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"Methods of Reasoning and Imagination": History's Failures and Capacities in Anglophone Design Research

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This chapter critically explores the place of history as concept and practice within the field of design research, past and present. Design, today, refers to a spectrum of practices varying widely in medium, scale, and application. Alongside familiar forms such as architecture, fashion, interiors, graphic, product, industrial, textile, engineering, and systems design and urban planning, practices such as interaction design, service design, social design, and speculative critical design have emerged in the past decade, alongside new forms of technology, new interfaces, new economic and political landscapes, and new ideas about the roles that design can play in society and the economy.[1] In its expanded practice, design shapes, creates, and implements material and immaterial artefacts, not only the buildings, chairs, and garments familiar to us as "design" but public policy, corporate strategy, and social behavior.[2]

On a more abstract level, design is both verb and noun, both action and the product of action. As such, design can be codified as a set of specific actions that, if undertaken, can lead to solutions for particular challenges. Design can also be framed—or reframed—as everyday practice. So the identity of "the designer" may be widened or "democratized" from a narrow professional sphere to include "Everyone designs who devises courses of action aimed at changing existing situations into preferred ones."[3] Together, these reframings afford practices such as codesign and social design/design for social innovation, in which designers work as facilitators and enablers, supporting communities—including professional communities such as groups of civil servants or medical practitioners—to use design techniques to address a particular situation,[4] or in

which communities take the lead in designing environments, systems, and solutions based on local knowledge.[5]

This broader conception of design is currently embraced by prominent design organizations, national and international, to describe design generally and to reposition existing subdisciplines. In 2016, the World Design Organization (WDO)™, formerly the International Council of Societies of Industrial Design (Icsid), renewed its definition of industrial design:

> Industrial Design is a strategic problem-solving process that drives innovation, builds business success, and leads to a better quality of life through innovative products, systems, services, and experiences. Industrial Design bridges the gap between what is and what's possible. It is a trans-disciplinary profession that harnesses creativity to resolve problems and co-create solutions with the intent of making a product, system, service, experience or a business, better. At its heart, Industrial Design provides a more optimistic way of looking at the future by reframing problems as opportunities. It links innovation, technology, research, business, and customers to provide new value and competitive advantage across economic, social, and environmental spheres.[6]

Notably, this definition not only dematerializes the product or object of industrial design practice but removes any specification of materials or techniques. Industrial designers, in this definition, work across materials as well as disciplines; design, the definition suggests, is as much a mindset as a set of processes. And the new definition neither ascribes industrial design's core function as creating form nor limits its agency to professional designers.[7]

As the disappearance of "industrial" from the organization's name suggests, strategic and philosophical aims underlie design's redefinition as a far-reaching and open creative practice exceptionally suited for addressing complex social, economic, and environmental challenges. For a critical humanities scholar, this is a welcome reframing of a discipline that, in the form of practices such as packaging design, styling design, and advertising design, is deeply imbricated in the Anthropocene through its promotion of mass production and consumption. The design historian Victor Margolin has defined design as "the conception and planning of the artificial world."[8] If we are to take the Anthropocene seriously, then to place design in relation to the entirety of social, economic, and political relations as "the artificial world" seems only just. Indeed—and even without the pressing environmental agenda—linguistic and practical reframing already facilitates design's adoption as a management and governance technique by governments and corporate organizations. In political economies as diverse

as China, Chile, Denmark, and Canada, design as set out in the WDO™ definition is courted by policy-makers, taught in business schools and proselytized to tech firms.[9]

Such an enlargement of design's scope necessitates checks and balances: inquiring into how power and agency are distributed within relationships, who has the right to define terms of reference, and whether or not existing and often unequal power relationships are intentionally or accidentally replicated within new design ones. Some researcher-practitioners in social design and service design reflect publicly and critically on the politics of these practices.[10] Practices such as speculative critical design use design tropes to incite reflection on individual and collective choices, emerging technologies, and social formations.[11] The movement to decolonize design asks practitioners and commissioners alike to consider the impact of historical and ongoing global inequality on design decisions, and to investigate reshaping power relations for more equitable distribution.[12]

Much of this work builds on methods and existing work in social science, not least because the economic heft of subindustries, such as user-experience design—a core hiring area for technology companies and the crux of public service design—indicates an obvious turn to ethnographic and other social science techniques. Anthropology's critical traditions afford a similarly critical approach to articulating power relations within design practice, through design anthropology.[13] Similarly, both "problem-solving" and "problem-posing" design employ techniques from design, art, and architecture practice and from software development—for example, rapid prototyping, iteration, and visualization—to generate creative responses and different perspectives on familiar problems.[14]

Despite its own engagement with questions of power relations, design research in all its aspects draws less frequently on history as method. This is despite attention within the history of design—an adjacent, sometimes overlapping field concerned in part with critical self-reflection and debate around design—to issues such as globalization, cultural appropriation, disability, and sustainability,[15] through publishing, exhibitions, and—perhaps most crucially—university education.[16] When design research and practice refers to history, it is commonly in the form of "the history of," which is to say history as the past. This may be as a narrative that contextualizes contemporary practice and conditions, or as a resource—heritage—whose material artefacts might serve, it is hoped, as the basis for the forms and motifs of more locally appropriate or commercially popular products in the present. History can also be a set of critical methods

for research, analysis and interpretation, self-reflection, and communication—which might include inspection of the past but consist of the accumulation and assessment of evidence to generate and test explanations for change over time. This understanding of history appears in design pedagogy, but less frequently in design practice or design research.

This chapter focuses on the research field known first as "design methods," subsequently as "design research," which is concerned with the creation, communication, and application of systematic, repeatable methods to create positive and effective change through design.[17] Design research has become an intellectual and industrial milieu for academic research and doctoral training as research funding agencies have shifted to recognize design as a research area and doctorates become increasingly required for contracted academic posts in university design departments worldwide.[18] It is directly connected to design for the public, private and third sectors, as per the WDO™ definition. It is international: the 2016 biannual meeting of the Design Research Society (DRS) included participants from over thirty countries on five continents.[19] And it attracts attention not only from government and enterprise, but from arts and humanities researchers and funding bodies interested variously in creativity, social impact, and community practice.[20]

What it is not, often, is a humanities discipline. Current research funding sources illustrate this point. In the United Kingdom, for example, both the Arts and Humanities Research Council (AHRC) and Engineering and Physical Sciences Research Council (EPSRC) support research into design. This reflects the fact that design research teaching, doctoral training, and research is located both within art and design faculties or universities and in engineering faculties and specialist universities, sometimes in social science units as well. Funding and training map design research's continuing affinities with engineering, psychology, human-computer interaction (HCI), and other applied and social sciences; somewhat confusingly, much research in design is not, in this sense, design research.[21]

The chapter situates design research as a social practice shaped through its interactions with professional training and the academy, and as an economic practice within the university structure. It assesses how key actors within the "discourse communities or networks" that constitute design research have previously employed or understood history in two significant milieus and moments: the journal *Design Issues* in the 1980s and early 1990s; and interpretations of history for design in the early 2010s. It offers elements of design research that might benefit historians as well. Finally, it argues that history, as a

method that is both forensic and problem-posing, might enable design research to attend even more carefully to design's environments, impact, and power relations, and to create more effective, ethical products as a result.

Ultimately, the chapter aims to bring history and design into dialogue: not through writing histories of design or by developing designs that reference national or other pasts, but through an exchange of methods. In 1991, Victor Margolin called for a similar dialogue:

> I believe that history, if brought into relation with other disciplines, can contribute much to the study of design in contemporary culture as well as to its role in the culture of the past. While I don't wish to subsume historical research under research for practice, I do believe that it can both inform and be informed by practice if the two are considered more closely.[22]

Joining colleagues, including Margolin, I offer history and design as two powerful approaches and bodies of practice that might benefit from mutual engagement. I am hardly the first to do so. But the fact that history—design history or otherwise—continues to call for traction within design research—and vice versa—indicates the scope for further work.

A brief history of design research, 1960–1980

Research into systematic, systematized methods for design practice emerged as a shared area of interest, research, and practice within and between academia and industry in Britain after the Second World War:[23]

> Thus, a phase has been entered in which design, as design, is a subject for study. The goal of such a study must be to understand the nature of the design process and how its various elements can be developed and assembled, motivated and controlled to give the greatest overall benefit.[24]

I. M. Ross's comment at the 1962 Conference on Design Methods, held at Imperial College in London, begins to characterize design research as developed in the postwar decades. From the early 1960s, practitioners across graphic design, industrial design, engineering design, architecture, and urban planning—in sites as geographically and politically dispersed as the United States, Britain, West Germany, Japan, the Soviet Union, Brazil, and Chile—identified self-reflexivity and the conceptualization, codification, and communication of considered, articulated methods for the rational design of artefacts,

systems, and environments.[25] Both the goal and the conceptualization of design prefigured the dematerialization and abstraction of the 2016 WDO™ definition. In Ross's words:

> The last few years have seen the beginning of a shift in emphasis in the study of design—from the end product as such and the components, materials and knowledge which come together in the evolution of its form, to the process itself and the methods of reasoning and imagination by which the form is conceived and refined.[26]

Despite variance in ideas between individual proponents and between different local design methods communities, a common goal was to optimize effective results in any project by attending to the design process itself, including design's context, as a designed, enacted and reproducible set of actions—a design in its own right. Proponents believed that attention to design process might enable designers to improve the outcomes of projects as diverse as precision machinery manufacturing and urban design.[27]

As defined by British engineering design educators E. Matchett and A. H. Briggs, design was the process of deriving "the *optimum* solution to the *sum* of the *true needs* of the *particular* set of circumstances."[28] Broadly stated, optimizing the design process formed part of a more general interest among engineers, managers, and academics in industrialized or industrializing nations to optimize manufacturing, engineering, and planning. Design methods emerged alongside, and in many cases drew from, practices such as operations research, urban planning, and cybernetics, all of which built on wartime systems theory and developments in practice such as network flow control. Advocates such as Ross shared the desire to systematize design process as a problem-solving method, and, in so doing, position design as a rational, scientific and self-reflexive practice similar to the scientific method.[29] As described by leading theorist and practitioner Nigel Cross, "There is, therefore, a common concern with increasing both the efficiency and the reliability of the design process in the face of the increasing complexity of design tasks."[30]

By the early 1970s, design methods, or design research as it was by then increasingly known, had become an academic discipline in Britain and the United States, with a university presence, national and international societies, newsletters, conferences, a profile in other more established academic disciplines' journals and conferences and regular communication between proponents.[31] In the United Kingdom, design research contributed to shaping design education in industrial design and engineering faculties at universities and polytechnics,

alongside more arts-oriented conceptions of design as creative practice in art schools and polytechnics.

As the field's cultural and organizational proximity to engineering should suggest, design research in the 1960s and 1970s referred primarily to research methods in engineering and technical disciplines. When attention was accorded to context, it found itself in the social sciences, rather than in humanities disciplines such as history, or in existing histories of modern design such as Reyner Banham's *Theory and Design of the First Machine Age* (1960).[32] Methods proposed in this period demonstrate some parallels with historical practice, as in, for example, an attention to articulating change over time, the identification of factors in change, and the results of specific combinations of these factors. Many early British design research protocols specified assembling all relevant evidence to ensure accurate assessment of a situation as the first step in the design process, while demonstrating an awareness of the impossibility of gathering all relevant evidence and of knowing when one has or has not done so. However, for the most part design research's advocates framed their processes as generating a product—a system, machine part, urban plan, or other designed artefact—rather than as describing and communicating the process through which a condition came into being.

Design methods and history also shared a cultural shift after the late 1960s, from the positivist assumption that universally applicable, rational methods might generate a systematic understanding of cause and effect toward an expectation that humans were simply messy, and that effective design and description required attending to social complexity and human scale. As early proponent J. Christopher Jones reflected several decades later: "We sought to be open minded, to make design processes that would be more sensitive to life than were the professional practices of the time. But the result was rigidity: a fixing of aims and methods to produce designs that everyone now feels to be insensitive to human needs."[33]

Even more strongly, Jones wrote:

> I dislike the machine language, the behaviorism, the continual attempt to fix the whole of life into a logical framework. Also, there is the information overload which swamps the user of design methods (in the absence of computer aids that really do aid designing). I realize now that rational and scientific knowledge is essential for discovering the bodily limit and abilities we all share, but that mental process, the mind, is destroyed if it is encased in a fixed frame of reference.[34]

By the 1970s, design research suffered from what Cross described as "a clash of views between those who want to develop an objective 'design science' and

those who want to reconstitute the design process in recognition of the ill-defined, wicked,[35] or ill-structured nature of design problems."[36] The rupture formed part of the broader shift in thinking as practice away from the modernist "science and technology" paradigm critics saw as having led to crises such as the Vietnam War to one critical of power structures and desiring to distribute decision-making agency to broader publics.[37] In design research, this meant an exploration of participatory practices that shifted agency, as Cross describes it, "towards recognition of satisfactory or appropriate solution-types and an 'argumentative', participatory process in which designers are partners with the problem 'owners' (clients, customers, users, the community)."[38] Design research's sea change paralleled the rise of approaches such as narrative history, critical history, poststructuralism, women's history, and social history in the 1970s, as well as the emergence of critiques of technological determinism and social construction of technology theory within the history of technology.[39]

Design history was also shaped by this cultural shift. Design history as an academic discipline in Britain emerged in the mid-1970s as a subject area within art and design education, located in art schools and in polytechnics. Catalyzed by government reforms to tertiary art and design education and by late-1960s protests at British art and design schools against what students saw as irrelevant modes and content of art history teaching, art and design schools and polytechnics in the early 1970s began offering design history as a mandatory subject for design students, delivered by lecturers with backgrounds in cognate disciplines, such as the history of art.[40]

Design history combined approaches from cultural studies, cultural history, semiotics, visual and material culture, socioeconomic history, and the history of architecture. Some design historians focused on the history of design professions, prominent designers, and designed artefacts in twentieth-century Britain, the United States, and Western Europe, with attention primarily to modernism, an approach following that of modernist canon-creating histories such as Nikolaus Pevsner's *Pioneers of Modern Design* (1937). Some aimed to historicize professional design practice through the lenses of cultural, political and social history.[41] Others, some aligned with the Birmingham School in cultural studies, directed students' attention to analyzing everyday objects such as the Vespa scooter and developed a professional discourse around artefact-based social and cultural critique.[42]

Design research, like other engineering-based or aligned design approaches, featured rarely in this constellation. Similarly, 1970s design research developed human-centered design approaches largely without reference to humanities

fields such as history. Writing in the inaugural issue of the DRS journal *Design Studies*, Bruce Archer, Professor of Design Research at the Royal College of Art, included history within what he calls "design methodology": "Design methodology is alive and well, and living in the bosom of its family: design history, design philosophy, design criticism, design epistemology, design modelling, design measurement, design management, and design education."[43] At the 1980 DRS conference, Archer called for design researchers to attend to design's social and cultural context as well as to cognitive methods, and noted history as one of the methods attuned to recognizing and understanding it.[44]

Much period writing about the relationship between design research and history, however, comments on a lack of communication. In a pair of brilliant essays published in 1984, British design historian Clive Dilnot critiqued "design studies' attempts, so far profoundly ahistorical, to analytically and logically model the design process" and argued that design research had not in fact engaged the social.[45] As he wrote, "it is very difficult to hold simultaneously an orientation to the design professions, whose entire value system eschews the social, and to the wider, social sense of the activity and its human, rather than simply design professional, import."[46] Dilnot cited several factors for the gap between design history and design research, firstly historical class differences between the humanities and applied science and technology. He argued that the disconnect between humanities-based design history and design practice with its connections to business, industry, and engineering emerged from the denigration of business, industry, and technology as lesser than "pure" sciences and humanities in Britain since the nineteenth century.[47] A difference in cultures—namely what Dilnot saw an overreliance on positivist methods within design research, stemming from its allegiance to science, technology, and engineering, and an uncritical focus on narratives of great modernist designers and designs within the history of design, stemming from similarly un-self-reflexive practice—furthered the disjuncture.[48]

For Dilnot, these epistemological differences blocked the possibility of mutual recognition: "Discouraged from pursuing the kind of self-reflection characteristic of the humanities and sociohistorical sciences and of science itself, neither technology nor design has pursued the historical, cultural, or philosophical-analytical study of itself."[49] Design history research, he argued, should go beyond modernist canon formation to address broader historical issues, including questions of economics and industrial organization.[50] This, he argued, would allow design history to contribute both to understandings of design and to design's ability to respond to pressing social challenges.

Dilnot's critique is unrelenting, perhaps intentionally so, in deemphasizing the self-reflexive, intellectually open practice that did exist in the fields of design research and design history. Similarly, a broader categorization of design history would include his own academic practice, which did bridge the two communities. Regardless, the critique's possibility indicates both a lack of communication and the feeling of necessity, amongst some, to join the two practices.

Design historians within design and history: *Design Issues,* 1983–1995

In the 1980s, a similar vision for history's relation with design research emerged within epistemological and institutional fields in Britain and the United States. By the early 1990s, this would lead to heated debates around design history's instrumentalization and independence in relation to design research:

> Relevant to any historian interested in the design process is the growing body of literature on what is termed "design methods." This literature reflects the reflections of practitioners and theorists on designing. Their aim in making the methods used explicit and discussing their various strengths and weaknesses is, of course, to make designing more effective and scientific.[51]

Notable in design historian John Walker's 1989 description is the effort to parse design research as relevant rather than present in design history. Dilnot's 1984 critique suggests, similarly, that British design historians were aware of design methods, but found them intellectually alien and unhelpful.[52] Design historians and design researchers occasionally published research or presented conference papers across disciplinary boundaries, but the two fields remained separate for the most part outside each other's mainstreams.

American academia provided the ground for an argument for including history, theory and criticism within design research, as well as models for this practice. Dilnot's critiques were commissioned by Margolin, an American design historian, for *Design Issues*, an academic journal founded in 1982 at the University of Illinois Chicago.[53] The first issue ran Dilnot's overview and critique of design history practice; the second his argument for change in both design research and design history practice, to address urgent social and political issues. As the reasoned ferocity of Dilnot's critique suggests, *Design Issues* represented a concerted effort to generate discourse, discussion, and ideas by publishing plural ideas about design; the initial editorial stated that the journal intended "to be

provocative and raise controversial issues," rather than seek the foundations of a science or theory of design.[54] A second aim concerned American design education: to defuse what the editors saw as unfounded belief in pragmatism within design education by modeling history's attention to complexity and consequent disabling of oversimplified conclusions, which they saw as endemic in American design education and academic discourse at the time. Third, the journal aimed to reposition design within culture, as counterpoint to design research's continued focus on method. As described by Margolin, a cofounder:

> The five founders identified the themes of the journal as history, theory, and criticism, thus staking out a space in the field of design research that was not occupied by any other publication or discourse community at the time. The aim of the journal, as stated in the initial editorial, was "to be provocative and raise controversial issues," rather than seek the foundations of a science or theory of design. The editors positioned *Design Issues* as "a journal of ideas that will embrace many forms from scholarship to polemics." Their intent was to explore design as a broad part of culture rather than an enterprise with a particular theory or methodology.[55]

Publishing design history furthered all three aims, and in doing so created a space self-identified within design research but infused with humanities approaches. The journal thus became a key site for publishing design historical research, both by American scholars located in academic disciplines such as American studies and art history, and by British and European authors situated within design history, philosophy, and pedagogy.[56] Book reviews stimulated American audiences by introducing design history research published elsewhere—primarily but not exclusively in the United Kingdom. Historical content appeared alongside theory and criticism, toward the journal's aim to spur critical discourse and self-reflexivity within academic design.

Editors felt that design history should contribute to larger issues in and around design: "By asking probing questions … design history constitutes one important form of deliberation on the artifacts, events, issues, and themes intrinsic to design in the modern era."[57] Despite editors' work to connect design history overtly to pressing issues in design, however, the journal's 1980s design history articles often stayed within historical parameters, focusing on historiographical points—important for the task of strengthening design history's academic capacity and provoking reflection for nonhistorian readers, but requiring some work on their part. Writing retrospectively in 1995, Margolin commented, "Design history … has not had much success in engaging with current practice. These

issues involve new technologies, innovative collaborative efforts among design professionals, a concern with the impact of complex products on users and the relations between the design of material objects and immaterial processes."[58]

Perhaps due to disciplinary and structural conventions within American universities that saw many design historians working within art history departments, the journal's 1980s design history articles had addressed such issues thematically as conventional history articles, without overtly addressing contemporary design practice or its conditions. Paralleling Dilnot's call in 1984, by the early 1990s *Design Issues* published material from areas like design management, design policy, and design pedagogy alongside the original humanities trio. This widening reflected a shift in editors' understandings of the theoretical and critical apparatus necessary for intellectually powerful design, an assemblage that cofounder Richard Buchanan described as "design thinking as a liberal art":

> The significance of seeking a scientific basis for design does not lie in the likelihood of reducing design to one or another of the sciences-an extension of the neo-positivist project and still presented in these terms by some design theorists. Rather, it lies in a concern to connect and integrate useful knowledge from the arts and sciences alike, but in ways that are suited to the problems and purposes of the present.[59]

Within this project, Margolin saw a particular role for design history, writing in a 1992 *Design Issues* article:

> I therefore want to propose two locations for design history, one in relation to the discourse and particular concerns for its own practitioners and the other in relation to the wider field of design discourse, where it can contribute to the ongoing research about design and its future. Within this wider field, history can play a powerful role that is currently being neglected.[60]

For Margolin, history was both collective experience and critical practice; in both senses, history's "long view" would benefit design research through contextualization and comparison. Similarly, history's attentiveness to the impact and nuances of cultural and social conditions might, he suggested, mitigate what he perceived the continued tendency toward ahistorical methods within design research:

> Until now, few design historians have sought such a role. While it may be argued that design history is a relatively new field and that the historian's energies are best turned to the development of his or her own research community, it can also be propounded that design historians are urgently needed to prevent design discourse from taking too strong a turn toward technique as the dominant topic

> of research. Historians have the capacity to help shape the consciousness of the design community and to contribute to the articulation of its ideals, principles and research agendas.[61]

Margolin called for design historians to operate within a new field namely "design studies": "the field of inquiry that addresses questions of how we make and use products in our daily live and how we have done so in the past."[62] This stance reflected Margolin's concern that design research, as it was developing particularly in the new area of doctoral training, espoused engineering, management, and social science perspectives and remained insufficiently attentive to the human. In this hierarchy, humanities—history—was insufficiently quantifiable or reproducible, and thus excluded. Margolin argued that the value and credence of history and criticism—fields seemingly "soft" in comparison with "hard" engineering-derived design theory—were simply invisible within the logic of the dominant system despite their important role in rendering socially responsible design: "When history, theory, and criticism are marginalized within design thought, the social conditions of design practice recede in importance. … it is not enough to simply readmit judgement and experience to the design imagination. These qualities require analysis and cultivation. They must be treated as subjects in their own right."[63]

This stance, publicized in *Design Issues* and the DRS journal *Design Studies*, engendered heated debate amongst design historians: should history be part of a larger suite of critical tools for working with/in design, "design studies," or would this simply instrumentalize design history? Architectural and design historian Adrian Forty replied in *The Journal of Design History*, arguing, "To my mind, the main obligation of design history is to write good history—in its ends design history is no different to any other branch of history."[64] The issue was one of purpose: history alongside design research, or history to strengthen design research's effectiveness and ethical claims. In sum, the issue again concerned coextant value systems both with claims on practice: history's power to act in its own right *versus* history's ability to intensify the impact of another practice—design—and, within the latter, qualitative humanities *versus* quantifiable applied and social science.

Arguments around history and/in/as design research, now

Today, design historians are again discussing history's instrumentalization. For some key figures in the discipline, the concern lies with design communities' perception of history: is design history seen an adjunct or "service" discipline to

design education and practice, rather than a discipline in its own right? Writing in 2013, design historian Kjetil Fallan asked:

> Is design history becoming a field of academic scholarship in its own right, or is it the fate of design history to provide context, background, legitimacy, and inspiration to design education and practice? Despite the major advances made over the last decades, the latter rationale shows a disturbing tenacity. These are the confessions of an anti-instrumentalist.[65]

Fallan cited "Design History as a Tool for Better Design," the title of a thematic track at the 2013 annual meeting of the European Academy of Design (EAD), and the call for papers that invited "interpretations that show how today's designers will benefit from a better knowledge of design history."[66] Fallan noted the benefits of designers understanding the history of their field and practice:

> Just as I prefer a prime minister with at least a working knowledge of political history, I fully agree that design history should form part of the intellectual framework of designers. But researching, writing, and teaching that history should be done on historians' terms, not on those of designers (to be).[67]

Ultimately, Fallan expressed his concern that linking design history to design practice limits the field's development, and argued for design history to engage increasingly and more thoroughly with other humanities and social science disciplines.[68]

Fallan's points on design as historical practice are important, but the article is caught in a false dichotomy. History should not be framed as "for" design education and practice, but that does not mean that design historians cannot then work with designers or that designers cannot or should not employ history methods within their practice. Fallan is interested in the status and practice of design history as a discipline that has largely operated outside that of history "proper." But this pertains partly to positioning—a gesture of self-marginalization on the part of design historians. Referring back to Forty's 1993 argument, design historians could easily practice both history, and design history. Nothing should stop design historians from collaborating with design researchers, as with any interdisciplinary collaboration, even as design researchers might employ historical methods. If historians desire agency in how history is understood and deployed, then communicating history to designers could surely form an important part of history practice (as the 2013 EAD track convenors do in their professional life, through teaching, publishing, and academic community participation).

Fallan's concerns about instrumentalization point to the continued presence of other voices—many active since the 1980s—calling for historians to work alongside designers to contribute toward addressing urgent social, political, and environmental issues. Speaking at the Design Research Society biannual meeting in 2010, Margolin posited that history facilitates the analysis and understanding of complex sociotechnical systems, and called for DRS conference attendees to create collaborations between design researchers, practitioners, and design historians:

> The problem with the disconnect between discourse communities is that much design that occurs today is highly technical and as it is configured into large systems it has a significant impact on our lives. We need more research to help us understand these systems. New connections need to be made between researchers who study design's meaning in the past, present, and potentially in the future and those who are doing the research that is generating new and unprecedented products.[69]

More recently, in 2015, the design philosophers and historians Tony Fry, Clive Dilnot, and Susan Stewart argued for a new use of history within design research to address the arrival of the Anthropocene. Positing that design research as a field suffers from a perpetual forgetfulness about what historically defines "design," and somewhat selectively critiquing design history for solipcism in the face of environmental, economic, political and social crisis, they modeled modes of employing history—including art and design-led presentations of historical pasts in present everyday spaces and articulations of design shaped the dénouement of world-changing events —to reintroduce "reflection" into design thinking[70].

This may be more complicated than it first appears. In 2016, at the biannual DRS conference in Brighton, trustees of the Design History Society (DHS) organized a conference strand, "Design Research—History, Theory, Practice: Histories for Future-Focused Thinking." The strand sat alongside strands devoted to case studies, methodological propositions and critiques of using design to broaden access of power: on social design and codesign, to shift agency to users and communities. Other strands addressed optimizing product usability for market share gain and user ease, with notable emphasis on ethnographic research to understand users. Yet others convened papers on design thinking/practice as a method for designing policy and other nontangible systems; on design for health and well-being; on design philosophy; and on design education.

In these examples, papers by historians are rare and history is rarely visible as method. Papers and strand themes indicate the strong presence of social science techniques and perspectives, reflecting design research's methodological

shift. This shift is also visible in the heavy emphasis on qualitative and quantitative social science techniques in design research handbooks for researchers, students, and practitioners.[71] Ostensibly, the current value placed on user-experience design and on metrics for demonstrating value and impact in research funding bids and to clients and employers serves, in part, to explain this response. The results of research employing historical approaches are less easy to measure, take far longer to produce, and remain less obviously user-centered.

In contrast, strand organizers Harriet Atkinson and Maya Oppenheimer desired to bring design history into conversation with design research, to stimulate long-term mutual dialogue and to position history as part of a broader set of open practices conducive to more effective, attentive design research. Echoing Jones, Atkinson and Oppenheimer saw history as counteracting the dangers of reductionism: "the simplification of design methods to behavior training as well as the reduction of a creative, ambiguous and evolving work to systematic, algorithmic protocols for design problem-solving."[72] If we understand Atkinson and Oppenheimer to have called for new ways of engaging in a skills-exchange between design research and design history, how might we respond?

This chapter began with the World Design Organization™ definition of industrial design. From my perspective as a historian whose research and professional practice are enmeshed with those of design, the scale, scope, and potential for understanding, communicating and implementing design as critically effective practice offered in the WDO™ definition is exciting. Yet these same characteristics—the optimism, the scale, the positioning of potential—concern me as well. From the WDO™ definition to DRS 2016 papers, too many framings of design, today, express overt overoptimism and insufficient attention to trouble. All too often they employ the language and concepts of empowerment without inquiring into how power is distributed amongst stakeholders, despite the impact of power flows and imbalances on design outcomes and involvement in design processes. As design popularizes, attention to complexity, nuance, bias and to the presence and absence of agency and power within human relations and design systems remains essential. Problem-posing, skepticism, and reflection—fundamental, integral practices for the humanities, including history—could provide this.

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