

THE COLOGICAL
BY DESIGN

**A HISTORY FROM
SCANDINAVIA**

KJETIL FALLAN

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**THE MIT PRESS
CAMBRIDGE, MASSACHUSETTS
LONDON, ENGLAND**

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The MIT Press would like to thank the anonymous peer reviewers who provided comments on drafts of this book. The generous work of academic experts is essential for establishing the authority and quality of our publications. We acknowledge with gratitude the contributions of these otherwise uncredited readers.

This book was set in Arnhem Pro and Frank New by Westchester Publishing Services.

Library of Congress Cataloging-in-Publication Data is available.

ISBN: 978-0-262-04713-5

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ACKNOWLEDGMENTS

This book grew out of the research project *Back to the Sustainable Future: Visions of Sustainability in the History of Design* which I directed from 2014 to 2018. Funded by the Research Council of Norway and generously supported by my employer, the University of Oslo, this project provided a highly stimulating environment in which to work on this book and related research. I am particularly indebted to my former PhD students Gabriele Oropallo (died October 2021), Ingrid Halland, Ida K. Lie, and Malin Graesse, who made this project such a unique experience in collective curiosity and lateral learning. Thanks are due also to Peder Valle for providing valuable research assistance in the early phases. I am grateful to the Design History Society for awarding me its Research Publication Grant for 2022.

Substantial parts of this book were written during my sabbatical in the academic year 2018–2019, which I spent as a visiting researcher at the University of California, Davis. Made possible by a Fulbright fellowship and additional funding from RCN and the Career Development Program at the University of Oslo's Faculty of Humanities, the Californian sojourn was greatly enriched by the company of and stimulating conversations with my UC Davis colleagues, especially Christina Cogdell, Simon Sadler, and Jim Housefield.

Taking shape over the course of many years, material making up this book has been presented at a range of events in Giessen, Chicago, Kolding, Helsinki, Stavanger, Oslo, Davis, New York, Newcastle, Mexico City, Milan, Moscow, Basel, and Bologna. I am grateful to the organizers of these events for allowing me to discuss work in progress and to the audiences for valuable feedback. In less formal settings, I have benefited tremendously from exchanges with esteemed colleagues near and far, including Peder Anker, Larry Busbea, Greg Castillo, Mads Nygaard Folkmann, Elena Formia, Maria Göransdotter, Denise Hagströmer, Rebecca Houze, DJ Huppatz, Hans-Christian Jensen, Dolly Jørgensen, Finn Arne Jørgensen, Grace Lees-Maffei, Sarah Lichtman, Tania Messell, Anders Munch, Monica Obniski, Tim Stott, Bobbye Tigerman, Even Smith Wergeland, Christina Zetterlund, Carl Zimring, and many more.

This book could not have been written without access to archival materials and collections at a number of institutions, including the University of Oslo's Humanities and Social Sciences Library, the National Library of Norway, the National Museum's Library and Archive, the National Archives of Norway, Design Museum Denmark, Konstfack College of Arts, Crafts and Design, the Swedish Society of Crafts and Design, Moderna Museet, the University of Brighton Design Archives, San Francisco State University, the Peter J. Shields Library, and the University of California Libraries. Archival material is not always institutionalized, however. Ane Vedel and Karen Vedel kindly allowed me to study Kristian Vedel's personal archive, generously giving of their time and knowledge. The late Ulla Tarras-Wahlberg Bøe trusted me with papers collected by herself and her late husband Alf Bøe. Many time witnesses have shared their recollections of the period and events discussed in this book, including Nils Faarlund, Sultan Somjee, Amrik Kalsi, Eva Trolin, Varis Bokalders, and Maria Benktzon.

Moving from researching and writing the book to publishing it, I would like to thank Victoria Hindley at the MIT Press for believing in and refining the project and Gabriela Bueno Gibbs for shepherding it. The three anonymous reviewers deserve my praise and recognition for their time and effort, as well as for their insightful comments and sage advice. Finally, I owe my most heartfelt gratitude to Miriam Ardiles Fallan, my cherished partner in this complex design project called life, and to our children, Ulrik and Alma, for directing a historian's gaze toward the future—parenthood significantly changed my view of how design matters. This is for you.

INTRODUCTION

How did the two words “ecological design” become entangled? And what do the intrinsically global phenomena of environmental crisis and modern design culture look like from the edge of the earth? These questions form the driving force of this book, which explores the making of ecological design in a globally situated Scandinavia in the late 1960s and 1970s. In so doing, it provides a much-needed historical understanding of what is arguably the most significant development in design culture since the industrial revolution: the quest for a more sustainable future. This imperative permeates all aspects of contemporary design discourse, from research and education to professional practice and popular media—but its historical emergence remains virtually uncharted. *Ecological by Design* addresses this lacuna by examining ecological design in its making during the era of popular environmentalism and what is often referred to as the “crisis” of modernism.

The Scandinavian countries are widely considered pioneering societies in the shift toward a more sustainable future. Scandinavia is also widely acclaimed for its design culture. Rarely, however, have these two understandings been considered together. This book is the first to examine how they are deeply entangled in surprising and significant ways, thus comprising a novel history of the emergence of what is now known as ecological design. Scandinavia’s image as a driving force in environmentalism and sustainable development makes an easy target, of course—there are plenty of beams in the eyes of Scandinavian politicians, planners, manufacturers, designers, and consumers—but it isn’t entirely unwarranted either. The region proved a fertile soil for political activism, counterculture, and the modern environmental movement, and is home to the world’s first Environmental Protection

Agency (Sweden, 1967) as well as the world's first Ministry of Environmental Protection (Norway, 1972; Denmark, 1971/1973). This is not to argue for any sort of regional exceptionalism, but to establish a distinct and productive perspective. The study might set out from a specific geography, but it is by no means isolationist in its outlook. Reflecting the global nature both of the environmental crisis and of modern design culture, this book's case studies are consistently placed in an international context, resulting in a narrative that ventures far beyond the shores of Scandinavia, tracing key connections to continental Europe, Britain, the western United States, Central America, and East Africa.

A second disclaimer of sorts is that this is not a heroic history. If read cynically, it could on the contrary seem a history of fringes and failures. The history of Scandinavian design is no less riddled with unsustainable products, practices, and policies than is any other design history. It remains a (sad) fact that the history of ecological design is not a history of mainstream design, and Scandinavian designers and critics were not necessarily any more environmentally concerned than their brethren elsewhere. It is of vital importance to recognize the "dark side" in order to challenge the prevalent portrayal of design as an intrinsically benevolent force.¹ Just as Melvin Kranzberg declared of technology, design "is neither good nor bad; nor is it neutral."² Therefore, environmental histories of design should comprise narratives of unsustainability as well as of sustainability. Within this broader field, histories of ecological design will tend to emphasize actors, institutions, and ideas that sought to align design with environmentalism—but the discourses produced by and around these nodes will still acknowledge the ambivalent position design holds in both making and unmaking the environment.³

Brian Eno's notion of the "Big Here" and the "Long Now" might elucidate the broader relevance of focusing on a specific place and time. Contemplating a "Big Here" connects Scandinavia with the rest of the world, and invoking a "Long Now" includes the past (and the future) in the present, thus expanding our sense of empathy, relevance, and responsibility beyond this small region and this short period in time.⁴ It is no coincidence, though, that a history of ecological design emphasizes the late 1960s and the 1970s. As Finn Arne Jørgensen and I have argued, this period commands attention because it represents "a moment in time when concerns over environmental destruction went mainstream and the crisis of modernity prompted comprehensive soul-searching by design professionals of all kinds. The centrality of this specific period is thus also evidence of how we are historicizing our contemporary concerns—as every society does—at a time when the environmental crisis

seems more urgent than ever before.”⁵ “There is virtually no theme, practice, or technological advance being addressed today that was not discussed at length at the end of the 1960s and the beginning of the next decade,” writes Larry Busbea.⁶ Similarly, Daniel Belgrad argues that the period’s intellectual climate offered a sense of hope and agency that resonates particularly well with us today: “In the seventies, ecological thinking took on widespread significance because it offered a new way of understanding how to go about changing society for the better.”⁷ But before delving into the archives, this introduction will pan out and provide a broader context for the historically and geographically grounded narrative that follows, showing how so many of the key issues discussed in this book remain at the forefront of design and environmental discourse even today. Activism, reform movements, social change, consumption, capitalism, biodiversity, natural resources, environmental justice, colonialism, and so on are not particularistic concerns, but deeply entangled both in space and time and of vital importance to any history of ecological design as well as to contemporary design culture.

A QUESTION OF CHANGE

Design changes everything.⁸ Or so we are conditioned to believe. From the socialist utopias of nineteenth-century reform movements, via the scientific “problem-solving” of modernism, to contemporary mirages of sustainable development and “massive change,”⁹ the agency instilled in design has often carried a certain hubris. In his critique of this hubristic heritage, Simon Sadler showcases alternative registers of imagining transformation that may be more promising, or at least more sympathetic. But no matter the scale or the agenda, change remains at the heart of the matter: “I propose that design necessarily ‘imagines’ the situation in which it operates—that in setting out to make things and change things, designers (whether amateur or by vocation, singly or collectively) assume or create mental models of the environment in which they will work.”¹⁰ Design’s capacity to produce change is of course not necessarily a good thing. Since the industrial revolution, design has done more to harm Earth’s ecosystems than to heal them.

Identifying environmental challenges as a particularly important area for historical scholarship, Jo Guldi and David Armitage argue that historical case studies “from the deep or recent past alike can point to alternative traditions in governance, collecting and describing the fringe movements of the past that are bearing useful

fruit today.”¹¹ From a design history perspective, their claim chimes exceedingly well with the field’s longstanding engagement with precisely such traditions and movements, the full value of which often has been appreciated only significantly later. These types of historical narratives, they continue, “perform an important role: they are energising of new movements; they give scientists and policy-makers on the ground a sense of where to look for possible futures.”¹² In this manner, by studying past examples of actors, events, and movements working to—explicitly or implicitly—reduce, mitigate, or revert environmental problems, design history can contribute to the forging of more resilient futures.

Design reform movements have long formed a staple of design historical research, and none more so than the arts and crafts movement. These histories tend to be tales of artists and craftsmen who—revolting against the social, cultural, ethical, and aesthetic corollaries of industrialization—moved from the city to the country to set up collective workshops where life and work would be one, producing quality artistic goods inspired by premodern communal practices and the beauty of nature. As such, established design historical narratives of the arts and crafts movement have largely cast its relationship with nature and the environment as one of creative inspiration and social critique rather than in ecological terms.¹³ However, as Anne Massey and Paul Micklethwaite point out, there is much about the arts and crafts movement that could warrant a rereading of its ideological underpinnings in the light of subsequently escalating concerns for design’s more troublesome entanglements with nature and the environment.¹⁴ Key figures wrote at length, and with ardor, about their observations of the defilement of nature caused by industrial manufacture and urbanization. John Ruskin did not limit his castigation of industrial society to its pollution of the environment and defilement of natural beauty by way of its end products; he was equally eager to point out the detrimental effects of modern manufacturing processes in terms of the depletion of natural, material, and human resources alike.

Similarly, William Morris took a broad view of the environmental ramifications of industrial society. This is particularly evident in his fiction writing, nowhere as poignantly as in his 1890 novel *News from Nowhere*, a utopian tale of a future (twenty-first-century) society where all the ills of capitalism have been healed and industrialization has been reversed. Often considered an early example of “eco-fiction,” the book depicts a pastoral paradise where all labor is of love; profit and private property are unknown concepts; and all pollution, from production and products alike, is a thing of the past, as people live in symbiotic harmony with nature. Rivers, fields, and forests are pristine and opulent, yet considered “gardens” for human recreation and

consumption. Industrial cities like Manchester have disappeared without a trace.¹⁵ Morris's aversion to dirty factories, cheap trinkets, speculative capitalism, and other trappings of industrialism is of course well known and also duly noted in design history. Surprisingly, though, design historians have been slow to relate these aspects of arts and crafts ideology explicitly to issues of ecology and environmentalism.

Casting Morris as a proto-environmentalist is not entirely unproblematic, of course. But the "green" strand of arts and crafts ideology has an intriguing legacy also in later episodes in the history of ecological design. In the 1970s, initiatives as different as the Italian Global Tools collective and the British alternative technology movement paid homage to Morris and the arts and crafts movement.¹⁶ Even the broader environmental movement embraced these Victorian design reformers as pioneers and kindred spirits. An evocative example of this infatuation is Nicholas Gould's feature on Morris, chosen as the cover story of the July 1974 issue of *The Ecologist*—the environmental movement's premier periodical. The cover design included both his portrait and one of his characteristic floral patterns. The article claimed that "his voice was one of the first to be raised against the environmental effects of industrialization" and quoted forceful statements by Morris. *The Ecologist* clearly found Morris's environmentalist concerns to be even more pressing in the 1970s than they had been in his own time: "The rape of the English countryside has advanced so far since Morris' day that it comes as a surprise to find how often he echoes our own complaints." Ultimately, though, Morris was to be lauded for practicing what he preached, wrote Gould, finding in his example the proof that it is possible to be a pragmatic idealist.¹⁷

It was of course his proclivity to imagine design otherwise, to envision a path toward a more symbiotic relationship between humans and nature—to *change*—that made Morris such a fascinating figure to environmentalists and counterculturalists of the 1970s. The timeframe covered by this book saw a rising public awareness of ecological principles along with the rapid expansion of the environmental movement's reach and role in public discourse. This coincided with a development in design culture that profoundly questioned design's integration with capitalism, industrial production, and consumer society, resulting in the emergence of related responses such as anti-design, ecodesign, and design activism. A common denominator for both these trajectories is the broader notion of counterculture, which encompassed a broad spectrum of insurgent ideologies and activities, yet was coherent enough to make up a significant social and political force. Historians of technology, environment, and design alike are taking an interest in this countercultural

moment/movement, where established knowledge, structures, and practices were challenged and alternative models were sought.

The caricature of the Californian hippie has become hegemonic in most imaginaries of counterculture, far beyond its US origins. And not without reason. Both the mythical figure and the movement that spawned it have proved enormously influential, also on design historical scholarship. This study is no exception: through travels, networks, and mediations, the makers of Scandinavian ecodesign crossed paths with many familiar figures and collectives emanating from the vibrant communities in the San Francisco Bay Area and beyond. And as we shall see in chapter 4, these transcultural encounters were not always harmonious. The reason was often, as became abundantly clear when countercultural entrepreneur and *Whole Earth Catalog* editor Stewart Brand and the Hog Farm collective descended on the United Nations Conference on the Human Environment in Stockholm in June 1972, that their Scandinavian counterparts were overtly political in their battle to change the world. Young Scandinavian designers eager to make themselves “useful to society” did not buy into the notion that they could save the world one mail-ordered “tool” or makeshift tin-can radio at a time; they believed in grassroots activism, collective responsibility, and political engagement. Their political radicalism reached a zenith at “People and the Environment II” (Menneske og miljø II), the final seminar organized by the short-lived Scandinavian Design Students’ Organization (SDO) at the School of Arts and Crafts in Copenhagen in the summer of 1969, where Victor Papanek—designer of the infamous tin-can radio mentioned above—watched to his great frustration as the organization he had followed closely since its inception two years prior “imploded under the yoke of its own radical design activism.”¹⁸ Graphic designer Terje Roalkvam and a delegation from Oslo’s National College of Applied Art and Craft drove down to Copenhagen to attend the seminar in a van adorned with a billboard designed by Per Kleiva proclaiming that “The revolution has started, come along!”¹⁹ Two years later, Kleiva—a driving force in the radical artist collective GRAS (*grass*)—produced the serial print *American Butterflies* (figure 0.1), a work that castigated the

0.1

Per Kleiva, *American Butterflies*, 1971.
© Per Kleiva/BONO 2021. Photo courtesy
of the National Museum of Art, Architecture,
and Design.



US ecocide in Vietnam just as vehemently as Sweden's Prime Minister Olof Palme would do from the podium at the UN conference in Stockholm the following year. And five years after the revolution road trip to Copenhagen, Roalkvam designed the *Oil or Fish?* poster depicted in figure 0.3.

Despite Brand's lukewarm Scandinavian welcome, the *Whole Earth Catalog* and what it represented remains a significant reference point. Pointing again to the centrality of change, Sadler observes that "the *Whole Earth Catalog* was one of those rare instances of design's operating environment rendered (somewhat) explicit, allowing its users to debate what in our relationship to nature can and cannot be changed."²⁰ In its very essence, as revealed by the *Catalog's* subtitle, the project was about navigating and managing that change by giving people "access to tools"—both intellectual and practical. Andrew Kirk has shown how it conceived and promulgated a brand of environmentalism that was less about conservation of nature, anti-industrialism, or political lobbying, and more about harnessing technology for creative, subversive, sustainable use and living.²¹ This type of hands-on attitude can be seen as a variety of design activism in its own right, but Kirk goes further, showing how Brand and his associates were instrumental in propagating the alternative technology movement in the US, as well as in formulating what would soon be known as ecological design. What makes the counterculture of the late 1960s and 1970s, in all its locales and permutations, such fruitful material for design historians looking for an objective—a societal purpose—for their work is the strong expression of discontent, the palpable sense of urgency, and the remarkable capacity for imagining and experimenting with alternative modes of thinking, acting, and organizing. At the risk of stating the obvious, these ideas and values have not diminished in relevance. Studying their history and how they materialized in activist practices of design might serve to revitalize them at a time witnessing the emergence of a new design culture of discontent.

A QUESTION OF RESOURCES

Design is garbage. Or, perhaps more precisely, design generates garbage—inconceivable amounts of garbage. It might take a while before your heirloom silverware or your treasured easy chair ends up on the landfill, but they will eventually. "Waste is every object, plus time."²² The real impact, however, comes from the vast majority of objects, from plastic cups to cars, which are discarded and replaced at



such a pace and in such quantities that the environmental degradation caused by their production, distribution, consumption, and disposal can only be marginally mitigated by shifting to more benign materials and processes (figure 0.2). As we shall see, especially in chapter 1, these problems began to occupy design professionals and environmentalists a great deal from the mid-1960s on, and continue to do so today. Across all scales and levels of abstraction, design is implicit in the creation of waste. From the nuclear or coal-fired power plants that feed our endless appetite for energy (see chapter 6), via the economic systems and infrastructures that make

0.2

Landfill operation at Jamaica Bay, New York. Photograph by Arthur Tress in May 1973 as part of DOCUMERICA: The Environmental Protection Agency's Program to Photographically Document Subjects of Environmental Concern. U.S. National Archives and Records Administration (NARA record: 1100153).

your new hairbrush cross half the world on an oil-burning ship to reach you, to the communication platforms that mediate our desire for ever more things, design is involved every step of the way. But even though, in the words of Ben Highmore, “it is hard not to see global warming and climate change as a consequence of a variety of design processes, design values and design products;”²³ these problematic aspects of design are rarely made the object of design history.

If design historians have been reluctant to treat design as garbage, this corollary to the usual gospel of design as a beneficial force underpins some interesting developments in the realm of design theory and methodology. But true to the problem-solving ethos of the profession, the focus has largely been to develop models and methods for how design can contribute to leaner production and cleaner consumption. The best-known exponent for this type of thinking, the Cradle to Cradle (C2C) framework developed—and trademarked—by William McDonough and Michael Braungart, is a prime example of the positivistic approach to design as a technofix capable of solving environmental problems caused by conventional manufacturing. Waste and wastefulness can be designed away, they have argued ever since the framework’s inception as the Hannover Principles, drafted in 1991: “Eliminate the concept of waste’—not reduce, minimize, or avoid waste, as environmentalists were then propounding, but eliminate the very concept, by design.”²⁴ According to this logic, in which the waste of one product or process becomes the “food” of another, there are, at least in theory, no limits to growth. One can easily understand the appeal this bright outlook has to industry, especially after C2C also became a certification system providing commercial actors with an economic incentive to distinguish products as “eco-friendly.” Recently, however, C2C has been criticized, e.g., for its blind faith in growth and for ignoring key aspects of products’ environmental impact, especially during use and transportation.²⁵

If there are good reasons for the (utopian) attempts at eliminating waste from (and by) design practice, there are equally good reasons for *not* eliminating waste from design history. First, histories of “dirty design” are needed to balance out the bias toward an understanding of design as intrinsically “good” in most current scholarship.²⁶ To fully grasp the environmental impact of design—past, present, and future—requires us to acknowledge that the history of design is, perhaps more than anything, a history of waste and wastefulness, of unsustainability.²⁷ Second, rethinking the history of design in this way will strengthen the knowledge base for the type of redirective initiatives exemplified by C2C, allowing such necessarily flawed attempts to “fail better” in the future. From R. Buckminster Fuller’s

“comprehensive design science” via the Brundtland Report’s definition of “sustainable development” to today’s ecomodernism, the belief that “scientific and technological progress will entail environmental benefits through increased resource efficiency” has paired environmental concerns with an emphasis on design for efficient use of resources.²⁸ Whether waste is considered residual, something unwanted to be reduced or eliminated through clever designs and manufacturing processes, or something of potential intrinsic value that can be reused, repurposed, or recycled, the moral economy of waste constitutes an important, albeit underexplored, topic in the history of design.

The broader public awareness of basic ecological principles and the onset of the environmental movement in the 1960s and 1970s led to a significant change in the perception of waste and garbage, at least in the affluent parts of the world, with large-scale investments in increased and improved recycling systems and containment technologies.²⁹ Granted, even the most advanced and successful recycling systems today are nowhere near closing the loop of our manufacturing and consumption infrastructures—but that does not mean the efforts are in vain. Although comprehensive, governmentally controlled recycling systems explicitly motivated by environmental concerns are a relatively recent phenomenon, practices of recycling, repurposing, and reuse of course have a much longer history. Recent scholarship in design history and related fields has begun documenting these practices, the relevance of which to contemporary concerns over resource depletion should be evident to any student of design culture.

Practices of waste reduction through reuse and repurposing that are bottom-up rather than top-down in nature are readily seen as having a creative streak, and have thus attracted the interest of scholars of design culture. In such scholarship, these activities become acts of design in themselves, and are often interpreted, explicitly or implicitly, as examples of *bricolage*. David Lucsko shows how even in the most emblematic of all manifestations of rampant consumerism—US car culture—there are strong forces and alternative practices running counter to the throwaway mentality with which it is normally associated. “For if nothing else, gearhead activities like customization, street rodding, and restoration clearly suggest that bricolage, which Douglas Harper, Susan Strasser, and others have lamented is a dying art, is and has been alive and well within the automotive realm.”³⁰ The similar, remarkable creative energy and resource economy that goes into securing old US cars a new lease on life in postrevolutionary Cuba was the focus on Viviana Narotzky’s study of this extreme case of make-do-and-mend design culture: “The American

cacharros require endless tinkering, are held together with chicken wire and mechanical ingenuity. These monumental objects never die in Cuba: they become part of an endless life cycle, a vortex of use, re-use, transformation, appropriation and reconstruction.”³¹ As these two cases demonstrate, there is a rich and diverse history of product afterlives that is of great value in exploring how use and users matter in constructing understandings and practices of waste(-fullness) and resource (-fullness) in design culture.

As crucial as the practices of use and users are in understanding the design cultures of waste, recycling, and reuse, the latter cannot be fully grasped without also considering their structural traits, which often result from top-down initiatives. The more extreme cases of such governmentally enforced waste reduction and control over resource allocation can be found in wartime manufacturing, as emergency situations justify emergency measures—even in societies normally characterized by a high degree of liberal market dynamics and individual freedom. Perhaps most famously and comprehensively in modern history, World War II saw the proliferation of elaborate systems for rationing of materials and goods as well as direct state intervention in design and production. Since the demand for many, if not most, materials was virtually endless in manufacturing for the war effort, efficient and intelligent use of resources was crucial. This speaks to the centrality of design in these endeavors, but also highlights the extreme attention to frugality in use and post-use—particularly in the form of salvage and recycling of materials of high strategic value for the munitions and supply industry.

In the field of design history, the most well-known example of such governmentally imposed restrictions on resource allocation and design is the Utility Scheme introduced in the UK by the Board of Trade from 1941/1942 regulating the output of “civilian” industries such as clothing, furniture, and ceramics. The objective of the scheme was to secure rational production and fair distribution of essential consumer products and durables without compromising the munitions industry and while preventing profiteering. This was to be achieved “using as little power, labour and material as possible” by imposing strict regulations on which materials and products were to be used and even fixing profit margins and retail prices.³² Although in the design history literature on the Utility Scheme the focus has often been on how the restrictions put on design resulted in pared-back, unornamented products interpreted as modernism-by-decree, strong arguments have also been made that this episode may hold lessons for the environment today as well. Judy Attfield argues that while “the distinctiveness of the historical period in which the

Utility Scheme arose is quite specific . . . there are nevertheless certain broad parallels that can be drawn with current concerns for an ethical design practice.” More specifically, she continues, “the economic management, use and consumption of materials has echoes in current global concerns over the depletion of natural resources expressed in a growing ‘green’ consciousness.”³³ Anne Massey and Paul Micklethwaite emphasize the scheme’s strict regulation of resources and its localized nature of both production and consumption as potential lessons for contemporary design challenges: “This model of production and consumption now appeals to us in terms of its efficient materials cycle and low-energy manufacture and distribution.”³⁴

Despite its renewed relevance, it is important to acknowledge that the Utility Scheme is no panacea of sustainable design. Its legitimacy rested entirely on the command economy of wartime production and reconstruction shortages, and not much love was lost on Utility designs by British consumers or manufacturers. In peacetime, this level of state control over design and production is only paralleled in socialist planned economies. Perhaps the most striking example is the East German Central Institute of Design, which, when subsumed under the German Office for Measurement and Product Testing in 1965, effectively was given veto power over the output of the nation’s manufacturing industry. From 1973, its control became total, as all factories now were required by law to let the Central Institute’s staff designers do the actual industrial design work for them, rather than simply submit their proposals for approval.³⁵ Although the German Democratic Republic design community at the time engaged in an elaborate debate over product durability versus planned obsolescence,³⁶ there is little evidence to suggest that ecological sustainability was a prominent concern in the Central Institute’s dictatorial design work. Nevertheless, such totalitarian scenarios could of course be conceived as potentially providing a more efficient strategy for a rapid and wholesale transition to sustainable design practices than do insular practices of profit-driven design in a free market economy—but its political viability seems limited in the current age of neoliberalism, and its undemocratic disposition is decidedly unsavory.

Whether seen through the lens of bottom-up cultural practices or top-down political structures, material ecologies have preoccupied historians of design for some time now. Increasingly, these studies are also focusing specifically on the ecological performance and impact of the materials which make up our designed world, including plastics, aluminum, steel, and wood.³⁷ Such accounts of the waste and want of materials are of great value in forging a type of design history that

improves our understanding of how design practice and design culture shape the use of resources and thus how this can be reshaped for a more sustainable future.

A QUESTION OF JUSTICE

Design divides; design unites. Both practices and studies of design are therefore deeply entangled with discourses of justice. The notion of justice in the context of design culture can of course be explored along a range of vectors, including gender, sexuality, race, class, and ability—as well as what is broadly conceived of as global justice and environmental justice. All these entanglements of design and justice are distinctly diachronic, in that they have both historical and contemporary significance. Some of these discourses have become relatively mature topics in design history literature (gender, sexuality), some are currently receiving greater attention (class/labor, ability, race), whereas others remain underexplored (global justice, environmental justice). It is predominantly these last that weave through the current study.

Hailing from the realms of philosophy and policy, the notion of global justice throws modern design culture into sharp relief. Any conventional understanding of design and its histories conjures up strong connotations of enlightenment epistemology, a colonial (and later postcolonial) world order, industrialized production systems, capitalist economies, consumer societies, etc. Design has been proven integral to imperialist modes of government,³⁸ portrayed as industry's make-up department,³⁹ and cast as one of the most harmful professions in the world.⁴⁰ It has even been suggested that the very term “design” itself is too mired in these historical and cultural connotations to serve as an analytical category beyond the linguistic culture of its origin, and that it therefore should be replaced with other, local/indigenous words for “prefigurative practices.”⁴¹ Heeding this call would quickly become deeply impractical, however. Learning from anthropology, where translanguistic discourse is commonplace, we can instead acknowledge that the “definition is not isomorphic with the practice.”⁴² In a similar vein, Dipesh Chakrabarty has argued that “European thought is at once both indispensable and inadequate” in making sense of coloniality and its legacy.⁴³ Rather than debunking design, then, a more viable strategy for conceptually decolonizing design is to update, refine, and expand our understanding and use of the term to embrace a broader and less prejudiced range of practices. But even so, no terminological exercises can change the fact that

design is complicit in the creation and maintenance of a world where the distribution of both wealth and health is disturbingly lopsided. What, then, are designers and design scholars across the globe supposed to do when faced with structural inequity and injustice of this magnitude? The sheer scope of the challenge could make it tempting to fall back on Tomás Maldonado's position that design's capacity to bring about substantial change toward a more just and ecologically sound society is severely curtailed by political structures, and that its true potential thus can only be realized following a revolution.⁴⁴ But that somehow seems too fatalist. How can individuals and collectives address structural unsustainability? Studying its history is no panacea, but it does offer new insight and it can open paths for new initiatives: "Historical knowledge can feed back into actual practice, strengthen the potential for positive socio-environmental impact, inform policy and more generally foster plurality of voice and agency."⁴⁵

Issues of global justice and environmental justice are intrinsically connected by the specter of colonialism. Recently, scholars such as Arturo Escobar have demonstrated just how critical design is in addressing both sides of the equation: "The contemporary crisis is the result of deeply entrenched ways of being, knowing, and doing. To reclaim design for other world-making purposes requires creating a new, effective awareness of design's embeddedness in this history."⁴⁶ This could serve as a mantra for the book as a whole—but it seems particularly pertinent in the context of design for development, a topic explored at length in chapter 3. Globalization and environmentalism intersect also in the discussions of ecoactivism in chapter 4 and ecophilosophy in chapter 5, thus providing additional evidence that the long and winding cultural history of nature constitutes a rich subject for design history. Drawing on Bruno Latour's take on the foundations of the modern world order,⁴⁷ Marisol de la Cadena observes that "notwithstanding the differences that sparked liberalism and socialism in the nineteenth century, both groups (in all their variants) continue to converge on the ontological distinction between humanity and nature," which is why it remains so challenging for "moderns" to accommodate or even conceptualize "earth-beings" in their/our ontologies.⁴⁸ This might go some way in explaining why there is such a strong correlation between global injustice and environmental injustice, and why ecological design must be in conversation with the quest to decolonize design. As Rob Nixon has pointed out, "We may all be in the Anthropocene but we're not all in it in the same way."⁴⁹ And, rather disturbingly, environmental injustice is to a large extent a product of design. Extreme weather events caused by climate change disproportionately affect communities relegated to poorly designed

housing in precarious and poorly planned neighborhoods. The health hazards involved in recycling the mountains of discarded electronic products are largely borne by people far removed from their designers and consumers. The war machine's designed destruction of ecosystems and communities alike tends to strike far from the warlords' own abodes. The list goes on.

Environmental justice also has a strong temporal, even futural, dimension. And so does design. Past and present acts of design condition the future. Design is, in Tony Fry's words, a "futuring" and "defuturing" activity—it opens up and closes off potential futures by way of its ecological consequences.⁵⁰ This, of course, is the design response to the Brundtland report's warning that "the results of the present profligacy are rapidly closing the options for future generations."⁵¹ When considering the defuturing properties of design in an environmental justice perspective, it is hard to think of a more salient point of convergence than the world's addiction to oil and the petrocultures developed in its wake. From a Norwegian outlook, this issue is particularly vexing. The nation's current and future wealth and welfare are built on its vast oil reserves, as the government has accumulated its share of the revenues in what has grown to become one of the world's largest investment funds currently worth about NOK 11 trillion (USD 1.2 trillion) and owning 1.5 percent of all shares in the world's listed companies. When the country at the same time consistently has cultivated an image as a global leader in environmental protection and sustainable development, the paradox is not lost on anyone. This discrepancy—if not outright hypocrisy—recently reached a symbolic crescendo when the environmentalist organizations Young Friends of the Earth Norway (Natur og ungdom) and Greenpeace sued the government for violation of the Constitution's §112, which states that citizens *now and in the future* are entitled to a clean and healthy environment, following the government's 2016 granting of new oil drilling permits in the ecologically precarious Arctic Ocean. The carefully orchestrated and highly media-tized Climate Lawsuit, as it was dubbed, went all the way to the Supreme Court, which in December 2020 rejected the case, ruling that that the constitutional "right to a clean environment did not bar the government from drilling for offshore oil, and that Norway did not legally carry the responsibility for emissions stemming from oil it has exported."⁵² Oil has fueled, fed, and furnished design culture for well over a century, but concerns over its ecological ramifications caught fire following the rise of the modern environmental movement. Following the discovery of oil on the Norwegian continental shelf on December 23, 1969, and the opening of the first field in 1971, it did not take long before ambivalences appeared and conflict lines

formed. The international oil crisis of 1973 only carried fuel to the fire, of course. On the occasion of the first Offshore North Sea (ONS) meeting, a major event for the booming oil industry, in Stavanger in September 1974, Young Friends of the Earth Norway and other environmentalist organizations set up a parallel event called Alternative Oil Debate highlighting the problematic aspects of the oil industry. Reflecting the widespread fear that offshore oil extraction would jeopardize marine life, one of the campaign's main slogans was the characteristically confrontational "Oil or Fish?"⁵³ Terje Roalkvam, who, as mentioned above, had attended the 1969 seminar on design and the environment in Copenhagen, designed a correspondingly binary black-and-white poster for this campaign (figure 0.3).

Roalkvam's poster also serves as a poignant reminder that environmental justice is not limited to human subjects, but pertains also to the more-than-human realm and thus to the burning issue of biodiversity. As I will show in chapter 5, this topic was a key concern for the deep ecology movement long before it became a household term. Again, the Arctic provides a useful setting for thinking about design's impact on nonhuman life as well as on nonbiotic nature. The long history of commercial activity and resource exploitation in volatile Arctic landscapes has upset both biotic nature, geological formations, as well as human settlements, and climate change is rapidly transforming the territories and ecological systems of the far north, rendering their fate uncertain in the face of future speculation.⁵⁴

Fortunately, though, design and environmental justice do not converge *solely* on doom and gloom. Now and again, it is useful to remind ourselves that even if "we've committed some very stupid acts over the course of our history, . . . our stupidity isn't inevitable," as Margaret Atwood puts it. She then goes on to list "three smart things we've managed to do":

First, despite all those fallout shelters built in suburban backyards during the Cold War, we haven't yet blown ourselves up with nuclear bombs. Second, thanks to Rachel Carson's groundbreaking book on pesticides, *Silent Spring*, not all the birds were killed by DDT in the '50s and '60s. And, third, we managed to stop the lethal hole in the protective ozone layer that was being caused by the chlorofluorocarbons in refrigerants and spray cans, thus keeping ourselves from being radiated to death. As we head towards the third decade of the 21st century, it's hopeful to bear in mind that we don't always act in our own worst interests.⁵⁵

What I have tried to show with the examples outlined above is that design history is, or at least can be, a history of both sustainment and unsustainment, and that

Olje eller fisk?



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ALTERNATIV OLJEDEBATT

AKSJON KYST-NORGE
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Oslo 1

7208 ROLIVM-74

this type of knowledge can in fact provide important lessons for the environment. This is not to argue for an instrumentalist understanding of design history. Rather, it is a reminder of the importance of “staying with the trouble,” as Donna Haraway insists, of living in the present “not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures,” but as an ongoing struggle “in myriad unfinished configurations of places, times, matters, meanings.”⁵⁶ If the history of design has taught us anything, it is that through present practice the future is in constant dialogue with the past. As David Orr explains, “we have a heritage of ecological design intelligence available to us if we are willing to draw on it.”⁵⁷ What follows can hopefully serve as a guide to some of that heritage.

HEXAHEDRAL HISTORY

The book is structured thematically rather than chronologically, with each chapter discussing different but interconnected topics and arenas of key importance for the increasing entanglement of ecology and design in this period: consumerism, systems thinking, international development, activism, ecophilosophy, and alternative energy. Taken together, these discussions produce an account that elucidates the underappreciated role that design played in the rise of modern environmentalism and, conversely, the importance of ecological thinking in the profound transformation of design culture in and beyond Scandinavia as the modernist faith in progress and prosperity dwindled. The six chapters that follow are intended as facets of a historical space. As such, they provide different but intersecting viewpoints, angles, and approaches to the multifarious and entangled historical development that is the making of ecological design in Scandinavia. In the abstract, there is of course no limit to the number of facets of the polyhedral prism of historical analysis—but in a world of finite resources and practical constraints, I will posit that this hexahedral model provides a sufficiently rich and nuanced narrative of a little-known

0.3

Oil or Fish? Poster designed by Terje Roalkvam for a campaign by Young Friends of the Earth Norway (Natur og ungdom) in 1974. Photo courtesy of the National Museum of Art, Architecture, and Design.

history. So even if there surely are more than six sides to the story, those presented here should at the very least outline some complementary perspectives for an initial foray into the topic at hand.

The first chapter is set in the arena where most people engage with both design culture and environmental concerns: the sphere of everyday consumption. Sustained and substantial economic growth converged with decades of design reform campaigns to create the contours of a consumer society which, in the course of the 1960s, would shift from promising to problematic. In Sweden, this development is hallmarked by the so-called throwawayism debate at the outset of the decade, in which design critics battled over the merits of disposability versus durability, and by the subsequent rise of the environmental movement spurred by public intellectuals bridging science, politics, activism, and design. This chapter discusses how design professionals sought to negotiate the increasing ambivalence and unease concerning the social and environmental cost of consumption. Running through this discourse are concerns over how to grapple with issues of waste, value, resources, and environmental ethics in a predominantly commercial design culture. Conversely, environmentalists saw both problems and potential in design's ecological entanglements, arguing for a societal shift toward more sustainable modes of production and more conscientious modes of consumption.

The second chapter shifts the attention from the sphere of consumption to the realm of production, taking a close look at how design professionals in ecology—and especially its emphasis on systems thinking—found inspiration to critically reassess and contextualize their own practice and its environmental impact. The growing acknowledgment in the 1960s that the serenity and purity of nature hitherto taken for granted now was under threat, and that design and designers were implicit in this environmental destruction, significantly changed how nature was perceived and invoked in design discourse. This chapter examines some of the earliest Scandinavian efforts to bring an ecologically inspired mode of systems thinking into dialogue with design. Starting from the writings of the first architects, landscape architects, and industrial designers attempting to reform design practice and education according to ecological principles, the chapter moves on to examine the morality of materials in the marked shift from teak to pine as the dominant material in Norwegian furniture design. As a whole, this journey through widespread and dense Norwegian wood(s) aims to show how ecological design grew from many and different roots, and that one of its main characteristics is the dual attention to the local and the global.

Placing global connections front and center, chapter 3 examines the intersection of ecological design and the new paradigm for developmental aid emerging in this period. Design for development was by no means a Scandinavian invention, but, as this chapter shows, the phenomenon has a long history in the region, with a close but little-known relation to ecological design. The case of the Danish designer Kristian Vedel, who in 1968 was deployed to Kenya by the Danish International Development Agency (DANIDA) to develop Africa's very first industrial design program at the University of Nairobi, is here mobilized to probe the paradox that has haunted design for development ever since, and which forever binds it to ecological design: how to design for the improvement of human living conditions in a manner that respects the communities, societies, cultures, economies, environments, and ecosystems intervened in. Following a brief outline of the concept of design for development and of Scandinavian development aid policies, the chapter traces Vedel's professional formation with an emphasis on an extensive study trip to Central America in 1965 which greatly influenced his thinking on the social and ecological aspects of design. The chapter then details his work at the University of Nairobi and its aftermath, before zooming out to place Vedel's ideas and efforts in the broader international discourse on design for development.

If Scandinavian design thus ventured out into the world to engage with global environmental problems, the reverse movement soon followed. Chapter 4 explores design interventions at, and in the wake of, the UN Conference on the Human Environment, which for a hectic week in June 1972 brought the world's political leaders, high-level bureaucrats, environmental scientists, NGOs, activists, and media to Stockholm. Sidestepping the official proceedings of the summit, attention is instead aimed at the environmental-political activism of design students and the design practices of the broader activist movements and events surrounding the conference. The chapter begins by exploring how the UN conference and the associated alternative programs prompted and related to the students' activism. It then delves into one of the most emblematic outlets of this activism, namely the use of graphic design as a practice of public protest. Whereas the chapter thus initially revolves around the notion of demonstration understood as public protest, the latter half of the chapter is concerned with another, but closely related, understanding of demonstration as a practical exhibition and explanation of how something works. By taking a closer look at two exhibitions on so-called "alternative technology" staged in Stockholm in 1972 and 1976, the chapter explores how activists sought to

demonstrate key principles of their approach to ecological design and the significance of design to the environmental movement.

Many of the key themes discussed in this book, including degrowth, environmental activism, global justice, systems thinking, etc., are rooted in the new ecophilosophy emerging at the time. Chapter 5 demonstrates the symbiotic relationship between philosophy and design developed around such concepts. From the late 1960s on, a group of Norwegian philosophers, who were also avid mountain climbers, developed a distinctive mode of thinking about the interconnectedness of human and nonhuman nature and of material and nonmaterial culture. Prominent amongst these was Arne Næss, who coined the concepts of “deep ecology” and “ecosophy.” Notably, this conceptual development took place in close dialogue with fellow philosophers, climbers, and countercultural ecodesign initiatives in Næss’s beloved California. Emerging as it did at a time when the environmental movement had awoken designers, critics, and consumers alike to the ecological entanglements of design, it is easy to understand the appeal and relevance many found in the concept of deep ecology. Conversely, Næss’s simple cabin life, his passionate and advanced mountaineering, and his championing of “clean” climbing technologies were part and parcel of his ecophilosophy. At the heart of this mutual movement toward an ecophilosophy of design is a deep fascination with tools, shared by both philosophers and designers.

The sixth and final chapter discusses alternative/renewable energy technologies as an essential element in the emergence of ecological design. The early history of Denmark’s pioneering windmill industry provides a highly instructive case study to better understand how the discourse on ecological design is not the sole preserve of anticapitalist ideologies, but also comprises commercial considerations and industrial applications. Drawing on insights both from business history and the history of technology, this account traces the development of this considerable feat of engineering design and energy policy from technical experiments, via countercultural initiatives, to commercial enterprise. Wind power now covers half of Denmark’s electricity consumption, and the nation’s windmill industry is the undisputed world leader with the lion’s share of the international market. From the perspective of ecological design, then, windmills are a far more substantial contribution to Danish modern than is fine furniture. As windmills transitioned from a technical curiosity to a cornerstone of the national economy and energy policy, they have also become cultural heritage and design icons.

The book closes with a coda that brings together many of the major themes and trajectories running through it. Aspen came to Scandinavia in the final week of September 1979. In the history of design, the name of the Colorado town has come to stand for the series of conferences it hosted from 1951 to 2004, the International Design Conference in Aspen (IDCA). Although both the town and the conference are quite place-specific, the latter actually did travel on two occasions—to London in 1978 and to Oslo in 1979. The IDCA is perhaps most famous for the countercultural rebellion at the 1970 conference, *Environment by Design*—and the ensuing decade is noted for its political activism. But when the kingpins of the US design world descended on Oslo at the end of the decade, the momentum of both counterculture and political activism had waned, and the dynamics of US-Scandinavian design relations were at a turning point. So, when Aspen came to Scandinavia in 1979, it was part of an effort at realigning interests along vectors of professionalism rather than activism, of problem-solving rather than revolution. The polished, corporate professionalism displayed by the US delegation provoked suspicion and criticism in their Scandinavian colleagues. Conversely, the nonconsumerist and socially responsible approach to design that characterized the bulk of the Scandinavian projects presented at the conference did not seem to resonate well with IDCA dignitaries deeply connected in corporate America.

BIBLIOGRAPHY

- Abdulla, Danah. "The Challenges and Opportunities of Introducing Design Culture in Jordan." In *Design Culture: Objects and Approaches*, ed. Guy Julier, Mads Nygaard Folkmann, Niels Peter Skou, Hans-Christian Jensen, and Anders V. Munch, 214–226. London: Bloomsbury Academic, 2019.
- Agnsäter, Håkan. *Affisclerna från den svenska alternativrörelsen 1967–1979*. Stockholm: Ordalaget Bokförlag, 2013.
- Åkerman, Brita. *Makt åt konsumenten*. Stockholm: Rabén & Sjögren, 1968.
- Allen, Peter. "The End of Modernism? People's Park, Urban Renewal, and Community Design." *Journal of the Society of Architectural Historians* 70, no. 3 (2011): 354–374.
- Amble, Erling, Botolv Helleland, Karl G. Høyer, Sigmund Kvaløy, Magne Lindholm, Dag Norling, and Arne Vinje. *Dette bør du vite om EF: Økopolitikk eller EF? Oslo: Pax, 1972*.
- Ambole, Amollo. "Rethinking Design Making and Design Thinking in Africa." *Design and Culture* 12, no. 3 (2020): 331–350.
- Amir, Sulfikar. "Rethinking Design Policy in the Third World." *Design Issues* 20, no. 4 (2004): 68–75.
- Anker, Peder. *The Power of the Periphery: How Norway Became an Environmental Pioneer for the World*. Cambridge: Cambridge University Press, 2020.
- Anker, Peder. *From Bauhaus to Ecohouse: A History of Ecological Design*. Baton Rouge: Louisiana State University Press, 2010.
- Anker, Peder. "Deep Ecology in Bucharest." *The Trumpeter* 24, no. 1 (2008): 56–57.
- Anker, Peder. "Science as a Vacation: A History of Ecology in Norway." *History of Science* 45, no. 4 (2007): 463.
- Anker, Peder. "Buckminster Fuller as Captain of Spaceship Earth." *Minerva* 45, no. 4 (2007): 426.
- Anker, Peder. "The Philosopher's Cabin and the Household of Nature." *Ethics, Place and Environment* 6, no. 2 (2003): 138.
- Anker, Peder, and Nina Witoszek. "The Dream of the Biocentric Community and the Structure of Utopias." *Worldviews: Global Religions, Culture, and Ecology* 2, no. 3 (1998): 239–256.
- Arler, Finn. "Renewables." In *Ethics in Danish Energy Policy*, ed. Finn Arler, Mogens Rüdiger, Karl Sperling, Kristian Høyer Toft, and Bo Poulsen, 93–121. London: Routledge, 2020.
- Armiero, Marco, and Lise Sedrez. "Introduction." In *A History of Environmentalism: Local Struggles, Global Histories*, ed. Marco Armiero and Lise Sedrez, 1–20. London: Bloomsbury Academic, 2014.

- Arrhenius, Thordis. "Preservation and Protest: Counterculture and Heritage in 1970s Sweden." *Future Anterior* 7, no. 2 (2010): 106–123.
- Attfield, Judy. "Introduction: Utility Reassessed." In *Utility Reassessed: The Role of Ethics in the Practice of Design*, ed. Judy Attfield, 1–10. Manchester: Manchester University Press, 1999.
- Bach, Christian Friis, Thorsten Borring Olesen, Sune Kaur-Pedersen, and Jan Pedersen. *Idealer og realiteter: Dansk udviklingspolitikens historie 1945–2005*. Copenhagen: Gyldendal, 2008.
- Balaram, Singanapalli. "Design in India: The Importance of the Ahmedabad Declaration." *Design Issues* 25, no. 4 (2009): 54–79.
- Balasubrahmanyam, Suchitra. "Imagining the Indian Nation: The Design of Gandhi's Dandi March and Nehru's Republic Day Parade." In *Designing Worlds: National Design Histories in an Age of Globalization*, ed. Kjetil Fallan and Grace Lees-Maffei, 108–124. New York: Berghahn Books, 2016.
- Baldwin, J. "One Highly-Evolved Toolbox." In *Soft-Tech: A Co-Evolution Book*, ed. J. Baldwin and Stewart Brand, 8–17. New York/Menlo Park, CA: Penguin/Portola Institute, 1978.
- Banham, Reyner. "Is There a Substitute for Wood Grain Plastic?" In *Design and Aesthetics in Wood*, ed. Eric A. Anderson and George F. Earle, 4–11. Albany: SUNY Press, 1972.
- Banu, Lisa S. "Defining the Design Deficit in Bangladesh." *Journal of Design History* 22, no. 4 (2009): 309–323.
- Baudrillard, Jean. "The Environmental Witch-Hunt: Statement by the French Group, 1970." In *The Aspen Papers: Twenty Years of Design Theory from the International Design Conference in Aspen*, ed. Reyner Banham, 208–210. New York: Praeger, 1974.
- Belgrad, Daniel. *The Culture of Feedback: Ecological Thinking in Seventies America*. Chicago: University of Chicago Press, 2019.
- Berg, Liv, and Krisno Nimpuno. *Recycling: Från skräp till nytta*. Stockholm/Alingsås: L. Berg, 1972.
- Bernsen, Jens, Tapio Periäinen, Stefán Snæbjörnsson, Ulla Tarras-Wahlberg Bøe, and Lennart Lindkvist. "A Scandinavian Design Council Manifesto on Nature, Ecology, Human Needs and Development for the Future." In *Scandinavian Design 1990–towards 2000: The Challenge of Internationalization Demands and Needs for a New Millennium*, ed. Ulla Tarras-Wahlberg Bøe, 63. Oslo: Scandinavian Design Council, 1990.
- Beuse, Ejvin, Jørgen Boldt, Preben Maegaard, Niels I. Meyer, Jens Windeleff, and Iben Østergaard, eds. *Vedvarende Energi i Danmark: En krønike om 25 opvækstår 1975–2000*. Copenhagen: OVEs Forlag, 2000.
- Bicknell, Julian, and Liz McQuiston, eds. *Design for Need: The Social Contribution of Design*. Oxford: Pergamon Press, 1977.
- Bijker, Wiebe E. *Of Bicycles, Bakelites, and Bulbs: Toward a Theory of Sociotechnical Change*. Cambridge, MA: MIT Press, 1995.
- Bjørkdahl, Kristian. "Dommedagsdokumentet: Limits to Growth og verdens grafiske undergang." In *Kollaps: På randen av fremtiden*, ed. Peter Bjerregaard and Kyrre Kverndokk, 163–180. Oslo: Dreyer, 2018.

- Bøe, Alf. *Den norske Designpris de syv første år/The Norwegian Design Award its first seven years*. Oslo: Norsk Designcentrum, 1969.
- Bøe, Alf, ed. *Norsk/Norwegian Industrial Design*. Oslo: Kunstindustrimuseet i Oslo/Johan Grundt Tanum forlag, 1963.
- Borgström, Georg. *Too Many: A Biological Overview of the Earth's Limitations*. New York: Macmillan, 1969.
- Borgström, Georg. *The Hungry Planet: The Modern World at the Edge of Famine*. New York: Macmillan, 1965.
- Bornold, Salka Hallström. *Det är rätt att göra uppror: Mah-Jong 1966–1977*. Stockholm: Modernista, 2003.
- Brunnström, Lasse. *Svensk designhistoria*. Stockholm: Raster, 2010.
- Brunnström, Lasse. "Hjälpmiddel för ett säkrare och jämlikare liv." In *Svensk industridesign: En 1900-talshistoria*, ed. Lasse Brunnström, 297–323. Stockholm: Prisma, 2004.
- Busbea, Larry. *The Responsive Environment: Design, Aesthetics, and the Human in the 1970s*. Minneapolis: University of Minnesota Press, 2020.
- Busbea, Larry. "Paolo Soleri and the Aesthetics of Irreversibility." *Journal of Architecture* 18, no. 6 (2013): 788.
- Cadena, Marisol de la. *Earth Beings: Ecologies of Practice across Andean Worlds*. Durham, NC: Duke University Press, 2015.
- Cadena, Marisol de la, and Mario Blaser, eds. *A World of Many Worlds*. Durham, NC: Duke University Press, 2018.
- Castillo, Greg. "Counterculture Terroir: California's Hippie Enterprise Zone." In *Hippie Modernism: The Struggle for Utopia*, ed. Andrew Blauvelt, 87–101. Minneapolis: Walker Art Center, 2015.
- Chakrabarty, Dipesh. *Provincializing Europe: Postcolonial Thought and Historical Difference*. Princeton, NJ: Princeton University Press, 2000.
- Chatterjee, Ashoke. "Design in India: The Experience of Transition." *Design Issues* 21, no. 4 (2005): 8–9.
- Christensen, Benny. "History of Danish Wind Power." In *The Rise of Modern Wind Energy: Wind Power for the World*, ed. Preben Maegaard, Anna Krenz, and Wolfgang Palz, 33–92. Boca Raton, FL: CRC Press, 2013.
- Chu, Hsiao-Yun. "Paper Mausoleum: The Archive of R. Buckminster Fuller." In *New Views on R. Buckminster Fuller*, ed. Hsiao-Yun Chu and Roberto G. Trujillo, 6–22. Stanford: Stanford University Press, 2009.
- Clarke, Alison J. *Victor Papanek: Designer for the Real World*. Cambridge, MA: MIT Press, 2021.
- Clarke, Alison J. "Victor J. Papanek: Agent Provocateur of Design." In *Victor Papanek: The Politics of Design*, ed. Mateo Kries, Amelie Klein, and Alison J. Clarke, 24–47. Weil am Rhein: Vitra Design Museum, 2018.

- Clarke, Alison J. "Design for Development, ICSID and UNIDO: The Anthropological Turn in 1970s Design." *Journal of Design History* 29, no. 1 (2016): 43–57.
- Clarke, Alison J. "Buckminster Fuller's Reindeer Abattoir and Other Designs for the Real World." In *Hippie Modernism: The Struggle for Utopia*, ed. Andrew Blauvelt, 68–75. Minneapolis: Walker Art Center, 2015.
- Cowan, Ruth Schwartz. *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*. New York: Basic Books, 1983.
- Dahl, Eilif. *Økologi for ingeniører og arkitekter*. Oslo: Universitetsforlaget, 1969.
- Dalby, Mette Strømgaard. "Kristian Vedel: Industriell designer, pioner og idealist." In *Kristian Vedel*, ed. Lise Schou, 9–14. Copenhagen: Arkitektens forlag, 2007.
- Dammann, Erik. *Kontraster: Beretning om et mangfoldig liv*. Oslo: Aschehoug, 2005.
- Dammann, Erik. "The Future in Our Hands: Its Conceptions, Aims, and Strategies." 1982. In *Wisdom in the Open Air: The Norwegian Roots of Deep Ecology*, ed. Peter Reed and David Rothenberg, 224–226. Minneapolis: University of Minnesota Press, 1993.
- Dammann, Erik. *The Future in Our Hands*. Oxford: Pergamon Press, 1979.
- Dammann, Erik. *Fremtiden i våre hender*. Oslo: Gyldendal, 1972.
- Devall, Bill. "The Deep Ecology Movement." *Natural Resources Journal* 20, no. 2 (1980): 309–310.
- Devall, Bill, and George Sessions. *Deep Ecology: Living as if Nature Mattered*. Salt Lake City: Peregrine Smith Books, 1985.
- Doczi, György. *The Power of Limits: Proportional Harmonies in Nature, Art, and Architecture*. Boulder, CO: Shambhala Publications, 1981.
- Downton, Paul. *Ecopolis: Architecture and Cities for a Changing Climate*. Dordrecht: Springer, 2009.
- Doyle, Michael. "Resolutions by Those Attending the 1970 International Design Conference in Aspen." Reprinted in *The Aspen Complex*, ed. Martin Beck, 96–97. Berlin: Sternberg Press, 2012.
- Drengson, Alan. "Introduction: The Life and Work of Arne Naess: An Appreciative Overview." In *Ecology of Wisdom: Writings by Arne Naess*, ed. Alan Drengson and Bill Devall, 3–44. Berkeley: Counterpoint, 2008.
- Drengson, Alan, and Bill Devall. "The Deep Ecology Movement: Origins, Development & Future Prospects." *The Trumpeter* 26, no. 2 (2010): 53–54.
- Dunaway, Finis. *Seeing Green: The Use and Abuse of American Environmental Images*. Chicago: University of Chicago Press, 2016.
- Dutta, Arindam. *The Bureaucracy of Beauty: Design in the Age of Its Global Reproducibility*. London: Routledge, 2007.
- Dybdahl, Lars. *Dansk design 1945–1975: Produktdesign, Grafisk design, Møbeldesign*. Copenhagen: Borgen, 2006.
- Dyrekilde, Bigitte, and Johan Christensen. *Vestas: Verdensmester for enhver pris*. Copenhagen: Lindhardt og Ringhof, 2017.

- Ehrlich, Paul R. *The Population Bomb*. New York: Sierra Club/Ballantine Books, 1968.
- Eldin, Pia, Synnöve Mork, and Katja Waldén. “Textil konst och formgivning.” In *Tanken och handen: Konstfack 150 år*, ed. Gunilla Widengren. Stockholm: Page One Publishing, 1994.
- Emmet, Robert S., and David E. Nye. *The Environmental Humanities: A Critical Introduction*. Cambridge, MA: MIT Press, 2017.
- Engh, Sunniva. “Georg Borgström and the Population-Food Dilemma: Reception and Consequences in Norwegian Public Debate in the 1950s and 1960s.” In *Histories of Knowledge in Postwar Scandinavia: Actors, Arenas, and Aspirations*, ed. Johan Östling, Niklas Olsen, and David Larsson Heidenblad, 39–58. London and New York: Routledge, 2020.
- Eriksen, Thomas Hylland. *Søppel: Avfall i en verden av bivirkninger*. Oslo: Aschehoug, 2011.
- Escobar, Arturo. *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. Durham, NC: Duke University Press, 2018.
- Faarlund, Nils. “Stetind 1966—‘tindebestigere’ skaper ny giv i naturvernet.” In *Arven og gleden—et festskrift til naturen*, ed. Børge Dahle, Finn Wagle, Øystein Dahle, Siri Næss, Nils Faarlund, Aage Jensen, Sigmund K. Setreng, 23–25. Trondheim: Tapir akademisk forlag, 2010.
- Faarlund, Nils. “A Way Home.” In *Wisdom in the Open Air: The Norwegian Roots of Deep Ecology*, ed. Peter Reed and David Rothenberg, 157–168. Minneapolis: University of Minnesota Press, 1993.
- Fallan, Kjetil. “Norwegian Wood: Trails to Ecological Design.” In *Design Struggles: Intersecting Histories, Pedagogies, and Perspectives*, ed. Claudia Mareis and Nina Paim, 117–135. Amsterdam: Valiz, 2021.
- Fallan, Kjetil. “Aspen Comes to Scandinavia.” In *Scandinavian Design and the United States, 1890–1980*, ed. Bobbye Tigerman and Monica Obniski, 289–306. Los Angeles/Munich and New York: Los Angeles County Museum of Art/DelMonico Books Prestel, 2020.
- Fallan, Kjetil. “Introduction: The Culture of Nature in the History of Design.” In *The Culture of Nature in the History of Design*, ed. Kjetil Fallan, 1–15. London: Routledge, 2019.
- Fallan, Kjetil. “The Object of Design History: Lessons for the Environment.” In *A Companion to Contemporary Design since 1945*, ed. Anne Massey, 260–283. Oxford: Wiley Blackwell, 2019.
- Fallan, Kjetil. *Designing Modern Norway: A History of Design Discourse*. London: Routledge, 2017.
- Fallan, Kjetil. “Nordic Noir: Deadly Design from the Peacemongering Periphery.” *Design and Culture* 7, no. 3 (2015): 377–402.
- Fallan, Kjetil. “Love and Hate in Industrial Design: Europe’s Design Professionals and America in the 1950s.” In *The Making of European Consumption: Facing the American Challenge*, ed. Per Lundin and Thomas Kaiserfeld, 134–156. Basingstoke, UK: Palgrave Macmillan, 2015.
- Fallan, Kjetil. “LEGO, Denmark (Ole Kirk Christiansen, 1958).” In *Iconic Design: 50 Stories about 50 Things*, ed. Grace Lees-Maffei, 176–179. London: Bloomsbury Academic, 2014.
- Fallan, Kjetil. “Culture by Design: Co-Constructing Material and Meaning.” In *Assigning Cultural Values*, ed. Kjerstin Aukrust, 135–163. Frankfurt am Main: Peter Lang, 2013.
- Fallan, Kjetil. “‘The “Designer”—The 11th Plague’: Design Discourse from Consumer Activism to Environmentalism in 1960s Norway.” *Design Issues* 27, no. 4 (2011): 30–42.

- Fallan, Kjetil, and Finn Arne Jørgensen. "Environmental Histories of Design: Towards a New Research Agenda." *Journal of Design History* 30, no. 2 (2017): 103–121.
- Farnstad, Halfdan, and James Ward. "Wind Energy in Denmark." In *Transitions to Alternative Energy Systems: Entrepreneurs, New Technologies, and Social Change*, ed. Thomas Baumgartner and Tom R. Burns, 93–98. Boulder, CO: Westview Press, 1984.
- Fernández, Silvia. "The Origins of Design Education in Latin America: From the hfg in Ulm to Globalization." *Design Issues* 22, no. 1 (2006): 3–19.
- Feyerabend, Paul. "'Science': The Myth and Its Role in Society." *Inquiry* 18, no. 2 (1975): 167–181.
- Flood, Catherine, and Gavin Grindon, eds. *Disobedient Objects*. London: V&A Publishing, 2014.
- Foreman, Dave, ed. *Ecodefense: A Field Guide to Monkeywrenching*. Tucson: Ned Ludd Books, 1985.
- Fox, Warwick. "The Meanings of 'Deep Ecology'." *The Trumpeter* 7, no. 1 (1990): 48–50.
- Friedel, Robert. "History, Sustainability, and Choice." In *Cycling and Recycling: Histories of Sustainable Practices*, ed. Ruth Oldenziel and Helmuth Trischler, 219–225. New York: Berghahn Books, 2015.
- Friends of the Earth (Amory Lovins, Michael Denny, and Graham Searle). *The Stockholm Conference: Only One Earth. An Introduction to the Politics of Survival*. London: Earth Island, 1972.
- Fry, Tony. *Design Futuring: Sustainability, Ethics and New Practice*. Oxford: Berg, 2009.
- Fry, Tony, Clive Dilnot, and Susan Stewart. *Design and the Question of History*. London: Bloomsbury Academic, 2015.
- Fry, Tony, and Anne-Marie Willis. *Steel: A Design, Cultural and Ecological History*. London: Bloomsbury Academic, 2015.
- Fuad-Luke, Alastair. *Design Activism: Beautiful Strangeness for a Sustainable World*. London: Earthscan, 2009.
- Fuller, R. Buckminster. *Earth, Inc.* Garden City: Anchor, 1973.
- Fuller, R. Buckminster. *Operating Manual for Spaceship Earth*. Carbondale: Southern Illinois University Press, 1968.
- Galbraith, John Kenneth. *The Affluent Society*. Boston: Houghton Mifflin, 1958.
- Giedion, Sigfried. *Mechanization Takes Command: A Contribution to Anonymous History*. New York: Oxford University Press, 1948.
- Gipe, Paul. *Wind Energy Comes of Age*. New York: John Wiley & Sons, 1995.
- Gjefsen, Truls. *Arne Næss: Et liv*. Oslo: Cappelen Damm, 2011.
- Göransdotter, Maria, and Johan Redström. "Design Methods and Critical Historiography: An Example from Swedish User-Centered Design." *Design Issues* 34, no. 2 (2018): 20–30.
- Graesse, Malin K. "The Weaving World of Deep Ecology and Textile Design: Locating Principles of Sustainability at Austvatn Craft Central." MA thesis, University of Oslo, 2017.

- Gray, Timothy. *Gary Snyder and the Pacific Rim: Creating Countercultural Community*. Iowa City: University of Iowa Press, 2006.
- Guffey, Elizabeth. "The Scandinavian Roots of the International Symbol of Access." *Design and Culture* 7, no. 3 (2015): 357–376.
- Guha, Ramachandra. "Radical American Environmentalism and Wilderness Preservation: A Third World Critique." *Environmental Ethics* 11, no. 1 (1989): 71–83.
- Guldi, Jo, and David Armitage. *The History Manifesto*. Cambridge: Cambridge University Press, 2014.
- Gutiérrez, Alfredo. "When Design Goes South: From Decoloniality, through Declassification to *dessobons*." In *Design in Crisis: New Worlds, Philosophies and Practices*, ed. Tony Fry and Adam Nock, 56–73. London: Routledge, 2021.
- Haley, Mary Jean, ed. *Open Options: A Guide to Stockholm's Alternative Environmental Conferences*. Sala: Ågren & Holmbergs, 1972.
- Halland, Ingrid. "Error Earth: Displaying Deep Cybernetics in 'The Universitas Projects' and *Italy: The New Domestic Landscape, 1972*." PhD thesis, University of Oslo, 2017.
- Halliday, Sandy. *Sustainable Construction*. Oxford: Butterworth-Heinemann, 2008.
- Hansen, Per H. *Danish Modern Furniture 1930–2016: The Rise, Decline and Re-emergence of a Cultural Market Category*. Odense: University Press of Southern Denmark, 2018.
- Hansen, Per H. *En lys og lykkelig fremtid: Historien om FDB-møbler*. Copenhagen: Strandberg Publishing, 2014.
- Haraway, Donna J. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham, NC: Duke University Press, 2016.
- Harper, Peter, in conversation with Simon Sadler. "The Exhibition of People's Technology, 1972." *Digital Culture & Society* 6, no. 1 (2020): 153–184.
- Harper, Peter, and Godfrey Boyle, eds. *Radical Technology*. London: Wildwood House, 1976.
- Harris, Alex, and Margaret Sartor. *Gertrude Blom: Bearing Witness*. Chapel Hill: University of North Carolina Press, 1984.
- Haug, Wolfgang Fritz. *Kritik der Warenästhetik*. Frankfurt am Main: Suhrkamp, 1971.
- Hayter, Teresa. *Aid as Imperialism*. Harmondsworth: Penguin, 1971.
- Heidenblad, David Larsson. "Mapping a New History of the Ecological Turn: The Circulation of Environmental Knowledge in Sweden 1967." *Environment and History* 24, no. 2 (2018): 265–284.
- Herforth, Carl, and Claus Nybroe. *Solenergi, vindkraft: En håndbog*. Copenhagen: Information, 1976.
- Heymann, Matthias. "Signs of Hubris: The Shaping of Wind Technology Styles in Germany, Denmark, and the United States, 1940–1990." *Technology and Culture* 39, no. 4 (1998): 641–670.
- Highmore, Ben. "A Sideboard Manifesto: Design Culture in an Artificial World." In *The Design Culture Reader*, ed. Ben Highmore, 1–11. London: Routledge, 2009.

- Hofseth, Paul. "Ecology and Appropriate Technology." In *Mobilizing Appropriate Technology: Papers on Planning Aid Programmes*, ed. Matthew S. Gamser, 36–39. London: Intermediate Technology Publications, 1988.
- Höhler, Sabine. *Spaceship Earth in the Environmental Age, 1960–1990*. London: Pickering & Chatto, 2015.
- Hunt, Jamer. "Very, Very Strange Things: Victor Papanek and the Anxiety of Aesthetics." In *Victor Papanek: The Politics of Design*, ed. Mateo Kries, Amelie Klein, and Alison J. Clarke, 180–191. Weil am Rhein: Vitra Design Museum, 2018.
- Husz, Orsi. "The Morality of Quality. Assimilating Material Mass Culture in Twentieth-Century Sweden." *Journal of Modern European History* 10, no. 2 (2012): 152–181.
- Husz, Orsi. "Passionate about Things: The Swedish Debate on Throwawayism (1960–61)." *Revue d'Histoire Nordique* 7, no. 1 (2011): 135–160.
- Illich, Ivan. *Tools for Conviviality*. New York: Harper & Row, 1973.
- Isenberg, Alison. *Designing San Francisco: Art, Land, and Urban Renewal in the City by the Bay*. Princeton: Princeton University Press, 2017.
- Jamison, Andrew. "Greening the City: Urban Environmentalism from Mumford to Malmö." In *Urban Machinery: Inside Modern European Cities*, ed. Mikael Hård and Thomas J. Misa, 281–298. Cambridge, MA: MIT Press, 2008.
- Jasper, James M. "The Objects of Political Creativity." In *Design and Political Dissent: Spaces, Visuals, Materialities*, ed. Jilly Traganou, 123–130. New York: Routledge, 2021.
- Jensen, Hans-Christian, and Anders V. Munch. "Environment and Emancipation Through Design: Avant-Garde Intervention and Experiments with Social Design in Denmark around 1970." *AIS/Design: Storia e Ricerche* 7, no. 12–13 (2019–2020): 88–109.
- Johnson, Cedric G. "The Urban Precariat, Neoliberalization, and the Soft Power of Humanitarian Design." *Journal of Developing Societies* 27, no. 3–4 (2011): 445–475.
- Jørgensen, Finn Arne. *Recycling*. Cambridge, MA: MIT Press, 2019.
- Jørgensen, Thomas Ekman. "Utopia and Disillusion: Shattered Hopes of the Copenhagen Counterculture." In *Between Marx and Coca-Cola: Youth Cultures in Changing European Societies, 1960–1980*, ed. Axel Schildt and Detlef Siegfried, 333–352. Oxford: Berg Publishers, 2006.
- Julier, Guy. "From Design Culture to Design Activism," *Design and Culture* 5, no. 2 (2013): 215–236.
- Kalsi, Amrik. "A New Design Education in Kenya." In *Kristian Vedel*, ed. Lise Schou, 81–88. Copenhagen: Arkitektens forlag, 2007.
- Karnøe, Peter. *Dansk vindmølleindustri: En overraskende international succes* (Copenhagen: Samfundslitteratur, 1991).
- Karnøe, Peter, and Raghu Garud. "Path Creation: Co-creation of Heterogeneous Resources in the Emergence of the Danish Wind Turbine Cluster." *European Planning Studies* 20, no. 5 (2012): 733–752.
- Kaye, Michael S. *The Teacher Was the Sea: The Story of Pacific High School*. New York: Links Books, 1972.

- Kepes, György. "Art and Ecological Consciousness." In *The Universitas Project: Solutions for a Post-Technological Society*, ed. Emilio Ambasz, 150–159. New York: Museum of Modern Art, 2006.
- Keshavarz, Mahmoud. "Violent Compassions: Humanitarian Design and the Politics of Borders." *Design Issues* 36, no. 4 (2020): 20–32.
- Kirk, Andrew G. "Alloyed: Countercultural Bricoleurs and the Design Science Revival." In *Groovy Science: Knowledge, Innovation, and American Counterculture*, ed. David Kaiser and W. Patrick McCray, 305–336. Chicago: University of Chicago Press, 2016.
- Kirk, Andrew G. *Counterculture Green: The Whole Earth Catalog and American Environmentalism*. Lawrence: University Press of Kansas, 2007.
- Klingle, Matthew. "The Nature of Desire: Consumption in Environmental History." In *The Oxford Handbook of Environmental History*, ed. Andrew C. Isenberg, 467–511. Oxford: Oxford University Press, 2014.
- Kohtala, Cindy, Yana Boeva, and Peter Troxler. "Introduction: Alternative Histories in DIY Cultures and Maker Utopias." *Digital Culture and Society* 6, no. 1 (2020): 5–34.
- Kolsrud, Dag. "Hvit ambivalens: Fremveksten av sportsklatring på Kolsås." In *Kolsås: Klatreparadis og naturperle*, ed. Dave Durkan, Jon Gangdal, Geir Grimeland, Gunnar Thon, Tore Nossun, Ola Hanche-Olsen, and Egil Fredriksen, 113–123. Oslo: Kolsås Klatreklubb, 1992.
- Kranzberg, Melvin. "Technology and History: 'Kranzberg's Laws'." *Technology and Culture* 27, no. 3 (1986): 544–560.
- Kvaløy Setreng, Sigmund. "To økofilosofier i Norge; deres begynnelse og en del til." *Norsk filosofisk tidsskrift* 37, no. 1–2 (2002): 117–126.
- Kvaløy, Sigmund. "Man, Nature, and Mechanistic Systems." *The North American Review* 264, no. 3 (1979): 35–37.
- Kvaløy, Sigmund. "Ecophilosophy and Ecopolitics: Thinking and Acting in Response to the Threats of Ecocatastrophe." *The North American Review* 259, no. 2 (1974): 16–28.
- Kvaløy, Sigmund. *Økokrise, natur og menneske: En innføring i økofilosofi og økopolitikk*. Oslo: s.n., 1973.
- Kvaløy, Sigmund. "Sammenhengen mellom økonomisk vekst og økologisk likevekt." In *Økologi og økonomisk vekst*, ed. Mimi Lønnum, 38–55. Oslo: Elingaard, 1973.
- Labrague, Michelle. "Patagonia, A Case Study in the Historical Development of Slow Thinking." *Journal of Design History* 30, no. 2 (2017): 175–191.
- LaChapelle, Dolores. "Our Mutual Love of Mountains." *The Trumpeter* 9, no. 2 (1992): 66–67.
- Larsen, Janike Kampeveld, and Peter Hemmersam, eds. *Future North: The Changing Arctic Landscapes*. London: Routledge, 2018.
- Latour, Bruno. *Politics of Nature: How to Bring the Sciences into Democracy*. Cambridge, MA: Harvard University Press, 2004.
- Latour, Bruno. *We Have Never Been Modern*. Cambridge, MA: Harvard University Press, 1993.

- Lee, Martha F. *Earth First! Environmental Apocalypse*. Syracuse: Syracuse University Press, 1995.
- Leifer, Tore, Jesper Nielsen, and Toke Sellner Reunert. *Restless Blood: Frans Blom, Explorer and Maya Archaeologist*. San Francisco: Precolumbia Mesoweb Press, 2017.
- Leopold, Aldo. *A Sand County Almanac and Sketches Here and There*. 1949; New York: Oxford University Press, 1987.
- Lewallen, Constance M., and Steve Seid, eds. *Ant Farm: 1968–1978*. Berkeley: University of California Press, 2004.
- Lie, Ida Kamilla. “‘Make Us More Useful to Society!’: The Scandinavian Design Students’ Organization (SDO) and Socially Responsible Design, 1967–1973.” *Design and Culture* 8, no. 3 (2016): 327–361.
- Lucsko, David N. *Junkyards, Gearheads, and Rust: Salvaging the Automotive Past*. Baltimore: Johns Hopkins University Press, 2016.
- Lundberg, Willy Maria. *Ting och tycken*. Stockholm: Rabén & Sjögren, 1960.
- Madge, Pauline. “Ecological Design: A New Critique.” *Design Issues* 13, no. 2 (1997): 44–54.
- Magaziner, Daniel. “The Foundation: Design, Time, and Possibility in 1960s Nairobi.” *Comparative Studies in Society and History* 60, no. 3 (2018): 599–628.
- Magaziner, Daniel. “The Politics of Design in Postcolonial Kenya.” In *Flow of Forms / Forms of Flow: Design Histories between Africa and Europe*, ed. Kerstin Pinther and Alexandra Weigand, 134–151. Bielefeld: Transcript, 2018.
- Magaziner, Daniel. “Designing Knowledge in Postcolonial Africa: A South African Abroad.” *Kronos: Southern African Histories*, no. 41 (2015): 265–286.
- Maldonado, Tomás. *La speranza progettuale: Ambiente e società*. Turin: Einaudi, 1970.
- Manzini, Ezio. “The Cultural Tools for an Ecology of the Artificial Environment.” In *Scandinavian Design 1990–towards 2000: The Challenge of Internationalization Demands and Needs for a New Millennium*, ed. Ulla Tarras-Wahlberg Bøe, 46–50. Oslo: Scandinavian Design Council, 1990.
- Margolin, Victor. “Design for Development: Towards a History.” *Design Studies* 28, no. 2 (2007): 111–115.
- Martinez-Reyes, Jose. “Mahogany Intertwined: Enviromateriality between Mexico, Fiji, and the Gibson Les Paul.” *Journal of Material Culture* 20, no. 3 (2015): 313–329.
- Massey, Anne, and Paul Micklethwaite. “Unsustainability: Towards a New Design History with Reference to British Utility.” *Design Philosophy Papers* 7, no. 2 (2009): 123–135.
- Mathur, Saloni. “Charles and Ray Eames in India.” *Art Journal* 70, no. 1 (2011): 34–53.
- Mattsson, Helena. “Designing the ‘Consumer in Infinity’: The Swedish Co-operative Union’s New Consumer Policy, c. 1970.” In *Scandinavian Design: Alternative Histories*, ed. Kjetil Fallan, 65–82. London: Berg Publishers, 2012.
- Mau, Bruce, and the Institute without Boundaries. *Massive Change*. London: Phaidon, 2004.

- McDonough, William, and Michael Braungart. *Cradle to Cradle: Remaking the Way We Make Things*. New York: North Point Press, 2002.
- Meikle, Jeffrey L. *American Plastics: A Cultural History*. New Brunswick: Rutgers University Press, 1997.
- Messell, Tania. "Contested Development: ICSID's Design Aid and Environmental Policy in the 1970s." In *The Culture of Nature in the History of Design*, ed. Kjetil Fallan, 131–146. London: Routledge, 2019.
- Michl, Jan. "On Seeing Design as Redesign: An Exploration of a Neglected Problem in Design Education." *Scandinavian Journal of Design History* 12 (2002): 7–23.
- Miles, Elza. *Selby Mvusi: To Fly with the North Bird South*. Pretoria: University of South Africa Press, 2015.
- Miller, Daegan. "On Possibility: Or, The Monkey Wrench." In *Future Remains: A Cabinet of Curiosities for the Anthropocene*, ed. Gregg Mitman, Marco Armiero, and Robert S. Emmett, 143–148. Chicago: University of Chicago Press, 2018.
- Møller, Jes Fabricius. *På sejlrens vej: Historien om Skolesamvirket Tvind og dets skaber Mogens Amdi Petersen*. Copenhagen: Dike, 1999.
- Morris, William. *News from Nowhere: or An Epoch of Rest, Being Some Chapters from a Utopian Romance*. 1890; London: Routledge, 1970.
- Munch, Anders V., Vibeke Riisberg, and Lene Kiærbye Pedersen. "Harmful or Useless? Victor Papanek and the Student Rebellion at Danish Design Schools 1967–1976." In *Lessons to Learn? Past Design Experiences and Contemporary Design Practices: Proceedings of the ICDHS 12th International Conference on Design History and Design Studies*, ed. Fedja Vukić and Iva Kostešić, 137–147. Zagreb: UPI2M Books, 2020.
- Myrvang, Christine. *Forbruksagentene: Slik vekket de kjøpeysten*. Oslo: Pax, 2009.
- Næss, Arne. *The Selected Works of Arne Naess*, ed. Harold Glasser and Alan Drenegson. Dordrecht: Springer, 2005.
- Næss, Arne. "Architecture and Deep Ecology." 1992. *The Trumpeter* 21, no. 2 (2005): 29–34.
- Næss, Arne. "Comments on Guha's 'Radical American Environmentalism and Wilderness Preservation: A Third World Critique'." In *Philosophical Dialogues: Arne Naess and the Progress of Ecophilosophy*, ed. Nina Witoszek and Andrew Brennan, 325–333. Lanham, MD: Rowman & Littlefield, 1999.
- Næss, Arne. "Intrinsic Value: Will the Defenders of Nature Please Rise." 1986. In *Wisdom in the Open Air: The Norwegian Roots of Deep Ecology*, ed. Peter Reed and David Rothenberg, 70–81. Minneapolis: University of Minnesota Press, 1993.
- Næss, Arne. "The Future of the Industrialised Society." In *Scandinavian Design 1990–towards 2000: The Challenge of Internationalization Demands and Needs for a New Millennium*, ed. Ulla Tarras-Wahlberg Bøe, 55–58. Oslo: Scandinavian Design Council, 1990.
- Næss, Arne. *Ecology, Community and Lifestyle: Outline of an Ecosophy*, trans. David Rothenberg. Cambridge: Cambridge University Press, 1989.
- Næss, Arne. "Identification as a Source of Deep Ecological Attitudes." In *Deep Ecology*, ed. Michael Tobias, 256–270. San Diego: Avant Books, 1984.

- Næss, Arne. "Modesty and the Conquest of Mountains." In *The Mountain Spirit*, ed. Michael C. Tobias and Harold Drasdo, 13–16. Woodstock, N.Y.: Overlook Press, 1979.
- Næss, Arne. *Teknikk, pedagogikk og en ny livsstil: En del artikler og foredrag gjennom 25 år*. Oslo: Universitetsforlaget, 1978.
- Næss, Arne. "Why Not Science for Anarchists Too? A Reply to Feyerabend." *Inquiry* 18, no. 2 (1975): 183–194.
- Næss, Arne. "The Case Against Science." In *Science Between Culture and Counter-Culture*, ed. Catharina I. Dessaur, 25–48. Nijmegen: Dekker & van de Vegt, 1975.
- Næss, Arne. *Økologi, samfunn og livsstil: Utkast til en økosofi*. Oslo: Universitetsforlaget, 1974.
- Næss, Arne. "The Shallow and the Deep, Long-Range Ecology Movement. A Summary." *Inquiry* 16, no. 1–4 (1973): 95–100.
- Næss, Arne. "The Place of Joy in a World of Fact." *The North American Review* 258, no. 2 (1973): 53–57.
- Næss, Arne. *Økologi og filosofi: Et økosofisk arbeidsutkast. Tredje prelimnære utgave*. Oslo: Universitetsforlaget, 1972.
- Næss, Arne. *Opp stupet: til østtoppen av Tirich Mir*. Oslo: Gyldendal, 1964.
- Næss, Arne. *Tirich Mir: The Norwegian Himalaya Expedition*. London: Hodder and Stoughton, 1950.
- Næss, Arne. "Bolteklatrering." In *Norsk fjellsport 1948*, ed. C. W. Rubenson and Hans H. Røer, 100–120. Oslo: Grøndahl & Søns forlag, 1948.
- Næss, Arne. "Nye klatreruter i Jotunheimen og Nord-Norge." In *Den norske turistforenings årbok 1937*, ed. Rolf Lykken, Erling Hauger, and Andreas Backer, 179–193. Oslo: Grøndahl & Søn, 1937.
- Næss, Arne, and Inga Bostad. *Inn i filosofien: Arne Næss' ungdomsår*. Oslo: Universitetsforlaget, 2002.
- Næss, Siri. "Self-Realization." In *In Sceptical Wonder: Inquiries into the Philosophy of Arne Naess on the Occasion of his 70th Birthday*, ed. Ingemund Gullvåg and Jon Wetlesen, 270–281. Oslo: Universitetsforlaget, 1982.
- Narotzky, Viviana. "Our Cars in Havana." In *Autopia: Cars and Culture*, ed. Peter Wollen and Joe Kerr, 169–176. London: Reaktion Books, 2002.
- Nielsen, Kristian H. "Danish Wind Power Policies from 1976 to 2004: A Survey of Policy Making and Techno-economic Innovation." In *Switching to Renewable Power: A Framework for the 21st Century*, ed. Volkmar Lauber, 99–121. Abingdon: Earthscan/Routledge, 2005.
- Nielsen, Kristian H., and Matthias Heymann. "Winds of Change: Communication and Wind Power Technology Development in Denmark and Germany from 1973 to ca. 1985." *Engineering Studies* 4, no. 1 (2012): 11–31.
- Nixon, Rob. "The Anthropocene: The Promise and Pitfalls of an Epochal Idea." In *Future Remains: A Cabinet of Curiosities for the Anthropocene*, ed. Gregg Mitman, Marco Armiero, and Robert S. Emmett, 1–18. Chicago: University of Chicago Press, 2018.

- Nordenström, Monica, Egil Öfverholm, and Hans Nordenström, eds. *Byggande, energi och ekologi: Forskning och projekt. Rapport från en resa i USA*. Stockholm: Statens råd för byggnadsforskning, 1975.
- Oldenziel, Ruth, and Mikael Hård. *Consumers, Tinkerers, Rebels: The People Who Shaped Europe*. Basingstoke, UK: Palgrave Macmillan, 2013.
- Olesen, Thorsten Borring, and Jan Pedersen. "On the Side of the Angels: Altruism in Danish Development Aid 1960–2005." *European Review of History/Revue européenne d'histoire* 17, no. 6 (2010): 881–903.
- Olvång, Bengt. *Våga se! Svensk konst 1945–1980*. Göteborg: Författarförlaget, 1983.
- Oropallo, Gabriele. "People Have the Power: Appropriate Technology and the Implications of Labour-Intensive Making." In *Craft Economies*, ed. Susan Luckman and Nicola Thomas, 83–93. London: Bloomsbury Academic, 2018.
- Oropallo, Gabriele. "Making or Unmaking the Environment: The Role of Envisioning in the History of Sustainable Design." PhD thesis, University of Oslo, 2017.
- Orr, David. *The Nature of Design: Ecology, Culture, and Human Intention*. Oxford: Oxford University Press, 2002.
- Orr, David. "Conservation and Conservatism." *Conservation Biology* 9, no. 2 (1995): 242–245.
- Östberg, Kjell. "Sweden and the Long '1968:' Break or Continuity?" *Scandinavian Journal of History* 33, no. 4 (2008): 339–352.
- Östling, Johan. "Circulation, Arenas, and the Quest for Public Knowledge." *History and Theory* 59, no. 4 (2020): 111–126.
- Owens, Brandon N. *The Wind Power Story: A Century of Innovation that Reshaped the Global Energy Landscape*. Hoboken, NJ: John Wiley & Son, 2019.
- Paglia, Eric. "Not a Proper Crisis." *The Anthropocene Review* 2, no. 3 (2015): 247–261.
- Palmstierna, Hans. *Besinning*. Stockholm: Rabén & Sjögren, 1972.
- Palmstierna, Hans. *Plundring, svält, förgiftning*. Stockholm: Rabén & Sjögren, 1967.
- Palmstierna, Hans, Marit Paulsen, Jan Odhnoff, Lena Palmstierna, Sture Andersson, and Gudrun Hjelte. *Framtiden kräver: Energi, arbete, miljö*. Kristianstad: Tidens förlag, 1974.
- Papanek, Victor. "Lies and Consequences: Industrial Design and Ecology." In *Scandinavian Design 1990–towards 2000: The Challenge of Internationalization Demands and Needs for a New Millennium*, ed. Ulla Tarras-Wahlberg Bøe, 51–54. Oslo: Scandinavian Design Council, 1990.
- Papanek, Victor. "Design in Developing Countries 1950–1985: A Summing Up." *Art Libraries Journal* 11, no. 2 (1986): 44–51.
- Papanek, Victor. "For the Southern Half of the Globe." *Design Studies* 4, no. 1 (1983): 61–64.
- Papanek, Victor. *Design for the Real World: Human Ecology and Social Change*. New York: Pantheon Books, 1971.

- Papanek, Victor. *Miljön och miljonerna: Design som tjänst eller förtjänst?* Stockholm: Bonniers, 1970.
- Pech, Christina. *Arkitektur och motstånd: Om sökandet efter alternativ i svensk arkitektur 1970–1980*. Göteborg: Makadam, 2011.
- Pérez, Jorge F. Rivas. “Cannibal Homes: Additive Modernity and Design by Absorption in Brazil, Mexico and Venezuela, 1940–1978.” In *Moderno: Design for Living in Brazil, Mexico, and Venezuela, 1940–1978*, ed. Gabriela Rangel and Jorge F. Rivas Pérez, 15–33. New York: Americas Society; Miami: Prisa/Santillana USA, 2015.
- Persen, Åsne Berre, and Nils Hermann Ranum. *Natur og Ungdom: 30 år i veien*. Oslo: Natur og Ungdom, 1997.
- Pesce, Gaetano. “The Period of the Great Contaminations.” In *Italy: The New Domestic Landscape: Achievements and Problems of Italian Design*, ed. Emilio Ambasz, 212–222. New York: Museum of Modern Art, 1972.
- Petersen, Flemming. *Da Danmark fikk vinger: Vindmøllehistorien 1978–2018*. Aarhus: Danmarks Vindmølleforening, 2018.
- Petersen, Flemming, Bjarning Grøn, Asger N. Kristiansen, and Anette Christensen. *Det danske vindmølleeventyr*. Copenhagen: Fysikforlaget, 2007.
- Pfützner, Katharina. *Designing for Socialist Need: Industrial Design Practice in the German Democratic Republic*. London: Routledge, 2018.
- Pharo, Helge Ø., and Monika Phole Fraser. “Introduction.” In *The Aid Rush: Aid regimes in Northern Europe during the Cold War*, Volume 1, ed. Helge Ø. Pharo and Monika Phole Fraser. Oslo: Unipub, 2008.
- Pido, J.P. Odoch. “Pedagogical Clashes in East African Art and Design Education.” *Critical Interventions: Journal of African Art History and Visual Culture* 8, no. 1 (2014): 119–132.
- Priebe, Janina. “From Siam to Greenland: Danish Economic Imperialism at the Turn of the Twentieth Century.” *Journal of World History* 27, no. 4 (2016): 619–640.
- Pursell, Carroll. “Sim van der Ryn and the Architecture of the Appropriate Technology Movement.” *Australasian Journal of American Studies* 28, no. 2 (2009): 17–30.
- Pursell, Carroll. *The Machine in America: A Social History of Technology*. Baltimore: Johns Hopkins University Press, 1995.
- Pursell, Carroll. “The Rise and Fall of the Appropriate Technology Movement in the United States, 1965–1985.” *Technology and Culture* 34, no. 3 (1993): 629–637.
- Reed, Peter, and David Rothenberg, eds. *Wisdom in the Open Air: The Norwegian Roots of Deep Ecology*. Minneapolis: University of Minnesota Press, 1993.
- Reynolds, Helen. “The Utility Garment: Its Design and Effect on the Mass Market 1942–45.” In *Utility Reassessed: The Role of Ethics in the Practice of Design*, ed. Judy Atfield, 125–143. Manchester: Manchester University Press, 1999.
- Ringdal, Siv. “110 Volts at Home: the American Lista.” *Journal of Design History* 27, no. 1 (2014): 79–96.
- Robach, Cilla. *Formens frigörelse: Konsthantverkare och design under debatt i 1960-talets Sverige*. Stockholm: Arvinius, 2010.

- Roszak, Theodore. *Where the Wasteland Ends: Politics and Transcendence in Postindustrial Society*. Garden City, N.Y.: Doubleday, 1972.
- Roszak, Theodore. *The Making of a Counter Culture: Reflections on the Technocratic Society and Its Youthful Opposition*. Garden City, N.Y.: Doubleday, 1969.
- Rothenberg, David. *Is It Painful to Think? Conversations With Arne Naess*. Minneapolis: University of Minnesota Press, 1993.
- Rubin, Eli. "The Form of Socialism without Ornament: Consumption, Ideology, and the Fall and Rise of Modernist Design in the German Democratic Republic." *Journal of Design History* 19(2) (2006): 155–168.
- Sadler, Simon. "Design's Ecological Operating Environments." In *The Culture of Nature in the History of Design*, ed. Kjetil Fallan, 19–30. London: Routledge, 2019.
- Sadler, Simon. "Tools of Oneness: Design for Post-Industrial Communities." In *California: Designing Freedom*, ed. Justin McGuirk and Brendan McGetrick, 157–163. London: Phaidon, 2017.
- Sadler, Simon. "An Architecture of the Whole." *Journal of Architectural Education* 61, no. 4 (2008): 108–129.
- Sætra, Hartvig. *Den økopolitiske sosialismen*. Oslo: Pax, 1973.
- Schou-Christensen, Jørgen. "Kristian Vedel." In *The Lunning Prize*, ed. Helena Dahlbäck Lutteman and Marianne Uggla, 136–137. Stockholm: Nationalmuseum, 1986.
- Schultz, Tristan, Danah Abdulla, Ahmed Ansari, Ece Canli, Mahmoud Keshavarz, Matthew Kiem, Luiza Prado de O. Martins, and Pedro J. S. Vieira de Oliveira. "What Is at Stake with Decolonizing Design? A Roundtable." *Design and Culture* 10, no. 1 (2018): 81–101.
- Schumacher, E. F. *Small Is Beautiful: A Study of Economics as if People Mattered*. London: Blond & Briggs, 1973.
- Scott, Felicity D. "'Talking Teacher': Radio, Television, and the Oral Channel." In *Victor Papanek: The Politics of Design*, ed. Mateo Kries, Amelie Klein, and Alison J. Clarke, 48–63. Weil am Rhein: Vitra Design Museum, 2018.
- Scott, Felicity D. *Outlaw Territories: Environments of Insecurity/Architectures of Counterinsurgency*. New York: Zone Books, 2016.
- Seed, John, Joanna Macy, Pat Fleming, and Arne Naess. *Thinking Like a Mountain: Towards a Council of All Beings*. Philadelphia: New Society Publishers, 1988.
- Serafimova, Silviya. *Ethical Aspects of 20th Century Norwegian Environmental Philosophies*. Sofia: Avangard Prima, 2017.
- Sessions, George. "Arne Naess & the Union of Theory & Practice." *The Trumpeter* 9, no. 2 (1991): n.p.
- Sessions, George. "Ecological Consciousness and Paradigm Change." In *Deep Ecology*, ed. Michael Tobias, 28–58. San Diego: Avant Books, 1984.
- Simeons, Charles. *Hydro-Power: The Use of Water as an Alternative Source of Energy*. Oxford: Pergamon Press, 1980.

- Simon, Herbert. *The Sciences of the Artificial*. Cambridge, MA: MIT Press, 1969.
- Skønberg, Sven Erik, ed. *Grønn pepper i turbinene: 16 bidrag om miljøkrisen og veiene ut av den. Til ære for Sigmund Kvaløy Setereng*. Oslo: Universitetsforlaget, 1985.
- Slagstad, Rune. *De nasjonale strateger*. Oslo: Pax, 1998.
- Smith, Adrian. "Environmental Movements and Innovation: From Alternative Technology to Hollow Technology." *Human Ecology Review* 12, no. 2 (2005): 113–119.
- Snyder, Gary. *Turtle Island*. New York: New Directions, 1974.
- Soleri, Paolo. *Arcosanti: An Urban Laboratory?* San Diego: Avant Books, 1984.
- Soleri, Paolo. *Arcology: The City in the Image of Man*. Cambridge, MA: MIT Press, 1969.
- Somjee Rajan, Sultan Firoze H. "Learning to Be Indigenous or Being Taught to Be Kenyan: The Ethnography of Teaching Art and Material Culture in Kenya." PhD thesis, McGill University, 1996.
- Somjee, Sultan. *Material Culture of Kenya*. Nairobi: East African Publishers, 1993.
- Somjee, Sultan. "The Arts in Lifelong Education in Kenya." In *The Arts in Life-long Education*, ed. D'Arcy Hayman, 55–60. Paris: UNESCO; Sofia: Sofia Press, 1977.
- Springfeldt, Björn, ed. *Finlandia, Svezia, Norvegia: Biennale di Venezia '76* (Venice: Biennale di Venezia, 1976).
- Stone, Peter. *Did We Save the World at Stockholm?* London: Earth Island, 1973.
- Stott, Timothy. "Ludic Pedagogies at the College of Environmental Design, UC Berkeley, 1966 to 1972." In *The Culture of Nature in the History of Design*, ed. Kjetil Fallan, 58–71. London: Routledge, 2019.
- Stott, Timothy. "Systems in Play: Simon Nicholson's Design 12 Course, University of California, Berkeley, 1966." *Journal of Design History* 32, no. 3 (2019): 223–239.
- Strandh, Sigvard, ed. *Daedalus 1968: Tekniska Museets årsbok*. Stockholm: Tekniska Museet/P.A. Norstedt & Söner, 1968.
- Szeman, Imre, and Dominic Boyer. "Introduction: On the Energy Humanities." In *Energy Humanities: An Anthology*, ed. Imre Szeman and Dominic Boyer, 1–13. Baltimore: Johns Hopkins University Press, 2017.
- Taft, Maggie. "Morphologies and Genealogies: Shaker Furniture and Danish Design." *Design and Culture* 7, no. 3 (2015): 313–334.
- Tate, Ryan Driskell. "Rural Revolt: Power Line Protests and the Alternative Technology Movement in the United States, 1970s." *Technology and Culture* 62, no. 1 (2021): 1–26.
- Taylor, Joseph E. III. *Pilgrims of the Vertical: Yosemite Rock Climbers and Nature at Risk*. Cambridge, MA: Harvard University Press, 2010.
- Thau, Carsten. "Ussing og Hoff—arkitekturen frisatt." In *Susanne Ussing—mellem kunst og arkitektur*, ed. Birgitte Thorsen Vilslev and Carsten Hoff, 81–125. Copenhagen: Strandberg, 2017.

- Theien, Iselin. "Shopping for the 'People's Home': Consumer Planning in Norway and Sweden after the Second World War." In *The Expert Consumer: Associations and Professionals in Consumer Society*, ed. Alain Chatriot, Marie-Emmanuelle Chessel, and Matthew Hilton, 137–150. Aldershot, UK: Ashgate, 2006.
- Thiberg, Sven. "Dags att undvara." In *Formens rörelse: Svensk form genom 150 år*, ed. Kerstin Wickman, 268–283. Stockholm: Carlssons, 1995.
- Thill, Brian. *Waste*. New York: Bloomsbury Academic, 2015.
- Thorndahl, Jytte. *Gedsermøllen: Den første moderne vindmølle*. Bjerringbro: Elmuseet, 2005.
- Tobias, Michael, ed. *Deep Ecology*. San Diego: Avant Books, 1984.
- Tostrup, Elisabeth. *Norwegian Wood: The Thoughtful Architecture of Wenche Selmer*. New York: Princeton Architectural Press, 2006.
- Traganou, Jilly, ed. *Design and Political Dissent: Spaces, Visuals, Materialities*. New York: Routledge, 2021.
- Tunstall, Elizabeth. "Decolonizing Design Innovation: Design Anthropology, Critical Anthropology, and Indigenous Knowledge." In *Design Anthropology: Theory and Practice*, ed. Wendy Gunn, Ton Otto, and Rachel Charlotte Smith, 232–250. London: Bloomsbury, 2013.
- Turpin, John. "The Irish Design Reform Movement of the 1960s." *Design Issues* 3, no. 1 (1986): 3–21.
- Twemlow, Alice. *Sifting the Trash: A History of Design Criticism*. Cambridge, MA: MIT Press, 2017.
- Twemlow, Alice. "'A Guaranteed Communications Failure': Consensus Meets Conflict at the International Design Conference in Aspen, 1970." In *The Aspen Complex*, ed. Martin Beck, 110–135. Berlin: Sternberg Press, 2012.
- Twemlow, Alice. "I Can't Talk to You if You Say That: An Ideological Collision at the International Design Conference at Aspen, 1970." *Design and Culture* 1, no. 1 (2009): 23–49.
- Van der Ryn, Sim, and Stuart Cowan. *Ecological Design*. Washington, DC: Island Press, 1996.
- Wann, David. *Deep Design: Pathways to a Livable Future*. Washington, D.C.: Island Press, 1996.
- Ward, Barbara. *Spaceship Earth*. New York: Columbia University Press, 1966.
- Ward, Barbara, and René Dubos. *Only One World: The Care and Maintenance of a Small Planet*. New York: W. W. Norton, 1972.
- West, Kim. "The Exhibitionary Complex: Exhibition, Apparatus, and Media from Kulturhuset to the Centre Pompidou, 1963–1977." PhD thesis, Södertörn University, 2017.
- Williamson, Bess. *Accessible America: A History of Disability and Design*. New York: New York University Press, 2019.
- Werner, Jeff. *Medelvägens estetik: Sverigebilder i USA*. Hedemora/Möklinta: Gidlunds förlag, 2008.
- Winograd, Terry, and Fernando Flores. *Understanding Computers and Cognition: A New Foundation for Design*. Norwood, NJ: Ablex, 1986.

World Commission on Environment and Development. *Our Common Future*. Oxford: Oxford University Press, 1987.

Yran, Knut. *A Joy Forever: Knut Yran Talks About Design in Industry*. Melbourne: Industrial Design Institute of Australia, 1980.

Zapffe, Peter Wessel. *Spøk og alvor: Epistler og leilighetsvers*. Oslo: Gyldendal, 1977.

Zapffe, Peter Wessel. *Barske glæder og andre temaer fra et liv under åpen himmel*. Ed. Sigmund Kvaløy. Oslo: Gyldendal, 1969.

Zelko, Frank. *Make It a Green Peace! The Rise of Countercultural Environmentalism*. Oxford: Oxford University Press, 2013.

Zimring, Carl A. *Aluminum Upcycled: Sustainable Design in a Historical Perspective*. Baltimore: Johns Hopkins University Press, 2017.