

Bess Williamson, Elizabeth Guffey, eds. *Making Disability Modern: Design Histories*. London: Bloomsbury Visual Arts, 2020. Illustrations. 264 pp. \$26.95, paper, ISBN 978-1-350-07042-4.

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The primary topic of this book is how the experiences and meanings of disability have been shaped by design. By design, the editors, design historians Elizabeth Guffey and Bess Williamson, mean the processes of planning and making the material world. Guffey is a professor of art and design history and head of the MA program in art history at the State University of New York, Purchase College. Williamson is an associate professor of art history, theory, and criticism at the School of the Art Institute of Chicago. Their edited volume brings together thirteen individual papers presented at a conference at the Center for the History of Business, Technology, and Society in Wilmington, Delaware. The center organizes historical conferences while housing a major research collection documenting the history of American business and technology.

The book is structured around three sections that each begin with an editor's introduction that provides linkage between the papers. Section 1 focuses on pre-industrial times, with an article by Nicole Belolan outlining the ingenuity and creativity which persons with gout, particularly those with substantial financial means, applied to improvise daily-use items as their assistive technology. It was they, as well as their families, rela-

tions, slaves, or local craftspeople who devised and created the items necessary for the care of and use to family members who lived with gout. As impairments were common, Belolan argues, and mainly a matter of the close social environment, it depended on this environment how impairment was experienced, and if or in what ways it was disabling. Disability in the pre-industrial period, in general, is presented here as reflecting individual circumstances and environments as there was no overall, top-down state or government approach. Cara Kiernan Fallon's study follows chronologically. She investigates the usage of canes in the nineteenth century. These were, in contrast to crutches and other walking aids, items of high fashion, especially among the American middle classes and particularly since mass production allowed for a wide range of designs and affordable prices. Fallon shows that canes only fell out of fashion at the turn of the century, while at the same time canes became standardized medical devices. This expertly written essay gives an impressive example of the interpretative flexibility of technical objects.

Aparna Nair's account deserves to be highlighted because she so skillfully demonstrates not only how colonial narratives controlled the exper-

ience of deafness, but also how certain local actors under this regime actively experimented with signing. Nair found that the mass-produced technological aids imported from Britain and imposed on deaf or hearing-impaired people were used mainly by better-off persons who began to reject signing. Colonial rule, the sale of mass-produced products, and oralism went hand in hand. However, the products in question were not diffused through Indian colonial society, where many people continued to adhere to sign languages and hearing aids that were perceived as superfluous in everyday life.

The fourth essay in this chapter, by Caroline Lieffers, relates to a point that Guffey and Williams make in the section's introduction: the industrial age brought up new disabilities or, as has been argued before in early disability studies scholarship, actually created disability in the first place. While the latter may be contested, it is certainly true that industrial production, factory life, and the growth of cities, many with unhealthy living conditions, caused a high level of health problems and lasting impairments. Medical innovations at the same time ensured that a growing number of people survived injuries and illnesses, but with lasting health issues, thus also creating impairment. Such medico-technical innovations also accelerated the interventionist medical approach to impairment. With the industrial age came the paradigm of rehabilitation. Lieffers discusses medico-technical interventions by the example of workers injured in the construction of the Panama Canal. There, prostheses were much more than devices to substitute for bodily functions. Injured workers' damaged bodies represented both an ethical and a political problem to the canal administration as they reminded the public of the expansionist policies of the United States and its cost in lives as well as of the failure of the project. Prostheses were distributed to mask these failures and losses. Lieffer's essay is special in that

she structures it along four biographies of prosthetic users.

Section 2 is less coherent in approaches and topics. The contributions vary in substance and sophistication. Of positive note is Elizabeth Guffey's contribution on British architect Selwyn Goldsmith (1932-2011) and the different editions of his seminal book, *Designing for the Disabled* (1963). Guffey has written extensively on Goldsmith before. Here, she highlights the differences between the US and UK approach to design in relation to disability. In the United States in the second half of the twentieth century, disability policy was significantly more about civil rights than in Europe and accessibility was the overall paradigm, demanding that all persons with disabilities should participate independently in everything and thus be thoroughly normalized. The British welfare state took a different angle. In Britain, as in many other European countries well into the 1990s when the civil rights and inclusion approach took root in Europe, disability policy was focused on social security, rehabilitation, and care. The ideal of the British welfare state was to issue care and aids to those who needed them, including a very special mobility aid, the Invacar, and other "special" technologies. In many European states, such as the United Kingdom, France, the Netherlands, Denmark, and both the Federal Republic of Germany and the Democratic Republic of Germany, there was a strong intent to integrate persons with disabilities into society through medical, vocational, and social rehabilitation. It was firmly believed that this was best done by special institutions and by things made especially for "special needs" people, and that individual people needed help to adapt to the ways of "normal" societies.

This integration-by-separation approach was very manifest in Het Dorp in the Netherlands, an accessible village with a lot of special care and training facilities built only for a very specific, limited (and promising) group of people with physical

impairments. Wanda Katja Liebermann points out in her essay on Het Dorp that the idea was to turn persons with disabilities into what were regarded as functioning people. They were meant to adapt to the modern world. This world, the built environment, and its living conditions were not questioned in general. Disabled people were offered special facilities and special places where they were expected to fit in. This approach was still very different from the ideal of an inclusive society today where we strive to assess the conditions and environments in the world to see if all people have a chance to participate. Debra Parr then writes about chemical sensitivities and air pollution and the repercussions of modernist planning and building. Kristoffer Whitney looks into the design of the National Technical Institute for the Deaf in Rochester, New York. It was built at a time when special education in the United States was coming under political pressure and integrative teaching was being promoted within the civil rights movement. Whitney points to how the building manifested the conflicting but equally top-down policies of providing safe and effective spaces for deaf students and their inclusion in the world of the hearing.

Elizabeth Guffey rounds the section off with a study on an outstanding assistive device, the Swany Bag, a suitcase-like block with a handle on four 360-degree wheels. This invention is used by persons faced with challenges in walking and balancing in order to stabilize themselves. The Swany Bag is remarkable, because, as Guffey puts it, it facilitates hiding a condition in plain sight. And this is exactly what it was designed for, by a Japanese user who needed to make his walking disability disappear from society's gaze. The Swany Bag is thus a way for disabled people to adjust to the Japanese cultural norm of invisibility and still participate in daily public life.

Section 3 moves on to more recent times and emerging technologies. As the editors note in their introduction to the section, persons living with a

variety of conditions have long been pioneer users of new technologies. Electronic navigation of electric wheelchairs might be just one example, albeit one where the impetus for use came from doctors and rehabilitation experts. But think of the early use of the SMS and messenger apps by persons hard of hearing. This example points directly to disabled persons' choices and spirit. I would have very much liked to read more about that—about tinkering, making do, adjusting to new digital technologies and media according to one's wishes and needs. This would have been an excellent opportunity to explore relations between innovation by usage, agency, and digitalization.

Jennifer Kaufmann-Buhler's essay on the design of personal computers, however, focuses mostly on the new injuries and impairments that work at hardware stations, such as desktop computers, instigated. In a way, her article pairs well with that by Lieffers as they both point to the ambivalent potential and the unintended negative consequences of new technologies. Elizabeth Ellcessor's paper on personal emergency response systems (PERS) is interesting from a technological point of view as she demonstrates how these were designed, how they worked, and who used them and why. She points out that these systems were, in a way, predecessors of today's wearables, monitoring and self-enhancement devices. She also argues that PERS can be seen as devices for surveillance—often bought by relatives who wanted to track and monitor their elderly family members. What is striking about the piece, however, is that it teaches us how disability approaches are bound to cultures and nations. Ellcessor writes extensively about a US television advertisement for PERS and on how its line "I've fallen, and I can't get up," as well as the actress who spoke it, became part of US popular culture. The line became a highly popular saying and was selected as statement of the year by *Time* magazine, and all this while it actually mocked old age and disability. In the process, the device, its users, and, more broadly, disability and old age, were ridiculed. This whole phe-

nomenon, however, was utterly culture-specific. I have never heard of the advertisement nor of its manifestation in popular culture. So, had I ever heard the line in a pop song or elsewhere, I would not have noticed its reference to PERS and would not have known that it mocked disabled and old people.

Next, Bess Williamson's paper nuances the section's argument by showing that disability can actually be used as a marketing strategy and feature for, in this case, 3D printing of prosthetic devices. But as with the PERS and many of the other devices present in this volume, design here is understood as a remedy for disability, as a problem solver and as something that eliminates something considered undesirable. So despite all its high-tech qualities, 3D-printing is, or at least is being presented as, a very traditional anti-disability technology.

The section closes with an essay by Jaipreet Viridi which in a way diverges from the others, as it analyzes the use of digital technology in historiography and public history. Viridi writes about certain technologies and how they can bring up new meanings of disablement and create new ways of access and maybe of agency, but also about how the humanities themselves are part of the construction of disability within the academic world (an entanglement that is long known but rarely studied by those who, as disability historians, are immensely part of the entanglement). Her study is both an analysis and a meta-analysis of an application. This is of methodological importance to historians of disability and public history, of which she herself is one.

The contributions are shaped by a social-constructionist perspective typical of disability studies which the editors expound in their introduction. Neither disability nor access just happens. The editors argue that, when they address everyday technologies and architectural features as either barriers or accessible spaces and devices, activists, designers, experts, tinkerers, and users define disab-

ility as a phenomenon emerging from the material environment. Thus, spaces, facilities, or services can be interpreted as both the reason for disabilities but also as the key to inclusion. Apart from that, the political inscribes itself into artifacts and designs; these become politically charged. So material culture, spaces, and all kinds of artifacts as well as the ways these are used are products of political contexts and are themselves factors that influence political discourse and decision-making.

The contributions bring together many themes: gender, ethnicity, disability, and social class. Some are intersectional by study design. It is nice that the contributions do not cover only US topics, although this is the main regional focus. Other articles focus on disability regimes in Japan, the Netherlands, colonial India, and the UK. Perspectives vary between material studies, art history, disability studies, design history, and cultural history. If readers want to differentiate according to the type of disability that is being written about, then it is noticeable that the volume is predominantly about objects and spaces associated with physical disabilities, especially walking disabilities, and sensory disabilities.

While some contributions focus on critique, others adopt more descriptive narratives. While some contributions focus on one or more particular artifacts or spaces, some have a more top-down view. The volume is nevertheless widely coherent. The three sections of the book reflect a strategy of periodization. The editors argue that in the eighteenth and nineteenth centuries, before the onset of industrial mass production, all artifacts were handmade and highly flexible as they were created specifically to accommodate an individual's needs—made mostly by families, neighbors, and local craftsmen who were well acquainted with an individual's situation. Disability, the editors argue, and the devices invented and crafted to serve the needs and wishes of their users, were rather normal in the sense of everyday life. When standardization and mass production re-

placed those earlier flexible approaches—a long process that is still ongoing in many respects—there was less and less room for nonstandard bodies and their needs or abilities. In the nineteenth century, the notion appeared that bodies and persons who were now perceived as different, non-functioning, or pathological in some way had to be cured or fixed with technical aids. Functional impairments were increasingly seen as pathological deficits and problems that needed to be solved by doctors, therapists, and teachers. This resulted in new institutions and products. People were increasingly sent to places outside the home to be treated, trained, or cared for. Disability was thus more and more removed from society—under the idea of bringing disabled persons back into society after functional rehabilitation. Paradoxically, rehabilitation and integration were meant to be achieved by separation. In Europe, I may add, this paradigm lasted longer than in the United States where, after the Second World War, a civil rights approach to disability took over. As far as the assistive devices were concerned, mass production and welfare-state allocation of aids did not entirely stop disabled persons and their environments from adapting, tinkering with, and improving the devices according to what worked best in their daily lives. Standardized mass-produced devices are often used as the basis for further work in order to make them more suitable through adaptation. The third era, reflected by the third section, is the digital age. The editors describe it as a new period of design with new relationships between people and products.

The editors offer their interpretation of modernism as a thematic clasp for the individual essays. By modernism they mean the aesthetic style and mind-set that, among other things, promoted functionality, rationalization, and standardization. It came with both the neglect of what the editors call nonstandard persons in mainstream architecture, technology, and planning and resulted in an abundance of “normal” yet inaccessible spaces and technologies as well as in special inventions

and concepts addressed specifically to those who were, for one reason or another, regarded as non-standard. The modernist approach in design resembled the approach in science and medicine: to devise specific solutions for “different” people in order to heal, overcome, or alleviate this differentness. There have been a growing number and variety of special products for disabled persons in the countries studied. In other words, the focus on the standard made some designers and architects consider how they could accommodate those who were isolated, marginalized, or disabled by these standards, a realization, one may add, that led—somewhat paradoxically, particularly in Europe—to yet another wave of standardization by building norms.

The editors argue that all of the essays contribute to a deeper understanding of modernism, modernity, and disability by studying the relations and interdependencies of disability experiences and design. Yet the individual contributions could have referred more directly and openly to the theoretic framework of the volume.

The editors have taken a great deal of editorial care. Most contributions are structured in a clear way. At the beginning, topics, questions, and hypotheses are presented clearly in almost all contributions. Frequently, sources and methodological requirements are also introduced critically. All papers are read with relative ease and are visually quite appealing although the font size is rather small. The contributions have sufficient notes and bibliographies. There is an index, but unfortunately the individual authors are not introduced.

The book is certainly appropriate for referencing, but also for teaching. Several individual contributions feature high-quality research and will certainly be of importance for other studies in disability history as well in material and design studies. The introduction has textbook quality and appears very suitable for courses on disability history. For example, it includes important comments on terminology as the editors present terms such

as assistive technology, access, barrier-free building as well as universal design and inclusive design in their respective historical contexts.

For historians of disability it will be particularly interesting that Guffey and Williamson present another model for disability, the design model of disability. It is distinct from both the social and the medical models as it focuses on the role design plays in the construction of disability and the shaping of the meaning of disability. In the design model, disability is seen as “a phenomenon that can be treated or ameliorated through digital or material things” (p. 5). Design defines both ability and disability along with categories of function and normalcy. Guffey and Williamson highlight that the design model is aware of design and disability being contingent and totally historical. Design choices are contextual as are the relations between design and disability. The editors also point to the weaknesses of the model and the discrimination it implies. First, they highlight the ambivalences of design. Design can create barriers and prevent people from participation, but design also provides solutions that enhance participation. There is both a wide range of objects and features of the built and digital environments and an equally wide and ambivalent variety of effects and outcomes. Secondly, they warn against techno-ableism that may come with an overly strong focus on technology as people get pressured to adopt any new technological devices available and not to rely on the help of other people. However, the design model of disability is not explored openly by the authors, so it is a little difficult to deduce how the essays’ findings add up to or fit in with this model. But to cut to the chase, this anthology can be recommended to researchers and students in disability history.

If there is additional discussion of this review, you may access it through the network, at <https://networks.h-net.org/h-disability>

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