't see why you should keep a diary at all

Cecily: I keep a diary in order to enter the wonderful secrets of my life. If I didn't write them down, I should probably forget all about them

(Oscar Wilde: *Bunbury*: 1908: 210)

INTRODUCTION

The burgeoning literature on grand societal challenges spans a variety of spheres (e.g., Ferraro, Etzion, & Gehman, 2015; Gatzweiler, Frey-Heger & Ronzani, 2022), addressing, among others, poverty alleviation (Pradilla, Bento da Silva, & Reinecke, 2022) to affordable health care (Rauch & Ansari, 2021). However, there is still much to learn about how individuals at the frontline of these challenging contexts, experience and cope with extreme situations involving human suffering. While extreme contexts and grand challenges are two distinct strands of literature, many grand challenges play out in extreme contexts (see Hällgen, Rouleau, & de Rond, 2017, for an overview). Relatively little research has attended to the emotional trauma of individuals working to alleviate human suffering in the midst of extreme contexts, such as warzones (De Rond & Lok, 2016; Fraher, Branicki, & Grint, 2017) and refugee camps (De La Chaux, Haugh, & Greenwood, 2018).

Social science has documented numerous sources of data to study grand challenges such as surveys, case studies, interviews, ethnographies, and natural experiments, to capture the complex and manifold dimensions of grand challenges. Such data, however, may not be able to apprehend the real-time feelings, thoughts, and experiences of affected individuals confronting extreme situations. For example, in their study of the social stability in a Kenyan refugee camp, De La Chaux et al. (2018, p. 160) acknowledge the difficulty of studying grand challenges:

[...] sensitive topics such as incidents of rape and the role of mafia gangs remained difficult to discuss as we sensed a clear reluctance to delve into these topics. [...] In the follow-up phone interviews, silences, pauses, and hesitation took on a similarly central role and again occurred primarily when we inquired about incidents of gender-based violence and gang structures [...].

In the past decades, several methodological innovations have emerged in management scholarship to address various ontological and epistemological considerations. This includes video data, team ethnographies, and multimodality – addressing material, sensory and visual aspects of data (Jancsary, Höllerer, & Meyer, 2016; Kress, 2010) in order to strengthen the existing methodological arsenal, such as field observations and interviews. However, concepts such as emotions and cognitions are still difficult to decipher and access (Zietsma, Toubiana, Voronov, & Roberts, 2018). Oftentimes, “emotions are not worn on sleeves” but instead actors engage in emotional labor, emotional self-censorship, or a strategic display of their emotions (Jarvis, Goodrick, & Hudson, 2019). The well-known example of the air hostess smiling on the job (Hochschild, 1979) points to the emotional labor in the service industry, in which actors perform certain roles (e.g., being friendly and welcoming) that do not betray the feelings that they actually experience.

We propose the use of personal diaries (Burgess, 1984) as a fruitful and rich source of data in the endeavor to study grand challenges by giving voice to participants in the daily praxis of their work. Diaries capture people's innermost thoughts, reflections and memories that they document without the gaze of social judgment. Writing personal diaries described as a "technology of the self" (Foucault, 1982) is a time-honored and culturally sanctioned way of animating personal values and innermost feelings (Klein & Boals, 2001), and embodying experiences through self-talk. Indeed, diary writing is an established tradition and practice across different cultural backgrounds dating back to famous examples such as the so called "Pillow book" by the court lady Sei Shanoagon to Empress Consort Tieshi during the 990s and early 1000s in Japan. Other notable examples include James Cook's board journals from the eighteenth century, the diaries kept by Samuels Pepys from London in the 1660s, and the diaries written by Anne Frank and Thomas Mann – all of which represent important cultural and historical artifacts of modern society.

Drawing on our own experience of working with diary-based data in extreme contexts (e.g., see Rauch & Ansari, 2022 for a diary-based project studying military personnel), we illustrate their potential of diaries to study and advance scholarship on grand challenges and organization studies. While diary writing is known to bring psychological benefits to people coping with traumatic events (Amabile & Kramer, 2011), we showcase the value of diary writing for management studies (Balogun, Huff, & Johnson, 2003; Ohly, Sonnentag, Niessen, & Zapf, 2010). Diary studies seem particularly suitable for investigating personal accounts of people deeply affected by grand challenges, and capturing their innermost thoughts and feelings, as well as their coping strategies in the midst of extreme contexts (Farny, Kibler, & Down, 2019). We show the value of unsolicited diaries in revealing the inner world of people that cannot be captured by other modes of communication. We outline different ways of working with diaries and the advantages and disadvantages of conducting research with diaries, and provide a set of practical guiding principles by drawing on our own experiences of working with diaries-based data.

USING DIARIES FOR STUDYING GRAND CHALLENGES

Despite its frequent use in private life such as in the famous examples of Anne Frank, Max Frisch, Andy Warhol, and a myriad of diary writers across the globe, the use of data from diaries in (social) science is rather rare. This is despite the few attempts to introduce diaries into social science (Alaszweski, 2006; Balogun & Johnson, 2004; Rauch & Ansari, 2022). In many disciplines, such as chemistry, pharma, and medicine, using and writing diaries are integral parts of research, as well as a means of transferring and communicating knowledge between individuals to keep track of developments (Bartlett & Milligan, 2015; Hislop, Arber, Meadows, & Venn, 2005). In comparison, social science research rarely relies on diaries as a key source of knowledge (see for exceptions Balogun & Johnson,

2004; Hannaway, 1989; Rauch, & Ansari, 2022). The use of self-reporting methods like diaries has been described as an “unconventional method” (Wickert & Schaefer, 2015, p. 124), and can serve “as a supplement to the active role of critical researchers” (Wickert & Schaefer, 2015, p. 124) in shedding new light on managerial work and the performative aspects of language. Indeed, “self-reporting methods have been applied successfully [...] and appear to be a promising tool” (Wickert & Schaefer, 2015, p. 124).

Diaries vary in terms of the degree of detail but also in the way they are written, as well as regarding the motivation of people to write diaries. Diarists adopt different styles in writing about different aspects of their lives. While some diarists engage in daily writing, for example, in the morning or the evening, others engage in less frequent journaling. The diversity of diaries is also illustrated by the different forms that diaries take; some write on Microsoft Word, others use weblogs or diary-apps, a classical blank page or a book with or without a lock.

Here, we follow the definition of diaries by Alaszweski (2006, p. 2) “as a document created by an individual who has maintained a regular, personal and contemporaneous record.” In the extant literature, journaling, keeping a diary, and diarist, are treated as synonyms (Alaszweski, 2006). Diaries are emic reflections and not etic observations. Emic reflections refer to viewpoints obtained from within the social group from the subject’s insider perspective. Etic observations refer to the observer’s outsider perspective (Headland, Pike, & Harris, 1990).

We provide granularity and specificities regarding how diary data can be used to study organizational phenomena and provide the distinctions between two forms of diaries, and their advantages and disadvantages (see Table 1); that is, (1) unsolicited diaries, which are diaries that are conducted voluntarily without the observation of others; or (2) solicited diaries, which are written for trials, research projects or to cover a particular event (Milligan & Bartlett, 2019). For example, Rauch and Ansari (2022) use unsolicited diaries of military personnel working in the U.S. Air Force to study their perception of drone technology and its influence on nature and morality of their work, and the subsequent consequences it had for them and their work. Balogun et al. (2003) solicited managers to write their reflections in a diary based on their responses to five questions to track the progress of change implementations in their organizations. Others, such as Buchanan and Boddy (1992) studied the change managers’ experience of managing change by drawing on audio diaries over a two-week period. Schilit (1987) drew on diaries by middle managers to record the frequency, nature, and outcome of interactions among supervisors and themselves, in relation to strategic decisions over two months. These examples highlight the importance of diaries as a tool for research.

We zoom in on the use of unsolicited diaries, as they offer unique insights into the “thought world” of the diarist without being subject to social desirability and other biases that potentially affect solicited diaries. One type of such unsolicited diaries is also referred to as “natural diaries.” In other words, “the test is whether the interaction would have taken place in the form that it did had the researcher not been born or if the researcher had got run over on the way to the university that morning” (Potter, 1996, p. 135). Diaries allow for immediate reflections on events, experiences, and thoughts. In particular, diaries provide a more nuanced

Table 1. Overview Diaries.

	Unsolicited Diaries	Solicited Diaries
Definition	Diaries are conducted voluntarily without observation of others	Diaries are written for the purpose of trials, research, or to cover particular events
Advantages	<p>Diarists are engaging voluntarily in journaling, often depicting a form of life-history data capturing the individual's reflections about life, experiences, and how the individual feels about particular events, and happenings in their life, that is, offering an "inside view, and helps to look on the "backstage" of the "backstage" (Goffman, 1959)</p> <p>Allows for the absence of the researcher in the field, especially suitable in extreme contexts (such as war) and covering a longer time period (months to years)</p> <p>Mitigate the risk of "retrospective bias" and "social desirability bias" which often associated with interview studies</p>	<p>Diarists focus on certain aspects prompted by the initial guidance to record impression that are of interest to the research project, for example, focus on certain types of events, issues, and experiences</p> <p>(More) systematic technique to collect data</p> <p>Allows for the absence of the researcher in the field, especially suitable in extreme contexts (such as war) and covering a longer time period</p> <p>Helps to mitigate the risk of "retrospective bias" which often associated with interviews</p>
Points for consideration	<p>As there is no "one way" of keeping a personal diary, different diary technique and foci on detail among diarists</p> <p>Large amount of data which might be less relevant for the purpose of the research project</p> <p>Difficult to gain access and importance to adhere to anonymity and rules such as General Data Protection Regulation (GDPR), especially in data storage and handling</p>	<p>Actors encouraged to keep to a diary for research purposes</p> <p>Actors are potentially less inclined to keep detailed diaries (e.g., managers, CEO)</p> <p>Diarists might feel "uncomfortable" and "observed" when journaling (e.g., on sensitive topics)</p> <p>Regular check in with diarists to potentially keep them motivated</p> <p>Importance to adhere to anonymity and rules such as GDPR, especially in data storage and handling</p>
Important examples	Rauch and Ansari (2022) studying military operators	Balogun and Johnson (2004) studying middle manager

understanding of situations that evoke strong emotions. As such, unsolicited diaries can mitigate retrospective bias and socially desirable responses by providing a thick description of events in "real-time," and how those events unfold over time (e.g., in change processes).

Studies on extreme contexts have illustrated how people "emotionally control" (de Rond & Lok, 2017; Fraher et al., 2017) their behavior in difficult situations, and are reluctant to speak about difficult experiences. One example is the study by De La Chaux et al. (2018) on maintaining social stability in Kenyan refugee camps. Fraher et al. (2017, p. 252) allude to the role of emotions in their study of U.S. Navy Seals working in Afghanistan and Iraq, arguing that

the Seal candidate is forced to compartmentalize his emotions – and not fixate on them – to provide his best effort in the moment and to not obsess over the "what-ifs" [...].

The social norms of working in extreme contexts such as in the military encourage a “culture of silence” (De Rond & Lok, 2016; Fraher et al., 2017), where participants are unable to not just express or display their emotional distress but also not share their experiences with colleagues. By observing or interviewing actors in such extreme contexts, one might conclude that actors are not emotionally affected by the experienced atrocities as they appear calm and controlled in getting on with their job, preferring not to display their emotions in public (Farny et al., 2019; Jarvis et al., 2019). As such, diaries can capture the experience of individuals in a way that is not possible by using traditional designs. They permit the examination of events and experiences in their natural and spontaneous context (Reis, Erber, & Gilmore, 1994), offsetting some of the problems associated with retrospective accounts (Bower, 1981).

EMPIRICAL EXAMPLES FROM DIARIES

To show their methodological value, we provide illustrations of how diary studies can be used to enrich qualitative studies. Potentially, diaries can be used in the same manner as sole diary studies and as a support for quantitative studies (e.g., Amabile, Barsade, Mueller, & Staw, 2005; Schilit, 1987). However, we will focus on diaries as part of qualitative analysis. We draw on one example conducted for a larger project on “organizing in extreme contexts” in which we studied how actors cope with brutal reality in such contexts. In doing so, we draw on examples from our research drawing from unsolicited diaries obtained from medical personnel working for Doctors Without Borders (MSF).

In the case of MSF, we analyzed a set of over 70 diaries of medical personnel ranging from nurses, doctors, and surgeons from different parts of the world with diverse backgrounds, gender and sexual orientations. The organization did not prescribe its personnel to write diaries. Instead MSF personnel engaged voluntarily in journaling. We interviewed all diarists (besides one) after we read through the diaries several times. In addition, one author joined several missions to extreme contexts such as Afghanistan, South Sudan, and Yemen to observe work in extreme contexts and get a feel of the context. This was done in light of our research interest in the realm of grand challenges, in contexts that scholars have described as people being “silent” or numb when it comes to the expression of their emotional experiences. In these situations, actors have deployed coping strategies when they are unable to openly voice, express, and display their emotional distress.

Our observations regarding emotional experiences from field trips align with the findings of studies of contexts where actors prefer to remain silent rather than display their emotions and articulate their experience. Actors cope in different ways when faced with trauma, such as black humor, cynicism, planting vegetables, or engaging in substance abuse. By analyzing the diaries, we were able to observe that actors are actually not emotionally numb or in control of their emotions as it may appear from observing their behaviors in the field. Instead, they are highly affected emotionally by the experience on the ground but simply don't

wear them on their sleeve. As such, a surgeon illustrates in his diary his experience working in an MSF clinic in Afghanistan:

I started two days ago and I remember he [Youssuf] was one of my first ones. I can't describe what I have done. I know the medical procedure but in reality, what I did. I cannot. I should be able to but I cannot. I had no other option. Had the inner urge to puke. [...] Youssuf was one of my longest patients. He had a severe infection. [...] No surprise he had a severe infection. Every double here without infection is a medical miracle. Prosthetics in plastic bags. No wheelchair. No doubt no wheelchair. What do I even say? I am happy if we have enough pain pills to hand them [...]. We have set him up with new prosthetics today. It was Christmas and birthday all in one. It is the best of all feelings here. It is the only feeling worth describing here. (Diary 56)

In a follow-up interview with this surgeon, we probed further into this diary entry in relation to the patient which he called Youssuf:

Of course I have never talked to anybody in the field about my sentiments towards Youssuf. Talking isn't a way of solving anybody's problem in the field. We all do the work and we all need to find ways to come to terms with it. But to your question. No, I have never articulated or share this with anybody. We all performed procedures together but we have never talked about it from a human empathic point of view. We kept it always to the medical point of view. For me writing a diary which I still do to his very point was a way to find a space for myself but also a space to share my thoughts, both negative and positive ones. And I can tell you in the field there are more negative ones. (Interview 56)

Looking at diaries in relationship to the interviews allowed us to access the inner thoughts, reflections, and feelings of the actors in the field. By looking at these diaries, we reveal how medical professionals are highly affected emotionally by what is happening in the field in contrast to what one may conclude from observing their behaviors in the field where they may appear as “cold rational agents.” We could also observe how actors described the need to change their way of “seeing” and “perceiving reality.” They described such a change as necessary “to survive” and cope with the traumatic reality at hand. A doctor in a field trip to Yemen reflected on the situation of civilians and the lack of access to basic food and medical supplies amidst the ongoing war:

Once starvation was on the table and starvation was used as a weapon and tool of war, things radically changed for me. One needs to change to stay sane. No way to rationalize and find a justification why a human being would use and try to eradicate other humans in such a manner and cruel way [...]. At this point I learned the hard way to look the other way. A different way! Which way this is I am still figuring out. For now, I just know it can't be the old way. (Diary 70)

Despite the need to cope with the difficult situations on the ground, and “look the other way,” we identified a “culture of silence” (De Rond & Lok, 2016), where people do not share nor openly talk about their difficult experiences and emotional distress. Rather, they express themselves through writing personal diaries that reveal the internal conflicts they experience and the mechanisms they use to cope with the conflict. They engage in this form of “self-censorship” (Edmondson, 1999), not out of fear that speaking up will lead to being penalized by their superiors or concerns about personal consequences (e.g., Morrison, 2011). Rather they do so, as a coping mechanism to deal with the emotional distress they experience in extreme situations and for being able to “get the job done.” Speaking about

emotional distress and sharing feelings even with colleagues only made matters worse, as in many cases, it led to emotional breakdowns.

Overall, looking at the diaries while not being a researcher in situ, allows us to gain an insider’s understanding of their daily experiences and a peek into their innermost thoughts and feelings unobservable elsewhere.

METHODOLOGICAL GUIDANCE

In the excerpts we showed, we have used the example of emotions illustrating the power of diaries. The use of diaries is not limited to the aforementioned concepts and ideas. Studying diaries can be also used for concepts such as cognition, sensemaking, and framing but also for studying identity, and interactions with technology. We see strong potential in using diaries revealing other aspects of organizational life and changes in the nature of work. For example, in following organizational norms, procedures, and rules, there may be a stark difference between the emotions experienced and the behavior displayed in which people may not express their innermost doubts and cynicism.

We provide practical guidance informed by our own experience, and some important questions to be raised when engaging with diaries (see Table 2). We have characterized them alongside steps in empirical research which may vary depending on the scope of projects.

Data Collection

One reason why diary-based studies are less common in organization studies is partly due to the difficulty of access to diaries. Not everyone writes diaries nor may be vocal about their journaling, and even if they write diaries, they may be

Table 2. Questions to Consider When Working with Diaries.

Data Collection	Data Analysis	Ethical Considerations
<ul style="list-style-type: none"> • How to get access to diaries? • What is the purpose of data collection? • Will diaries be the “main” data source? • Why do people share diaries? • What is the advantage of collecting interviews alongside diaries? • Will you keep their employer in the loop? • (How) to transcribe hand-written diaries? 	<ul style="list-style-type: none"> • Which analytical approach will you follow? • Can you use text analysis software? • How do you analyze diaries? • Will you use a sensitizing concept? • Will you work with other data sources? • How important are diaries vis-à-vis other data sources? 	<ul style="list-style-type: none"> • Ethical approval by internal review board? • How do you adhere to anonymity? • Received “informed consent” by the diarists? • Where and how you are going to store the diaries (long term)? • How are you storing the physical diaries? • What happens if one diarist would like the diary back/dies? • How do you ensure research ethics with such sensitive data? • How do you ensure GDPR in the project?

less willing to share their diaries with a stranger (researcher). This observation is in particular true for unsolicited diaries as these are not written as part of a research project, but instead considered to be a “sacred” space for the diarist’s private or even intimate reflections and inner thoughts. It might be easier to obtain in pre-arranged solicited diaries (e.g., see [Ohly et al., 2010](#)). One example is the study of procedures by [Balogun et al. \(2003\)](#) in which the authors instructed the diarists to focus on five particular questions in their journaling activities. Also, in a solicited diary study, [Amabile and Kramer \(2011\)](#) probed the everyday work experiences of professionals working of 238 professionals in 26 project teams. The study was based on a daily questionnaire in the form of a diary that was emailed from Monday through Friday. For gaining access to diaries, consider public sources such as the German diary archive which houses over 20,000 diaries by 4,000 diarists ([Deutsches Tagebucharchiv, 2019](#)), or the solicited diary database by Theresa Amabile based on her past work.

From interactions with vocal actors at MSF, we had prior knowledge that a group of actors engages in journaling in order to cope with their emotional distress. Through support by key figures (including award-winning medics highly esteemed within the community) and personal relationships, we were able to build trust with an initial set of volunteers who became willing to share their diaries with us. It is important to emphasize that central figures do *not* necessarily need to be high ranked officials, or those with administrative influence such as human resources, that most likely does not keep track of who engages in private diary writing. On the contrary, it was important for actors in our setting that their private diaries will *not* “land on the desk of HR” (Interview 10). It is important to gradually build trust in order for people to become amenable to sharing data that might contain intimate aspects of their lives.

We used a snowballing approach ([Biernacki & Waldorf, 1981](#)), that is, “a study sample through referrals made among people who share or know of others who possess some characteristics that are of research interest” (p. 141). We did not directly ask diarists to participate given the sensitive nature of data, but we relied on the unsolicited referrals of individuals encouraging other colleagues to participate by sharing their diaries. In subsequent projects, community support was of pivotal importance to gain access. Our experience of doing research in extreme settings, including time spent in Afghanistan visiting military establishments and semi-governmental organizations, gave us legitimacy in being able to relate and “speak the same language.” Our independent role as researchers also helped in gaining access, as we do not hold any institutional ties to the organizations, nor are involved in any consulting, education or any other activity. Participants saw us as neutral outsiders with no affiliation with the organization (including HR). As some of them acknowledged in private conversations, they were more willing to share their diaries with us than anyone from within their organization or the media.

In our project, diary data have been the primary data source, which we have complemented with observations to sensitize us with the context, and interviews to follow-up on emerging topics and need for clarification. However, we made two key observations during the follow-up interviews: First, actors reacted differently

to us knowing “everything” from their diaries including very personal sentiments pertaining to aspects outside of our research interest (e.g., family life, dreams, and desires) from treating us very welcomingly to being rather reserved. Some felt uncomfortable at first: “you know me through and through but I hardly know you.” As a common reaction at the beginning of each interview, most diarists asked the questions “Did you read *all* of it [Diary]”? often concluding that “you know more than my wife does” and “Don’t know what I can add to this anymore.” Second, many felt uneasy about revisiting particularly (harsh) experiences when prompted, as they found them “difficult to speak about.” This is echoed by [De La Chaux et al. \(2018\)](#) that people find it difficult to talk about difficult experiences despite journaling frequently about these experiences (e.g., the diary entry about a surgeon writing about his patient Youssuf). Others stated that “maybe it wasn’t all that bad” and “I have not thought about this incident in a long time,” which prompted us to be very careful and patient in interviews. Also, informal settings and a flexible interview guideline was key to a meaningful interview, and we often let the interviewees choose the time and place. Overall, very few interviews could live up to the standards of diaries in terms of the density, richness, and value of information but instead encountered instances of memory loss and retrospective sensemaking, which are common drawbacks in interviews.

At the same time, interviews were helpful to tease out follow-up questions, and what seemed to be taken-for-granted assumptions in diaries. Unsolicited diaries are written in a natural manner, and as such, there is no standard structure such as introduction or an explicit description of key actors (e.g., family members, relatives, and work aspects) and key events. This requires the researcher to establish that who are the important actors in a diarist’s life and their relationships. In contrast to other forms of data collection, diarists do not first systematically introduce key players as their relationship is obvious to them at the time of diary writing [but not to the reader]. As such diarists do not refer to “my sister Tanja,” but instead refer to simply “Tanja” or “my sister.” Similarly, a diarist referred often to his love for Ellie and how much he misses Ellie “Today I really miss Ellie” (Diary 19) which turned out to be a Cocker Spaniel and the family dog when he grew up in Michigan, which died when the diarist went to medical school. Context may thus be missing and the researcher needs to make sense of the meaning.

Data Analysis

Diaries can be analyzed drawing on inductive, abductive, or deductive approach, different ontological and epistemological stances, depending on interests and the nature of data, to address a broad range of research questions ([Ohly et al., 2010](#)). Although we have not focused on quantitative research, new tools such as machine learning can be fruitful to leverage the vast amount of data gathered in diary studies.

Before starting our analysis, we imported data into the qualitative text analysis software NVivo for further analysis. As the diaries varied in their degree of details and writing style; and were both in hand-written and electronic forms, we transcribed all hand-written diaries (14) into an electronic form to facilitate

further analysis. We returned hand-written diaries to their respective owner after transcribing them.

In the empirical example we presented, we draw on a framing lens (Goffman, 1974), which was used as a “sensitizing concept.” It does not “provide prescriptions of what to see” but can “suggest directions along which to look” (Blumer, 1954, p. 7) to work with the amount of data. A potential drawback of diary studies, especially when working with unsolicited diaries is the amount of data often spanning months to years. It can easily amount to thousands of pages many of which do not pertain to the targeted research questions. This is why doing explorative work is time and resource intensive. Drawing from our experiences, a sensitizing theoretical lens might be fruitful to guide coding while still allowing for emergence, serendipity, or to “stumble(d) upon” (Wiedner & Ansari, 2017, p. 15).

We followed an inductive approach, drawing on the tenets of interpretive research. We iterated between data, emerging themes, and existing theory throughout our analysis (Locke, 2001). When working with diary data, commonly established practices may be used such as axial coding, thick descriptions, and creating tables. We created tables and timelines, stating background information, important key events and mission experiences for the different diarists. Here it was particularly important to match diary content with the follow-up interviews. Such development of chronologies might add complexity in creating a “thick description” of events, when different diarists interact with each other and reference the same events and experiences. In our case, actors rarely joined the same mission however we had the challenge that these diaries sometimes varied in the time period they are written. For example, diarist 1 engaged in journaling in the years 2011–2017 only when on missions, diarist 2 engaged in daily journaling in the years 2015–2017 regardless of being on or off missions. Diarist 2 covered many aspects including his “life back at home” which diarist 1 did not do. Hence, one needs to be aware of the limitations and peculiarities of diaries.

Analyzing diaries in extreme settings is difficult and potentially more demanding due to the gravity of the content. This included a lurking feeling among researchers of being powerless to change situations for diarists and the people affected by grand challenges, who live in dire situations. Researchers may also feel guilty about their sheer privilege of being able to code diary data on an Apple MacBook while sitting in a nice academic office in a university with central heating and running hot water. At least that was our experience in comparison to conducting research at a public media broadcaster (Rauch, Wenzel, & Koch, 2020; Wenzel, Cornelissen, Koch, Hartmann, & Rauch, 2020). We thus needed to develop certain coping techniques when working with very bleak and dark contents (e.g., only coding in the morning and not before going to bed; and regular (mostly daily) sharing with the team to help with coping as a researcher).

Ethical Considerations

When working with diaries, the importance of ethical considerations cannot be overstated (see Wood, 2006). Particular care must be given to anonymity, diarists’ confidentiality, and data security once diaries have been entrusted to the research

team. This begins from the moment of obtaining the diary, data storage, transcriptions of hand-written diaries (e.g., by third party services), and the publication of information of the diarists. After all, the diarists have entrusted their most private thoughts oftentimes covering their entire life stories for research purposes. Regulations such as the GDPR have addressed aspects of data protection that are also relevant to diary studies that contain personal data.

We took special care to uphold the trust placed in us, as these diaries contained the actors' intimate thoughts and reflections. We anonymized the data to protect the diarists' identities and those of the people and events they talked about. Given the known problems with Dropbox, and cloud services, we have made the deliberate decisions not to use such services but instead store the data locally relying on more old-fashioned approaches when sharing data, such as USB sticks to reduce the risk of unauthorized access.

Given the sensitive nature of some of the diaries' content, and data protection issues, we assured diarists from the outset, that we would refrain from referring to specific missions, procedures, individuals, and private matters (e.g., affairs, extramarital relationships, etc.) which are beyond the scope of our research. A practical guide to ensure this anonymity, we worked on codification even before uploading the data to the qualitative software package. Hence, in the subsequent discussions, we always referred to their assigned number or a fictional name. To further ensure their anonymity, we refrained from connecting on social media (e.g., LinkedIn, Twitter, and Facebook) unless explicitly requested by them.

CONCLUSION AND IMPLICATIONS

In this article, we illustrate the importance of diaries in studying people's inner thought worlds. Diaries are an important example of the use of self-reporting methods, and part of "unconventional method" in conducting research (Wickert & Schaefer, 2015). Their innermost thoughts and feelings that they write about in solitude cannot be gleaned from other sources of data such as interview data or field observations. For this purpose, we drew on an empirical example building on a qualitative study that we conducted in extreme contexts based primarily on data from diaries. This was paired with the support of interview and observational data, in which we illustrate the power of diaries in studying the phenomenon of how people cope with emotional distress in extreme contexts, and other key concepts relevant to organizational phenomena. In addition, we offer a set of practical guidelines for scholars intending to work with diaries.

We address how diaries help to understand that emotions may be strategically displayed or purposefully withheld. By focusing on diaries, a researcher can capture some of these innermost thoughts and feelings, immediate reflections, and the sensemaking process in these situations. Drawing on diaries allows us to better understand the "thoughts, feelings, considerations and reactions"; and be able to "capture these events as they happen to avoid the problems associated with retrospect" (Radcliffe, 2017, p. 190). Gaining insights into these experiences

and infer the underlying meanings not readily discernable from observed behaviors and interactions requires the use of “creative methodologies” (Gray, Purdy, & Ansari, 2015). While previous methodological advancement has been built on new tools such as analyzing video data and multimodal communication more broadly, diary studies help us to look on the “backstage” of the “backstage” (Goffman, 1959). This also echoes with calls for innovations in qualitative methods in business ethics, corporate responsibility, and sustainability research, as “business ethicists cannot afford to ignore under-researched topics of great ethical import because reliable data is hard to obtain” (Reinecke, Arnold, & Palazzo, 2016, p. 14).

We show the importance of analyzing diary writing as a “technology of the self,” where one writes to and for oneself to work upon oneself (Foucault, 1982) that enables a “deep analysis of individuals internal processes and practices” (Radcliffe, 2018) – which are otherwise unobservable. While diaries have long been neglected in organization studies (Alaszewski, 2006; Bartlett & Milligan, 2015), the use of writing about the self was even appropriated by the church in the practice of confession. Many famous examples such as the diaries by Anne Frank have shown how expressive writing allows people to share their innermost feelings and thoughts with proven psychological benefits (Amabile & Kramer, 2011). Drawing on diaries allows us to infer the underlying meanings not readily discernible from observed behaviors and interactions, or interviews. By drawing on diaries, we show the value of a novel methodology in understanding how people feel when practicing emotional control in difficult circumstances such as in extreme contexts.

A second contribution is to provide a systematic overview of the potential of using diaries to study people engaged in the fight against grand challenges and organization studies more generally. We illustrate the benefits of drawing on diaries as a data source as well as some of the challenges and drawbacks. Furthermore, we offer an alternative to the existing portfolio of data sources in studying grand challenges (Schoeneborn, Vásquez, & Cornelissen, 2021; Stjerne, Wenzel, & Svejnova, 2021). The surge and emphasis to study grand challenges and unconventional events oftentimes goes hand in hand with travel to extreme settings and conduct unsettling fieldwork including strong ethical implications (Wood, 2006), such as refugee camps and the aftermath of earthquakes. As such, work entails both physical and psychological consequences and poses risks to scholars, working with diaries written in situ by people directly affected reduces the level of risk and danger. Furthermore, diaries allow for an investigation which in particular is suited for longitudinal understandings of phenomena and hence ideal for process studies (Langley, 1999) due to the temporal nature of diary writing.

Our article has two limitations. First, we focused on unsolicited diaries given our experience of working with these kinds of diaries. Future research should extend our methodology by developing procedures for capturing and analyzing data from solicited diaries. We specifically call for further methodological development grounded in empirical analysis that may find additional and more nuanced ways to gain insights from diaries. Second, we did not aim to provide a methodological guide to coding data from diaries but instead simply offer some guiding principles when engaging with diaries. In other words, we provide a platform

for conversation about how diaries are a novel way to gain insights into people's thoughts and feelings that are hard to access through other methodological tools.

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GRAND CHALLENGES AND BUSINESS EDUCATION: DEALING WITH BARRIERS TO LEARNING AND UNCOMFORTABLE KNOWLEDGE

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ABSTRACT

In this article, we explore some of the barriers that prevent learning about grand challenges. By grand challenges, we refer to transformational social and environmental issues and the critical barriers toward addressing them. Despite recent research contributions, initiatives, and calls for action to focus on such concerns, relatively little is known about the different barriers that hinder learning about grand challenges. To explore these issues, we draw from Rayner's (2012) concept of uncomfortable knowledge, defined as knowledge that is disagreeable to organizations because it may challenge their value base, self-perception, organizing principles, or sources of legitimacy. Focusing on the example of recent programmatic attempts to advance "responsible education" in business schools, we identify three barriers to learning about grand challenges: Cognitive overload, emotional detachment, and organizational oblivion. We conclude by outlining several implications on how to overcome these barriers, adding to recent academic and policy debates on how to make

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business school education more attuned to the transformational and social challenges of our time.

Keywords: Grand challenges; learning; barriers; uncomfortable knowledge; business education; responsible education

INTRODUCTION

With a particular interest in the way that organizations can contribute to tackling intractable and persistent social problems, such as global competition over scarce resources, climate change, or large-scale displacement, the notion of “grand challenges” has become a central concern for organizational scholars. Studies have made significant advances in our understanding of how organizations may bring about change efforts in response to such grand challenges (Lawrence, 2017; Mair, Marti, & Ventresca, 2012; Mair, Wolf, & Seelos, 2016). At the same time, we also see more calls to translate insights from such research into the learning environment of universities and business schools (Hoffman, 2021; Smith & Elliott, 2007). These calls, for instance, manifest in initiatives to reform education curricula in business schools (Rasche & Gilbert, 2015) and demand for broader changes in the culture and incentives of business education (Lotz-Sisitka, Wals, Kronlid, & McGarry, 2015). Yet, relatively little is known about the barriers that can hinder learning about grand challenges. By grand challenges, we refer to transformational social and environmental issues and the critical barriers toward addressing them (George, Howard-Grenville, Joshi, & Tihanyi, 2016).

To explore the barriers that prevent individuals and groups from learning about grand challenges, we draw from the concept of *uncomfortable knowledge*. Rayner (2012) defines “uncomfortable knowledge” as knowledge that is disagreeable to individuals or organizations because it may challenge their value base, self-perception, organizing principles, or sources of legitimacy. Accordingly, uncomfortable knowledge is a type of knowledge in tension with and even hostile toward the legitimated accounts that individuals and organizations have developed about themselves to cope with the complexity of their environment. Rayner (2012) has explored several strategies that organizations and institutions may use to keep uncomfortable knowledge at bay, which act as barriers to engaging with and learning about societal problems. However, the issue of *learning* on grand challenges remains insufficiently explored. Accordingly, we explore the critical barriers to learning about grand challenges and the role that uncomfortable knowledge plays in this context.

To explore these concerns, we draw from recent programmatic attempts to advance “responsible education” in business schools, which seek to align learning objectives with initiatives such as the United Nations Sustainable Development Goals to foster “sustainable social, environmental and economic value” (PRME, 2019). These programmatic attempts have manifested in numerous initiatives, including the Principles for Responsible Management Education (PRME), the Globally Responsible Leadership Initiative (GRLI), or the Academy of Business in Society (ABIS). A particular focus of “responsible education” is to embed relevant research insights, innovations, approaches, and academic discussions in the

curriculum so that business schools can positively contribute to addressing grand challenges (Friedland & Jain, 2020; Rasche & Gilbert, 2015). Yet, while such initiatives are on the rise, they still remain at the fringes of current business education.

Building on the concept of uncomfortable knowledge, we discuss how barriers to learning about grand challenges manifest on different conceptual levels. These levels include a *cognitive barrier* arising from how people react to the temporal, spatial, and conceptual complexity of grand challenges, an *emotional barrier* that sets hurdles to a deeper sense of personal connection to and reflection on uncomfortable knowledge, and an *organizational barrier* that treats uncomfortable knowledge as a potential threat to the legitimacy of the organization vis-à-vis external stakeholders and wider institutional pressures. Based on the discussion of these issues, we explore implications about how to overcome such barriers to learning about grand challenges, adding to recent academic and policy debates on how to make business school education more attuned to the transformational and social issues of our time.

Our argument is structured as follows. We first introduce the concept of uncomfortable knowledge and its application to grand challenges topics. Building on uncomfortable knowledge, we then discuss how different barriers to learning about grand challenges form and affect the possibility of engaging with the topic. We outline the implications of these identified barriers for business education and conclude with avenues for future enquiry.

GRAND CHALLENGES AND UNCOMFORTABLE KNOWLEDGE

Drawing from Rayner (2012), we argue that the ways in which individuals and organizations deal with uncomfortable knowledge are essential to advance our understanding of grand challenges. Uncomfortable knowledge forces a reflection on some of the implicit and/or opportunistically induced blind spots that affect learning and taking action to address some of the most significant challenges of our times. Uncomfortable knowledge can originate from a variety of sources, including

its potential to reveal substantive epistemological disagreements about “facts” or about organizational or ethical principles (values), but [...] it may also derive from the potential revelation that parties who appear to have reached agreement, or at least accommodation, actually remain divided. (Rayner, 2012, p. 113)

Dealing with uncomfortable knowledge can thus be a complicated, if not dangerous, undertaking for organizations for several reasons. First, there are incentives to keep uncomfortable knowledge as far as possible from organizational actors. For example, as has been well documented by now, while the fossil fuel industry had detailed information about the likely trajectory of global warming already at the beginning of the 1980s, it developed strategies to divert attention away from such uncomfortable knowledge for decades as it was considered a threat to the existence of the industry. Second, filtering out uncomfortable knowledge implies the persistent danger of sheltering organizations from necessary changes that stem from meaningful engagement with constructive criticism. As

organizations ignore sources of criticism, they risk gradually degenerating into socially irrelevant or even dangerous “zombie institutions” (Beck, 1994, p. 40; see Flyvbjerg, 2013). Accordingly, understanding how individuals and organizations deal with uncomfortable knowledge – both opportunistically and proactively – is critical to foster possibilities of embracing criticism, doubt, and adversity in transformative efforts to tackle grand challenges.

Research has begun to identify strategies that unpack how organizations and institutions keep uncomfortable knowledge at bay (McGoey, 2012; Rayner, 2012). These strategies may include, in increasing order of sophistication, *denial* as a refusal to recognize inconvenient information; *dismissal* by rejecting information as irrelevant; *diversion*, namely the pursuit of practices to divert attention; and *displacement*, which occurs when organizations pretend to tackle an issue but instead substitute the management of the issue with the management of a model or simulation of the issue (Rayner, 2012). These strategies do not only filter out uncomfortable knowledge to enhance self-preservation, but they also act as barriers that may compromise the ability of organizations to bring about change efforts to tackle grand challenges. This perspective on uncomfortable knowledge also foregrounds that ignorance is not necessarily to be treated as a by-product of dysfunctionality as it may be the result of purposeful institutional work that is maintained with much effort, and therefore all the more difficult to overcome (McGoey, 2012).

The theoretical concept of uncomfortable knowledge is apt for investigating learning about grand challenges. A defining feature of many grand challenges is that they tend to be interconnected and mutually influencing (George et al., 2016; Servigne & Stevens, 2020). Any serious conversation on climate change, for instance, entails acknowledging that its implications are going to have environmental, humanitarian, economic, social, and geopolitical effects. This characteristic of grand challenges and their enduring nature makes learning about them an inherently uncomfortable endeavor. Once denial becomes manifest in its rudimentary simplicity (Rayner, 2012), a common response is to start digging deeper into the issues at hand. However, learning more about grand challenges can frequently convey feelings of frustration: the more we read about grand challenges, the less we may *feel* we know. Their inherent interconnections make grand challenges manifest and unavoidable, and yet they might prove to be especially difficult to grasp and define (see Arciniegas-Pradilla, Da Silva, & Reinecke, this volume). The more we learn, the more we realize the existence of positive and negative externalities that entangle grand challenges and that constantly seem to evade our comprehension as we are faced with a staggering amount of knowledge that exists in different branches of knowledge around these topics.

We also realize that grand challenges topics are identified as uncomfortable because there are no easy answers and, more and more frequently (e.g., during the Covid-19 pandemic), not even experts with common epistemic frames of references (e.g., virologists) are seen to agree on the appropriate responses to specific problems (e.g., how to reliably prevent viral transmission), let alone agree on how such problems interface and interfere with other interconnected crises (e.g., the

mental health consequences of protracted lockdowns). In other words, what we know about grand challenges is seldom a *terra firma* or a stable toolkit that we can reassuringly rely on and deploy to act on ever-unfolding environments. The knowledge in question has a fluid character to it and is frequently shifting like a kaleidoscope. This is not only problematic for academics that devoted their lives to studying complex organizational phenomena but also applies to people that grapple with the implications of their habits and quickly realize the intricate nature of these matters. Because of these reasons, *wanting* to learn about grand challenges frequently starts from feelings of personal anxiety, the anxiety that is felt when attempts at denial begin to crumble.

In the next section, we build on these insights on grand challenges and uncomfortable knowledge and discuss how critical barriers to learning on grand challenges may manifest at the cognitive, emotional, and organizational level.

BARRIERS TO LEARNING ON GRAND CHALLENGES

The Barrier of Cognitive Overload

The first barrier that may hinder learning on complex social and environmental issues that we identify is *cognitive overload*. Cognitive overload presents itself in situations that put excessive demands on people's capacity for cognitive processing and can limit how they learn, mobilize, and apply knowledge to unfolding situations. Research has looked at how the defining features of grand challenges – such as their interconnected nature and the elusive links that make them potentially intractable – influence how actors enact their environments and detailed some of the systematic cognitive issues that may undermine such processes. For example, the literature showed how the complexities of grand challenges could prevent appropriate issue framing and categorization (Hoffman & Ventresca, 1999), generate sensemaking challenges (Gatzweiler & Ronzani, 2019), or compromise attention (Bansal, Kim, & Wood, 2018). These factors may hinder the development of individual and organizational learning and affect if and how uncomfortable knowledge is brought to light rather than being dismissed or denied.

The notion of cognitive overload has also attracted attention in neighboring disciplines ranging from cognitive sciences (Kirsh, 2000), communication studies (Fox, Park, & Lang, 2007), and education (Feldon, 2007). Cognitive overload has been the focus of extensive research by educational psychologists who highlight how it constitutes a barrier to learning that poses pedagogical difficulties related primarily to the risk that the learners' ability to retain and use information may be overwhelmed by complex problem-solving scenarios (Sweller, 1994, 2011). Dominant approaches to cognitive overload in educational psychology focus on how instructional design can mitigate the risks associated with high levels of "element interactivity" (i.e., the complexity of a concept that is attributed to how its implied propositions are interconnected), the type and amount of information that is available, and the learners' prior knowledge (Sweller, 1994, 2011).

Educational psychology approaches commonly attempt to mitigate cognitive overload through simplification. Simplification efforts assume that instructional material can be partitioned in ways that allow the breaking down of the complexity of concepts, ideas, or assignments through functional decomposition. However, in the case of grand challenges that are interconnected, mutually influencing, and reciprocally intensifying (e.g., deforestation, pollution from intensive animal farming, and extinction risk of animal species), trying to simplify what makes some material hard to understand can be short-sighted and potentially misguided (Servigne & Stevens, 2020). Simplifying complex interdependencies can open up entire systems to the consequences of blind spots that may have problematic effects and intensify some of the very problems they try to solve (see Frey-Heger, Gatzweiler, & Hinings, 2021). We contend that seeking simplification can contribute to keeping uncomfortable knowledge at bay instead of unveiling its transformative potential.

Another critical factor that forms part of the barrier of cognitive overload and should induce skepticism toward pedagogical and organizational efforts to simplify learning is the fluid and unfolding nature of existing knowledge on grand challenges. The absence of a stabilized knowledge base to inform grand challenges can lead to multiple legitimate claims that are mutually exclusive but conceptually equally valid and based on different scientific or technocratic arguments. In other words, knowledge on grand challenges is prone to generating controversies among potentially incompatible bodies of legitimized knowledge (see Dionne, Mailhot, & Langley, 2019). This ought not to be interpreted as an overly relativistic position. We may all agree that global warming is a “fact,” but this does not imply that “rational” and “legitimate” insights coming from different bodies of knowledge are necessarily compatible.

For instance, while there is consensus on the importance of reducing carbon emissions, there is less clarity on how to achieve it. While we are witnessing a substantial push toward electric vehicles to move away from fossil fuels, the emissions associated with the production of an electric car can be significant, making problematic the assumption that simply switching to electric cars will be enough to decarbonize private transport (Blach, 2020). While there may be numerous environmental benefits associated with the widespread adoption of electric cars, there is fervent debate on understanding and negotiating the economic, environmental, public health, and development impact of such initiatives, and this requires multidisciplinary insights to inform policy. However, such insights are developed through different methodologies, worldviews, and relying on various traditions of argumentation that pertain to each discipline’s history. Learning on grand challenges requires navigating the complexity of situations where specific claims become the subject of a dispute between arguments, disciplines, and even visions of the world that affect how scientific, technological, and policy knowledge is applied to emergent issues (see Jasanoff, 1997). Assuming that this knowledge can “peacefully” coexist and inform the development of coordinated action is problematic. Taking stock of the instability of knowledge and the cognitive demands this puts on organizational actors is part of teasing out and overcome the cognitive barrier to uncomfortable knowledge.

We argue that the barrier of cognitive overload cannot be “overcome” through shortcuts or nudges but through the development of cognitive styles that are more apt to engage with complex “real life” problems. Hence, dealing with cognitive overload cannot rely on simplification strategies that conceal the messiness that informs our value judgments. Instead, it needs to expose the key drivers of such potential for being overloaded, such as the cognitive demands that multiple bodies of knowledge put on learners. The discussion of the cognitive barrier highlights how cognitive overload constitutes an important obstacle to learning about grand challenges. Teasing out and acknowledging the limits of our cognition and – crucially – of our knowledge is a necessary part of unveiling and embracing the uncomfortable knowledge of grand challenges. At the same time, these considerations also point to the intrinsic connections that this barrier has to emotional factors that affect learning on complex social and environmental issues.

The Barrier of Emotional Detachment

Dealing with and learning about uncomfortable knowledge further manifests on the emotional level as a form of emotional detachment that prevents individuals and organizations from feeling connected to and “touched by” calls to act in relation to a grand challenge. The emotional barrier manifests itself through individuals and organizations experiencing grand challenges as spatially and temporally abstract and distant phenomena whose scale is so large that any form of action is perceived to occur in vain (see [Bansal et al., 2018](#); Dittrich, this volume; Stjerne, Wenzel, & Svejenova, this volume). Unpacking the emotional barrier is key to understanding the common gap between scientific knowledge about grand challenges, such as climate change, and the (lack of) collective action in response to these issues.

Grand challenges force learners to acknowledge that they cannot stay neutral. Staying neutral in front of biodiversity collapsing, pollution increasing, and inequality rising is problematic. It is either ethically questionable or the product of some non-deliberate neutralization and dismissal strategies (see Vittel & Grove, 1987). For example, neutralization strategies can operate unconsciously to justify behaviors by denying responsibility (e.g., “I’m sure my everyday consumption is not really hurting anybody”) or denying victim (e.g., “I am not doing anything about this specific issue, but so is anyone else around me”). Dismissal strategies are more sophisticated and can take the form of condemning the condemners (e.g., denigrating the “accusers”) by claiming that they do not have the moral right to escalate specific issues or appealing to higher loyalties. Wanting to learn about grand challenges entails overcoming these neutralization strategies and recognizing that we are directly *affected* by what we learn. As the word “affect” suggests, these concerns do not pertain exclusively to “rationality,” and they are not simply a matter of academic speculation: wanting to learn about grand challenges makes us reflect on our capacity to-do-or-not-do something. As soon as we realize this, the uncomfortable dimension of this learning endeavor comes back to the forefront. These issues highlight that the uncomfortable journey of learning about grand challenges cannot be tackled with the language of “rationality”

alone, but it needs to appeal to emotions that make us realize the wicked nature of many of the situations we encounter and make us want to learn *and* do something.

Hence, a central emotional barrier to learning on grand challenges is being *detached* from the object of study. Detachment frequently has positive connotations when it is understood as a form of mental assertiveness that enables actors to maintain their boundaries, impartiality, and integrity in dealing with the emotional demands of individuals, groups, or situations. However, in relation to grand challenges, inducing a feeling of connection to the issues at hand, encouraging learners to feel personally and emotionally involved in the topics of study, and even not being afraid to generate feelings of sadness, anxiety, and anger through the engagement with uncomfortable knowledge is of utmost importance. As [Servigne and Stevens \(2020, p. 206\)](#) argue about the notion of environmental “collapse,” building on emotions is essential for prompting understanding, involvement, and action formation:

More than in other areas, reflection and emotion are intimately mixed in an ecological eschatology where issues of life and death, personal and collective, are the very objects of the investigation. We cannot approach this investigation ingenuously, believing that our lives will not be turned upside down as a result. [...] But we do not feel this moral force as external to ourselves, dictated by some dogma or religion: it belongs to our being since both the images and the thoughts of collapse that now populate our minds are mixed, as in an indecomposable alloy that cannot be reduced to its various components.

In this sense, emotions are not a hindrance to understanding, but they can and should play a role in instigating a desire to learn more on these topics. Hence, in the development of new approaches, methodologies, and case studies to foster learning on grand challenges (see [Rauch & Ansari](#), this volume), the focus should not only be on developing conceptual insights on the respective topic but efforts should also be spent on overcoming the barrier of emotional detachment. Using tools such as [Mair et al. \(2016\)](#) study of “locally bound social systems” may offer some promise in overcoming the abstract nature of grand challenges and the perception of distance that learners often experience in relation to social or environmental issues. Focusing on locally bound social systems enables learning about such phenomena in particular places and communities, thereby making them concrete and attentive to the political, cultural, and economic realities on the ground. Recognizing the barrier of emotional detachment is an important step in overcoming barriers to learning about grand challenges. The next step is recognizing organizational barriers that further complicate such learning.

The Barrier of Organizational Obliviousness

We further argue that a critical organizational barrier to learning on grand challenges is *organizational obliviousness*, which is especially relevant in organizations and institutions – such as business schools – that educate individuals with skill sets that allow them to learn and further develop knowledge on grand challenges. We define organizational obliviousness as the subtle ways through which learning on grand challenges can be disregarded at the business schools’ organizational

and institutional levels. We differentiate between explicit and implicit obliviousness that either denies and dismisses the importance of grand challenge learning or more subtly distracts from or displaces the problem.

We consider the tendency to label grand challenge learning as a ‘hype’ an explicit hindrance to learning on grand challenges. Considering grand challenge topics as a “hype that will go away” (Lotz-Sisitka et al., 2015, p. 73) seeks to justify the refusal to engage with or pay more attention to social and environmental issues in business school curricula. Business schools thereby deny that they carry responsibility for educating students and graduates that are often suspected of failing to recognize the role of corporate activities in intensifying grand challenges (Friedland & Jain, 2020). This role is evident in relation to links between corporate carbon emissions and climate change (Ansari, Wijen, & Gray, 2013) and is also well documented for the impact that business activities may have on the reproduction of systemic inequality (Amis, Mair, & Munir, 2020).

Another explicit form of organizational obliviousness refers to the narratives surrounding the instrumentalist objectives of many business schools. Here, the importance of integrating learning about grand challenges might be formally acknowledged; however, it is subsequently rejected given business schools’ instrumental value propositions that foreground the “career-enhancing and salary-increasing aspects of business education” (Pfeffer & Fong, 2004, p. 1501). Reasons for rejecting social or environmental issues as part of students’ curricula are often a negative answer to the question “Do ethical concerns and considerations of grand challenges ‘pay off?’.” Many business schools have developed value propositions that indirectly regard students as “customers” who might not want to learn about grand challenges, as long as such learning is not considered of direct (monetary) value (Lynch, 2006; see Jandrić & Loretto, 2021). This objective also explains the current focus on MBA graduates’ financial success as an accepted indicator of “teaching quality,” reinforcing the “instrumentalist climate” (Friedland & Jain, 2020) of many business schools.

These tendencies may be further consolidated and institutionalized by ranking devices that arguably assign disproportionate weight to the starting salary of business school graduates as a criterion for a school’s ranking position. Given such pressures, engagement with topics that do not further value-generation might be delegitimized, marginalized, or dismissed (see Friesike, Dobusch, Heimstädt, this volume). In addition, integrating grand challenge content might also be faced with open dismissal by faculty who do not want to be told what to teach or might fear that their teaching content might be replaced (Millar, Gitsham, Exter, Grayson, & Maher, 2013).

In addition to these explicit factors that explain organizational obliviousness, we identify more implicit ones. For example, business schools’ mission statements often divert attention from the absence of grand challenge topics in curricula. According to Rayner (2012, p. 113), diversion “involves the creation of an activity that distracts attention away from an uncomfortable issue.” For many business schools, such activity means adapting mission statements that outline how they tackle today’s social and environmental problems. However, recent studies suggest that grand challenge research and responsible management education are often not

integrated into core learning activities (Beddewela, Warin, Hesselden, & Coslet, 2017; Louw, 2015). Often, such learning is offered in elective modules that remain detached from core curricula (Beddewela et al., 2017). Some scholars consider these decoy activities as mere “cause branding” or “reputation enhancement” (Louw, 2015), which might jeopardize substantive changes to business education.

Even more implicit is the tendency to decouple research and teaching activities on grand challenges. Displacement strategies offer a manageable surrogate for the more underlying uncomfortable issue of learning on grand challenges (Rayner, 2012). In business schools, the fixation with “top publications” and the counting of A-Journal papers (Aguinis, Cummings, Ramani, & Cummings, 2020) that increasingly focus on grand challenge topics presents a manageable surrogate for the process of changing educational curricula. While scholars may engage with social and environmental issues in their research, these issues are still rarely mainstreamed in courses and programmes. In addition, the predominant attention to countable and manageable research outputs leads to a situation in which teaching is generally given less attention, sometimes even considered a “by-product” (Rasche & Gilbert, 2015, p. 245) of the academic profession. While studies on social and environmental issues are more and more recognized in top scholarly journals, they remain sidelined as learning activities and inputs for students.

IMPLICATIONS FOR LEARNING ON GRAND CHALLENGES

We identified and discussed three different types of barriers – cognitive overload, emotional detachment, and organizational obliviousness – that constitute important hindrances to learning on grand challenges and can provide insight as to why business schools have not yet changed to the “extent needed to meet the challenges of the twenty-first century” (Aspling, 2013, p. 40). In recognizing these barriers that contribute to keeping uncomfortable knowledge at bay, in what follows, we discuss their implications for learning on grand challenges.

Addressing the barrier of organizational obliviousness requires business education to work more actively against an enduring and institutionalized myth that has pervaded curricula for decades: the alleged value-neutral nature of business. As emphasized by Hoffman (2021, p. 517) in an essay on the future of business education, “teaching a set of aspirational principles is something that many of my colleagues are uncomfortable doing. They question whether business faculty have the legitimacy to enter such value-based domain.” A famous example of the institutionalized nature of the separation between allegedly “neutral” forms of economic value and normative social values is Parsons’ pact, which delineated a “division of labour” between economists and the rest of the social sciences. Stark (2009, p. 7) summarizes Parsons’ pact along the following lines: “You, economists, study value; we, sociologists, will study values” as the normative principles in which economic affairs are embedded. While it is well accepted within critical streams of management and organization theory research that

business is not value-neutral, this is not necessarily the case for most mainstream business education.

Overcoming the barrier of organizational obliviousness in learning about grand challenges thus implies breaking with Parsons's pact. Significant advances have been made in business research to foreground the notion of public value and the "common good" (see [Ansari et al., 2013](#)). Breaking with Parsons' pact requires that business education infuses its traditional curricula surrounding accounting and finance, strategy, entrepreneurship, and human resources with a more robust social science orientation. Due to the institutionalized separation between business and economics subjects on the one hand, and political science and sociologically oriented subjects on the other hand, cross-fertilization between these subjects is still often at an insufficient level to inform teaching on grand challenges meaningfully. Yet, as we indicated, drawing from a multiplicity of values beyond a narrow focus on economic value in business education will foster a deeper understanding of the problems in which businesses are embedded that form the social and physical backbone of today's grand challenges.

Initiating change to organizational obliviousness involves putting the purpose of business and its benefit to society at the center of business school curricula. Emphasizing purpose means asking how organizations are helping to solve problems faced by stakeholders and the environment in a value-adding manner. One way of addressing organizational obliviousness in the current environment might be for lecturers to "hack" the existing system and foster the agenda of grand challenge education without necessarily seeking to overhaul the existing system explicitly. For instance, this could mean using the example of activist organizations or the discussion of hybrids, such as B-Corps, to explain well-established entrepreneurship, strategy, or accounting and finance concepts. Such initiatives can add substance to the approaches that seek to make business education more attuned to the grand challenges we are facing. It could also mean considering more student-centered learning styles that harness students' existing and often diverse knowledge on social and environmental issues. Here, students are considered co-creators of insights and teaching content, while lecturers take on a role of "learning facilitators" rather than "instructors" to promote educational change and engagement with uncomfortable knowledge. Accordingly, approaches with a stronger interdisciplinary orientation require experimentation with different learning tactics that may not be individually elegant but robust enough to initiate change.

Our suggestions on how to address the barrier of organizational obliviousness also have implications for the cognitive barrier. The cognitive barrier was defined by issues surrounding cognitive overload due to how the often unstable and controversial nature of existing knowledge interfaces with the complexities of grand challenges. To deal with cognitive overload, we suggest that learning activities are designed to embrace the tensions, ambiguity, and doubts of such knowledge, rather than suppressing them, which requires a form of learning that can cross conventionally established and legitimated boundaries. We suggest that it is paramount to prevent the development of learning strategies that perpetuate "ontological gerrymandering" ([Woolgar & Pawluch, 1985](#)). Ontological

gerrymandering is the process of distinguishing between the claims and the bodies of legitimized knowledge that can be made subject to questioning and those that cannot (Quattrone, 2000). In developing interdisciplinary arguments, ontological gerrymandering frequently operates by “making one science problematic by making some others unproblematic” (Arrington & Schweiker, 1992, p. 527). Hence, it is necessary to instill transdisciplinary approaches to “make connections between diverse elements of human experience through making those analytical distinctions that will enable the joining up of concepts normally used in a compartmentalized manner” (Tsoukas, 2017, p. 132). Preventing this and unveiling – rather than keeping at bay – the uncomfortable potential of knowledge on grand challenges appears to be paramount for overcoming this cognitive barrier.

To do so, it is important to foster a learning attitude that does not take for granted specific prescriptions coming from a body of legitimized knowledge without reflecting on its assumption, applicability, and where and how it may clash with other knowledge bases. A way to embrace the tensions, gaps, and explanatory limitations of knowledge on grand challenges is trying to transcend binary thinking. Binary thinking refers to the instinctive framing of issues encompassing a polar opposition between mutually exclusive alternatives, which tends to occur when individuals and groups are faced with complex events (Wood & Petriglieri, 2005). Reducing any decision to a binary process such as “yes or no?,” “this or that?,” “is this right or wrong?” can prevent people from looking beyond the polarity of opposite positions, which is arbitrary when approaching complex subject matters such as grand challenges.

We, therefore, argue that it is essential to develop learning activities that hold the tensions and ambiguities “long enough to permit exploration, differentiation, and resolution” (Wood & Petriglieri, 2005, p. 31). In other words, we contend that it is necessary to induce a form of learning that shies away from trying to formulate quick solutions to complex problems and instead interrogates the nuances of their mediating elements. The purpose is to enable learners to cope with and benefit from these tensions – rather than to be paralyzed by them (see Langely, 1995). In the classroom, this could imply integrating “reflection assignments” (Hibbert & Cunliffe, 2015) where learners are asked to interrogate the tensions and ambiguities that they faced during a course on “sustainability grand challenges,” “corporate social responsibility” or “accounting for sustainability.” The aim is to invite reflections on how each learner deals and copes with the limited and often contradicting information on social or environmental issues.

We identified emotional detachment as another barrier to learning on grand challenges. Overcoming this barrier involves harnessing some of the generative elements that emotions can bring into collective learning on grand challenges. Extant literature has identified at least two such generative roles of emotions in collective action. The first one is the critical role of emotions as triggers for action and energizers for individuals and groups. Research has indicated that being “rationally” aware of a social problem or a dysfunctional element in an existing institutional order is often insufficient to provoke action (Voronov & Vince, 2012). The second generative element that emotions can do to foster learning on grand

challenges is their role as a “social connector, bringing actors together in the collective pursuit of a common aim” (Lawrence, 2017, p. 1772). Since addressing grand challenges involves developing collective action capacities among actors that may not have aligned interests and a shared identity or history (Kornberger, Leixnering, & Meyer, 2019), emotions can be an important “social glue” that drives actors to tackle a grand challenge.

Bringing these enabling elements of emotions into learning on grand challenges provides a promising path to overcoming the barrier of emotional detachment. Such an approach to learning requires looking beyond strictly linguistic ways of communicating insights about grand challenges that seek to overcome some of the limitations of discursive interactions. For example, the use of visual artifacts and other symbolic resources – for example, the use of video material, pictures, artworks, etc. – may be particularly adept for such a learning purpose. As we have established, the language of rationality and technocratic arguments alone may be too “cold” and insufficient to instigate reflection and action on grand challenges (Servigne & Stevens, 2020). The systematic use of communicative artifacts that seek to entice a reaction from the audience could be more promising to overcome the barrier of emotional detachment and unveil the potential of uncomfortable knowledge on grand challenges.

Visuals and images can be instrumental for the engagement with grand challenge topics in virtue of how they can “speak” to us and sensitize us to issues in a more direct manner compared to other semiotic resources, such as text or numbers (Ronzani & Gatzweiler, 2021; Quattrone, Ronzani, Jancsary, & Höllerer, 2021; Barberá-Tomás, Castelló, de Bakker, & Zietsma, 2019). For instance, interactive visuals have been shown to work as powerful engines for the engagement with the sustainable development indicators by bringing to life abstract and technical concepts, and prompt collective problem identification and action (Bandola-Gill, Grek, & Ronzani, 2021). Visuals can also connote objects, actions, and relationships in ways that appeal to the senses and people’s imagination, thereby allowing the construction of novel and potentially unexpected visibilities on social and organizational phenomena that can generate reflection (Quattrone et al., 2021). Visual artifacts, data visualizations, and artworks can be evocative and, while “they may not serve immediate organizational purposes, [they may] invite enquiry and reflection by de-familiarizing organizational members’ habitual conceptualizations” (Barry & Meisiek, 2010, p. 1505). In so doing, the use of visual artifacts to learn about grand challenges can allow people to see and frame predicaments differently and notice more situational clues – both comfortable clues and uncomfortable ones that challenge preconceived assumptions and worldviews.

For example, the communicative difference between pictures of the working conditions in some of the poorest countries by Sebastião Salgado versus a UNICEF report on childhood poverty is stark. Visual representations can prompt esthetically embodied learning processes that navigate past and future: John Martin’s famous Victorian depictions of the Biblical apocalypse may generate a reflection on the future that transcend the specificity of their socio-historical conditions of production. Here we are not arguing for a conflation of message

between “art,” “science” and “policy”; instead, we are making a case for the use of symbolic artifacts that are developed to entice an emotional response from the audience and can operate as triggers and energizers for learning and action. For these reasons, visuals can be used to generate energy for the enactment of organizational and social change (Barberá-Tomás et al., 2019). We contend that the use of such visuals can prove invaluable in breaching the barrier of emotional detachment as visuals can allow learners to capture at one glance possible realities, cross the boundaries of time and space, and capture grand challenges that might otherwise seem geographically, socially, and emotionally distant.

CONCLUSION

We explored some of the barriers that prevent learning about grand challenges. Informed by the concept of uncomfortable knowledge, we identified three key barriers that manifest on a cognitive, emotional, and organizational level and offered some reflections and implications on overcoming these barriers. One of the implications of our argument was that educators have to be aware of the common strategies to keep uncomfortable knowledge at bay and develop reflection spaces to recognize the inevitable learning challenges that follow from the barriers of cognitive overload, emotional detachment, and organizational obliviousness.

Such spaces for reflections may become more difficult in the wake of the “digital turn” that business education has experienced over the past years and following the COVID-19 crisis. A danger is that learning becomes more focused on “information transmission” rather than collective engagement with the uncomfortable knowledge presented by grand challenges. As we indicated, learning about the multifaceted and multidimensional nature of grand challenges cannot be satisfactorily achieved by simply focusing on transmitting essential background information on these issues. Instead, the focus should be placed on the inherent cognitive, emotional, and organizational messiness and controversies surrounding these issues, beyond learning “basic facts.” For these reasons, learning on grand challenges requires adaptation, playful imagination, improvisation, and bricolage to “patch together” insights from different legitimate sources while trying to orchestrate them in a meaningful, reflective manner.

While we drew from emerging literature on grand challenges as we reflected and worked on this article, it became clear that empirical work on learning on grand challenges is still relatively sparse, despite the importance of the topic. As this subject matter is gaining relevance in business education in recent years, extending our understanding of the tools, approaches, methods, and contexts that affect learning on grand challenges forms a promising area of future empirical and theoretical investigation. This will also mean that organizational scholarship may further embrace unconventional empirical sites, such as “extreme contexts” (Hällgren, Rouleau, & De Rond, 2018) and other socially and politically contested settings as learning contexts that promise to offer novel insights into organizational phenomena that are otherwise difficult to tackle.

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STRIVING FOR SOCIETAL IMPACT AS AN EARLY-CAREER RESEARCHER: REFLECTIONS ON FIVE COMMON CONCERNS

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ABSTRACT

Many early-career researchers (ECR) are motivated by the prospect of creating knowledge that is useful, not just within but also beyond the academic community. Although research facilities, funders and academic journals praise this eagerness for societal impact, the path toward such contributions is by no means straightforward. In this essay, we address five common concerns faced by ECRs when they strive for societal impact. We discuss the opportunity costs associated with impact work, the fuzziness of current impact measurement, the challenge of incremental results, the actionability of research findings, and the risk of saying something wrong in public. We reflect on these concerns in light of our own experience with impact work and conclude by suggesting a “post-heroic” perspective on impact, whereby seemingly mundane activities are linked in a meaningful way.

Keywords: Engaged scholarship; impact; open science; rigor-relevance gap; science communication; third mission

Organizing for Societal Grand Challenges

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There are better-paid jobs, there are less stressful jobs, and there are jobs with more predictable career trajectories. But in all probability, readers of this article work in academia. What is it that makes academic work so appealing, despite its obvious downsides? A small number of academics derive meaning from fully immersing themselves in the production of academic arguments. They find academic work most fulfilling when political values and practical concerns are kept at bay (Weber, 1946). Most other academics, however, regard the question of meaning as more complicated (Alvesson, Gabriel, & Paulsen, 2017). They are often intrigued by the process of creating knowledge, but at the same time, they want to experience this knowledge being of practical use to individuals, organizations, and institutions beyond the academic sphere (Burawoy, 2005; Wickert, Post, Doh, Prescott, & Prencipe, 2020). They not only strive for *scholarly impact* within academia but for *societal impact*, too. In this essay we refer to activities through which researchers engage with people outside academia as *impact work*. Impact work includes activities such as giving public lectures, writing media op-eds, using social media platforms, informing policy processes, developing open educational resources, and providing consultancy services to private or public organizations.

These two aspirations – academic knowledge and societal impact – are more closely entangled in the social sciences than in many other academic fields, since society itself is the object of research (Giddens, 1984; Gond, Cabantous, Harding, & Learmonth, 2016; Heimstädt & Friesike, 2021). To come to terms with this entanglement, social scientists have theorized quite extensively about the relations between academic research and impact work (Bartling & Friesike, 2014; Bucci & Trench, 2014; Davies & Horst, 2016; Jamieson, Kahan, & Scheufele, 2017; Kieser, Nicolai, & Seidl, 2015; Perkmann, Salandra, Tartari, McKelvey, & Hughes, 2021; Weigold, 2001). Most of this research on the relations between abstract knowledge and society has resulted in even more abstract knowledge. In this essay we aim to resist abstraction and to develop practical knowledge for a specific group of academics: early-career researchers (ECRs). ECRs – including doctoral students, postdocs, and untenured junior faculty – are in a particularly challenging position when it comes to the pursuit of societal impact. First, they have less academic reputation than their senior colleagues, which makes it more difficult for them to establish expert authority among non-academic audiences. Second, they also have less incentive to engage in impact work by comparison to more established researchers. While universities often expect established researchers to serve as figureheads by developing a public profile, the evaluation of ECRs' performance is linked more strongly to the production of academically reputable publications.¹ Third, the education of ECRs typically focuses on skills and knowledge they will need to publish and to succeed in the “ranking games” of academia (Osterloh & Frey, 2015). At the same time, however, many social science departments define their mission as societal impact. They claim, for example, to “develop scientifically substantiated interventions” (University of Groningen), “find innovative solutions in the pursuit of the common good” (Sciences Po) or “tackle some of the major challenges facing humanity in the 21st century” (University of Oxford). Others seek to offer their students an education that has “weight in the real world” (Goldsmith University) or leads to “immediate societal

impact” (Leiden University). Yet, very few institutions have translated these visions into either impact-oriented educational programs or respective incentive structures for their ECRs (Könneker, Niemann, & Böhmert, 2018). Given this lack of structural support, we want to provide ECRs with a resource for self-help in their pursuit of societal impact.

When we approached ECRs in our own community, we found that many of them are dealing with the same concerns. In the rest of this essay we will discuss five common concerns struggled with by ECRs who wish to engage in impact work: In “Do I even have time for this?” we reflect on the opportunity costs of impact work. In “Should I focus on impact activities that count?” we engage with the fuzziness of current impact measurement. In “Are my findings too incremental?” we examine different ways of making a contribution. In “My findings are not actionable – so how are they useful?” we discuss the transferability of research findings. And finally in “What if I say something wrong?” we talk about the perils of public discourse. We reflect on these concerns on the basis of our own experience as impact-oriented academics and provide a series of personal vignettes to illustrate our arguments. While these reflections do not lead to a “recipe” for creating societal impact, they converge into what we call a “post-heroic” perspective on impact. From this perspective, impact emerges over time, as a researcher links individual impact activities in a meaningful way. Thus, impact is neither a distant goal that only established researchers can reach, nor the cumulative result of a great quantity of activities. Instead, impact emerges from targeted, purposeful practices carried out over time. This understanding of impact, we hope, will encourage ECRs to take a leap of faith and start working toward societal impact.

DO I EVEN HAVE TIME FOR THIS?

Many ECRs assume that the single measure of what will make or break their academic career is their tally of publications in so-called “top journals.” While they feel that engaging in impact work with non-academic audiences can make their job more meaningful, they also wonder whether the opportunity costs of such activities – the papers not published while engaging with the outside world – are just too high a price to pay. We don’t deny the “publish or perish” mentality that dominates academia (De Rond & Miller, 2005). All three of us have felt (or, in the case of the untenured co-author, still feel) the pressure to publish in “top journals.” However, we also believe that – in the social sciences at least – the distinction between “time well spent on publications” and “time well spent on impact work” is a false dichotomy. Of course, we all know colleagues who have developed academic careers by devoting most of their time to “pure” forms of academic reasoning (whether expressed as conceptual theory building, simulation modeling, or granular coding of qualitative data) required by the most reputable journals in our field.² But we have also crossed paths with many scholars who have managed to develop successful careers in academia that include significant amounts of impact work. We argue that the latter case is no anomaly; there are at

least two ways in which work toward societal impact can contribute to the creation of outstanding scholarly contributions.

First, impact work can underpin the creation of interesting research papers when it helps scholars to access field sites that remain inaccessible to others. Having access to a highly exclusive or even confidential field site allows scholars to make observations that are unique, noteworthy, and consequently attractive for journal editors and readers alike. Gaining such access, in turn, often depends on superior knowledge of a field and on earning the trust of gatekeepers and practitioners. Trust is particularly difficult to acquire intentionally, as it is generally a “by-product” of longer-term engagement (e.g., in the process through which one of the authors gained access to the hacker collective “Anonymous,” see Box 1).

Box 1. Access to the Hacker Collective “Anonymous”

Through his impact work as an ECR, one of the authors of this essay was able to secure access to the hacker collective “Anonymous.” Data he gathered on this highly secretive group laid the foundation for one of the author’s first publications in a “top journal” (Dobusch & Schoeneborn, 2015). What helped him to secure access to members of the secretive group of hacktivists was the credibility and personal contacts he had acquired over years of blogging at netzpolitik.org, a German language blog with an outstanding reputation on issues such as digital rights, data protection, or anti-surveillance. His openly accessible blog posts, as well as a personal endorsement by the blog’s editor-in-chief helped the author to reassure potential interview partners that the research he was planning would not be used by police or other state agencies to identify and track-down participants in Anonymous’s illegal hacking activities. The author’s own blog posts did not cover predominantly hacking-related topics but focused on issues of copyright regulation. However, what led to the transfer of credibility from the blog to the author was the longevity of his engagement for the blog and the blog’s explicit positioning as an advocate for civil rights and civil society. Hence, the creation of the rare and scientifically valuable data set on Anonymous was enabled by two things that ECRs are warned to avoid: engaging in impact work for several years with no obvious instrumental objective, and engaging in public debates by taking a political stance.

Second, impact work can enable researchers to discover and attend to emerging empirical phenomena earlier than their academic peers. Sensing a new phenomenon early may allow ECRs to write an article that becomes an obligatory point of passage for future research on this phenomenon. The more undirected and open the impact work with outside actors, the greater an academic’s capacity to sense emerging phenomena. One arena in which impact work can lead to the discovery of new phenomena is Twitter. For example, two of the authors used

Twitter to discuss their research on Open Access publishing with other academics, librarians, and people working in the publishing industry. It was through this form of impact work that they sensed the growing relevance of “predatory publishing” and decided to explore the implications of this phenomenon for their field in an academic article (Dobusch & Heimstädt, 2019). The discovery of new phenomena through impact work, however, can only be translated into scholarly reputation when reputable journals are willing to publish this type of work. For several decades, journals in the field of management and organization studies were biased toward theory-driven research. But recently we do see a shift in this field, with established journals like *Long Range Planning* (Von Krogh, Rossi-Lamastra, & Haefliger, 2012) or *Journal of Management Studies* (Wickert et al., 2020) and new outlets like *Academy of Management Discoveries* (Van de Ven et al., 2015) embracing phenomenon-driven research.

SHOULD I FOCUS ON IMPACT ACTIVITIES THAT COUNT?

The growing interest of research institutions and funders in societal impact has given rise to various indicators and methods for making engagement between academics and non-academic publics measurable. One of the most popular instruments used for this form of quantification are Altmetrics. Altmetrics assess how widely an output (e.g., a research article) has been referenced outside of the scholarly literature, that is, in “alternative” forms of communication such as news media, blogs, or social media platforms. Altmetrics eventually collapse all this information into a single number, which is framed as representing a paper’s overall impact on society. While some academics use Altmetrics as a way to monitor the popularity of their outputs personally, they are also used increasingly as a performance measurement tool by research institutions and funding bodies around the world (Fraumann, 2018). The institutionalization of Altmetrics as a performance measure in academia raises the question for ECRs of whether they should focus impact work primarily on those activities captured by these metrics. We believe that what seems to apply to most evaluative systems holds true for Altmetrics as well: “when a measure becomes a target, it ceases to be a good measure” (Strathern, 1997, p. 308). Our overall conviction, therefore, is that ECRs should be aware of but not cling to the Altmetrics system. The reasons for this are threefold, at least.

First, Altmetrics conflate attention with societal impact (for a broad definition of impact, see e.g., Burawoy, 2005; Wickert et al., 2020). Whether an article scores high on Altmetrics can be strongly affected by its authors’ social media network and even more so, by the way its content is framed by media outlets. For example, one of the articles with the highest Altmetrics score in 2018 discussed the effect of extreme drought and heat on the global beer supply (Xie et al., 2018). While the immediate usefulness of this paper to a general public might be limited, it gained widespread attention when, for instance, WIRED reported on it under the title “Don’t save the planet for the planet. Do it for the beer” (Rogers, 2019).

There are many forms of impact work that do not translate into public attention (e.g., consulting work, private discussions with policy-makers, membership of advisory boards) and can hence be captured only inadequately by systems such as Altmetrics (Fecher & Hebing, 2021). Clinging to such systems thus narrows the range of potential activities through which ECRs can strive for societal impact.

Second, attempts to increase the measurability of impact work through systems like Altmetrics may even directly undermine the success of ECRs' "academic activism" (Rhodes, Wright, & Pullen, 2018). For example, an ECR might be asked by civil society organizations to provide scientific expertise for their upcoming campaign against a major corporation's business practices. This type of consultation work is time-consuming but can only be captured in Altmetrics systems if the ECR documents their engagement, for example, in a blog post. At the same time, the more attention this type of documentation attracts, the more likely it is that the corporation will take preventive measures – thereby reducing the overall effect of the campaign.

Third, even though an impact activity may not lead to direct, measurable results, it is quite possible that there will be considerable indirect effects. And in turn, these could have an impact on other areas of academic life that are being evaluated. One typical example is the spillover effect between impact activities and academic teaching. Our teaching can be more exciting and versatile if its transfer into practice is taught as well as academic theories. For example, with guest lectures by experts we have met through impact activities. But impact activities may also affect the way we teach, as the example in Box 2 illustrates.

Box 2. Module on the Masterplan Learning Platform

A few years ago, one of the authors was asked by the online learning platform Masterplan³ to help to develop a video-based online learning module. The Masterplan platform is used by many companies in the German-speaking world for employee development. The creation of a professional training seminar is a form of impact work that is not taken into account in university performance evaluations, and it does not provide access to particularly unusual field sites, either (see the previous vignette on Anonymous). However, the author decided to accept the invitation – the challenge of putting his own work into a video format for continuing education seemed intriguing and fun. The actual implementation was more time-consuming than he had imagined and transferring thoughts coherently into a video format was a real challenge, not to mention the strange feeling of appearing in front of a camera and speaking to an imaginary audience. But the experience gained was of great value later, when the COVID-19 pandemic made traditional teaching impossible and universities switched to video lectures. Having experienced this in a professional context made the transition to online teaching much easier; the teaching formats emerged quite quickly and were very well-received by students.

ARE MY FINDINGS TOO INCREMENTAL?

When we think of social scientists who have gained popularity beyond the academic community, we often associate them with a single iconic concept. In our own academic field, these are concepts like Clayton Christensen's (1997) "disruptive innovation," Kaplan and Norton's "balanced scorecard" (1996), or Kim and Mauborgne's "blue ocean strategy" (2014). These breakthrough ideas are famous inside and outside academia and enjoy a halo effect that overshadows more mundane impact activities. When ECRs compare their own works to iconic concepts they typically come to the conclusion that by comparison, their findings seem rather incremental. Instead of developing a novel approach to innovation (disruption) or strategy (blue ocean), they may test, broaden, or refine established concepts in an incremental fashion – adding a small detail to a long tradition of other small details. This comparison leads to ECRs asking whether their own results are perhaps far too incremental to make an impact outside of academia. We believe that while the concern is understandable, it artificially restricts the self-efficacy of one's own – sometimes incremental but still relevant – impact work. We would like to raise three points for discussion in this context.

First, the comparison of incremental findings and iconic concepts nurtures the belief that the only resources available to social scientists when engaging with societal groups are their own original contributions. However, reflection on the process of knowledge production suggests otherwise. Academic publishing requires a broad overview of an entire research field. ECRs spend a considerable amount of their research time reading and discussing prior research by others. Having an in-depth overview of what has been said by other researchers provides ECRs with a valuable resource for public engagement and a foundation on which to build broad impact activities. Even if one's own contribution to the field may be incremental, over time one gains an overview of other incremental contributions that can be applied to a broad range of situations. While iconic concepts typically comprise a single idea that cannot possibly be the answer to every question, ECRs have the opportunity to apply the diversity of what they have read to their own impact activities. Furthermore, when engaging in impact work, ECRs sometimes find that neither their own nor the field's contributions will help them to answer specific questions. In many cases, what is asked of scholars in their roles as public experts cannot be answered with strict scientific reasoning alone but requires some form of informed speculation and translation – science scholars refer to such issues as "trans-scientific questions" (Weinberg, 1972). During the COVID-19 pandemic, we and our colleagues have been confronted with trans-scientific questions regarding how such an unprecedented crisis can be managed. In Box 3 we describe how one of the authors responded to these questions with an innovative open online course. As an example shows, knowing one's field of research can be a great help when contextual factors change, as long as one is able to transfer existing insights to the new context. Researchers are not only the intellectual parents of their own findings, therefore, but also navigators who can open up their research field to others.

Box 3. Organizing in Times of Crisis

When the COVID-19 situation grew into a global pandemic in early 2020, many social scientists were confronted with the question: How can we, as a society, cope with this crisis? To address this problem, one of the authors teamed up with a group of colleagues from the social sciences, and within a few weeks they had developed the collaborative open online course “Organizing in times of crisis: The case of COVID-19.”⁴ The course took the crisis as a context against which to teach basic organization and management knowledge, yet combined this basic knowledge with critical reflection on the pandemic’s development and its implications for management (e.g., regarding global supply chains or other grand challenges such as climate change and inequality). What made the course particularly impactful (reflected in an international award for impactful teaching) was that all the course materials were made available with open access to anyone. A core syllabus as well as all the lecture slides was published in editable, open formats for download. They were also openly licensed to allow for adaptation without the need to clear rights, enabling everyone to adjust the course flexibly to local needs. This online course shows that impactful engagement with non-academic stakeholders does not need to be restricted to a breakthrough idea or the narrow set of truth claims made by scholars in their own peer-reviewed publications: it can also result from the application of existing knowledge to an emerging context.

Second, comparing one’s own incremental research to iconic concepts underestimates the societal value that may come from deep engagement with a narrow topic. It is certainly true that most dissertations are hardly suitable subject matter for best-selling books. But conversely, that does not mean that these works cannot be of tremendous value to a very specific group. Identifying this group and entering into a dialogue with them is often easier – and may be even more rewarding – than addressing a broad audience. Finding relevant stakeholders is often easy, as one already established contact during the research process. It is also possible to demonstrate academic expertise with only a few specific publications. And furthermore, one has substantive access to the concerns and problems that could be addressed through impact activities. In all, this allows researchers to develop particularly deep insights relating to a specific topic and then share them with societal stakeholders. One of the authors of this essay, for instance, was researching the role of remixing design objects in 3D printing communities. This is not exactly a topic receiving widespread attention in the media, but it is of particular interest to those involved (platform providers, makers, and community managers at fab labs⁵). Following several publications on the topic, the author was engaged in numerous email exchanges and presented his work at community conferences and fab labs. One strength of the academic research system lies in

its sheer quantity of topics and research approaches. Even if individual research projects can only be transmitted to a small group of users, the great strength of the system lies, among other things, in the fact that practically every research topic allows access to a small, specific audience. Overall, then, science is capable of addressing countless topics, even if the individual findings themselves do not amount to iconic concepts.

Thirdly, it is important to understand how iconic concepts emerge. Sociologists of science argue that ideas do not turn into an iconic concept because of their inherent quality, but primarily through the processes whereby they are socially constructed as outstanding and unique (Latour, 1993). In many cases, the social construction of an iconic concept follows a pattern. A book is written, followed by a number of articles in “popularization journals” (Schulz & Nicolai, 2015, p. 31). Afterwards, the “academic entrepreneurs” (Mehrpooya & Willmott, 2018, p. 729) hit the road and spent months or even years taking the idea to the public in lectures, workshops, and consulting gigs. Ideas that are successfully constructed as an iconic concept lead to real consequences. For example, an iconic concept can be very helpful to an entire academic field that is seeking legitimacy from non-academic audiences. When an academic field has produced a concept that has diffused into non-academic language as well (e.g., “disruptive innovation”), the field is more likely to secure future resources from individuals and organizations outside the academic community. However, pursuit of an iconic concept might lead to a situation in which the popularization of this very concept becomes the only form of impact work appearing plausible to the researchers involved. When a concept has been successfully constructed as “iconic,” academics can become locked into this concept as the only topic of their impact work. Their name becomes so strongly associated with the concept that fear of a “sophomore slump” creates a cognitive barrier to the development of a new, unrelated idea. The halo effect of an iconic concept comes with a downside, therefore, as the success of the idea forces the researchers to stick with it. Doing research that achieves incremental results can also be understood as a feature, allowing an ECR to deal with a different topic in the next project, and thus to get involved in a different, exciting subject area.

MY FINDINGS ARE NOT ACTIONABLE – SO HOW ARE THEY USEFUL?

Many of our field’s canonical textbooks not only feature peer-reviewed research findings but also introduce a broad array of “plug and play” management tools. Rarely, however, do these textbooks discuss the differences between these forms of knowledge. This shortcoming, we believe, shapes the way ECRs think about impact work. When they begin to contemplate opportunities for engagement beyond the academic community, some ECRs assume that only academic knowledge that can be translated easily into “plug and play” tools can be useful for non-academic audiences. If their research does not lend itself to such translation, they might become discouraged from impact work. This concern can be mitigated by

clarifying the epistemological status of popular tools and by taking into account the different ways in which academic knowledge can be useful for non-academic audiences.

Looking at the history of popular management tools, we find that many did not emerge from academic research but from knowledge work by practitioners. In his historical study on the professional field of strategy, Whittington (2019), for instance, sheds light on the genesis of the famous “Growth-Share Matrix.” Although the matrix is featured in many textbooks, Whittington shows that it was not translated from academia into the world of strategy consulting, but was created *ex nihilo* by employees of the Boston Consulting Group. In order to move their invention closer to the world of academic knowledge, the consultants theorized the concept in several articles, publishing them in outlets such as the Harvard Business Review as well as the firm’s own working paper series. Another famous example is the “Cynefin Framework” developed by Dave Snowden when employed by IBM Global Services. The Harvard Business Review article on the concept (Snowden & Boone, 2007) won the “Outstanding practitioner-oriented publication in OB” award from the Academy of Management. Today, the framework is widely applied in teaching and practice. We hope that these examples will provide ECRs with some relief from their concern about actionability, as they show that while tools like the growth-share matrix appear as very useful examples of academic knowledge, they should be seen more as academically fashioned examples of practical knowledge.

Concerns around the actionability of one’s own research can also be mitigated by familiarizing oneself with the full spectrum of academic research’s usefulness for non-academic audiences. Nicolai and Seidl (2010) describe three different ways that academic research can be useful for practitioners. First, academic knowledge can provide what they call “instrumental relevance” (p. 1266) by helping practitioners make decisions. These can be (a) schemes that provide systematic categories like flow charts or matrixes; (b) technological rules or recipes that provide a course of action; and (c) forecasts that provide predictions about future developments. Second, Nicolai and Seidl describe “conceptual” (p. 1267) and “legitimative” (p. 1268) forms of relevance. Conceptual relevance can derive from (a) new linguistic constructs such as metaphors (“organizations as organisms”); (b) uncovering contingencies like alternative routes of action; and (c) uncovering causal relationships or unknown side-effects. Rather than proposing a direction, conceptually relevant research takes the form of “reflexive knowledge” that provokes a critical, substantive debate – or, as Burawoy (2005) puts it, is “concerned with a dialogue about ends” (p. 11). Third, Nicolai and Seidl suggest that scientific knowledge can have legitimative relevance, when individuals or organizations can acquire material or symbolic resources simply by affiliating with it (e.g., when a startup receives funding because its business plan cites peer-reviewed academic articles). These forms of relevance show that academic knowledge’s societal impact is by no means limited to “plug and play” tools such as checklists or frameworks; academic research can also be useful for non-academic actors in many other ways. Providing an example of such

usefulness beyond the application of scholarly knowledge as a tool, Box 4 cites a case where a scholarly concept is applied as a framework for reflection on a practical problem.

Box 4. Path Dependence and the Wikipedia Community

The Wikipedia community is a focal research object for one of this essay's authors. In recent years, he has engaged regularly in dialogue with the community and reported back on some of his research findings. In this form of impact work, he frequently mobilized the theoretical concept of "organizational path dependence" (Sydow, Schreyögg, & Koch, 2009), which was perceived by the Wikipedia community as a new, intuitive, and useful metaphor for understanding their own organization. In the case of Wikipedia and its male-dominated pool of volunteer editors, path-dependence theory explains how a lack of diversity early on may have been reinforced over time into a persistently male-dominated community culture. This culture, in turn, makes it harder to increase the diversity of contributors at later stages in the process. Such a path-dependence lens can explain bias without putting too much blame on individual community members. At the same time, it highlights the need for external intervention, given that self-reinforcing dynamics make it very unlikely that the diversity problem will be resolved from within the community. The concept of organizational path dependence thus serves as a good example of academic knowledge that is not instrumentally but conceptually relevant: it offers the Wikipedia community a tangible metaphor for a problem that was hard to describe before. The new metaphor enables the community to address this issue communicatively, but at the same time, it does not prescribe any immediate action regarding how to resolve the problem of the male-dominated community culture.

WHAT IF I SAY SOMETHING WRONG?

Making a research presentation to academic peers can be a stressful experience – but at least the presenter can expect a minimum level of professional decency and some predictable discursive rituals ("There is a lot to like about your paper, *but ...*"). In an academic setting, the presenter can work out quite easily whether a presentation met expectations or not, but such situations very rarely turn into hostile exchanges. When academics provide expertise for non-academic publics, the audience's response is much less ritualized and predictable. Thus ECRs might feel uncertain about what is expected of them in situations of impact work and fear that if they "say something wrong," they will embarrass themselves or even cause lasting damage to their reputation. To help mitigate this concern, we first

take a closer look at the dynamics of public repercussion and then offer some practical suggestions for managing them over time.

The history of scientific expertise in public debates yields some extreme cases in which impact work has led to reputational disaster for the researchers involved. For example, [Hirschi \(2018\)](#) has reconstructed the “ecstasy controversy” around British pharmacologist David Nutt. Asked by the British government to revise an existing risk classification of drugs, Nutt came up with a list in which alcohol and tobacco were rated as more harmful than LSD, cannabis, or ecstasy. The government was extremely dissatisfied with the result of this expert consultation, yet Nutt refused to budge from his own classification scheme. As a result, the government not only dismissed him from his formal role as government advisor; members of the government also used the mass media to frame Nutt’s results as his personal political opinion rather than scientific knowledge.

Impact work can also lead to repercussions among academic peers. Most of us will recall a situation in which academics (over a glass of wine at a conference reception) gossiped about the senior colleague who allegedly spends most of their time on impact work rather than writing peer-reviewed articles. In the eyes of the gossipers, such constant exchange with non-academic audiences makes the colleague lose touch with the discipline’s “pure” questions and “rigorous” methods. A recent example of this dynamic is the book *The Age of Surveillance Capitalism* by Harvard Business School professor Shoshana Zuboff. The best-selling book attracted much praise from the popular press (*The New Yorker* included it in its list of top non-fiction books of 2019) but it was harshly criticized from within the academic community for a lack of methodological rigor (e.g., [Haggart, 2019](#)).

The cases of David Nutt and Shoshana Zuboff illustrate how impact work can lead to an academic’s loss of reputation among the general public as well as the academic community. However, there were very specific boundary conditions in those two cases. Both Nutt and Zuboff were well-established senior researchers when engaging in these respective episodes of impact work. It also seems fair to assume they were able to anticipate the effect of their impact work on their reputations but deemed it a risk worth taking, given their career stage and the opportunity to make a societal impact. Most ECRs will not find themselves in comparatively high-stakes situations with the potential to damage their reputation. However, they may well encounter public repercussions that evoke paralyzing feelings of embarrassment and shame. In Box 5, one of the authors of this essay provides a personal account of how he experienced and coped with a failed attempt at impact work on Twitter. The experiences of critique in digital publics vary, however, depending on the researcher’s subjective position ([Ferber, 2018](#)). For example, female researchers are more likely than male researchers to experience harassment in digital publics. To cope with this harassment, female researchers not only engage in coping strategies such as resistance or acceptance (as described in the following vignette); they may also feel the need to turn silent or decide to avoid certain platforms altogether ([Veletsianos, Houlden, Hodson, & Gosse, 2018](#)). Such coping strategies hence limit their ability to engage in impact work and leverage its positive side-effects.

Box 5. Turning Criticism into Research Ideas

When one of the authors submitted his master thesis, he hoped that his first piece of “real” research might also be interesting to a wider audience. In his thesis, the author described how a group of transparency activists in the UK successfully convinced government agencies to “open up” their digital data sets by uploading them to the Internet. The author felt sympathy with the transparency activists and decided to share his thesis on the Internet as well. He uploaded the document to his private website and announced on Twitter that he had “opened up” his work. At first, the Tweet received some favorable reactions from his interlocutors and other activists. A few minutes later, however, another Twitter user left a rather harsh comment criticizing the fact that the author had published his thesis under a license that was not in line with the activists’ definition of openness. The Tweet ended with the words “you should know better,” suggesting that the author lacked understanding of his own research topic. This was an embarrassing situation for him. He quickly changed the document’s license, but the experience stuck with him until he finally figured out that what had happened that day on Twitter was not just a personal embarrassment; it was also an interesting opening from which to explore the way in which transparency activists manage the boundaries of their movement. Almost four years after the somewhat failed experiment in science communication, he was able to exploit this insight in a paper on the phenomenon of “open-washing” (Heimstädt, 2017). Tweets about this paper were unanimously well-received.

For most mundane forms of impact work, risks of reputational damage and embarrassment cannot be eliminated, but they can be reduced using two tactics. First, the risks can be managed by trying to assess upfront what the respective audiences will expect from their engagement with an academic. Being able to classify the expectations of one’s counterpart may sound trivial, but it is an essential step toward overcoming feelings of discomfort. All three of us have received inquiries (e.g., a request to provide a keynote presentation for a practitioner audience) where an assessment of expectations revealed that someone else could meet them much better. Sometimes, one’s own impact work may consist of giving advice on who else to ask.

Second, managing these risks also means choosing the right form of impact work in which we feel best able to defend our reputation (or self-esteem) against critique. For example, some academics might feel quite comfortable with performative forms of impact work, on stage and in front of an audience. They feel that having a rough idea about the audience and being in a physical position of authority allows them to best defend their reputation. Other academics might feel more comfortable with digital publics such as social media platforms. In

these settings, assumptions about the audience are more difficult to make, but the affordances of social media (mostly text-based communication) allow for a more careful, considered crafting of responses to criticism.

CONCLUSION: STRIVING FOR IMPACT MEANS COPING WITH CONCERNS

Many ECRs expect a career in academia to allow them opportunity to balance the creation of academic knowledge with engagement in impact work. Increasingly, academic institutions do embrace their employees' desire for societal impact, but so far they provide only very limited support for those academics who would benefit the most: ECRs. The aim of this essay is to provide ECRs with self-help by unpacking five common concerns around impact work.

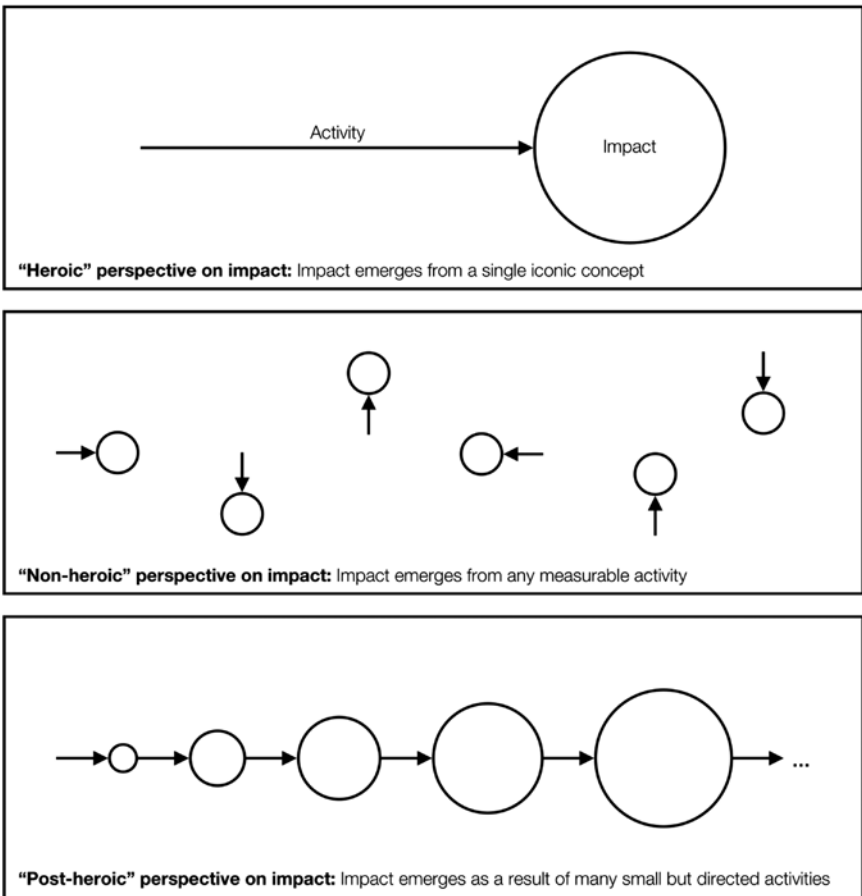


Fig. 1. Heroic, Non-heroic and Post-heroic Perspective on Societal impact.

This article was not intended to advance any theoretical program on the conditions, forms, and consequences of research impact (Kieser et al., 2015), but set out to develop practical knowledge for ECRs, based on our own personal experiences. What form does this practical knowledge take, by contrast to theoretical knowledge on the impact of social science research? We propose that our discussion of five common concerns has helped us to present a *post-heroic* perspective on impact – not as a theoretical lens for studying impact but as a resource to guide ECRs’ impact activities (see Fig. 1). We suggest this post-heroic perspective on impact as an alternative to the more established (i.e., popular among ECRs and other researchers) heroic and non-heroic perspectives.

When academics make sense of their own impact activities from a heroic perspective, they adopt a narrow focus on the generation of an iconic concept. In contrast, when academics make sense of their impact work from a non-heroic perspective, they might easily conflate attention with relevance. When academics make sense of their impact work from a post-heroic perspective, they are able to realize societal impact from mundane and seemingly inconsequential activities (a lecture here, a podcast episode there, and a press article elsewhere), which they skillfully connect in order to make them consequential over time. When ECRs approach impact neither as a strategic project nor as an accumulation of atomic activities, but as the piecing together of individual impact activities in a meaningful way, we believe that they will be able to follow present-day academic careers that will profoundly transform the institutions of science in the future.

NOTES

1. The different evaluation regimes of ECRs and tenured faculty seem more pronounced in national contexts where universities rely heavily on attracting private sector funding and generating revenue through executive education programs (e.g., USA and UK).

2. This singular devotion to abstract theorizing has been criticized as the “‘physics envy’ approach to management research” (Thomas & Wilson, 2011, p. 447), that is, the compulsion to develop novel and pure theories constantly in an effort to signal legitimacy as a “real” scientific discipline.

3. <https://masterplan.com/en/>

4. Available at timesofcrisis.org

5. Fab lab is a common term for small-scale workshop spaces that allow individuals to engage in digital fabrication.

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SECTION III

REFLECTIONS & OUTLOOK

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ROBUST ACTION: ADVANCING A DISTINCTIVE APPROACH TO GRAND CHALLENGES

Joel Gehman, Dror Etzion and Fabrizio Ferraro

ABSTRACT

Although management scholars have embraced grand challenges research, in many cases, grand challenges have been treated as merely a context for exploring extant theoretical perspectives. By comparison, our approach – robust action – provides a novel theoretical framework for tackling grand challenges. In this invited article, we revisit our 2015 model, clarifying and elaborating its key elements and taking stock of subsequent developments. We then identify three promising directions for future research: scaffolding, future imaginaries, and distributed actorhood. Ultimately, our core message is remarkably simple: robust action strategies – participatory architecture, multivocal inscription and distributed experimentation – jointly provide a means for tackling grand challenges that is well matched to their complexities, uncertainties, and evaluativities.

Keywords: Grand challenges; robust action; complexity; uncertainty; evaluativity; sustainability

Over the past several years, management scholars have produced a growing body of research on grand challenges. Although this particular label is relatively novel, the topic resonates with longstanding interest in addressing societal issues

Organizing for Societal Grand Challenges

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within organization studies (Hinings & Greenwood, 2002; Selznick, 1996; Stern & Barley, 1996). We were fortunate to have published our own contributions (Etzion, Gehman, Ferraro, & Avidan, 2017; Ferraro, Etzion, & Gehman, 2015) somewhat early in this cycle. Looking back, part of what our work enabled and catalyzed – together with other early contributions – was the creation and legitimation of an intellectual space for research on grand challenges, especially for early-career researchers (Friesike, Dobusch, & Heimstädt, 2022).

When we were developing our ideas, we certainly had no inkling of the popularity the paper would achieve. Rather than providing an entirely *de novo* set of ideas, our robust action framework brought together several extant (and sometimes eclectic) ideas in an integrated fashion. In some instances, this involved work to translate and unpack ideas from the margins of the management field; in others it involved reimagining (and blurring) the boundaries between literatures in ways that enabled us to expand the conversation. In this article, we embrace this spirit to further advance our ideas. Specifically, the editors invited us to take stock of progress relative to our robust action approach to tackling grand challenges.

Although we have read many of our interlocutors closely, this article does not aim to provide either a systematic or comprehensive review of this work. Rather, we seek to do three things. First, we revisit our original robust action framework with an eye to clarifying selected elements, particularly areas where further elaboration seems warranted, or where our concepts have been interpreted in ways we had not anticipated. Second, we take stock of how scholars have subsequently explored and extended these strategies. Finally, stepping back from the particular elements of our framework, we revisit the core premise of our original paper – robust action – and reflect on some challenges and opportunities that scholars may wish to take up next, namely in the areas of scaffolding, future imaginaries, and distributed actorhood.

COMPLEXITY, UNCERTAINTY, EVALUATIVITY

What are grand challenges? When we were developing our ideas, grand challenges had yet to attract significant interest from organization and management scholars. Both then and now, discussions of grand challenges invoked primarily phenomena-driven definitions. For instance, George et al. (2016) described grand challenges both as “formulations of global problems that can be plausibly addressed through coordinated and collaborative effort” (p. 1880) and, following Grand Challenges Canada, as “specific critical barrier(s) that, if removed, would help solve an important societal problem with a high likelihood of global impact through widespread implementation” (p. 1881).

Given this backdrop, one of the distinctive features of our original article was an effort to conceptualize and define what we called the “analytic facets of grand challenges.” Specifically, we introduced three facets: complexity, uncertainty, and evaluativity. In the remainder of this section, we revisit these three facets, expounding on our understanding of them (see Table 1).

Ultimately, we conceptualized grand challenges as matters of concern that entail complexity, evoke uncertainty, and provoke evaluativity. Although some

Table 1. Analytic Facets of Grand Challenges.

Facets	Original Definition	Commentary
Complex	The problems are characterized by many interactions and associations, and non-linear dynamics	Tackling grand challenges goes beyond a systems view of complexity wherein relationality and temporality are given and exogenous. Instead, relationality and temporality are themselves endogenized
Uncertain	The problems and their evolution are difficult to forecast for the actors, who cannot properly identify possible future states of the world	Tackling grand challenges entails future expectations, often as a means of preventing them from coming to pass, thereby undermining the possibility of falsifiability
Evaluative	The problems cut across jurisdictional boundaries, implicate multiple criteria of worth, and can reveal new concerns even as they are being tackled	Tackling grand challenges is an intrinsically values-laden endeavor. Requiring agreement on first principles as a precondition for action is likely fatal

Source: Ferraro et al. (2015) and authors' analysis in this article.

concerns may be global in scope (such as climate change), others may be more localized. Whereas some concerns may be widely accepted (such as poverty), others may not be. And whereas some concerns may be ameliorable via the removal of a common barrier, others may be much less tractable. Critically, this definition problematizes the possibility of drawing a delimited list of challenges once and for all, such as the sustainable development goals.

Two of the facets we introduced – complexity and uncertainty – overlap (at least superficially) with other perspectives such as wicked problems and volatility, uncertainty, complexity, and ambiguity (Barber, 1992; Rittel & Webber, 1973). Yet, our concept of complexity is broader than common understandings of this term. Namely, most understandings of complexity assume a certain level of ontological realism; complexity is perceived as “real,” and this reality is assumed to exist independent of humans, thus setting up a quest to accurately map the system and its intervention points. Such a systems approach to understanding complexity typically demands a kind of omniscience (Stacey, 2001). But in the context of sustainability and innovation, there are other understandings of complexity in which both relationality and temporality are conceptualized as endogenous, leading to different strategic, policy, and research implications (Garud & Gehman, 2012; Garud, Gehman, Kumaraswamy, & Tuertscher, 2017).

Similarly, our conceptualization of uncertainty is perhaps heterodox. We view it as a potentially innumerable set of possible futures. Ergo attempts to forecast via mathematical models and computer simulations are essentially untestable (Funtowicz & Ravetz, 1993). For example, the scientific assessment of the frequency, intensity, and damage caused by extreme weather events in a climatically changed world is a concern that can be – and is – modeled mathematically, and then transposed into financial instruments, such as catastrophe bonds (Etzion, Kypraios, & Forgues, 2019). However, such approaches to controlling, planning, adapting, or otherwise managing uncertainty are unfalsifiable:

[Catastrophe] models perform a peculiar epistemological magic. Because their object exists only in the probabilistic future, they are never absolutely falsifiable – yet by the same token, they can always be improved via the incorporation of new observations and science. (Johnson, 2015, p. 2511)

This means that our greatest achievements in grappling with grand challenges, were we to attain them, would be counterfactual – an unremarkable world that functions “normally,” devoid of pandemics, failing ecosystems, and social collapse. This imaginary is striking in that it is highly uncertain and simultaneously difficult to appreciate and value because it is so quotidian and taken for granted. Earning plaudits for contributing to the creation of such a future world would be a difficult endeavor – what is there to celebrate if the status quo has been preserved?

The third facet of our conceptualization – evaluativity – is perhaps the most original aspect of our treatment of grand challenges. As we put it in the original article: “The problems cut across jurisdictional boundaries, implicate multiple criteria of worth, and can reveal new concerns even as they are being tackled” (p. 365). Implicated here are axiological commitments (i.e., assumptions about what things are good, valuable, and worth having or doing) on the part of those involved or excluded, as well as questions about the value(s) of the challenges being pursued (Gehman, 2021). Taken seriously, this formulation invites researchers and participants alike to contend with issues such as rationalities, logics, values, practices, orders of worth, and so forth – all longstanding themes in the literature (Friedland & Alford, 1991; Haveman & Rao, 1997; Stark, 2009; Thornton & Ocasio, 1999; Townley, 2002; Weber, 1946). Examples in this vein include research on the role of institutional logics in enabling and constraining efforts aimed at addressing grand challenges (Cobb, Wry, & Zhao, 2016; Gümüşay, Claus, & Amis, 2020; Lounsbury & Wang, 2020; Zhao & Wry, 2016).

ROBUST ACTION STRATEGIES

At the core of our theoretical framework are three robust action strategies (see Table 2 for an overview). The remainder of this section assumes familiarity with our original arguments and revisits them. First, we seek to clarify selected elements, particularly areas where further elaboration seems warranted or where our concepts have been interpreted in ways we had not anticipated. Second, we take stock of how scholars have subsequently explored and extended these strategies.

Participatory Architecture

There is widespread agreement that tackling grand challenges requires novel forms of engagement and collaboration among diverse actors (governments, corporations, citizens, scientists, and NGOs, as well as non-human actors such as forests, oceans, lakes, and cities) (e.g., Latour, 2017). To address such circumstances, we proposed participatory architecture, defined as “a structure and rules of engagement that allow diverse and heterogeneous actors to interact constructively over prolonged timespans” (Ferraro et al., 2015, p. 373). This structural

Table 2. Robust Action Strategies.

Characteristic	Strategy		
	Participatory Architecture	Multivocal Inscription	Distributed Experimentation
Definition	A structure and rules of engagement that allow diverse and heterogeneous actors to interact constructively over prolonged timespans	Discursive and material activity that sustains different interpretations among various audiences with different evaluative criteria in a manner that promotes coordination without requiring explicit consensus	Iterative action that generates small wins, promotes evolutionary learning and increases engagement, while allowing unsuccessful efforts to be abandoned
Dimension	Structural	Interpretive	Practice
Original foundations	Governance of the commons (Dietz, Ostrom, & Stern, 2003; Ostrom, 1990) Hybrid forums (Callon et al., 2009)	Interpretive flexibility (Pinch & Bijker, 1987) Strategic use of ambiguity (Jarzabkowski & Sillince, 2007; Sillince, Jarzabkowski, & Shaw, 2012)	Small wins (Plowman et al., 2007; Weick, 1984) Experimentalist governance (Sabel & Zeitlin, 2012)
Expanded foundations	Deliberative and integrative engagement (Bachtiger & Parkinson, 2019) Modularity (Manning & Reinecke, 2016)	Actor-network theory and inscription devices (Akrich, 1992)	Abduction (Golden-Biddle, 2020) Local experimentation (Mair et al., 2016)
New directions	Scaffolding (Ansell, 2011; Casanovas & Ferraro, 2021; Mair et al., 2016) Fictional expectations (Augustine et al., 2019; Beckert, 2016) Distributed actorhood: non-humans and cities (Gehman et al., 2021; Zuzul, 2019)		

Source: Ferraro et al. (2015) and authors' analysis in this article.

dimension is meant to capture the need to devise governance practices that could harness diverse identities, values, interests, and actions in productive ways.

We chose the term *architecture* to refer to a broad set of principles, rules, roles, and practices that guide the collective construction of policies and standards and thereby have the potential to shape behavior and action. We also built on the concept of hybrid forums that bring together scientists and citizens (Callon, Lascoumes, & Barthe, 2009), evident, for instance, in work on the governance of open source software communities (O'Mahony & Ferraro, 2007; West & O'Mahony, 2008), where actors must devise novel ways for developers and corporations to cooperate. When we wrote the original article, scholars across fields with diverse interests were already advancing our understanding of these processes across multiple contexts.

The last decade has witnessed an explosion of studies in this area, with a focus on standard-setting processes (Levy, Reinecke, & Manning, 2016; Manning &

Reinecke, 2016), national and transnational regulation and policy (Abbott, Levi-faur, & Snidal, 2017; Avidan, Etzion, & Gehman, 2019; Brès, Mena, & Salles-Djelic, 2019), cross-sectoral partnerships and multistakeholder engagement (Gray & Purdy, 2018), shareholder engagement (Ferraro & Beunza, 2018; Goodman & Arenas, 2015), and social movements (Briscoe & Safford, 2008; DeJordy, Scully, Ventresca, & Creed, 2020; McDonnell, King, & Soule, 2015), to name just a few.

Along the way, scholars studying governance and stakeholder engagement have overcome a longstanding tension between consensus and dissensus via architectures that are robust to deeply contradictory value systems. As proposed initially by scholars in business ethics and grounded in Habermas' (1996) theory of deliberative democracy, many versions of stakeholder engagement assume that corporations and other stakeholders rely on rational deliberative processes to identify legitimate solutions to the divisive issues they face (Palazzo & Scherer, 2006; Scherer & Palazzo, 2007). Yet, this reliance on rational consensus as a regulative ideal has been criticized by scholars from both a theoretical and an empirical perspective for its inability to address power imbalances between stakeholders (Banerjee, 2014; Moog, Spicer, & Böhm, 2015), and for inadequately accounting for the profound differences in values that different parties might bring to engagements (Ehrnström-Fuentes, 2016). Instead, proponents of an alternative "agonistic" approach to stakeholder engagement have suggested that parties should not avoid conflict and strategic considerations. This approach ensures that less powerful actors can participate in the process, and leaves more space for NGOs to legitimately continue their advocacy work outside of the engagement (Brand, Blok, & Verweij, 2020).

Recent integrative approaches to participatory architecture aspire to eliminate the dualism between consensus and dissensus, highlighting the need to explicitly acknowledge and manage value pluralism via modular governance architectures. Building on a study of shareholder engagement on climate change between a group of religious investors (ICCR) and two automotive companies (Ford and GM), Ferraro and Beunza (2018) developed a communicative action model of dialogue that entails both contestation (e.g., the filing of aggressive shareholder proposals) and deliberative processes. Similarly, Levy et al. (2016) advanced a process model of engagement that starts with more radical disruptive demands, but evolves as parties increasingly accommodate reciprocal demands in ways that accommodate others' constraints while advancing their own interests. In business ethics, Schormair and Gilbert (2021) built on the critical pragmatism of Forester (2013) to propose a five-step discursive sharing process that actors might follow in a situation of value conflict. This approach recognizes that actors might not (and should not) overcome their value differences, but should orient themselves toward sufficient justification.

The way that issues are framed, of course, is pivotal in enabling or curtailing collaborative opportunities between actors. These frames can operate as provisional truces and, given their multivocal nature (see below), can help parties overcome their initial adversarial stance. Yet, this is not guaranteed. To the extent that some parties gradually develop more ambitious frames, they might also generate

pushback from others with deeply incompatible values and interests. For instance, [Berkowitz and Grothe-Hammer \(2022\)](#) studied the International Whaling Commission, and showed how once the commission switched its goal from sustainable whaling to whale conservation, Japan perceived the new order as lacking any decision-making agency (“decidability”) and thus left the Commission.

Bringing these insights together, we believe that while initial research on participatory architecture primarily emphasized the need to overcome differences in order to collaborate, theory and empirical evidence suggest that participatory architectures with the capacity to accommodate deeper value differences are more robust, thereby stopping short of delegitimizing more adversarial stances and potentially facilitating progress on grand challenges ([Schifeling & Hoffman, 2019](#)). We believe a deeper engagement with the literature on deliberation in political science could enrich our understanding of these processes, and advance our ability to design more effective participatory structures (for a recent review, see [Bachtiger & Parkinson, 2019](#)).

Multivocal Inscription

Our original paper defined multivocal inscription as “discursive and material activity that sustains different interpretations among various audiences with different evaluative criteria, in a manner that promotes coordination without requiring explicit consensus” ([Ferraro et al., 2015](#), p. 373). This definition fuses the notion of multivocality, which is a core aspect of robust action ([Padgett & Ansell, 1993](#)), together with actor-network theory’s concept of inscription devices ([Akrich, 1992](#)). By combining these two ideas, we hoped to foreground the extent to which both material and discursive artifacts can have multivocal properties, and thus function as a bridging mechanism that attracts and holds together actors with different worldviews ([Etzion & Ferraro, 2010](#)). In practice, effective multivocal inscriptions enable actors to see themselves as participants in multi-actor initiatives on issues of concern. They also can serve as metaphorical speed bumps for actors that may otherwise seek to exit participatory architectures that they find constraining or alienating. Multivocal inscriptions provide interpretive flexibility ([Pinch & Bijker, 1987](#)) that enables actors to justify to themselves and others why they remain committed, while also providing hooks for eliciting engagement from others.

In many studies, multivocal inscription continues to be understood as synonymous with the strategic use of ambiguity. [McMahan and Evans \(2018\)](#), p. 860 reinforced [Manning and Reinecke’s \(2016\)](#) insights by arguing that, at least in the case of scientific research, “ambiguity, and the uncertainty that follows, stimulate social learning and so ... play a crucial role in ... creating zones of social and intellectual engagement.” More generally, the benefits of ambiguity have been highlighted in the context of corporate social responsibility ([Meyer & Höllerer, 2016](#)), the circular economy ([Niskanen, Anshelm, & McLaren, 2020](#)), social impact ([Martí, 2018](#)), urban revitalization ([Jalonen, Schildt, & Vaara, 2018](#)), and sustainability ([Turnheim & Nykvist, 2019](#)). Consequently, such ambiguity should not be foreclosed; rather, efforts should be invested in its persistence ([Chliova,](#)

Mair, & Vernis, 2020). However, too much ambiguity can be a recipe for failure, especially when participants are unable to share cognitive representations about both concepts and processes (Zuzul, 2019).

Since 2015, research has highlighted how difficult it is to truly master multivocal inscription. In the domain of nanotechnology, for example, Grodal and O'Mahony (2017, p. 1820) showed how a variety of actors employed rhetoric that “grafted the grand challenge onto their existing interests, gradually broadening the grand challenge away from [the] initial ambitions” of the domain's founders (see also Feront & Bertels, 2021 in the context of responsible investing). Multivocal inscription was instrumental in setting sustainability standards in the global coffee industry (Manning & Reinecke, 2016) by allowing actors to deliberate and negotiate around “economic benefits for farmers,” a cornerstone of the Fairtrade movement. This interpretation was eventually embraced in the standards, in that 25% of the premium for Fairtrade certified coffee was earmarked for investments aimed at boosting farmers' productivity and quality – for their own long-term economic benefit, as it were. At the same time, it chipped away at the empowerment of farmers that Fairtrade was initially established to foster. Multivocality, it is clear, does not necessarily ensure optimal outcomes for all involved, and may perpetuate power imbalances.

Of course, few grand challenges are politically neutral, and powerful incumbents might have a strong interest in maintaining the status quo (Benschop, 2021). It is therefore important to explore how multivocal inscription legitimizes the status quo or slows down action to address the challenge. In the case of fossil fuel companies, for instance, scholars have analyzed the utility of clever wordplay (e.g., see Lefsrud, Graves, & Phillips, 2017 on “ethical oil”), façades (Cho, Laine, Roberts, & Rodrigue, 2015), and communication strategies that deflect attention toward individual responsibilities (Supran & Oreskes, 2021). More generally, multivocal inscription cuts both ways; it can promote both activism and inactivism (Mann, 2021).

Thus, it is important to emphasize that multivocal inscription is not a catch-all for any kind of utterance in a post-truth world. Baseless assertions (e.g., “vaccines cause autism”) aimed at tribalism are not multivocal. Landing a zinger on a social media platform or otherwise “pwning” an ideological adversary are unlikely to lead to enrollment or engagement. Propaganda, it goes without saying, is not multivocal. (Neither is hype.) Such efforts, indubitably, can be effective at rallying support, applying pressure, and clarifying positions; however, as they are directive and non-ambiguous, these efforts do not conscript new actors. From a network perspective, rather than facilitating dialogue or forging alliances across multiple nodes, such inscriptions tend to close ranks and create cliques, reducing robustness (Padgett & Ansell, 1993).

In addition, multivocality is not “anything goes” or a call for relativism. It reflects an onto-epistemological understanding that the sciences (plural) construct many facts (plural) and these facts may neither converge nor be commensurable (Etzion & Gehman, 2019; Mol, 2002; Sarewitz, 2004). Often, of course, the underlying value systems driving a multivocal inscription are not proclaimed or used as justification, yet a factual case is employed. In this way, multivocal

inscription does not collapse under scrutiny. It withstands repeated probing by multiple audiences that embrace different value systems and deploy different sets of social facts. As such, multivocal inscription is both a precursor and an outcome of sustained engagement.

At the same time, further research is needed to clarify why some multivocal inscriptions are more likely to prompt engagement, whether by enabling or thwarting progress. Is it possible to predict in advance the likelihood that certain inscriptions will achieve multivocality? One possibility is that the presence or absence of intentionality is a missing factor. Padgett and Ansell (1993) concluded that the Cosimo de' Medici was an effective practitioner of robust action, not just because others could not decipher his intentions, but because he himself was not quick to determine his own intentions. Is there a paradox that the more goal-oriented (or managerialist) people are, the easier it is for others to "see through" them and their objectives, and the less likely it is that multivocality will be successfully employed?

Distributed Experimentation

Despite the complexity, uncertainty, and evaluativity endemic to grand challenges, a robust action approach does not shy away from the need to take action. In such circumstances, abduction provides actors with the capacity to infer plausible explanations by forging connections between specific observations and general principles (Bartel & Garud, 2003; Golden-Biddle, 2020; Mantere & Ketokivi, 2013). In keeping with these insights, the third robust action strategy that we proposed emphasized a practice dimension in the form of distributed experimentation, defined as "iterative action that generates small wins, promotes evolutionary learning and increases engagement, while allowing unsuccessful efforts to be abandoned" (Ferraro et al., 2015, p. 376). Distributed experimentation contributes to robustness by enabling actors to potentially solve specific, urgent problems while improving (or at least not impairing) their capacity for subsequent problem-solving.

In our original article, we pointed out several instructive examples. For instance, despite long standing criticisms of US climate policy at the federal level, a plethora of local climate change efforts, including city, state, and multi-state initiatives, have been claimed to be as potent as more top-down approaches when considered collectively (Lutsey & Sperling, 2008). Distributed experimentation also can generate novel institutional arrangements, such as the Forestry Stewardship Council and the Fair Labor Association (Bartley, 2007). One reason why distributed experimentation can be so potent is the positive feedback loop that is created as one small win generates momentum, often making the next small win evident, and shifting resources in the direction of winners (Plowman et al., 2007; Reay, Golden-Biddle, & Germann, 2006; Weick, 1984). Even when particular experiments do not work out, these can be generative, for instance, prompting additional stakeholder involvement, setting in motion a search for alternative solutions, or promoting a redefinition of the problem itself (Callon, 2009; Sabel & Zeitlin, 2012).

Building on these ideas, several scholars have made important contributions to our understanding of how distributed experimentation can contribute to tackling grand challenges. One interesting study in this regard is [Porter, Tuertscher, and Huysman's \(2020\)](#) examination of Save Our Oceans, an initiative within the maritime industry aimed at improving the health of oceans and fostering more sustainable shipping practices. Central to this initiative was a crowdsourcing platform. [Porter et al. \(2020\)](#) identified several ways in which crowdsourcing proved effective in tackling ill-structured problems via distributed experimentation. First, the focus on crowdsourcing encouraged participants to create and maintain a large variety of different options. Second, crowdsourcing facilitated co-creation between those contributing ideas and those who would end up implementing candidate solutions, resulting in “a highly adaptive process that supported different groups of participants in acting while learning” (p. 271). Third, crowdsourcing allowed collaboration to occur, even as actors came and went or changed their roles or levels of engagement.

Making the ideation activity persistent and visible for the actors in the later phases informed subsequent experimentation efforts by enabling participants to follow interactions they were not directly involved in. (p. 272)

Fourth, the platform enabled ongoing experimentation, even at the level of problem definition. According to Porter et al., this served as a temporal coordination mechanism “by encouraging experimentation that is inclusive of the actors who will potentially be important for experimentation in the future” (p. 274). Beyond these insights on the role of crowdsourcing in fostering distributed experimentation, Porter et al. also highlighted how crowdsourcing platforms provide a means of “keeping novel ideas alive, so that actors in subsequent phases can take them up in their experimentation efforts” (p. 275). They dubbed this “reaching back” as a way of going forward (see also [Garud & Gehman, 2012](#)). For instance, the crowdsourcing platform served as “a valuable collective memory by enabling new participants to review and reflect on past experimentation” (p. 275).

Local experimentation was an important feature of the setting for [Mair, Wolf, and Seelos's \(2016\)](#) study. “Centering on small-scale societies opens up possibilities for organizations to engage deeply with local realities and to experiment with multiple villages” (p. 2022). In essence, Mair et al. leveraged the fact that the organization they studied – Gram Vikas – had been experimenting with different approaches to transforming inequality for years. Specifically, the program they analyzed was “the result of many years of experimenting, failing, and learning” (p. 2036), much of which took place independent of their fieldwork. But it was this ongoing program of distributed experimentation which provided the backdrop for the key insight to emerge from their study, namely the process of scaffolding, which the authors reported “was remarkably robust across villages” (p. 2037).

Similarly, [Busch and Barkema \(2021\)](#) studied an organization engaged in providing training and development programs for drug addicts and other vulnerable populations in Africa. Like Gram Vikas, the organization's headquarters

provided heuristics and simple rules, but encouraged local experimentation to promote cross-unit innovation and learning (Busch & Barkema, 2021). However, as highlighted in our original article, and consistent with extant understandings of innovation journeys more generally (e.g., Van de Ven, Polley, Garud, & Venkataraman, 1999), not all experiments are successful. In this regard, distributed experimentation is not only an approach for finding “what works” but also “what does not work” in contexts characterized by uncertainty and turbulent, non-linear dynamics (Furnari, 2014; Reay et al., 2006). Moreover, embracing experimentation requires actors to appreciate that failures are in fact a good measure of effort and ambition (Etzion, 2018).

Although copious evidence demonstrates the benefits of distributed experimentation, some questions remain. How many experiments is too many? How is learning from both success and failure shared? Is there a point at which making use of such a strategy can veer into splintering and fragmentation? Can or should distributed experimentation be structured, and if so, how?

RETHINKING OUR PRAGMATIST ROOTS

We developed our model of robust action starting from a pragmatist theory of action. Since then, scholars have added to our understanding of the mechanisms we proposed, in part by leveraging them in various empirical projects. In reflecting on this collective work, we realize that our embrace of the pragmatist principle was rather selective, and a more radical approach could be fruitful in at least two ways. First, pragmatism views problem-solving – inasmuch as it is attainable – as provisional closure achieved through the decision-making of actually existing human communities engaged in ongoing inquiry (Prasad, 2021). Consonant with this understanding, in our framework we claimed that repeated use of the three robust action strategies would generate novelty and sustain engagement, but did not delve deeply into specific mechanisms and processes. Second, pragmatism views ideas as instruments for action (Farjoun, Ansell, & Boin, 2015; Peirce, 1878). Although our three robust action strategies assume a recursive interplay between ideas and action, we did not explore the interplay between them and different types of ideas (e.g., beliefs, expectations, and imaginaries about the future). Finally, we see opportunities to more fully embrace pragmatism’s processual and relational ontology (Emirbayer, 1997), and to overcome a tendency to think in terms of actors rather than relationships. Embracing a truly flat ontology would encourage researchers to directly study the role of non-human actors, which seems increasingly crucial to our understanding of phenomena such as climate change (e.g., Haraway, 2016; Latour, 2017).

Scaffolding to Generate Novelty and Sustain Engagement

Our framework posits that participatory architecture, multivocal inscription, and local experimentation generate novelty and sustained engagement. In essence, we theorized how bringing together diverse actors, allowing for plural understandings,

and fostering collective experimentation and learning could catalyze progress in tackling grand challenges. However, our original framework underspecifies how these mechanisms operate dynamically, and the pragmatist understanding of collective learning at the core of our model is not explicitly articulated (Ansell, 2011; Dewey, 1938).

Germane to the question of sustained engagement and novelty generation, several recent studies have investigated the notion of scaffolding, a term first used in the context of learning theory to describe a process of providing students with temporary problem-solving frameworks as a way of enabling them to develop more sophisticated ones (Wood, Bruner, & Ross, 1976). More generally, higher-order skills can be scaffolded by lower-order ones. In the context of institutionalization, Ansell (2011) suggested that lower-order institutions become scaffolds for higher-order institutional change, and further differentiated upward scaffolding, or the conception of “broader and more ambitious institutional goals,” from downward scaffolding, which entails “the development of specific concepts and practices” (p. 37). For instance, Mair et al. (2016) concluded that scaffolding helped transform inequality patterns in small-scale societies by mobilizing resources, stabilizing new interactions, and concealing goals. Studying the emergence of social and impact investing in the UK from 1999 to 2019, Casanovas and Ferraro (2021) showed how these markets developed as the result of a recursive process of cultural and material scaffolding, through which diverse actors envisioned possible futures, and developed material practices that allowed them to be built. However, once actors started to experiment with concrete practices, the natural centripetal tendencies of the process led to a split in the emerging market.

Overall, scaffolding points to a collective but distributed learning process. Those involved are likely to attain different learning outcomes: some might learn to rig up scaffolds for future projects; others might connect dots in new and innovative ways. Actors do not need to know the same thing (i.e., canonical knowledge), but they do need to know and create their own knowledge for the success of their own projects and how it connects to the larger enterprise. As emphasized by Dittrich (2022), scaffolding and other non-linear pathways to impact are in fact numerous and widely available, if actors relieve themselves of accepted paradigms about scaling up. Arciniegas-Pradilla et al. (2022) similarly highlighted a learning process: as actors encounter new manifestations of a problem, new causes are discovered or new experiences can confront them with new realities, setting in motion repeated cycles of learning. In our view, the key question for future research is to explore whether and under what conditions scaffolding and other pathways to sustained engagement lead to meaningful impact relative to the challenges being pursued.

Building Desirable (and Robust) Futures: The Role of Fictional Expectations

One important area of research on robust action is to better understand how the way we think about the future shapes action in the present. This is particularly important in the context of grand challenges, as it requires actors to think not

only beyond the time horizons they are comfortable with, but also to imagine how the future might differ from the present.

Several theoretical perspectives are contributing ideas to this important debate. In economic sociology, for instance, Jens Beckert has led an important departure from the dominant tendency to envision present outcomes as resulting from past events, instead proposing a theory of fictional expectations to explain how the future looms as large as the past in shaping our actions (Beckert, 2016, 2021; Beckert & Bronk, 2018). This theory, building on the pragmatist idea of ends-in-view (Dewey, 1922, p. 225), posits that actors have a unique capacity to imagine their (economic) futures, and these imaginaries support the creation of expectations that in turn shape decision-making. Beckert (2016) suggested that economic action revolves around fictional expectations – that is, “the images actors form as they consider future states of the world, the way they visualize causal relations, and the ways they perceive their actions influencing outcomes” (p. 9). As expectations reflect a shared understanding about future economic actions, they help actors coordinate their efforts and, in so doing, affect the future (p. 11). Fictional expectations must be credible to shape decision-making, because credibility is central to the operation of the capitalist economy and represents the capacity to inspire beliefs in a specific future (p. 273). Financial investment, for instance, is oriented toward future economic profit, and investors commit with no guarantee by building upon imaginaries of the future (p. 132). Despite uncertainties, no investment would occur without expecting economic benefits based on credible expectations. Positing investments as based on “imaginaries of the future” might sound counterintuitive because investors strive to decrease risk by using financial calculative devices (Callon & Muniesa, 2005). These devices support the creation of beliefs about future outcomes and legitimize decisions; they are an instrument of the imagination that aids decision-making (Beckert & Bronk, 2018). Yet, on their own, calculative devices cannot fully support decision-making, especially when essential information is missing. Investment decisions, therefore, involve narratives that help actors envision how a future economic story might end (Beckert, 2016, p. 167).

In the case of grand challenges, one promising avenue for research is to better understand how the imagination of distant futures might affect the structure of participatory architectures, the role of multivocal inscriptions, and the shape of distributed experimentation. For instance, one recent study that tackled this question explored the construction of the distant future in geoengineering, and suggested that these futures become an “as-if” reality through a dialectical process of oppositions of conflicting imaginaries that reduce the issue to “its moral and cosmological assumptions” and thus invite opposition and articulation of new imaginaries, and eventually a synthesis (Augustine, Soderstrom, Milner, & Weber, 2019, p. 1952). This process generates an increasingly differentiated ecology of imaginaries and a more fine-grained discourse that makes those futures more credible. Others have highlighted notions such as “even-if” (Sarasvathy, 2021) and possibilistic thinking (Grimes & Vogus, 2021) as particular approaches to the future.

Actorhood: The Assemblage is the Actor

Building on the philosophical assumptions of pragmatism, our original paper explicitly took a distributed view of actorhood, and more generally shifted the gaze from individual heroic actors to the network of actors and their relationships. This also implied that corporations, especially large ones, were not our focal actors.

Relative to a traditional systems view of complexity, such an understanding of actorhood offers several important correctives. For instance, selection environments need not be taken for granted (Garud & Gehman, 2012). Instead, it is worth examining how and to what extent humans shape our selection environments (Garud, Gehman, & Giuliani, 2016). Even the particular form humans take (e.g., homo economicus) can be understood as a sort of genetically modified organism (Latour, 2017). Understood in terms of Gaia, terrestrial life shares an existential demand to carve out a territory for itself, a feat that must be accomplished under the noses of other terrestrials seeking to do the very same thing. This sets in motion a massive web or network of relationality (Ergene, Banerjee, & Hoffman, 2022; Harman, 2018; Latour, 2005). At the same time, humans are temporal beings, and our intertemporality is thought to be core to our beingness (Heidegger, 1962). We have the ability to wait, to delay gratification, to sacrifice in the present for the sake of some future good; we also have the capacity to imagine different futures along with pathways that might allow their realization, whether utopian or dystopian (Garud & Gehman, 2012; Gümüşay & Reinecke, 2022).

For grand challenges researchers, apprehending actorhood in decentered ways remains a key theoretical frontier (Gehman, Sharma, & Beveridge, 2021). Field studies that explore particular issues and contexts appear to enable greater acuity than case studies focused on specific organizational actors, and managers in particular. Our review has identified several such contexts, many of which focus on multisectoral initiatives (Berkowitz & Grothe-Hammer, 2022; Manning & Reinecke, 2016; Porter et al., 2020). This decentralization of the subjects and objects of research can be extended even further, for instance as in the case of nanotechnology (Grodal & O'Mahony, 2017), a more porous and diffuse context.

Building on Zuzul (2019), another appealing contextual nexus might be cities, which offer many affordances for researchers studying grand challenges. Many cities with pressing problems are tackling grand challenges rather urgently. From coastal and river-adjacent cities needing to adapt to climate induced rise in water levels, to cities tackling perennial grand challenges (such as homelessness, education, and policing), cities are at the forefront. By their very nature, cities are polycentric. City councils (typically) are helmed by elected officials, but are subordinate to higher-level officials on many issues and tend to be constrained and enabled by sprawling organizational bureaucracy. Civic engagement often involves numerous organizations. Key actors in many cities include universities, hospitals, corporate headquarters, cultural centers, and other autonomous organizations. This tapestry lends itself particularly well to research on participatory architecture and distributed experimentation.

Because city evolution appears to take on a life of its own, cities as sites of analysis also can provide useful contexts for studying multivocal inscriptions. Consider the notion of “smart cities” (Saxe, 2019), a powerful inscription that can recruit a diverse architecture of technological innovators, social crusaders, urban futurists and others pursuing diverse, yet not unrelated imaginaries. Importantly, a smart city, served by smart cars, at times tethered via a smart grid to smart homes, and at other times moving through a smart transportation network, clearly dismantles any preconceptions we might have as to actorhood being exclusively human.

CONCLUSION

In less than a decade, grand challenges research has moved from a mere possibility to a major focus. At one extreme, grand challenges are little more than a Rorschach blot, a context for applying extant theories. This approach risks taming grand challenges into rational problems, amenable to conventional managerialist toolkits and prescriptions. Our formulation differs significantly. Instead, we conceptualize grand challenges as matters of concern that entail complexity, evoke uncertainty, and provoke evaluativity. To tackle such concerns, we have articulated three robust action strategies – participatory architecture, multivocal inscription, and distributed experimentation – positing their joint capacity to foster novelty generation and sustained engagement.

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SURFING THE GRAND CHALLENGES WAVE IN MANAGEMENT SCHOLARSHIP: HOW DID WE GET HERE, WHERE ARE WE NOW, AND WHAT'S NEXT?

Jennifer Howard-Grenville and Jonas Spengler

ABSTRACT

Research on grand challenges in the management literature is vibrant and growing. Given that the term “grand challenges” was first invoked in our field 10 years ago, it is timely to reflect on how we came to this point – and where we might go from here. In this article, we first explore the origins of the concept of grand challenges in order to trace core assumptions and developments and understand how they shape the current conversation about grand challenges in management scholarship. We next convey findings from our review of 161 papers that cite the editorial for a grand challenges special issue (George, Howard-Grenville, Joshi, & Tihanyi, 2016), uncovering four ways in which papers are shaping the conversation on grand challenges. Finally, based on our perspective on how we got here and where we are now, we make several suggestions for what should come next in driving forward research on grand challenges. We urge scholars to go beyond the study of collaboration for tackling grand challenges and shift toward a more critical, yet generative, exploration of their construction, persistence, and unintended consequences. We also call for increased attention to theorizing grand challenges to guide practitioners’ understanding of the nature of the thing they are trying to address.

Organizing for Societal Grand Challenges

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In these ways, we hope to inspire management scholars to leverage expertise on processes – not content per se – that shape how grand challenges manifest and how they may be tackled.

Keywords: Grand challenges; sustainability; social impact; wicked problems; research relevance; corporate social responsibility

Management scholars are riding a wave of interest in grand challenges, having caught it about 10 years ago (Howard-Grenville, 2021a) – and this wave still appears far from cresting, given the volume of work currently being pursued and published. While orienting research toward complex problems has always been important, it is increasingly providing a way for scholars to craft their identities, journals to signal their participation in the production of useful scholarship, and funding bodies to reward impactful work (Kaldewey, 2018; Omenn, 2006). This is all before considering whether and how the products of research on grand challenges influence the audiences they aim to serve – the public and private organizations on the front lines of tackling our most vexing and entrenched societal challenges. Given the massive scholarly enterprise that has arisen around grand challenges, it is essential to consider how this wave emerged, what it has yielded, and what it might produce.

Will the wave of interest in grand challenges build momentum and direction, leaving some indelible marks? Or will it diminish and recede, leaving us gripping our surfboards on the beach and hopefully scanning the horizon for what comes next?

In the rest of the essay, we first trace a brief history of the grand challenges concept and its association with tackling big, meaningful problems. We then revisit an editorial co-authored by one of us, introducing a special issue of *Academy of Management Journal (AMJ)* focused on societal grand challenges (George et al., 2016, p. 1880), and reflect on its main messages and how it framed the potential for management scholarship on grand challenges. As this editorial was one of the pieces establishing grand challenges in the management field, we use a forward citation analysis to capture how scholars have used the article and the terminology of grand challenges. We find that management scholars have expanded the conversation on grand challenges in four ways: justifying context, motivating theory, elaborating on the grand challenge concept itself, and engaging in academic introspection. We conclude with some suggestions for how future research might build on these conversations to maximize the impact of the grand challenges wave.

HOW DID WE GET HERE?

Understanding the origins of the concept of “grand challenges” is vital because it reveals the core assumptions that have been carried along with the enterprise of orienting to and working on grand challenges, and traces how these assumptions

were transformed as the concept rippled across scholarly fields and other domains. Hence, we begin with a brief historical foray to contextualize the emergence of attention to grand challenges in management scholarship.

Grand challenges are traced to the definition, in 1900, by mathematician David Hilbert of 23 problems whose solutions would enable progress in mathematics. While widely credited with the label, Hilbert purportedly never used the term “challenges,” instead favoring “problems” (Kaldewey, 2018). Nevertheless, as origin stories do (Gould, 1989) this one established a time, place, and logic that anchored our subsequent understanding of the label.

Grand challenges came to be associated with problems of significant import that were nevertheless discrete and tractable. At least initially, they were also defined and tackled by a bounded community of experts – those trained in common techniques and working within a scholarly discipline. Spilling over from mathematics, the articulation of grand challenges became increasingly popular in scientific fields in the early 2000s (Kaldewey, 2018; Omenn, 2006). In such fields, knowledge might be regarded as cumulative and progress measurable by somewhat agreed-upon metrics. These features made grand challenges a way to inspire researchers and focus them on problems that were both interesting to advancing the field, and potentially useful to society. Utility to society could be couched in more pragmatic language; given that such fields rely on public funding, leading figures including the president of the American Association for the Advancement of Science recognized that

the concept and promotion of Grand Challenges can help energize ... students, journalists, the public, and their elected representatives ... [and] can show the added value of further major investments in research. (Omenn, 2006, p. 1696)

Articulating grand challenges did not stop with the “hard” disciplines; moving beyond science, computer science, and medicine, a dizzying range of social science and policy fields also designated specific grand challenges. Many had time frames and monetary prizes attached (Kaldewey, 2018; Omenn, 2006). The concept and language of grand challenges became further entrenched in broader discourse following Bill Gates’ announcement in 2003 of the Grand Challenges in Global Health Initiative, which set out 14 specific scientific goals and committed research funding to these.

As more and more grand challenges were articulated, groups began to move away from seeing them as difficult but nonetheless tractable problems toward seeing the actual existence of grand challenges as bound up in complex contexts and causality, which mattered greatly to making progress on them. Early critiques of the Gates initiative noted that a focus on scientifically tractable problems – for example, developing vaccines that did not require refrigeration so they could be delivered reliably in low income countries – risked narrowly framing “health as a product of technical interventions divorced from economic, social and political contexts” (Birn, 2005, p. 515). As other academic disciplines entered the conversation, they expanded the initial logic of tractability. For example, archaeologists settled on 25 grand challenges, which met their

criteria of being – like their mathematical and scientific forebears – “susceptible to a solution supported by data,” yet – in a departure from earlier grand challenges – driven by “cultural processes ... [that] involve complex, nonlinear relationships in which cause and effect are not readily distinguished” (Kintigh et al., 2014, p. 879).

In other words, grand challenges perhaps became grander, or at least more complex and multidimensional, as the communities involved in articulating them expanded and perhaps evolved. It is notable that the London Institute for Mathematical Sciences recently published a new list of 23 mathematical challenges for the twenty-first century, including not only one of Hilbert’s originals (the Riemann hypothesis, relating to the distribution of prime numbers) but many that are far less clearly connected to mathematics, like a theory of free will or explanation for the emergence of virtue (Whipple, 2021). Given that only 17 of Hilbert’s original problems have been even partially solved, this new list feels even more appropriate to contemporary understandings of the vexing nature of grand challenges, with many “problems [that] feel impossible to formulate, let alone solve” (Whipple, 2021).

This history helps contextualize how we have used – and perhaps misused – the label of grand challenges in management studies. The first reference to grand challenges in our field was in 2011 (Colquitt & George, 2011). The label has gained considerable momentum more recently (Brammer, Branicki, Linnenluecke, & Smith, 2019; Ferraro, Etzion, & Gehman, 2015; George et al., 2016). In our literature, grand challenges are often closely associated with – but not fully equivalent to – “wicked problems” (Reinecke & Ansari, 2016; Rittel & Webber, 1973), that is, problems that are persistent and defy solution in part because different actors perceive of and evaluate them differently. Elsewhere in this volume Ferraro, Etzion, and Gehman reflect and elaborate on their characterization of grand challenges as “seemingly intractable” (Ferraro et al., 2015, p. 367) problems that are complex, uncertain, and evaluative.

In the 2016 editorial, which introduced a special issue of *AMJ* focused on grand societal challenges, such challenges were described as “formulations of global problems that can be plausibly addressed through coordinated and collaborative effort” (George et al., 2016, p. 1880). This reflected the vestiges of tractability (“plausibly addressed”) that have been associated with grand challenges since Hilbert’s day. In the editorial, we adopted a modified version of a definition used by Grand Challenges Canada,¹ which reflected the idea – also attributable to Hilbert – that tackling discrete problems would enable significant further progress: a grand challenge was defined as “specific critical barrier(s) that, if removed, would help solve an important societal problem with a high likelihood of global impact through widespread implementation” (George et al., 2016, p. 1881; Grand Challenges Canada, 2011). However, reflecting the emphasis on grand challenges as culturally, politically, and economically embedded, and hence very difficult to “solve,” we also emphasized their scale and scope, the need for action by diverse stakeholders from different levels of organizations and society to engage, and the importance of “collective, collaborative, and coordinated effort” to tackle grand challenges (George et al., 2016, p. 1881).

Different from other scholarly disciplines, we did not define a list of grand challenges to focus the attention of management scholars, nor should we have, as we are not content experts on societal grand challenges, but rather process experts on the organizational mechanisms that produce them and might be rewired to tackle them (Howard-Grenville, 2021a). We recognized in the *AMJ* editorial that as management scholars our “value added” lies in exploring and explaining the processes of individual, organizational, and societal interactions that contribute to the formulation of what constitute grand challenges, the efforts taken to tackle them, and the outcomes of these efforts (George et al., 2016). We offered a framework for guiding future research by management scholars on grand challenges, leaving the definition of specific grand challenges to others; for example, the UN sustainable development goals (SDG).

This framework, reproduced below (see Fig. 1), captures on the left-hand side (blue box) that grand challenges need to be articulated and people motivated to reach some form of consensus on what a particular goal might be. Next, it suggests that articulating grand challenges enables multilevel actions required to tackle them (middle), and, finally, produces outcomes and impact (right-hand side). This left to right progression appears natural and linear but, in reality, is likely anything but. The framework also depicts some of the factors (in bubbles above and below) that influence the opportunities for, and barriers to, grand challenge articulation, action, and outcomes.

As an orienting conceptual model, the framework proved helpful for mapping the papers appearing in the special issue to particular stages and connecting them to various factors. But, as it was never intended as an explanatory process model, we did not “theorize the arrows” on the framework. This would have involved describing the actual mechanisms by which, say, articulating grand challenges drives multilevel actions, or, how coordinating architectures influence the progression from actions to outcomes. To produce such a model that was complete in terms of mechanisms would be near impossible, and furthermore, extraordinarily reductionist and naive.

At the same time, we should recognize that we have not populated much more of the framework in the ensuing years, raising questions about whether our work on grand challenges will, like much of our scholarship, remain scattered among

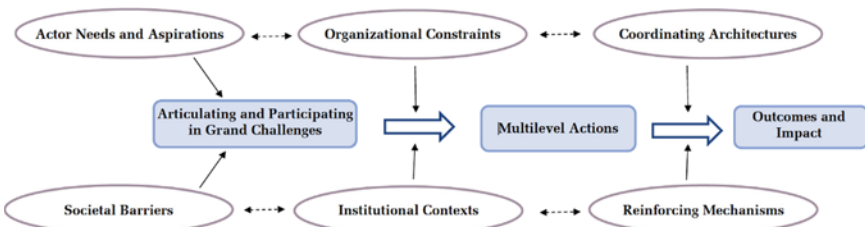


Fig. 1. Framework for Addressing Grand Challenges. Reproduced with permission from George et al. (2016, p. 1888).

similar but parallel lines of inquiry, anchored in different theoretical conversations, and rarely cross fertilize between these. Unlike mathematicians who, in this century, aspire to both a “theory of everything” to explain the universe (challenge #1) and a “theory of simplicity” to enable reconfiguration to new environments (challenge #19) (Whipple, 2021), perhaps management scholars are still casting about to find our sweet spot between too grand and too granular explanations for the processes of defining and taking action on grand challenges? Next, we take a close look at what is being said about grand challenges in management research, specifically that which cites the George et al. (2016) editorial, before returning to consider where we might go next.

WHERE ARE WE NOW?

When we wrote the George et al. (2016) editorial, we were hoping to spark research on grand challenges but perhaps did not expect the intensity of the response it, alongside related work (Colquitt & George, 2011; Ferraro et al., 2015), would generate. Five years later, it is important to take stock of where we are with the conversation around grand challenges in the management literature to trace and potentially redirect the conversation.

Method of Review of the Literature

To do so, we conducted a systematic review of all articles that cited George et al. (2016) over the past five years. We identified citing articles through the “cited reference search” function of Web of Science and overlaid these results with Scopus, EBSCO, and Google Scholar databases to find additional work not included in Web of Science. We chose the forward citation approach over a keyword search as we were primarily interested in tracing how the George et al. (2016) essay has been used, and in recognition of the fact that articles using the grand challenges concept may nonetheless not include it in their keywords. This yielded a database of 270 publications. In a second step, we excluded all calls for papers, book chapters, and book reviews – and we visually inspected the remaining list, further excluding articles from journals that we did not consider to be centrally representing scholarly conversations of management scholars. For example, the editorial has been cited in journals as diverse as *British Food Journal*, which we excluded since the primary audience for such a journal lies outside the management field. In sum, our process yielded a final list of 161 articles.

For each entry in the database, we extracted those paragraphs that either refer to the George et al. (2016) essay or mention the term grand challenges (or equivalent terms such as “GC” or “societal challenge”). These extracts were then imported into Nvivo and coded for how they use the concept of grand challenges, that is, what function it has in the paragraph’s argument. For those papers that most substantively engaged with the concept, mentioning it more than a few times, we explored the arguments of the entire paper in detail.

Results of Review of the Literature

Some good news upfront: scholars are not just talking about grand challenges – they are putting in work. Since 2016, there has been a steady rise in publications on the topic and these articles increasingly appear in the most highly regarded journals in our field, with the *AMJ*, *Journal of Management*, and *Journal of Management Studies* among the most popular outlets in the sample. Nevertheless, such trends give us little insight into how the concept of grand challenges is being engaged with and elaborated, and whether anchoring ones' research in this domain is more than just opportunistically catching a wave. Hence, we focused on exploring *how* management scholars have been *using* the concept of grand challenges.

Our analysis identified four ways management scholars are using grand challenges, as refracted through the [George et al. \(2016\)](#) editorial. These are: justifying contexts, motivating theory, understanding grand challenges, and academic introspection. These uses are not mutually exclusive, as some articles use the grand challenges concept to, for example, justify both the context and the theory. Nonetheless, we elaborate each separately as they represent distinct ways authors engage with grand challenges in the management literature.

(a) Justifying Contexts

One frequent use for the concept is justifying the choice of research context (occurred in 51 articles). Starting from the description of grand challenges as “critical barriers that, if removed, would help solve an important societal problem” ([George et al., 2016](#), p. 1881), authors argue that the context they are studying would indeed be considered a grand challenge and therefore warrants research. The logic offered is: if scholars ought to tackle grand challenges, and X is a grand challenge, then scholars ought to tackle X. Along these lines, grand challenges have prompted research on, among others, environmental issues (16 articles), global health and pandemics (7 articles), inequality (8 articles), migration (5 articles), and poverty (5 articles). More “eclectic” contexts are also framed as grand challenges, such as the aging workforce, big data, corporate control, stigmatization of professions, corruption, and innovation (1 article each).

Whether the grand challenges concept spurred the investigation of these new research contexts or is just being used to justify them post hoc is not a question we can answer in this essay. However, the label seems to, in any case, be a useful rhetorical device for positioning research on significant societal problems and hence moving it into the academic mainstream.

(b) Motivating Theory

The second line of reasoning, and in fact the most frequent one in our sample (occurred in 86 articles), involves using grand challenges to motivate the choice of theory (or concept). This argumentation takes on the same starting point as “justifying context” that we as management scholars should contribute to solving

grand challenges. However, it engages somewhat more substantively with the concept by emphasizing that such challenges are “complex” or “wicked” problems (Reinecke & Ansari, 2016; Rittel & Webber, 1973), that is, complex, uncertain, and evaluative (Ferraro et al., 2015). Therefore, solving grand challenges is said to require “coordinated and collaborative effort” (George et al., 2016, p. 1880) – which management scholarship can shed light on. This logic has prompted two types of contributions. One, which we label the “toolification approach,” aims to provide the conceptual “tools” for coordinated and sustained activity by studying, for example, collaboration (23 articles), (cross-sectoral) partnerships (15 articles), “new” organizational forms (12 articles), collective and responsible innovation processes (10 articles), or sustainable entrepreneurship (4 articles).

An example of this contribution is Hilbolling, Deken, Berends, and Tuertscher’s (2021) study of temporal coordination in multiparty collaboration. Following the argumentative logic outlined above, the authors claim that, because “complex societal challenges, such as public safety, are considered ‘wicked problems’” they require “diverse resources to realize innovative solutions” which are provided through “multiparty collaborations” (p. 2). For such collaborations to be fruitful, the paper argues that different actors need to align their temporal rhythms, paces, and time horizons. To help organizations do so, Hilbolling et al. (2021) propose three mechanisms: serendipitous alignment, temporary exclusion, and aligning on the future.

The second albeit smaller stream, which we label “roadblock removal,” investigates the dynamics that might undermine coordinated and sustained efforts to tackle grand challenges. Studies in this view consider, for example, conflicting institutional logics (3 articles), hegemonization (1 article), mission drift (1 article), and moral disengagement (1 article). For example, Yin and Jamali (2021) examine how different partnerships between multinational corporations and non-profits in China cope with conflicting institutional logics. They show how an either/or mindset, that is, recognizing trade-offs while denying synergies among partners, leads to the substitution of conflicting institutional logics, which impedes partnership success.

In sum, we can see that many management scholars have gone beyond “grand challenge naming” and begun to heed the call for “tackling” them (George et al., 2016, p. 1880) – both by showing how sustained coordination can be successful and why it may fail.

(c) Understanding Grand Challenges

While justifying contexts and motivating theory make up the bulk of the citations of the George et al. (2016) essay in the 161 articles analyzed, a small subset (11 articles) further theorized the concept of grand challenges as such. These articles engage with the concept on a detailed level and bring greater precision to the definition or use of the concept.

For example, Brammer et al. (2019, p. 518) warn that scholars are using the grand challenges label to refer to “qualitatively distinct types of phenomena” and argue that we would do well to acknowledge these different types explicitly. They develop a two-by-two matrix with geographical scale on one axis and

stakeholder/domain scope on the other to discern societal grand challenges from community grand challenges and, on the off-diagonals, complex grand challenges from global ones. This taxonomy might help authors reflect on how their empirical context aligns with the grand challenges conversation and hence justify their contexts (see section (a), above) with greater precision.

However, there can be a danger in parsing grand challenges along any dimensions, as Jarzabkowski, Bednarek, Chalkias, and Cacciatori (2019) point out in their application of a paradox lens to grand challenges research. They assert that grand challenges provide “fertile ground” (p. 121) for paradoxes, that is, persistent contradictions between interdependent elements. Furthermore, these authors argue that both the geographical scale and the stakeholder domains of grand challenges should be considered as conflated – global challenges manifest locally, while local contexts and cultural understandings shape particular stakeholder perspectives and interests. As a result, grand challenges might play out globally but “comprise a complex set of nested paradoxes that are multi-faceted and inter-organizational” (Jarzabkowski et al., 2019, p. 122).

Finally, using a different theoretical lens, Gümüşay, Claus, and Amis (2020) explore four dimensions of institutional logics – their macro-level positioning, contextuality, temporality, and value plurality – that can aid in the study of specific grand challenges. In some ways echoing some of the messages of a paradox lens on grand challenges (Jarzabkowski et al., 2019), this work calls on scholars to consider explicitly how challenges can be both global and locally situated, as well as socially constructed such that they reflect potentially enduring values yet nonetheless manifest differently over time.

(d) Academic Introspection

Finally, the grand challenges concept has also been invoked for critiquing the current state of management scholarship (31 articles), most notably problematizing its lack of impact and encouraging novel methods and forms of theorizing. Here, we can broadly identify two streams: The “impact discourse” and “methods for theory-building.”

The former stream consists mainly of editorial material that argues for better orienting the logic and incentives of management research toward practical impact. This emphasizes the “moral obligation to seek to improve social relations” (Nyberg & Wright, 2020, p. 25) and thus proposes changes to academic reward structures. For example, Chapman et al. (2020) argue for using the SDGs as a criterion for judging quality in academic research.

The latter stream takes a step back and considers how scholars might have to change their research methods and approaches to theory building to address the complex interdependencies inherent in grand challenges. Authors discuss ideas such as open theorizing (Leone, Mantere, & Faraj, 2021), configurational theorizing (Furnari et al., 2020), and thought experiments (Kornberger & Mantere, 2020).

In a recent publication, Leone et al. (2021), for example, call on scholars to use open theorizing, that is, drawing on each other’s datasets, code scripts, notes,

methodological protocols, auxiliary findings, and supplemental documentation to build new theory. They argue that, since solutions to grand challenges span across “topical dimensions and levels of analysis,” it makes sense for scholars from different disciplines to share their academic resources to unleash the “epistemic potential that resides in the diversity of research programs and the encounter of different analogies” and create “cross-topic understandings” (p. 20f).

All in all, our review of 161 papers in the core management domain that cite [George et al. \(2016\)](#) shows that there are a variety of ways in which scholars have joined the conversation on grand challenges; from (a) framing contexts as worthy of study; (b) orienting toward theories of collaboration and innovation; (c) elaborating how we conceptualize grand challenges and study them; and to (d) critiquing the management field and calling for further evolution. Next, we discuss how these themes could be built on for future scholarly enquiry.

WHAT’S NEXT?

Management scholars are indeed riding a sizable and growing wave of interest in grand challenges. We opened this essay by asking if the wave is building momentum and direction, and has left – or will leave – some indelible marks. From our analysis of articles citing the [George et al. \(2016\)](#) editorial and invoking the grand challenges concept, it is clear that management scholars are surfing several regions of the wave simultaneously and moving in varied directions. Looking at all this action from the beach, one might be attracted by quite a lot of activity but unsure where the most exciting stuff is happening. In this section, we consider what our historical foray and review of the current scholarship tells us about the prospect of this wave leaving an indelible mark. To do so, we must first clarify: For whom might this scholarship have an impact?

There are at least two answers to this question. First, a building wave of interest in management scholarship on grand challenges might leave a mark on our field. Themes (c) and (d) from our review – elaborating the grand challenges concept and academic introspection – support and enable such impact by offering and inspiring new contexts, modes of engagement, and theoretical lenses. As evidenced by the number of papers, journal special issues, and calls for greater attention to studying what matters to the world ([Howard-Grenville, 2021b](#); [Tihanyi, 2020](#); [Wickert, Post, Doh, Prescott, & Prencipe, 2021](#)), this orientation to grand challenges seems to be having an effect. There is now far more opportunity for scholars to study and publish work that engages topics of societal relevance, amplified by the fact that businesses and other organizations are more proactive than ever in navigating these issues. We encourage management scholars to take up these calls and add to the already ample creativity evidenced in how our field engages with grand challenges.

But we should not stop here. If we are the only ones watching ourselves surf, we will have had little impact on grand challenges themselves. So, we must ask the same question of a second and far more important audience: Is this wave of management scholarship leaving a mark on how people grapple with and work

on grand challenges? While, due to the difficulty of assessing impact, there is no straightforward “yes” or “no” answer, we believe that grand challenges scholarship is not yet making the most of its potential. We are doing some things that leverage our strengths as a scholarly community. For example, we have recognized that, as grand challenges, increasingly articulated at the societal level (e.g., through the SDGs), are inherently complex, underpinned by persistent interdependencies across scales and seemingly intractable differences in stakeholders’ needs and interests, there is a need for both “content” and “process” expertise. While management scholarship can contribute to understanding processes – including barriers to – making progress on grand challenges, we are not leveraging our potential. In this section, we propose two avenues for increasing our impact.

First, returning to the conceptual framework in [George et al. \(2016\)](#), we urge scholars to go beyond the “middle” of the framework and look both left and right to scrutinize how grand challenges come to be labeled as such and how outcomes and unintended consequences of actions to tackle them unfold. Second, we call for more work to bring precision to the concept of grand challenges. Through such articulation, we might better help those on the front lines of working with grand challenges generate new ways of thinking and acting.

Looking Left & Right

Our analysis revealed that scholars’ most frequent use of grand challenges is to develop management theories that might help tackle them (see theme (b)). When placing these studies on the framework set out in [Fig. 1](#), however, it becomes apparent that scholars are overwhelmingly focusing on the “middle” of the model, which delineates multilevel actions and the constraints, architectures, and institutional contexts in which they are embedded. Significantly less attention is devoted to the left- and right-hand sides of the framework. In other words, while scholars are devising tools for coordinating and collaborating, they are not yet looking at the antecedents and consequences of these tools.

While devising organizational tools for grand challenges is essential to resolving them, we should be aware that such an approach reflects the solution-focused logic of the original grand challenges construct. This logic suggests that a bounded community of experts can define grand challenges and that their resolution, which implies tractability, will lead to significant societal advancements. Here we believe that management scholars should exercise caution. For, if we take the complex, uncertain, and evaluative nature of grand challenges seriously, grand challenges are neither unanimously definable, nor will their resolution necessarily have “positive” consequences.

Looking to the left-hand side of the framework, especially with a critical eye, suggests considerable potential to research the social and discursive construction of grand challenges. Since grand challenges are complex and evaluative ([Ferraro et al., 2015](#)), what we come to see as a grand challenge is shaped by framing, rhetoric, and discursive processes (see, e.g., [Stjerne, Wenzel, & Svejenova, this volume](#)). What one actor may see as “grand,” others might consider trivial or meaningless. So how does one societal challenge become labeled “grand” and

“worthy of devoting significant resources” while another does not? How do the efforts that feed into such labeling unfold, and whose interests and needs do they represent? Whose interests and needs are ignored or misrepresented? How does the construction of grand challenges motivate or impede action?

While these questions were not explicitly excluded from the original intent of the [George et al. \(2016\)](#) framework, they have been less considered. Nevertheless, they matter a great deal to developing a better understanding of the process through which grand challenges come to be and the actions they motivate. As [Langley \(2021\)](#) and other organizational scholars (see, e.g., Schoeneborn, Vásquez, & Cornelissen, this volume) argue, labels and metaphors matter, for they guide our collective associations with, and understandings of, phenomena and their processual nature. Metaphors “promote particular understandings that may then influence how people assign blame for distressing events, or behave in the face of them” ([Langley, 2021](#), p. 254). For example, anyone concerned with climate change may be intrigued by the rush to commitments to “net zero.” Indeed, the goal of “net zero” – unattainable through technological change alone ([Allwood, 2019](#)) – conjures up the metaphor of a race more so than a doomsday scenario. Races are winnable; irreversible climate change has no victors.

Exploring the left-hand side of the [George et al. \(2016\)](#) framework is not simply about finding out who is involved in articulating needs, how barriers to meeting these are conceptualized, and who is recruited to act. It is also about scrutinizing what values and assumptions are associated with a certain formulation of a grand challenge, what other problems and processes these map on to, and the degree to which any of these adequately capture the inherent complexity of a grand challenge. Here is where some of the work to elaborate the grand challenge concept (theme (c) above) might be helpful. For example, [Brammer et al. \(2019\)](#) offer seven amplifying factors that influence the emergence of a challenge as grand, including the scale of ambition and diversity of stakeholder groups taking an interest; conversely, they posit four confounding factors that limit problems from presenting as grand challenges, including the degree to which they remain uncertain or groups engaging with them remain ideologically distant. This suggests a degree of consensus might be needed, as implied in the [George et al. \(2016\)](#) framework, to formally define a grand challenge. But, alas, whether we label them as such or not, grand challenges like poverty, inequality and more, exist. Hence, the efforts of other scholars to orient us to how grand challenges arise and *become salient*, due to, for example, changes in external conditions, or organizational interactions that reveal latent tensions, can be productive theoretical tools ([Gümüşay et al., 2020](#); [Jarzabkowski et al., 2019](#)) for exploring the left-hand side of the framework.

Finally, several of the papers we reviewed offer helpful possibilities to unpack this side of the framework. For example, [Salmivaara and Kibler \(2020\)](#) analyze how European Union policy-makers frame the meaning of entrepreneurship for sustainable development to motivate action among private sector organizations. [Wenzel, Krämer, Koch, and Reckwitz’s \(2020\)](#) essay on future and organization studies is another piece that goes in this direction. Using the example of

the Fridays for Future movement, the authors show how future-making practices, that is, ways through which actors produce and enact the future, can shape whether we see climate change as a near-future problem requiring immediate action or a far-future problem which may be addressed in its own time. Hence, how actors frame the future matters for motivating participants to engage with grand challenges. This also suggests new ways of thinking about how grand challenges get constructed. We need not wait for them to arise and become salient but offer ways to conceptualize the active triggering of efforts to construct grand challenges.

Looking to the right-hand side of the framework, scholars might want to devote additional attention to not just devising “tools” but also studying their “impacts.” In the original, mathematics-inspired formulation of grand challenges, there is an assumption that, if a grand challenge is “solved,” there would be discrete, anticipatable gains. For example, in the field of biology, mapping the entire human genome or detecting and measuring all the proteins in cells and blood have not only discrete end points but many knock-on gains for medical science (Omenn, 2006), albeit opening up a host of ethical questions about the use of this knowledge. However, suppose we take wickedness seriously and orient to the kind of societal grand challenges of interest to management scholars. Then we must wrestle with the fact that capturing and evaluating “impact” is not as straightforward. First, evaluating impact is difficult enough as common measures only imperfectly capture it. This is in part due to the complexity and uncertainty of the underlying processes and in part because we tend to measure what is measurable, which misses other forms of value (Howard-Grenville, 2021c). Second, as Gümüşay et al. mention in the introduction to this volume, since grand challenges are n -order problems with multiple feedback loops, “solving” them may have unintended consequences. As they suggest, studying the “dark sides” of organizing for grand challenges is also critical for understanding the broader changes that are invoked even when making seeming progress. Finally, the evaluative nature of grand challenges (Ferraro et al., 2015) makes it so that what one set of actors describes as “significant, positive impact,” others may well view as a “drop in the ocean” or, worse, a “step in the wrong direction.” Similar to our argument for the left-hand side, we believe that there is potential for scholars to add considerable nuance to understanding practices and processes around evaluating outcomes of efforts to tackle grand challenges.

Theorizing the Grand Challenges Construct

Another aspect of our forward citation analysis that immediately jumped out at us is that most articles in our sample mentioned the term grand challenges only once or twice – or not at all (see Fig. 2). This is especially true for articles using themes (a) and (b), justifying contexts and motivating theory, that have a median mentions – score of one (justifying contexts) and two (motivating theory), respectively. This reveals that many authors engage with the grand challenges construct superficially rather than substantively – they mention but do not develop it.

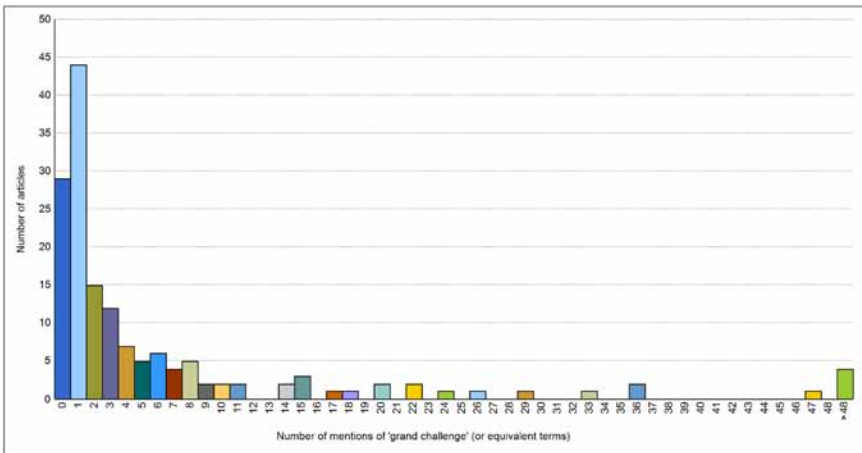


Fig. 2. Articles Citing [George et al. \(2016\)](#) by Number of Times That Invoked the Term “Grand Challenges.” *Note:* A mentions score of 0 means that the article cited the editorial but did not explicitly address grand challenges – for example, because the article references the SDGs instead.

However, we believe that there is considerable impact potential in providing practitioners with a more precise understanding of the grand challenges construct. Those who are on the front lines of working on grand challenges use various models – from “theory of change” approaches that connect desired goals or impacts (linearly backwards) through to actions and interventions, to more complex systems thinking approaches that map multiple actions, stakeholders, and reinforcing and balancing links between them. Can we offer additional ways of thinking that enable traction on vexing grand challenges?

We suggest it would be fruitful to expand on the work from theme (c) of our analysis that has begun ([Furnari et al., 2020](#); [Gümüşay et al., 2020](#); [Jarzabkowski et al., 2019](#); [Leone et al., 2021](#)). In doing so, we might enable practitioners to grasp grand challenges in terms of what they are – namely, very different from the problems we typically solve through the application of reductionist, linear thinking – and hence prompt new ways of making sense of them. As Jarzabkowski et al. note, for example, sharing with practitioners that grand challenges are paradoxical can result in “shifting their expectations from resolving contradictions to understanding that contradictions will continue to resurface in the dynamic process of engaging with a grand challenge” which in turn “might help alleviate feelings of disappointment and defeat associated with navigating such complex, important and intractable societal problems” ([Jarzabkowski et al., 2019](#), p. 129). Indeed, understanding not just when collaboration goes well, but how to engage productively with complexity, difference, and interdependence is central to tackling grand challenges.

Finally, it bears pointing out what by now we hope might be obvious: a linear perspective on grand challenges that frames them as being articulated, acted upon, and having (desired) outcomes is an oversimplification at best. This does

not mean that it is not helpful to break down these phases and encourage scholars to study a myriad of questions associated with each (see Table 2 in [George et al., 2016](#)). However, a more accurate image capturing the nature of grand challenges as complex, persistent, and interdependent might look more like a plate of entangled spaghetti than a linear progression of boxes and arrows. Or, at least there would be many connecting feedback loops alongside the boxes and arrows. This is not to argue that we *should* develop such a framework, model, or image. After all, mathematicians are working on a theory of everything in the coming 100 years, so we should respect a division of scholarly labor! Joking aside, the need for parsimony in how we convey complex phenomena, such as grand challenges, must be balanced against ways of capturing – for ourselves and others – key aspects of their complexity.

In making our theories useful to practice, scholars may also want to keep in mind the potential “dark sides of impact.” As [Ghoshal \(2005\)](#) notes, management theories can resonate with practitioners in unforeseen ways and can prompt actions that the theorist may not have fully intended. Especially in contexts as complex as grand challenges, it is hard for researchers to know what impacts their work will have. This suggests, as many have previously called for, modes of engaged scholarship ([Sharma & Bansal, 2020](#); [Van den Ven & Johnson, 2006](#)) that bring researchers and practitioners together to work on grand challenges as partners. In this way, researchers might better gauge the right amount of complexity to put into their theories and correct for potential unintended consequences of theorizing.

After all, the intent of the [George et al. \(2016\)](#) essay was to inspire management scholars to “turn research into actionable insights to frame and tackle some of the biggest challenges that we face in our global community.” In striving to do that, we must take closer notice of and deeper interest in both our fellow surfers and those we are trying to reach, connecting our creative moves while also challenging ourselves collectively to make this a wave that leaves a mark. Only in that way can we refine our understanding of what grand challenges comprise and make meaningful to others our engagement with them.

NOTE

1. Funded by the Canadian government, Grand Challenges Canada was founded in 2008, inspired by the Gates grand challenge initiative, and aimed at funding research to address critical global health problems.

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