

INTRODUCTION

The decade of the Sixties has brought with it an important change in the intellectual climate throughout many parts of the world, evidenced by a new attitude toward the future that has become apparent in public and private planning agencies as well as in the research community. The effect has been to extend customary planning horizons into a more distant future and to replace haphazard intuitive gambles, as a basis for planning, by sober and craftsman-like analysis of the opportunities the future has to offer. . . . The future is no longer viewed as unique, unforeseeable, and inevitable; there are, instead, a multitude of possible futures, with associated probabilities that can be estimated and, to some extent, manipulated.¹

Writing in 1967, the German-born mathematician Olaf Helmer succinctly captured the key elements that underpinned the new field of futures research, which reconceived the future(s) as an analytic category and, crucially, proposed that the future—in the long term—could be shaped, planned, and, as he put it, “to some extent, manipulated.” Helmer had fled Germany to the UK in 1934 and moved to the United States in 1937; in the 1960s, he was working at the RAND Corporation—an influential policy think tank that stood in the vanguard of futures research in the United States and, importantly, also wielded international influence. Both RAND and Helmer were key actors in the transnational networks through which research on the future was established across Europe, including in West Germany, and around the world.

During the 1960s and early 1970s, several institutes and platforms for research on the future were set up, notably *Futuribles* in Paris and Geneva in 1961, the Commission on the Year 2000 in the United States in 1964, and the Zentrum Berlin für Zukunftsforschung (Berlin Center for Futures Research, ZBZ) in West Germany in 1968. The formation of transnational networks—most prominently, Mankind 2000, the Club of Rome, and then, in 1973, the World Future(s) Studies Federation (WFSF)—lent another dimension, not to say momentum, to the field. Dedicated journals were also established: *Futuribles* in France in 1961; the Anglo-American *Futures*, started in 1968; and the West German *Analysen und Prognosen über die Welt von morgen* (Analyses and prognoses concerning the world of tomorrow), also 1968.

Meanwhile, in the socialist states, sections on prognostics were founded in the Academies of Science.² Futures studies garnered broad public and political interest, particularly within Western industrial societies, spurred on by—and part of—a booming public and political interest in the future and in the novel idea that the world of tomorrow could be analyzed, shaped, and planned.³

Meanwhile, the “new attitude” toward the future and the idea of a “multitude of possible futures” was taken up readily in the Federal Republic, which rapidly became home to a vibrant field of futures studies. In 1968, for example, the newly formed ZBZ echoed the thrust of Helmer’s 1967 analysis in a press release explaining its mission:

The fatalistic notion that the future is unforeseeable and inevitable is gradually being cast aside. Instead, one begins to recognize that a wealth of possible futures exists, and that these possibilities can be shaped in a variety of ways through appropriate intervention. . . . [We must] cease to be witnesses of contemporary history and instead play an active part in it by shaping the future.⁴

The ZBZ rallying call to actively shape the future was already underway, led by a handful of scientists who formed the vanguard of futures studies in West Germany—including Ossip K. Flechtheim, Robert Jungk, Karl Steinbuch and Carl Friedrich von Weizsäcker. That said, West German futures studies was strongly influenced by the transnational exchange and flow of ideas, knowledge, and people—with respect in particular to the United States, including, most prominently perhaps, the RAND Corporation. Exchanges and flows moved in two directions, back and forth across the Atlantic. West German futurists were hugely influential within transnational networks of futures studies. Beyond this, the West German case serves to illustrate that futures studies was a highly contested field of research characterized by competing styles of thought rooted in different intellectual and epistemological traditions, engendering bitter rivalries and serious conflicts among those in the vanguard of the field. Briefly stated, this book offers new insights into the history of futures studies as it developed in West Germany as well as in Western, trans-bloc, and global networks, taking account of its internal dynamics, intellectual diversity, and transnational dimensions. Equally, the analysis situates the national West German picture within the context of the international landscape of this rapidly expanding field during the Cold War.

This study conceptualizes the history of futures studies in a novel way that combines national and transnational perspectives. The analysis is organized along three principal lines. *First*, as stated, the book uses *West Germany* as a national case study of the futures field, illustrating the plurality and heterogeneity of the field and opening a window onto the impact of transnational networks on its development, both nationally and internationally. For example, the national picture highlights the way in

which the global mental map promoted by futurists in the 1970s was strongly tied to a local and human-centered context.

Second, the study draws on and adds a new dimension to the history of the *Cold War*. Not least, it reveals how Cold War mentalities played a decisive role in generating new methods for planning and forecasting the future in the United States, particularly in the field of strategic and military planning. Furthermore, the book identifies and tracks the circulation of concepts, methods, and knowledge between Western industrialized countries, including the bidirectional flow across the Atlantic, to show how this was foundational to the futures field. This circuitry of exchange also extended beyond the West, with knowledge flowing across—transcending—the Cold War bloc divide.

Third, the study incorporates a *global* perspective by tracing the history of the Club of Rome and the WFSE. That said, the book is not a global history; for example, it does not cover or use primary sources originating in the countries of the Global South. However, it examines the conceptions of globality that emerged in the futures field in the 1970s, which, in turn, stimulated notions of One World solidarity. It also takes account of the participation of actors from the so-called developing countries within the transnational networks of the futures field. Here, the book pays special attention to futures studies' mental maps—understood as cognitive landscapes comprising spaces that could be re/conceptualized and shaped.⁵ It charts how the contours of these maps changed as the field developed a more global perspective, moving away from its initial West-East axis. Indeed, connected to this, the book shows the extent to which Cold War science, détente science, and globalized science were closely interlinked and how this was important for futures research.⁶ With this threefold focus, the book develops a novel methodology that provides new insights into the history of envisioning, forecasting, and shaping the future.

Arguments Presented in This Study

A central thesis of the book argues that the development of the futures field was part and parcel of processes of political, social, and cultural change, to which futures scholars actively contributed. Indeed, futures researchers sought to act as agents of change, lending to the futures field a distinctive “applied” character in the sense that those in the vanguard of its development were highly engaged in changing the present and not only envisioning but shaping tomorrow’s world.

Three driving forces underpinned the growth of the new field of futures studies during the 1950s and 1960s. *First*, as stated, the *Cold War*—its ideological rivalry and military standoff—was especially decisive. In the United States, this conflict gave rise to think tanks such as the RAND Corporation, which provided the theories, methods, and techniques for military and strategic planning of administration and forecasting. Likewise, the Cold War also played a decisive role in the emergence of

a new field of scientific forecasting in the socialist states (also called prognostics),⁷ proceeding from a Marxist-Leninist paradigm of progress and powerfully shaped by the technological competition between West and East.

Second, the sheer pace of *technological and scientific change* sparked both euphoria and deep concerns about how to deal with and control technological progress. A growing number of scholars specializing in researching and imagining the future—so-called futurists or futurologists⁸—were animated by the perception of the accelerating pace of technological and scientific change, especially in the fields of aerospace, nuclear research, and computerization. It seemed increasingly that the knowledge of the past was less relevant to and useful for solving future problems. At the same time, new theories, techniques, and tools—such as cybernetics and the computer—seemed to offer solutions not only for exploring the future but opened a way of rationally researching the future in its entirety and as a system. Whereas some of the futurists sought to prevent a looming nuclear war through cybernetically based scenarios, others were led by a striking confidence in the power of scientific forecasting as a means to control change in the medium to long term.

Third, socially and culturally, *reformist, emancipatory*, and partly revolutionary ideas of the 1960s, shaped variously by the postwar economic boom, the New Left, and student movements, stood at the heart of futures studies conceptions and practices in Western industrialized countries. Furthermore, scholars from the Global South used international debates on social justice to push their knowledge and ideas of how to rethink notions and goals of development policy and to restructure or radically change the world economy. By contrast, in the socialist dictatorships, emancipatory dynamics were possible only to a limited extent, for example, within reformist and socialist humanist scientific circles. As a result, only in the West and in global networks did “futures” become a key concept behind a new scientific and intellectual understanding of what was to come. The future seemed to consist of an array of alternatives, and, following from this, the opportunity opened up to choose from a multitude of futures. The French scholar Bertrand de Jouvenel had coined the term “futuribles” around 1960, by which he meant “those descendants from the present state that now seem to us possible.”⁹ According to him, all dealings with the future are embedded in the present, which offers a multiplicity of, variously, possible, probable, and wished-for futures: in turn, which paths are followed—which opportunities are realized—depends on the decisions taken. In the following years, the notion of “futures” was widened in a can-do, emancipative, and revolutionary sense, premised on the notion that people could more or less shape the future according to their interests.

Environmentalism affords a powerful example of how futures scholars were active agents in processes of political and social change. Dating from around 1970, growing concern with environmental issues gave rise to what has been called the *environmental* turn in futures studies. This transnational phenomenon elicited huge worldwide public interest and concern, strikingly apparent in the *Limits to Growth* study of 1972.¹⁰ Furthermore, during the 1970s, and bound up with the environmental turn

as well as to One World ideas, knowledge about the future not only circulated within the West but transcended Cold War political and ideological boundaries, including across the North-South divide. Indeed, researchers from the so-called Third World actively participated in futures studies networks, adding their own knowledge and advancing their interests. In this way, the transnational futures field became *globalized*. Furthermore, as I argue, in this period many futurists placed a new focus on *human* needs in both global and local perspectives, with the aim of improving the quality of life for individuals and communities around the globe. Indeed, the futures field underwent a *pragmatic* turn: this involved a learning process that powerfully influenced an empirical and positivistic line of thought and action within futures studies. Confidence in technological forecasting aside, many futurists reflected on the capacity and limits of forecasting and placed a focus on qualitative scenario writing and participatory futures, enabling people to imagine and shape their own future. What is more, during the late 1970s, economic factors and thinking—an economic “turn,” so to speak—began to shape parts of the Western futures field in particular. This foreshadowed a recalibration of technological innovation as a source of economic dynamism, both nationally and across the Atlantic. Hence, the already heterogeneous futures field became ever more diversified.

The analysis in this book is organized around a central hypothesis, namely, that producing knowledge about the future is shaped by social and cultural factors—that is to say, by the epistemological and intellectual background of futures scholars and the cultural, social, and political contexts in which they lived and worked.¹¹ That is to say, the book focuses on and proceeds from those people and networks that originally conceptualized futures studies, sought to develop ways and means of forecasting, planning, and shaping the future, and, in so doing, brought the new field of futures studies into existence. These pathbreaking actors came from different disciplines, from across the epistemological and social spectrum, and from different countries.

In documenting this intellectual and epistemological diversity, this book challenges claims that futures studies was exclusively a project of the social sciences.¹² On the contrary, the study demonstrates the multi- and interdisciplinary character of the futures field, including, not least, the central role in its development of both cybernetics and systems analysis, both of which rested on natural sciences expertise. Hence, *differing styles of thought and action*—a term used in this book interchangeably with approaches—stood at the heart of various early conceptions of futures studies, ranging from normative to empirical styles of thought. Indeed, the book shows how research into the future oscillated between three main styles of thought and action: normative (exemplified by Bertrand de Jouvenel and Carl Friedrich von Weizsäcker), empirical-positivistic (Olaf Helmer, Herman Kahn, and Karl Steinbuch), and critical-emancipatory (particularly Robert Jungk and Ossip Flechtheim).

All of this makes clear that the study of the future in its formative period in the 1950s and 1960s was intellectually vibrant and diverse. Following from this, the field acquired different characteristics in different national settings and was given different

names. Throughout much of the West, “futures research” (*Zukunftsforschung*) implied a scientific approach concerned with forecasting and planning; in French circles, “la prospective” meant both forecasting as well as a more open appraisal of what the future could hold. Another term in circulation, “futurology,” was used in the United States, particularly by the media, and especially when discussing forecasting the future. Meanwhile, “Futurologie” in West Germany implied emancipatory, leftist approaches to studying and shaping the future. During the 1970s, however, the concept “future(s) studies” gained broad acceptance within futurists’ transnational networks, with a more inclusive meaning that not only embraced scientific approaches to studying the future but also encompassed forms of lay knowledge.¹³ In the West, futures studies was a scientific field that increasingly engaged with social movements’ conceptions of creating and imagining, including aspiring to shape the future from the bottom up, fueled not least by “1968.”¹⁴ This involved navigating, renegotiating, and transcending the boundaries between science, social movements, and the arts.¹⁵ For example, this was the case with future workshops, a groundbreaking innovation conceived by Robert Jungk; these workshops brought people who were most affected by political decisions into the planning process itself, not least by giving them the opportunity to imagine and discuss alternative futures—which could best serve their interests and needs.¹⁶ In what follows, I understand futures studies as a field centrally concerned with reflecting on, forecasting, and shaping the future within specific networks in which science and the social were closely interwoven, with this boundary itself becoming a subject of investigation.

Notes on Methodology

This study combines approaches from the history of science, the history of knowledge, and both cultural and political history. Methodologically, it presents a history of science inspired by cultural studies and STS studies, proceeding from the premise that knowledge is generated within cultural and social contexts. Here, my analysis draws on Ludwik Fleck’s concept of *Denkstil*—thought style—first put forward in 1935. For Fleck, producing scientific knowledge was fundamentally connected to cognition, specifically its intellectual, psychological, and sociological aspects. Fleck captured this idea in his concept of the “thought style,” which he defined as a “directed perception, with corresponding mental and objective assimilation of what has been so perceived.”¹⁷ Fleck emphasized that “value-free” or neutral science did not exist. From an epistemological perspective, scientific knowledge is not true, but is also and especially dependent on social conditions.¹⁸ Following Fleck, my analysis in this book is premised on the view that thought styles reflect certain epistemological preconceptions and patterns of perceiving or interpreting the world. It is in this sense that, as I emphasize in this book, epistemology as well as social and political contexts and ideas are conveyed through the concept of thought styles.

Equally, in seeking to capture what was novel in the emergence of the futures, I also draw on Thomas Kuhn's 1962 theory of "scientific revolutions" and his concept of the scientific paradigm. Kuhn argued that scientific development can be characterized by a series of revolutions, each of which is followed by periods of "normal" science. Normal science is characterized by research firmly based upon past scientific achievements that establish (for/within a particular discipline) a paradigm. This paradigm provides—for a particular discipline—the foundation on which it rests, guiding research within the corresponding scientific community. As and when new research findings begin to challenge the paradigm, the position of this paradigm is weakened and a new paradigm arises. Kuhn argued, too, that paradigm change often coincides with a generational shift. Like Fleck, Kuhn attached central importance to researchers' worldviews, and he emphasized the influence of social factors on a "scientific community" within which cognition takes shape.¹⁹ In this book, I explore the extent to which the emergence of futures studies can be understood as a "scientific revolution" in the Kuhnian sense, in which scholars led by specific experiences and worldviews generated a new and interdisciplinary paradigm of researching and shaping the future.

This book also refers to French poststructuralist scholarship on the history of science that has focused on the ambivalent connection between knowledge, power, and interests. For Pierre Bourdieu, a scientific "field" is the site at which scientific but also political dominance is contested. Bourdieu emphasizes the competition and struggle for profit, namely for resources, that exist within scientific fields.²⁰ Bourdieu also subjected the link between power and knowledge to greater scrutiny. Science cannot be understood in a rational sense as only assuring truth; rather, systems of knowledge always involve the wielding of power and acts of subjugation.²¹ Bourdieu's field theory likewise forms part of the conceptual framework of the book in the sense that one of the arguments developed through the chapters proposes the "futures field" as a site in which different actors and thought styles competed fiercely with one another, vying for scientific prestige and authority, and for financial, institutional and other resources.

Drawing on, at least, Fleck's, Kuhn's and Bourdieu's theories, a *history of knowledge* approach has emerged as a new and highly dynamic field of research in the last two decades, particularly in German-speaking as well as in Swedish and French scholarship. This provides a central methodological source of this book. Formerly, the history of science and general historical literature worked in relatively strict isolation from each other, if only because the history of science was highly specialized in its focus on the natural sciences.²² More recent scholarship tackling the history of knowledge has provided a means to bridge this gap. Arguing that the boundaries between knowing and other "forms of comprehending the world are fluid," this literature has proposed a broader understanding of knowledge, including scientific and nonscientific, everyday forms of knowledge—for example about atomic energy. Informed by STS and

history of science studies, a history of knowledge approach highlights that understandings of and claims for evidence, objectivity, and truth in producing and transmitting knowledge is subject to social and cultural contexts and changes over time. As such, it explores the interaction between different forms and claims to knowledge; it asks what people understood and accepted as knowledge at a certain time, and it also takes into account the processes of the circulation and transfer of knowledge, examining if and how knowledge was transmitted, transformed, restricted, or blocked.²³ That is to say, this study not only examines the political, social and cultural contexts within which futures scholars worked but also offers novel insights on the futures scholars' claims for evidence when generating knowledge. In so doing, it sheds light on how these scholars oscillated between confidence in forecasting and an awareness of its limitations, and their efforts to explain how far knowledge on the future could be produced despite all differences between factual statements and predictions. For example, Olaf Helmer used the concept of "tacit knowledge" to argue that predictions based on experts' intuition and background knowledge were more reliable than any other comparable alternative.²⁴ Furthermore, the study shows that the belief in the possibility of generating knowledge on the future at all was subject to negotiation and to historical change. With this in mind, this book considers the practices and processes of transmitting knowledge and explores the extent to which the futures field moved beyond the production of scientific knowledge about the future(s), bringing new forms of knowledge and the entanglements between scientific knowledge, imagination, and lay knowledge into play.

A further analytical strand developed within the book traces entanglements between futures studies and politics, taking into account sociological theory about the so-called scientization of politics, exploring both the increasing role experts came to play in politics and the mutual processes of influence between science and politics. Scientific knowledge is not (primarily) generated with its uses in political and social systems in mind. Generally, scientific knowledge is transformed before being adapted for experts' advice and politics; hence, as sociologists of science held, it is not only the political "use" of knowledge provided by experts but also the ways and channels of adapting and transmitting expertise to politics that constitute a subject of research interest.²⁵ The role of futures scholars as political consultants is explored in this study by scrutinizing the West German case. It reveals not only that, in practice, these encounters and processes were riven with tensions. The German case shows, too, that futures scholars raised high expectations within political and policy circles about the value and use of futures expertise that often could not be met.

Further, the study makes use of theories on the relation between science and the media, exploring how far newspapers and science journalists helped shape the futures field. Earlier theories on the "popularization of science" relied more heavily on a one-dimensional "top-down" transfer or diffusion of knowledge into the public realm; more recent approaches to the "public understanding of science" have placed greater emphasis on the reciprocal processes of exchange and influence between sci-

ence and the public sphere, in other words, highlighting the interactive and complex nature of this relationship.²⁶ As such, especially regarding the formative phase of the late 1950s and 1960s in the development of the futures field, this book explores how far the futures scholars worked to communicate and popularize the emerging field to the public and for the public; furthermore, it examines the extent to which the field was at least in part constructed and “made” by certain parts of the media.

This book develops a transnational and global history approach, opening a new window onto the transnational history of futures studies. Defined as “the movement of peoples, ideas, technologies and institutions across national boundaries,” transnational history has, since the 1990s, brought forth new historical perspectives, for example, on the dynamic interplay between national, regional, and international contexts and, notably, directing attention to a wide array of nonstate actors.²⁷ While the nation remains a reference point of the transnational approach, emphasis lies with flows and exchanges that transcend national borders.²⁸ This book highlights processes of knowledge transfer and circulation within futures studies, shedding new light on Western and Cold War mental maps, thought systems, and Cold War organizations such as the Congress for Cultural Freedom, which acted as platforms for the exchange of knowledge and ideas across the Atlantic. Importantly, the book also looks beyond this to explore how far knowledge circulated between West and East via trans-bloc contacts as well as processes of exchange within the increasingly global networks of futures studies. To this end, the book explores the ways knowledge moved into and out of West Germany, highlighting the trans-bloc dimensions of this exchange, while reflecting, too, on the limits to such flows.

In focusing on transnational networks and organizations of futures scholars’ experts, this study makes use of the concept of epistemic communities that Peter Haas has defined as “network(s) of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area.” Haas proposed that an epistemic community is united by “a shared set of normative and principled beliefs,” and thus by common worldviews and a common political agenda, in terms of a specific way of addressing problems and strategic goals.²⁹ In this book, the concept of epistemic community is central for investigating how far transnational futurist networks such as the WFSF and the Club of Rome perceived themselves as networks of experts—in the “epistemic community” sense—or as transnational social movements. This has relevance for the aforementioned boundary work between expert and lay knowledge at the transnational level.

Lastly, the present study makes use of global and postcolonial approaches, drawing on lines on inquiry linking global and knowledge history. As a methodological lens for historical research, global history directs its gaze toward highlighting global processes of exchange and interaction, and interrelationships as well as entanglements. Specialists in global and development history have shed light on how prevailing notions of cultural hierarchies and a self-imposed “civilizing mission”—fashioned with

the goal of modernizing nations deemed “underdeveloped”—had become firmly entrenched among the elites in twentieth-century colonial and development policy.³⁰ Postcolonial approaches also question the assumption that knowledge was mainly transferred from the Northern center to colonial or so-called developing countries’ periphery; instead, they have developed “a more nuanced understanding of the relationship between knowledge and power,” not only highlighting the conceptions of “civilizing missions” and asymmetrical relationships building the background of knowledge transfer and circulation but also emphasizing the mutual processes of exchange and the role traditional and local knowledge in the Global South played.³¹ Indeed, this book examines the perceptions and conceptions of globality and One World solidarity that shaped large parts of the futures field in the 1970s. It investigates how far Western futurists’ conceptions of international development changed over time, and how organizations such as the WFSF engaged with knowledge produced in the countries of the Global South. Here, the book offers new insights into how futures studies contributed to the dissemination of the concept of an equitable New International Economic Order (NIEO) proposed in the 1970s by the Group of 77, an organization created specifically to represent and advance the interests of countries from within the so-called “developing” world.

Analyzing the History of Futures: A Survey of Historical Scholarship

This book is a revised and expanded version of work originally published in German in 2015. At that time, the book was largely treading *terra incognita* given the dearth of historical research into futures studies. Indeed, historical scholarship had long paid little attention to the history of time and of the future.³² More recently, however, in many European countries, particularly in Germany, France, and the UK, but also in the United States, the history of future(s) research has become a dynamic field of historical and cultural enquiry. Accordingly, this book is also updated to take account of the growing literature examining the history of futures research since 2015.

Many scholars engaged in research into the future as a subject of historical analysis refer back to the German historian Reinhart Koselleck. His history of *concepts* and *ideas* offered a first historiographical point of reference for opening up the future to historical analysis. In the 1970s and 1980s, Koselleck put forward a still highly influential theoretical contribution to the historization of time and the future.³³ Koselleck developed the concept of “sediments of time” (*Zeitschichten*), which, “just like their geological prototype, refer to multiple temporal levels of differing duration and varied origin that are nonetheless simultaneously present and effective.”³⁴ Historical time, he maintained, is not homogenous but comprises different layers, not least the three temporal levels of past, present, and future, which he proposed were linked through processes of experience (present understandings of the past) and expectation (present understandings of the future). Koselleck particularly detected a general temporal shift in European history that occurred in the late eighteenth century (which he

called the “saddle time”).³⁵ In this period, new concepts such as “progress” and “history,” he claimed, signaled changing perceptions of time.³⁶ Lucian Hölscher took up Koselleck’s line of thought, concluding that in the seventeenth and eighteenth centuries, prompted by Enlightenment and scientific reason, a prophetic sense of time lost importance. In this prophetic notion, the future (*avenir*) was primarily regarded as destiny and guided by God. Instead, a modern, linear understanding of time emerged which regarded the future as proceeding mainly from the past and the present, and in ways that reflect human action. Importantly, for Hölscher, the task of the historian is to assess the relationships between the past future (the conceptions of the future held at a given point in time) and the present past (what we know today about the past).³⁷

Another important contribution was that by the French historian François Hartog. Fueled by the cultural turn and a boom of memory studies prevailing in European historiography in the 2000s, Hartog explored Western regimes of historicity (*régimes d'historicité*), understood as “dominant order(s) of time,” “expressing and organizing experiences of time—that is, ways of articulating the past, the present, and the future—and investing them with sense.” As such, a regime of historicity shaped experiences of time in a hegemonic sense, but could include different perceptions of time. With reference to Koselleck, Hartog identified a first regime of historicity dating up to the French Revolution, in which an orientation toward the past predominated. In the nineteenth and twentieth centuries, for Hartog, a new time regime prevailed, which was now oriented toward the future and planning ideas; later, in an age of “presentism” dating from the 1980s, the linear notion of time and progress that had characterized the modern regime of historicity faded as the idea of progress was questioned.³⁸

In a vibrant debate as to whether the 1970s was a “key watershed” in the Western industrialized countries, historians discussed whether the modern notion of progress came into a crisis.³⁹ Many scholars referred to a shift away from the “golden age” of economic growth that had dominated American and Western European postwar history toward a period during the 1970s and 1980s characterized by multiple economic and social crises in which conceptions of modernity and progress were questioned.⁴⁰ Referring to Koselleck, the German historian Fernando Esposito argued that intellectual debates on “no future” and *posthistoire* during the 1970s and 1980s signaled a hegemonic perception of the “end of history” and a “closing of the once ‘open future.’”⁴¹ Other scholars arguing from a constructivist perspective maintained that crises are by no means objectively given but rather socially constructed. If a political situation is framed as a crisis, it is communicated as threatening and requiring an immediate response; hence, this communication also entails optimism about shaping one’s own future.⁴² Indeed, particularly for the 1970s, a crisis narrative has been contested: apocalyptic concern about the threats of nuclear war, resource depletion, and environmental pollution advanced by new social movements and the Greens was often bound up with practicing new beginnings: People imagined futures totally different from the present and tried to move them into the present.⁴³ At the same time, no-

tions of progress were rethought and reconceptualized both in a Western and global perspective, for example, in the prevailing concept of sustainability.⁴⁴ Furthermore, as Daniel Rodgers put it for the United States, in an “age of fracture,” the postwar economic boom might have come to an end, but it did not only imply a crisis, as ideas of economy, society, and the self gave way to new concepts of individuality and the power of the market.⁴⁵ At any rate, Hartog’s theory of sequential regimes of historicity proved too inflexible to explain differing and competing time perceptions and visions of the future in history. The German historian Achim Landwehr has claimed a general multiplicity of times (*Pluritemporalität*), arguing that different perceptions and conceptions of time exist simultaneously. For Landwehr, time was and is a wholly social and historical construct since the past, present, and future have always been projections of different presents mobilized by different social groups.⁴⁶

The history of *planning* constitutes a *second* historiographical point of reference for this book. Of course, planning was not particular to the Cold War. In a wider perspective, French, Swiss, and German historians have discussed a specific “high modern” planning era stretching from the late nineteenth century to the 1970s. Dirk van Laak and others have argued that planning—understood as a public, process-based anticipation of the future shaping spatial, infrastructural and social developments of societies—became a central political approach in “high modern” industrialized countries, as scientific expertise came to be increasingly used for planning and controlling the future.⁴⁷ Particularly in the economic crisis of the 1930s, social and economic planning became a crucial goal of the social sciences in order to deal with growing uncertainties, as exemplified not least by the New Deal.⁴⁸ Moreover, planning shaped communist dictatorships. From the beginning, the communist parties legitimated their claim to power with narratives about designing a new and better future according to the laws set by Marxism-Leninism. Led by the intention of not only structuring but also controlling time in a high modernist sense, the Communist Party applied central economic planning in the USSR.⁴⁹

After 1945, planning became part of the Cold War rivalry. American historical scholarship worked for some time within the paradigm of a specific “Cold War science” as science and politics became ever more deeply intertwined during this period. Here, scientists were not passive; they did not just follow the political lead but rather set agendas themselves, pursuing also Cold War patterns of thought and action. For example, historians have cast light on the development of “Big Science” and the military-industrial complex, both of which manifest not only the expanding role of the state and politics in science but also a new policy focus on strategic and technological planning.⁵⁰ Scholars also studied the creation of and research done within policy think tanks such as the RAND Corporation—new kinds of independent institutes pioneered by the United States in the early Cold War—which provided the theories and methods used by successive US administrations for strategic planning purposes.⁵¹ At RAND, Herman Kahn, Olaf Helmer, and others developed techniques for studying the future, including computer-based simulation modeling and the Delphi technique.

That said, the role of Kahn, Helmer and others in establishing futures studies as a new research field long remained poorly understood—a gap addressed in this book.⁵²

Scholarship on planning in West European countries identified a similar planning boom in Britain, France, and West Germany during the 1960s, with Europeans typically striving to follow the US model. Triggered by a growing emphasis on thinking in terms of “systems” rivalry, together with a high degree of political trust in scientific expertise, planning appeared increasingly appropriate within the realm of long-term political decision-making.⁵³ At the same time, new and influential international organizations such as the OECD and the UN emphasized the need for and value of measures and policies geared toward facilitating economic growth and modernizing the West (as did the OECD) but also the countries of the Global South, which, in the language of the time, were deemed to be “underdeveloped.”⁵⁴

The surge in planning in the West during the 1960s was also apparent in the East as state socialism in Central and Eastern Europe proved receptive to new concepts of planning and control based on cybernetics. In general, state socialist planning, as Peter Caldwell put it for the GDR case, was “a technical means of organizing an entire industrial economy, a political ideal of the total governance of society, and a road map toward a qualitatively different world.”⁵⁵ Scholarship has highlighted that in the post-Stalinist era of the late 1950s and 1960s, inspired by the *Sputnik* shock and the increasing technological rivalry between the superpowers, a technology-driven understanding of modernity gained new significance in the Soviet Union and the socialist states, too. As a scientific-technical revolution was accelerating, as was claimed by the communist parties, the Soviet Union and the countries of the Eastern bloc opened up to cybernetics and systems-based planning techniques in order to “live up to [their] self-proclaimed status” as advanced countries⁵⁶ not least in order to get hold of knowledge generated in the Western camp.

More recently, historical scholarship has paid increasing attention to planning conceptions transcending Cold War boundaries during the détente period of the late 1960s and 1970s. Scholars have argued that in the course of de-Stalinization in the Soviet Union, concepts and practices of demarcation in science policy lost significance. During the 1960s, a theory of convergence developed by leftist sociologists and economists such as Jan Tinbergen proposed that both capitalist and socialist advanced industrial societies were converging around a similar scientific, technological and social model of a developed (and planned) society.⁵⁷ Meanwhile, historians have provided novel insights on the International Institute for Applied Systems Analysis (IIASA), a research institute working across the bloc divide and set up with a policy focus on long-term planning, including the application of technological rationality as a means for guiding the future both in the East and the West.⁵⁸ Two recent doctoral theses out of the Universities of Lausanne and Aachen have highlighted the role that systems analysis played at IIASA as a guiding tool modeling the world’s future.⁵⁹

This opens up a *third* historiographical point of reference, the history of *futures studies*. Of course, there is a literature on the history of generating knowledge about

the future in particular areas, for example, regarding the environment.⁶⁰ The German historian Alexander Schmidt-Gernig was one of the first to explore Western networks of future studies; further, he emphasized the central part played by cybernetics in conceptualizing futures studies during the 1960s and 1970s. Likewise, my book places the transnational dimensions of the futures field front and center but, in contrast to the work of Schmidt-Gernig, draws upon hitherto untapped archival sources.⁶¹ Moreover, employing a history of science approach, Élodie Vieille Blanchard has explored simulation modeling and the debate on the *Limits to Growth* study and has argued that, in each case, positions varied between techno-scientific doomsday and cornucopian futures.⁶²

Since 2015, a research group at Paris's Sciences Po has been publishing a number of articles and books on the history of the future in transnational science and politics during the Cold War, arguing that the "idea of the future" was an "often times contradictory notion that is inherently involved with power." In contrast to Koselleck and Hölscher, the Sciences Po group claims that notions of fate and destiny did not diminish in modernity but shaped parts of futures research.⁶³ In her history of IIASA, Eglė Rindzevičiūtė, a member of this group, argued that the trans-bloc think tank opened up a joint East-West future, supporting the exchange of knowledge across the borders of the Cold War and shedding some light on scientific forecasting in the Soviet Union.⁶⁴ Further, Vítězslav Sommer has provided novel insights into Czechoslovakian futurology and *prognostika*, and particularly the history of the so-called Richta group in the 1960s. This forecasting group worked in particular on postindustrial ramifications of the scientific-technological revolution in the wake of the Prague Spring, which was influential for some West German futurists. As the Richta group thought about possible futures, it questioned central tenets of Marxism, such as the understanding of man as the productive force, and the teleological notion of communism. Richta was sanctioned after the invasion of Czechoslovakia in 1968, and *prognostika* was reduced within economic forecasting.⁶⁵

In 2018, three years following the publication of the original German version of this book, work by the Swedish scholar Jenny Andersson, a member of the Sciences Po group, traced the story of Daniel Bell and the US Commission on the Year 2000 as well as the history of the Delphi technique, placing a particular focus on the WFSF and global networks of futurists. Here, Andersson put forward theses echoing some of those advanced herein, for example, claiming that the future became a "field of struggle between different conceptions of how to control, or, radically transform, the Cold War world" and the world itself. For Andersson, "future creation" drew on a wide range of modes "divided by the fundamental conflict line" between the future as control and status quo, on the one hand, and the future as a human construct and product of imagination, on the other.⁶⁶ In an article in 2019, Andersson illuminates the OECD Interfutures project of the late 1970s as a Western vision of globalization for expanding world market.⁶⁷

Biographical studies on key figures in the futures field within different national settings, and their roles in the transnational futures field, such as Bertrand de Jouvenel⁶⁸ and Ossip Flechtheim,⁶⁹ provide a further and rich historiographical point of reference for this book. A recent German PhD thesis has considered the history of the West German “Projekt Futurologie,” exploring this “intellectual phenomenon” of the 1950s to 1970s by focusing on key figures such as Robert Jungk and Ossip Flechtheim.⁷⁰

This survey of the literature on and historiography of futures studies points to the relevance of the futures field to politics and society in the twenty and twenty-first centuries. Research has provided insights on how to deal with past futures and expectations and on the changing notion of progress in twentieth-century Western industrialized countries, and it has identified the key role the 1970s played in this. It has also cast light on how, conceptually and policy-wise, planning came to new prominence in Cold War Europe and beyond. Meanwhile, more recent research has focused on the power of the idea of the future in transnational politics and expertise during the Cold War—and beyond. Yet, gaps remain in our understanding of the history of the futures field. Indeed, scholarship on futures studies in the last two decades raises many new questions about its development, nationally, internationally, and transnationally. This provides the point of departure for this book.

In foregrounding the *transnational* dimensions of the field, and combining this with an examination of the importance of these transnational dynamics for the development of the field within the *national* setting of West Germany, this book casts new light on a poorly understood—but, as I argue, critically important—aspect of its history and development. The West German case not only offers an in-depth analysis on *transnational exchange* and flows of knowledge and people that moved in two directions, it also reveals future studies to be a highly *contested* field characterized by competing styles of thought rooted in different intellectual and epistemological traditions, engendering combative conflicts among those in the vanguard of the field.

Methodologically, this book explicitly combines a history of *science* and history of *knowledge* approach with *cultural* and *political* history as well as interdisciplinary deliberations. By focusing particularly on *epistemologies* and *thought styles* of futures studies, it tracks conceptualizations developed by key figures of Western futures studies—Bertrand de Jouvenel and Carl Friedrich von Weizsäcker, Olaf Helmer, Daniel Bell, Herman Kahn, and Karl Steinbuch, as well as Robert Jungk, Ossip Flechtheim, and Johan Galtung. Furthermore, the book moves into new territory in making systematic use of sociological and STS scholarship. For example, it takes the innovative step of analyzing the mutual relationships between futures studies and the *media*, and it explores the *boundary work* between science, politics, and social movements, not only dealing with self-perceptions of researchers oscillating between scientists and activists, between epistemic communities and social movements, but also illuminating how futures scholars developed, discussed, and negotiated the boundaries between

scientific, intuitive, and lay knowledge. Regarding the relationships between *politics and futures studies*—and the historical scholarship on planning—the book not only sheds light on the role futures scholars played as planning experts for politics⁷¹ but also shows some sort of a planning euphoria shaping parts of West German politics and futures scholars in the years around 1970, also emphasizing the limits of euphoric and somehow technocratic planning aspirations that came to the fore in the 1970s.

Indeed, in contrast to existing research, this book has a specific focus on *processes of change*. To this end, it maps the transformations of the transnational and West German field, shows how futurists strived to actively shape the future, and reflects how far the field contributed to political and social change. What is more, with these deliberations, the book provides a contribution to the debate over how far the 1960s was a decade of a prevailing spirit of feasibility and notions of (technological, economic, and social) progress, and it gives new answers to the aforementioned question on how far the 1970s was a decade in which the envisioning of tomorrow turned from a spirit of progress and feasibility to environmental concern and crisis perceptions. Furthermore, it tackles the interesting question as to why the futures field lost scientific and public attention in the late 1970s.

Structure of the Book

The work is organized into ten chapters. Chapters 1 through 4 focus on the *emergence and conceptualizations* of the futures field mainly in the Western industrial societies. Chapter 1 explores the roots of the field in the early twentieth century. This is followed in chapter 2 by an exploration of the new theories and techniques of forecasting and planning developed by US think tanks and by the Academies of Sciences in the socialist states within the context of the early Cold War, and of the role played by Western platforms such as the Congress for Cultural Freedom in circulating futures conceptions. Chapter 3 focuses on the biographies and worldviews of key figures in the development of the different thought styles and conceptual frameworks through which the future became a subject of study from the 1940s to the 1960s. It explores the epistemologies and the disciplinary topography of the field, and it illuminates the social and political contexts that were important in the formation of the approaches that brought the field into existence. This chapter also assesses how national experiences and backgrounds shaped futures research nationally and fed into its transnational dynamics. Chapter 4 then sheds light on the strategies of futurists communicating their new field to the public and on the role of the media in the formation of the field in the United States and West Germany in the 1960s.

Chapter 5 provides a case study of the development and dynamics of the West German futures field. This in-depth analysis examines how the transnational phenomenon of futures studies was conceived and put into practice at the national level. In focusing on institutions—their prevailing thought styles, organization, financing, and the knowledge generated—the chapter also considers the role these institutes

played as political consultants, giving expert advice to the federal government, and it scrutinizes the fiery conflicts shaping the field.

Chapters 6 and 7 turn to the theme of transnational exchange of knowledge, discourse, and organizations oscillating between epistemic communities and social movements. Focusing on Mankind 2000, WFSF, and the Club of Rome, this chapter analyzes the self-conceptions and activities of these powerful actors in the futures field and investigates the relationships between knowledge production and social activism.

Chapters 8–10 consider the changes—“turns”—of the 1970s and 1980s, namely, the environmental turn and the discourse on *The Limits to Growth*, discussing, too, the extent to which futurists constructed and disseminated notions of coming “crises” both on the transnational level and in the (West German) national setting. Further, these chapters deal with the global and glocal turns in futures studies, exploring not only the WFSF and the Club of Rome but also the West German IFZ and Gesellschaft für Zukunftsfragen (Society for Futures Issues, GZ). Lastly, these chapters focus on the pluralization of methods and the use of participatory techniques, pointing not least to a pragmatic turn central for the field, and the question as to the extent to which an economic turn shaped futures studies in the late 1970s and 1980s on both the transnational and national levels.

Sources

This book draws from a wide variety of sources. *First*, central importance is given to published primary sources, namely, individual studies and specialist journals from the futures field. West German, Anglo-US, and French periodicals like *Analysen und Prognosen über die Welt von morgen*, *Futures*, and *Analyse et Prévision* provide the bulk of the material. Pamphlets and books produced by transnational organizations form another and valuable source of published primary sources.

Second, the book draws on a diverse range of primary unpublished sources that have yielded rich insights into the private views and thinking of leading figures in the book. Especially important were the papers of: Robert Jungk, held at the Robert Jungk Bibliothek, Salzburg; Karl Steinbuch, held at the Karlsruher Institute of Technology; Ossip Flechtheim, held in Frankfurt; Bertrand de Jouvenel, held at the Bibliothèque nationale de France; Dennis Gabor, held at Imperial College London; and the collections of biologists, Paul A. Weiss and Detlev Bronk, held at the Rockefeller Archive Center, New York. Other key primary sources include the archive of the Ford Foundation (New York) and files of West German ministries held at the Federal Archives in Koblenz. The author also conducted interviews with leading futurists such as Peter Menke-Glückert and Nigel Calder.⁷²

Research was also undertaken in the archives of futures studies institutes, including the Berlin Center for Futures Research (Zentrum Berlin für Zukunftsforschung), the Institute for Futures Studies (Institut für Zukunftsforschung), and the Society for Future Issues (Gesellschaft für Zukunftsfragen), all of which are located

in contemporary Institute for Futures Studies and Technology Assessment (Institut für Zukunftsstudien und Technologiebewertung) in Berlin.⁷³ For capturing the means, mechanisms, and processes of the transnational exchange of knowledge, the holdings of the OECD Archives and the UNESCO Archives in Paris proved especially useful.

Notes

1. Olaf Helmer, *Analysis of the Future: The Delphi Method* (Santa Monica, CA, 1967), 1–2.
2. For an overview on institutes, see Charles de Houghton, William Page and Guy Streatfield, *And Now the Future: A R.E.P. Survey of Futures Studies* (London, 1971); John McHale and Magda Cordell McHale, *The Futures Directory: An International Listing and Description of Organizations and Individuals Active in Futures Studies and Long-Range Planning* (London, 1977).
3. Around the year 1970, 80 to 120 monographs on the subject were published per year only in English; cf. Michael Marien, *Societal Directions and Alternatives: A Critical Guide to the Literature* (New York, 1976), 7–15.
4. Robert Jungk, “Weltweite Zukunftsforschung,” in *Informationsschrift zur Gründung des Zentrums Berlin für Zukunftsforschung (ZBZ)*, n.d. (1968), in BAK, B 138, 1550. All German and French quotes are translated into English.
5. Cf. Christoph Conrad, “Vorbemerkung,” in “Mental Maps,” special issue, *Geschichte und Gesellschaft* 28, no. 3 (2002): 339–42.
6. On the Cold War science paradigm, see, e.g., Mark Solovey, “Cold War Social Science: Specter, Reality, or Useful Concept?” in *Cold War Social Science: Knowledge Production, Liberal Democracy, and Human Nature*, ed. idem and Hamilton Cravens (New York, 2012), 1–23; on détente science, see Rüdiger Graf, “Détente Science: Transformations of Knowledge and Expertise in the 1970s,” *Centaurus* 59, nos. 1–2 (February and May 2017): 10–25; on science and globalism during the 1970s, e.g., Simone Schleper, *Planning for the Planet: Environmental Expertise and the International Union for Conservation of Nature and Natural Resources, 1960–1980* (New York, 2019); David Kuchenbuch, *Welt-Bildner: Arno Peters, Richard Buckminster Fuller und die Medien des Globalismus, 1940–2000* (Cologne, 2021).
7. Referring to “social forecasting” in the USSR, Igor V. Bestuzhev-Lada, “A Soviet Scientist Looks at Futurology,” *The UNESCO Courier* 24 (April 1971): 22–27; for the GDR, Jürgen Becher and Paul Friedrich, “Soziale Prognostizierung contra bürgerliche Futurologie,” *Deutsche Zeitschrift für Philosophie* 25, no. 5 (1977): 536–51; see Eglė Rindzevičiūtė, “A Struggle for the Soviet Future: The Birth of Scientific Forecasting in the Soviet Union,” *Slavic Review* 75, no. 1 (Spring 2016): 52–86.
8. The term “futurist” is originally linked to the fascists in early twentieth-century Italy, but it was also used by scholars who understood themselves to be specialists in the new field of researching and imagining the future; e.g., Jim Dator, “From Future Workshops to Envisioning Alternative Futures,” *Futures Research Quarterly* 9 (Fall 1993): 108–12, quotation 110.
9. Bertrand de Jouvenel, *The Art of Conjecture* (New York, 1967 [orig. *L’Art de la Conjecture*, 1964]), 19.
10. Donella H. Meadows, Dennis L. Meadows, Jørgen Randers, and William W. Behrens III, *The Limits to Growth: A Report for the Club of Rome’s Project on the Predicament of Mankind* (New York, 1972).
11. See a.o. Robert Proctor, *Value-Free Science? Purity and Power in Modern Knowledge* (Cambridge, MA, 1991); Peter Weingart, *Wissenschaftssoziologie* (Bielefeld, 2003), 41–45; and the literature mentioned in the next subchapter on the history of knowledge.
12. On futures studies as part of social sciences, cf. Kaya Tolon, “Futures Studies: A New Social Science Rooted in Cold War Strategic Thinking,” in Solovey and Cravens, *Cold War Social Science*, 45–62, 48; Jenny Andersson, *The Future of the World: Futurology, Futurists, and the Struggle for the Post–Cold War Imagination* (Oxford, 2018), 19, 78.

13. Eleonora Barbieri Masini, "Futures Research and Sociological Analysis," in *The International Handbook of Sociology*, ed. Stella R. Quah and Arnaud Sales (London, 2000), 491–505, at 491; cf. John McHale and Magda Cordell McHale, "An Assessment of Futures Studies Worldwide," *Futures* 8, no. 2 (1976): 135–45.
14. On social movements defined as loosely organized networks bringing about social change from below with a view to actively shape the future, see Sidney Tarrow, *Power in Movement: Social Movements and Contentious Politics* (Cambridge, 1999); Dieter Rucht, "Studying Social Movements: Some Conceptual Challenges," in *The History of Social Movements in Global Perspective: A Survey*, ed. Stefan Berger and Holger Nehring (London, 2017), 39–62.
15. See Thomas F. Gieryn, "Boundary-Work and the Demarcation of Science from Non-science: Strains and Interests in Professional Ideologies of Scientists," *American Sociological Review* 48, no. 6 (1983): 781–95.
16. See Dator, "From Future Workshops"; Robert Jungk and Norbert Müllert, *Future Workshops: How to Create Desirable Futures* (London, 1987 [orig. *Zukunftswerkstätten: Mit Phantasie gegen Routine und Resignation*, 1981]); see chapters 3 and 9.
17. Ludwik Fleck, *Entstehung und Entwicklung einer wissenschaftlichen Tatsache: Einführung in die Lehre vom Denkstil und Denkkollektiv* (Basel, 1935), 105.
18. See also Weingart, *Wissenschaftssoziologie*, 41–45.
19. Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 2nd ed. (Chicago, 1970 [orig. 1962]), quotations 10, vii.
20. Cf. Pierre Bourdieu, "The Specificity of the Scientific Field and the Social Conditions of the Progress of Reason," *Social Science Information* 14, no. 6 (1975): 19–47, quotation 23.
21. Cf. *ibid.*; Achim Landwehr, "Wissensgeschichte," in *Handbuch Wissenssoziologie und Wissensforschung*, ed. Reiner Schütze (Konstanz, 2007), 801–13.
22. See Helmuth Trischler, "Geschichtswissenschaft—Wissenschaftsgeschichte: Koexistenz oder Konvergenz," *Berichte zur Wissenschaftsgeschichte* 22, no. 4 (1999): 239–56; Lorraine Daston, "The History of Science and the History of Knowledge," *Know* 1, no. 1 (2017): 131–54.
23. See Simone Lässig, "The History of Knowledge and the Expansion of the Historical Research Agenda," *Bulletin of the German Historical Institute Washington* 59 (Fall 2016): 29–58, quotation 39; see Peter Burke, *What Is the History of Knowledge?* (Cambridge, 2016); Jakob Vogel, "Von der Wissenschafts- zur Wissensgeschichte: Für eine Historisierung der 'Wissensgesellschaft,'" *Geschichte und Gesellschaft* 30, no. 4 (2004): 639–60; Philipp Sarasin, "Was ist Wissensgeschichte?" *Internationales Archiv für Sozialgeschichte der deutschen Literatur* 36, no. 1 (2011): 159–72; for a history of science perspective, see Lorraine Daston and Peter Galison, *Objectivity* (New York, 2007); on moving and blocked knowledge, see John Krige, ed., *How Knowledge Moves: Writing the Transnational History of Science and Technology*, (Chicago, 2019).
24. See chapter 3 on Helmer.
25. See Peter Weingart, "Verwissenschaftlichung der Gesellschaft—Politisierung der Wissenschaft," *Zeitschrift für Soziologie* 12 (1983): 225–41; Carol Weiss, "The Many Meanings of Research Utilization," in *Social Science and Social Policy*, ed. Martin Bulmer (London, 1986), 31–40; Thomas Saretzki, "Welches Wissen—welche Entscheidung? Kontroverse Expertise im Spannungsfeld von Wissenschaft, Öffentlichkeit und Politik," in *Wozu Experten? Ambivalenzen der Beziehung von Wissenschaft und Politik*, ed. Alexander Bogner and Helge Torgersen (Wiesbaden, 2005), 345–69.
26. Cf. Ulrike Felt, "Wissenschaft, Politik und Öffentlichkeit: Wechselwirkungen und Grenzziehungen," in *Wissenschaft, Politik und Öffentlichkeit: Von der Wiener Moderne bis zur Gegenwart*, ed. Mitchell G. Ash and Christian Stifter (Vienna, 2002), 47–72; Arne Schirrmacher, "Nach der Popularisierung: Zur Relation von Wissenschaft und Öffentlichkeit im 20. Jahrhundert," *Geschichte und Gesellschaft* 34, no. 1 (2008): 73–95; Johan Östling et al., eds., *Circulation of Knowledge: Explorations in the History of Knowledge* (Lund, 2018).
27. Ian Tyrrell, "What Is Transnational History?" accessed November 25, 2023, <http://iantyrrell.wordpress.com/what-is-transnational-history/>.

28. Patricia Clavin, "Defining Transnationalism," *Contemporary European History* 14, no. 5 (2005): 421–39.
29. Peter M. Haas, "Introduction: Epistemic Communities and International Policy Coordination," *International Organization* 46, no. 1 (1992): 1–35, quotation 1–2; on epistemic communities and social movements, see Leonhard Dobusch and Sigrid Quack, "Epistemic Communities and Social Movements: Transnational Dynamics in the Case of Creative Commons," *Max Planck Institut für Gesellschaftsforschung: Discussion Paper 08/8*, accessed July 25, 2023, https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2121347_code1338049.pdf?abstractid=2121347&mirid=1.
30. See as a classic Dipesh Chakrabarty, *Provincializing Europe: Postcolonial Thought and Historical Difference* (Princeton, 2000); Lynn Hunt, "Globalisation and Time," in *Breaking Up Time: Negotiating the Borders between Present, Past and Future*, ed. Chris Lorenz and Berber Bevernage (Göttingen, 2013), 199–216. For an overview, see Ulrike Lindner, "Neuere Kolonialgeschichte und Postcolonial Studies," *Docupedia-Zeitgeschichte*, version 1.0, April 15, 2011, accessed July 25, 2023, www.docupedia.de/zg/Neuere_Kolonialgeschichte_und_Postcolonial_Studies; Corinna R. Unger, *International Development: A Postwar History* (London, 2018).
31. Lässig, "History," 37; generally, see Harald Fischer-Tiné, *Pidgin-Knowledge: Wissen und Kolonialismus* (Zürich, 2013); on the United States, see, e.g., David C. Engerman, "American Knowledge and Global Power," *Diplomatic History* 31, no. 4 (2007): 599–622; David Ekbladh, *The Great American Mission: Modernization and the Construction of an American World Order* (Princeton, 2010).
32. For an overview of the literature, Rüdiger Graf, "Zeit und Zeitkonzeptionen in der Zeitgeschichte," *Docupedia-Zeitgeschichte*, version 2.0, October 22, 2012, accessed July 25, 2023, http://docupedia.de/zg/graf_zeit_und_zeitkonzeptionen_v2_de_2012; Elke Seefried, "Geschichte der Zukunft," *Docupedia Zeitgeschichte*, version 1.0, March 10, 2023, accessed July 25, 2023, http://docupedia.de/zg/Seefried_zukunft_v1_de_2023; Berber Bevernage and Chris Lorenz, "Introduction," in *Breaking Up Time*, 7–35; Marek Tamm and Laurent Olivier, "Introduction," in *Rethinking Historical Time: New Approaches to Presentism*, ed. idem (London, 2019), 1–20.
33. Reinhart Koselleck, *Futures Past: On the Semantics of Historical Times* (Cambridge, 1985 [orig. 1979]).
34. Idem, *Sediments of Time: On Possible Histories* (Stanford, 2018 [orig. *Zeitschichten: Studien zur Historik*, 2000]), 9; see Tamm and Olivier, "Introduction," 11; Helge Jordheim, "Against Periodization: Reinhart Koselleck's Theory of Multiple Temporalities," *History and Theory* 51 (2012): 151–71.
35. Reinhart Koselleck, "Einleitung," in *Geschichtliche Grundbegriffe: Historisches Lexikon zur politisch-sozialen Sprache in Deutschland*, vol. 1, ed. Otto Brunner, Werner Conze and Reinhart Koselleck (Stuttgart, 1972), xiii–xxvii, quotation xv.
36. Reinhart Koselleck, "'Space of Experience' and 'Horizon of Expectation': Two Historical Categories," in idem, *Futures Past*, 267–88, quotation 278.
37. Lucian Hölscher, *Die Entdeckung der Zukunft* (Göttingen, 2016 [orig. 1999]), 12–13, 34–46; idem, "Zukunft und Historische Zukunftsforschung," in *Handbuch der Kulturwissenschaften: Grundlagen und Schlüsselbegriffe*, vol. 1, ed. Friedrich Jaeger and Bernhard Liebsch (Stuttgart, 2004), 401–16.
38. François Hartog, *Regimes of Historicity: Presentism and Experiences of Time* (New York, 2015 [orig. *Régimes d'historicité: Présentisme et expériences du temps*, 2003]), quotations 106–7; see similarly on the thesis that a modern "time regime" came into crisis in the 1980s, Aleida Assmann, *Ist die Zeit aus den Fugen? Aufstieg und Fall des Zeitregimes der Moderne* (Munich, 2013).
39. Geoff Eley, "End of the Post-war? The 1970s as a Key Watershed in European History," *JMEH* 9, no. 1 (2011): 12–17.
40. See Konrad H. Jarausch, ed., *Das Ende der Zuversicht? Die siebziger Jahre als Geschichte* (Göttingen, 2008); Anselm Doering-Manteuffel and Lutz Raphael, *Nach dem Boom: Perspektiven auf die Zeitgeschichte seit 1970*, 3rd ed. (Göttingen, 2012 [orig. 2008]), on a "finished" notion of progress at 135; Niall Ferguson et al., eds., *The Shock of the Global: The 1970s in Perspective* (Cambridge, MA, 2010); Daniel T. Rodgers, *Age of Fracture* (Cambridge, MA, 2011); Elke Seefried, "Towards 'The Limits to Growth?' The Book and Its Reception in West Germany and Great Britain 1972/73," *Bulletin of the German Historical Institute London* 33, no. 1 (2011): 3–37; Michael Egan, "Survival Science: Crisis

- Disciplines and the Shock of the Environment in the 1970s," *Centaurus* 59, nos. 1–2 (February and May 2017): 26–39.
41. Fernando Esposito, "Von *no future* bis Posthistoire: Der Wandel des temporalen Imaginariums nach dem Boom," in *Vorgeschichte der Gegenwart: Dimensionen des Strukturbruchs nach dem Boom*, ed. Anselm Doering-Manteuffel, Lutz Raphael, and Thomas Schlemmer (Göttingen, 2016), 393–423, quotation 408; see Fernando Esposito, ed., *Zeitenwandel: Transformationen geschichtlicher Zeitlichkeit nach dem Boom* (Göttingen, 2017).
 42. See Rüdiger Graf, "Totgesagt und nicht gestorben: Die Persistenz des Fortschritts im 20. und 21. Jahrhundert," *Traverse* 23, no. 3 (2016): 91–103; idem and Benjamin Herzog, "Von der Geschichte der Zukunftsvorstellungen zur Geschichte ihrer Generierung," *Geschichte und Gesellschaft* 42, no. 3 (2016): 497–515.
 43. See Silke Mende, "*Nicht rechts, nicht links, sondern vorn*": Eine Geschichte der Gründungsgrünen (Munich, 2011), 372–406; Elke Seefried, ed., *Politische Zukünfte im 20. Jahrhundert: Parteien, Bewegungen, Umbrüche* (Frankfurt a. M., 2022). On upcoming "new ideas" in times of an "intellectual crisis in political economy," see Lawrence Black and Hugh Pemberton, "Introduction: The Benighted Decade? Reassessing the 1970s," in *Reassessing 1970s Britain*, ed. idem and Pat Thane (Manchester, 2013), 1–24, quotation 2.
 44. Elke Seefried, "Rethinking Progress: On the Origin of the Modern Sustainability Discourse, 1970–2000," *Journal of Modern European History* 13, no. 3 (2015): 377–400.
 45. Rodgers, *Age of Fracture*.
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66. Andersson, *Future*, at 2, 215; cf. idem, “The Great Future Debate and the Struggle for the World,” *American Historical Review* 117, no. 5 (2012): 1411–30. For a critical review of this book, see Elke Seefried, “Review of Jenny Andersson, *The Future of the World*,” *American Historical Review* 125, no. 3 (June 2020): 981–84, accessed July 25, 2023, <https://doi.org/10.1093/ahr/rhaa261>.
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71. See also my article, “Steering the Future: The Emergence of ‘Western’ Futures Research and Its Production of Expertise, 1950s to early 1970s,” *European Journal of Futures Research* 2 (2014): 1–12, accessed July 25, 2023, <http://dx.doi.org/10.1007/s40309-013-0029-y>.
72. Among others, I had interviews with Rolf Kreibich in Berlin in 2008; Peter Menke-Glückert in 2009 and 2011 in Augsburg and Bonn, respectively; Nigel Calder in 2010 in Crawley; and Hugues de Jouvenel in 2012 in Paris.
73. I am grateful to Rolf Kreibich for enabling access to sources held at the Institut für Zukunftsstudien und Technologiebewertung, Berlin (Institute for Futures Studies and Technology Assessment).