DIVERSITY AND DESIGN

Understanding Hidden Consequences

Edited by
Beth Tauke, Korydon Smith, and Charles Davis

ROUTLEDGE

Diversity and Design

Diversity and Design explores how design—whether of products, buildings, landscapes, cities, media, or systems—affects diverse members of society. Fifteen case studies in television, marketing, product design, architecture, film, video games, and more illustrate the profound, though often hidden, consequences design decisions and processes have on the total human experience. The book not only investigates how gender, race, class, age, disability, and other factors influence the ways designers think, but also emphasizes the importance of understanding increasingly diverse cultures and, thus, averting design that leads to discrimination, isolation, and segregation.

With over 140 full-color illustrations, chapter summaries, discussion questions and exercises, *Diversity and Design* is a valuable tool to help you understand the importance of designing for all.

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Korydon Smith is Associate Professor of Architecture at the University at Buffalo—State University of New York, USA, and the editor of *Introducing Architectural Theory*.

Charles Davis is Assistant Professor at the University of North Carolina at Charlotte, in North Carolina, USA.

"We needed a book that introduces students to issues of diversity in design practice; this edited volume fills that gap. Fifteen engaging chapters argue that diversity can be an end product of a creative process that promotes social and economic inclusion. This volume places design at the center of emancipatory and progressive social practices and encourages designers and students of designed artefacts, environments, and systems to think of the social impact of their practices."

Arijit Sen, Associate Professor of Architecture, University of Wisconsin–Milwaukee, USA

"All design has hidden consequences. This anthology is a welcome addition to the literature exploring the role of designers in helping to create a more inclusive society."

Jeremy Myerson, Helen Hamlyn Professor of Design, Royal College of Art, UK

"*Diversity and Design* provides evidence of the profound but often unintended consequences of design decisions across a diverse spectrum of users and range of scales from video games and everyday-use products to architectural environments. The 15 case studies that comprise the book's chapters illustrate how a range of factors and user characteristics influence designers' thinking. Through content, discussion questions, and exercises, the book provides excellent tools for design instructors to better illustrate ways to avoid unintentional discrimination and segregation with design."

Lynne M. Dearborn, Associate Professor, University of Illinois at Urbana–Champaign, USA

"This book is a new interpretation and overview of the social issues that have been finding their way into education and practice for the last 50 years. Beth Tauke and colleagues have provided the overview necessary to take an array of perspectives and put them into a coherent and well-organized structure [allowing] educators and practitioners to continue to evolve toward a greater understanding of the continual emerging complexity in the global culture for which we are designing."

Craig Vogel, Director of the Center of Design, Research and Innovation
at the University of Cincinnati, Ohio, USA

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Edited by
Beth Tauke, Korydon Smith,
and Charles Davis

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Foreword

Closing the Gap between the Designer and the Recipients of Design

Sina Mossayeb, Global Systems Design Lead, IDEO

> *Few people think about it or are aware of it, but there is nothing made by human beings that does not involve a design decision somewhere.*
>
> (Bill Moggridge, Co-Founder, IDEO)

In 1991, British designers Bill Moggridge and Mike Nuttall, along with Stanford d.school founder David Kelley, co-founded IDEO, continuously ranked among the world's most innovative companies. Moggridge described his life work as being driven by his interest in people and their relationship to things. Bill, Mike, David, and a team of young designers, ethnographers, and engineers in California set out to rethink what it meant to do good design work. Their focus was on design methods—the way designers make decisions. IDEO called this approach to innovation "human-centered design."

At its core, human-centered design is about empathizing with people before designing for them. Human-centered designers suggest that it is not enough for a designer to consider important questions like: "Is this design idea technologically feasible?" or "Is this design idea viable for the market?" At IDEO, we argue that designers benefit most from starting with a more central question: "Who are we designing for and is this what they want or need?" By starting with people, you get human-centered design, but you also get more innovative, higher-quality design.

When designing to solve for a human problem or fill an opportunity gap, designers need to look at what people say and do, as well as understand and connect with what they are feeling and thinking. They also need context about those people. Some needs are universal, but how we express those needs and how we want those needs met vary across cultures and groups.

On one project, my team was interviewing Sally, a mother of two, who described herself as "organized." When we arrived at her home, the place was a mess—toys sprawled on the floor, clothes in a big pile, and dishes unwashed in the sink. If we had not visited her home and, instead, had based our knowledge

solely on the survey, we would not have understood the subtleties at play. In discussions with her, we realized what she meant by "organized" was "knowing where things were" and not necessarily having things tidy. She took out a stack of papers from a drawer and showed us the insurance she recently purchased. To Sally, being "organized" was also about feeling "safe." She cared less about visual clutter and sought security through an organized life.

Consider, as well, something that is seldom discussed: the diversity among those designing. Designers often talk about their point of view when addressing a design problem. Truly, what they are talking about is their view, not the *point* from which they are viewing. That *point* includes their experiences, their context, and all the other stuff that influences beliefs and perspectives—personality, gender, age, etc.—and it influences how the designer approaches the problem or opportunity at hand.

I have been part of several design teams that could not be more different, whether that diversity is in the team members' craft, discipline, depth or breadth of experience, ideology, temperament, ethnic and cultural background, gender, or sexual orientation. I have worked on several projects where we put together interdisciplinary teams that (ideally) address the complexity of the design challenge—whether that is improving the employee experience for frontline staff or designing attractive packaging for a line of supplements for people with the metabolic disorder Phenylketonuria. So, when IDEO talks about diversity, we are talking about both the diversity of the design team and the diversity of the recipients of the design. When setting out to design, we reflect on the diversity of the design team: Who are we? What is our background? What context and views do we bring to this design brief? And we think about those for whom we are designing: Who are they? What experiences do they have? How do they feel, what do they think, and what is their everyday life like? What do they want or need?

It is then that we can confidently take on a bold design prompt: "How might *we* design _____ for *them*?"

An important development in the process of human-centered design has been the idea of co-creation. Instead of thinking, "I'm designing this *for* them," IDEO designers shift toward a more inclusive and collaborative, "I'm designing *with* them." Beyond observations and empathy exercises—like going into the homes of people, hanging out for a weekend with them, spending hours shadowing people at work, and so forth—what if you posed the design brief directly to people and had them solve it? Invite them to brainstorm ideas with you. Facilitate their involvement in sketching a prototype of what they think would be an ideal way to engage their children in learning, of vitamin packaging to suit their needs, or of the desirable layout of a playground.

As a design student or beginning professional, you can build your ideas from human-centered research. You can take your prototype out into the world and have people interact with it—then make revisions, get more feedback, and make further revisions—before finalizing it. The design will be much improved and most likely more relevant to those for whom you are designing.

A colleague of mine designed a transportable mosquito net for workers who travel through the rainforests of Southeast Asia. The design was durable,

lightweight, and efficient—a really great piece of work. But, when his team took the prototype out into villages and showed people, the team received disturbing reactions. The people did not want to use it for sleeping, not because the net did not work but because it looked exactly like netted coffins they used to use. How could the designers have anticipated that without engaging the cultural context of those for whom they were designing?

In this book, there are many case studies that raise questions about human-centered design. As you read, consider how those designing came to their conclusions. What was the makeup of the design team? What processes did they use and how did it affect the end product? What were the unintended consequences of that process?

I have often found that the further I get from the insights drawn from those for whom I am designing, the more unreliable, ineffective, and inelegant the outcome. So, I wonder, in the case of failed designs, what role did the designers' *points* of view play in the outcome? Did they take time to understand the values, beliefs, and lived experiences of diverse end-users? Did they use participatory methods to co-create with them? Did they put themselves in their shoes? Human-centered design is itself not free of limitations or unintended consequences. Yet it is a process that beckons us to move beyond our assumptions and self-perceived expertise. Notwithstanding each person's inherent traits and biases, the goal is to lessen the gap between the designer and the recipients of the design.

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Introduction

Beth Tauke, Korydon Smith, and Charles Davis

> *If we cannot now end our differences, at least we can help make the world safe for diversity.*
>
> (John F. Kennedy, 35th President of the United States)

> *Design shapes the way we live. So it ought to serve everyone.*
>
> (Eva Maddox, Co-Founder, Archeworks)

While the case can be made for many populations—ethnic minorities, women, or people with disabilities—children are among the most underrepresented groups in design. Most of the world is designed by and for adults. Children have little say in what gets designed, almost no voice in the design process, and no active recourse for products, buildings, and cities that fail to meet their needs or preferences. Children's museums are the rare exception. Even elementary schools are more frequently designed from adult perspectives—teachers, administrators, and parents—than from the vantage point of kids. Rarer still is our critical questioning of the *immediate consequences* of design on children and the *residual effects* on their transition into adulthood. How does school design affect educational attainment? How does toy design affect children's perceptions of themselves? How does media design affect a kid's opinions about gender, race, or religion? How does the design of a city impact a child's long-term physical and mental health?

Even the history of children is "a marginal subject." Children "leave fewer historical sources than adults, and their powerlessness makes them less visible than other social groups," despite their relevance in major discourses such as immigration, slavery, and war.[1] Leaving children out of history and out of design—effectively off the list of recognized groups or issues, e.g., racism, gender inequality, etc.—both inhibits their development and restricts society's advancement. In contrast, incorporating historical narratives of children expands and enriches our understanding of society. Likewise, recognizing the physical,

cognitive, and emotional needs of children broadens and deepens the methods and impacts of design for other social groups.

Children provide a resounding example. They have, on average, less physical ability and less education than adults. They have little economic power and almost no political power. These factors both lead to and exacerbate their marginal status in design and society. As this book illustrates, however, design impacts all social groups: young and old; black, white, and multiracial; lesbian, gay, bisexual, transgender, and heterosexual. Design is never neutral. Design—positive or negative, overt or hidden—affects physical health, impacts emotional well-being, and governs social interaction. Design influences how we see ourselves, how we see others, and how others see us.

In parallel, the demographics and values of a society affect all of the design professions—from interior design to urban planning, from industrial design to architecture, and from media design to systems design. Larger, wealthier, and more politically powerful groups, "the majority," shape the ordinances that form our cities and towns. They drive which products are designed, manufactured, and sold, and at what prices. They provide the backdrop against which commercial and political messages are interpreted as conventional or innovative, agreeable or offensive. The minority (in number and/or power), conversely, has less influence, but is not without agency. A two-part strategy is needed: (1) uncovering the hidden consequences that dominant groups and prevailing design paradigms have on marginalized groups and (2) revealing and infusing the capacities of disenfranchised groups into the popular ethos and mainstream design processes, i.e., recognizing and integrating a minority group's capacities into everyday social and design practices.

Design and diversity—two social forces that shape our identities and our material world—can no longer be separate fields of study. As such, this book, *Diversity and Design*, focuses on the changing nature of society, and examines the rich diversity of cultural experiences and their associated design issues. Using case studies, contributors to this book discuss ways in which physical and media environments affect various populations and, reciprocally, the ways diverse populations have affected the designed world. Cases uncover instances of design discrimination as well as exemplars of emancipation (freedom). To that end, the book has three pairs of specific objectives:

- to introduce readers to various design disciplines and their relevant histories, and to introduce readers to various diversity groups and their relevant histories
- to raise awareness of the impacts that design decisions have had on diverse populations, and to raise awareness of the impacts that diverse populations have had on design decisions
- to analyze the social impacts of designed artifacts, environments, and systems; and to critically examine the social impacts of design processes and practices.

Building upon the traditions of feminism, critical race theory, inclusive design (design for disability), and other emancipatory paradigms, we assert that

designers can no longer exclusively design in their own image. San Francisco-based graphic designer, Joshua Brewer, for example, asserted that "you are not your user." Brewer added: "Socrates said, 'Know thyself.' I say, 'Know thy users.' And guess what? They don't think like you do."[2] Designers must actively consider the perspectives of "the other" in both general and specific terms. Renowned philosopher Martin Heidegger, for example, proposed that the very idea of communication itself, the exchange of words and symbols, presupposes the desire to hear or understand "the other" and is a fundamental aspect of being human.[3] This drive to know "the other"—to see or understand differences—is a subject in many disciplines, but more recent in design.

Encyclopedist Denis Diderot, in his "Letter on the Blind for the Use of Those Who See," engaged the idea of "the other" by taking the reader on an unusual journey of the visual from the perspective of the tactile. Sight, Diderot's blind man concludes, "is a kind of touch which extends to distant objects." Presenting "the other" through a set of comparisons or metaphors moves both parties, the blind man and the sighted man, beyond themselves into a space of greater understanding.[4]

Psychoanalyst Jacques Lacan presented the idea of "the other" through his concept of the mirror-stage. Lacan argued that the basic nature of difference emerges at the moment when one recognizes her/his reflection as a distinct entity in a mirror for the first time. We recognize ourselves outside of our bodies, the same as others do, yet awkwardly and self-consciously so, awaiting the promise of a unified, integrated *self-and-other*.[5]

Seeking out, knowing, and becoming "the other" is a common theme in many books, films, and television series—*Avatar*, *Star Trek*, *Beauty and the Beast*, *West Side Story*, *Big*, *The Merchant of Venice*, *The Little Prince*, and *To Kill a Mockingbird*, along with Facebook, online gaming, and other media. Despite its popularity in mainstream media, taking on the tasks of actively seeking difference and knowing "the other" typically is not part of mainstream education or design. But design for "the other"—what we might term "empathic design"—is essential to the study and practice of design (ethically and economically). Indeed, in the same way that certain IQ tests have grown obsolete due to their cultural biases and limited definitions of intelligence, some design fields and techniques, even some designers themselves, will face obsolescence (becoming "design-o-saurs") if they continue to focus on a shrinking or narrowly defined majority.[6]

Defining Diversity

Diversity is a global issue, but particularly relevant in multicultural places like the United States. The meaning of the term *diversity* has shifted several times in the U.S. during the postwar period, a history that holds global lessons.

According to Jodi Melamed, Professor of English and Africana Studies, intellectuals and activists of the 1960s considered diversity to be the natural end product of multiculturalism, the public coexistence of various cultural traditions.[7] A distinct quality of early calls for diversity was their legal and economic

character. Moving beyond the mere inclusion of social minorities, these policies sought to provide underrepresented groups with the institutional tools required to redress the inequalities that kept them from living better lives. This practical ethos fueled legislative efforts in the U.S. to inaugurate social programs such as affirmative action, the Voting Rights Act, and the near passage of the Equal Rights Amendment. On American college campuses, faculty members and students worked together to establish academic departments that enabled underrepresented groups to recover, record, and preserve their histories.

By the late 1970s and early 1980s, however, the meaning and spirit of diversity had changed. A more conservative political environment gave birth to an alternative model of inclusion that no longer invested in large-scale social programs for uplifting poor and marginalized communities. Instead, time and money were spent on promoting fewer, but extremely well-placed examples of women and minority successes. The biographies of celebrities such as Will Smith and Michael Jordan, or entrepreneurs such as Oprah Winfrey and Barbara Walters, led many to believe that anyone could achieve success if they worked hard enough. Such sentiments elevated individual achievements over the amelioration of institutional barriers. While many political and corporate institutions added non-discrimination clauses to their mission statements, and even experimented with quotas for hiring women and minority candidates, the prospects for social mobility for working- and middle-class women and minorities declined. By 2010, the likelihood of poor Americans raising their living standard above that of their parents was lower than it was in the 1960s. The radicals of the 1960s learned that diversity (as an endpoint of multiculturalism) was not as simple as making discrimination illegal. In an ironic twist of events, Americans have learned to celebrate individual differences just as improving the lives of underrepresented groups has become more difficult to accomplish.

As the philosopher Charles Taylor noted, personal identity formation is indelibly linked to the visual representation of diversity; without images of "people like us" in the public sphere, it is hard to imagine ourselves contributing to society.[8] In tandem with these positive effects, however, the visual representation of diversity can also mask continuing patterns of inequality. Such a situation is summarized in Walter Benn Michaels' polemical book, *The Trouble with Diversity: How We Learned to Love Identity and Ignore Inequality*.[9] If the link between diversity and economic uplift is broken, *diversity* loses much of its progressive meaning.

In an attempt to reverse the growing irrelevance of diversity in public life, the editors of this book have attempted to revive the socially progressive spirit that marked the late 1960s and early 1970s. Toward this end, we consider diversity to be the end product of a creative process that promotes social and economic inclusion. *Diversity*, as an end point rather than a static list of characteristics, requires that we do more than celebrate our individual identities or recognize an "other" as distinct from the "self." It requires us to be actively engaged in building a more just and inclusive society, whether we are personally affected by discrimination or not. Our definition of diversity also establishes the conceptual basis for treating design as a material form of *social praxis*.[10] We encourage anyone reading this book—students, scholars, and designers—to

couple their intellectual recognition of "the other" with the critical tools and strategies required to redress social inequality. This is no easy task. It means that we must understand the specific conditions that influence "the other" in our society and work at extending the forms of agency they already possess.

The essays included in this volume actively build upon academic traditions that examine specific aspects of "the other," while demonstrating how design can be used strategically to extend practical and political concerns. For example, one historical movement implicit in several chapters is critical race theory, which analyzes the ways that laws supported discrimination in the eighteenth, nineteenth, and twentieth centuries. Derrick Bell, Cheryl Harris, and Kimberlé Crenshaw inaugurated this field of study by exposing the legal codes that reproduced majority ownership of minority peoples and their lands, even without the conscious efforts of these groups.[11] Several chapters in this volume expose the ways that competing land-use claims are ultimately issues of group affiliation within physical spaces. The naming of spaces has legal implications that legitimize the cultural and historical claims used to orient future actions. Such a perspective opens the way to see that even the aesthetic decisions of designers are political acts.

In addition to these racial discourses, several essays in this book build upon the writings of feminist scholars, such as Judith Butler, which consider gender and sexuality to be the result of "gender performances" instead of a rigid product of biological characteristics.[12] This perspective provides women and lesbian, gay, bisexual, and transgender (LGBT) individuals with greater agency in everyday and professional life. The postcolonial critiques of Edward Said, Homi Bhabha, and Gayatri Spivak have also paved the way for considering the role of empire building in shaping of so-called "Western" and "non-Western" spaces and cultures.

Of course, it is impossible to be comprehensive in our coverage of diversity issues. This work, however, provides the conceptual tools and strategies for discovering parallel examples.

Defining Design

Like diversity, design is a vast subject, "too complex a matter to be summarized in less than a [full] book."[13] In this text, nevertheless, the term *design* is considered in both professionally focused and culturally expansive ways. Design is, first, considered as a set of professional disciplines in which the members have acquired specific knowledge and skills necessary to design media, products, buildings, cities, environments, systems, and services.

More important, design also is considered a basic component of humanity. Walter Gropius, founder of the Bauhaus, contended "that design is neither an intellectual nor a material affair, but simply an integral part of the stuff of life, necessary for everyone in a civilized society."[14] Likewise, if we accept Michael Shannon's notion that "design is the fundamental creative activity with which we direct our lives, and collectively, the earth's transformation from its original, natural state into our human-made world," then *we all are designers*.[15]

Although humans have been designing at every scale for thousands of years, the term *design* did not emerge until the 1540s, approximately the same time the term *architecture* appeared.[16] Design was not a named profession until after the industrial revolution. Prior to this time, those with titles such as artisan, craftsperson, and engineer did what we think of as design. Formalizing design as a profession, in part, was a result of the German Bauhaus curriculum, which combined architecture, the applied arts (crafts), and the fine arts into a core set of studies. This eminent school removed the barriers between these fields and encouraged architects, craftspeople, and artists to integrate industrialization into their work. It promoted a connection between art and industry, paving the way for the professionalization of design.

The design professions addressed in this book include graphic design, industrial (or product) design, interior design, architecture, urban design, landscape architecture, and systems design. While there are organizations and publications that solidify each profession as its own entity, the many shifts, overlaps, merging of specialties, and appearance of new ones, make design more fluid than the design disciplines suggest. The intent here is not to focus on each discipline but to critique the various design professions by looking at their impacts through case studies. Whether it is the acknowledgment of marginalized populations through the design of memorials or the empowerment of children through ergonomic fit, design is regarded as a political activity that influences people on global, civic, and individual levels, and affects social and power relationships.

So, who develops our products, visuals, and environments?

In the U.S., the average graphic designer is an able-bodied, white female who works in an urban area.[17] The average web designer is a 37-year-old white male who works in an urban area.[18] The average product designer is an able-bodied, white male who works in an urban area.[19] The average interior designer is an able-bodied, 42-year-old white female who works in an urban area.[20] The average architect is an able-bodied, white male over the age of 40 who works in an urban area.[21] The average landscape architect is an able-bodied, white male over the age of 40 who works in an urban area.[22] The average planner is an able-bodied, white male under the age of 50 who works in an urban area.[23]

These statistics are similar in other Western industrialized nations, and the litany sends a potent message. Those who are highly underrepresented in the design professions include seniors, children, non-Caucasians, those with physical or cognitive disabilities, rural inhabitants, and those who are economically disadvantaged. A more diverse pool of design professionals would better address the needs of more people, especially those who currently are not considered in the design process. What difference might this make? Would a 72-year-old man with diminished vision design the typical cell phone used today? Would a low-income teen design sneakers that no one in his neighborhood could afford? Would a woman who had been attacked design a dimly lit dead-end stairwell in a public building?

The concern about the lack of underrepresented groups in the design professions extends similar worries about medicine, law, and other professions. Underrepresented groups are participants in and recipients of design. It is,

therefore, important that design practices recruit and include people from all groups, particularly those who are, in some way, marginalized. Simultaneously, more inclusive design processes are needed, fostering work that resonates with a broader population and contains meaning for more people. With this, design becomes a primary catalyst for social justice and cultural change.[24]

While these idealistic notions are encouraging, it is important to remember that the consequences of considering social justice as a fundamental component of design have yet to be fully determined. Very few design practices focus on diversity issues. This is, in part, because design choices often are driven by economic profit. Given the pressures of a business, finding time to explore and understand diversity issues is outside standard practices. Moreover, making design decisions that ensure sensitivity to and enrichment for others involves broadmindedness—a willingness to explore ideas and ways of being other than your own. This mindset transforms design from something mostly about shape and form to something that is more about experience. It follows, then, that this broader view requires intellectual and economic investments. It is important, therefore, to tie these investments to greater profitability and/or improved quality of life.

What is important here is that diverse participation in the design process, from both professionals and public citizens alike, yields diverse and more equitable results. At the very least, understanding the cultural context reduces the likelihood of suffering hidden social, health, or economic costs. (Consider, for instance, the failings of the mosquito net discussed in the foreword to this book.) Inclusive processes help designers to make critically sound and socially conscious choices in complex situations. It fosters actions that: (1) take the viewpoints, needs, and desires of underrepresented populations into consideration, (2) relate various languages, systems, cultures, and diversity groups, and (3) broaden and deepen the equity and accessibility of our digital, visual, and physical environments. Reducing the "distance" between designers and the many populations they serve is perhaps the single most important charge to the design professions today.

Design also might be thought of as a basic life skill, a way for us to examine our relationship to the world and take informed action. As such, all of us need to be able to critically analyze it. *Time Magazine*'s 2006 person of the year supports this concept. The award went to "You." As editor Lev Grossman stated, "It's about the *many* wresting power from the *few* … and how that will not only change the world, but also change the way the world changes."[25]

As such, it is essential for designers to work within a questioning framework that integrates marginalized groups and peripheral points of view. Most important, examining the consequences of an expanded social agenda provokes questions about how to take action in ever-changing conditions—conditions that ultimately move toward diversity in design. Throughout this book, we emphasize that a socially minded study of design moves us from supporters of the status quo to arbiters of change.

Diversity and Design: The Themes and Case Studies in this Volume

A variety of viewpoints come forth in each case study, resulting, collectively, in the presentation of dozens of concepts. Taken together, *Diversity and Design* provides four cross-cutting themes: (1) revealing unintended consequences, (2) pluralizing voices and canons, (3) empowering underserved groups, and (4) promoting identity development.

Revealing Unintended Consequences

Design critic Ralph Caplan wrote, "Imagining consequences is as important as anything else designers learn to do."[26] He used the example of the leaf blower to make his point. Designers were focused on ergonomic fit and blowing force, but forgot about the noise. They failed to imagine that people might blow leaves off their decks at seven o'clock in the morning, waking and annoying neighbors in the process.

While the oversights of leaf-blower designers might irritate people, other unintended consequences of design are more serious. One of the worst design decisions regarding human aid involves food-ration packets and cluster munitions in Afghanistan. Both were the same canary-yellow color and similar in size. Both contained black sans-serif text written in English. The Humanitarian Daily Rations package held a 2,000 calorie meal. The cluster munitions package held a BLU-97 bomb "capable of killing anyone within a 50-meter radius and severely injuring anyone within 100 meters from the detonation."[27] Some Afghanis, both adults and children, who could not read English, confused the two packages; the results were devastating.

There are many reasons why designers fail to consider consequences. They might lack essential knowledge, make errors, hold biases, focus too narrowly, overreact, put immediate interests over long-term interests, disregard conflicting agendas, make assumptions, and/or ignore contexts. Designers cannot anticipate all consequences of their work. Nonetheless, more thoughtful design processes can help to eliminate many undesirable outcomes.

While this theme runs throughout the book, it is most thoroughly discussed in chapter 14, "Packaging Panic: The Design Consequences of the Tylenol Murders." Beth Tauke uses the 1982 Tylenol murders to show how focusing on immediate concerns rather than longer-term issues can result in unintended consequences. This case is used to demonstrate what design teams did not consider in their processes: functionality for underrepresented populations, evolving consumer attitudes, possible injuries, and additional non-biodegradable waste.

Older people feel the fallout when the execution of public housing plans neglect context in chapter 11, Mary Jane Carroll's "(Re)forming Regent Park: When Policy Does Not Equal Practice." Although the redevelopment project was based on a sound set of policies, shifts during design and implementation caused residents to be segregated not only by income but also by age.

Developers neglected to consider the pitfalls of isolating seniors in a high rise far from basic amenities, such as grocery stores and public transportation.

In chapter 13, conflicting agendas of security and access cause difficulties for well-meaning designers of public amenities. Jo-Anne Bichard, in "ExcLOOsion: How Design is Failing Sanitary Provision," discusses research into the challenges people face regarding public toilets. She shows how designers' focus on preventing negative behaviors in restrooms, e.g., drug use or vandalism, takes prominence over physical access and functionality. In this case, the unintended consequence is that people with disabilities either have difficulty or are altogether excluded from using public toilets. The chapter also illustrates how a design-anthropology approach aids designers in developing a deeper understanding of users' encounters with design.

Pluralizing Voices and Canons

Between the mid-1980s and the early 1990s, a series of debates ensued in American colleges that have come to be known as the "canon wars."[28] These debates were about the ultimate purpose of a liberal arts education in contemporary society. For the ranking traditionalists, such as University of Chicago Professor Allan Bloom, the purpose of the liberal arts was to provide American citizens with a basic understanding of the classical works of literature and philosophy that defined Western society since the Greeks.[29] A rising tide of revisionists, however, such as Cornell University Professor Martin Bernal, challenged the European and male bias of the Western canon, which, he and colleagues contended, no longer reflected the diversity of an ever-changing global society.[30]

Over time, as the revisionists persisted, university curricula expanded the voices included in the canon. The foundation of Western society was no longer restricted to the historical contributions of "great white men," but expanded to include women, minorities, and non-Western figures. In addition, the basic toolkit of college students shifted from the rote memorization of principles in classical texts to critical modes of inquiry and interpretation. With these new tools, it became possible for many more people to see themselves contributing to historical change.

Contributing to the pluralizing of the canon inaugurated nearly three decades ago, the contributors of this volume demonstrate several complementary ways of reinterpreting the past. In chapter 6, Despina Stratigakos exposes the gender politics of Germany's architectural profession in the late nineteenth and early twentieth centuries. Using the modern architect Otto Bartning's essay, "Should Women Build?" as a prompt, Stratigakos communicates how controversial the idea of female professionalism was at the time. Her use of photography to contextualize Emilie Winkelmann and Fia Wille's self-presentations as architects, mothers, and advocates visualizes the challenges women faced as professionals, a struggle that remains in the profession of architecture today.

In chapter 4, "Chinese Puzzle: Shifting Spatial and Social Patterns in Shanghai *Shikumen* Architecture," Peter Wong examines the material effects of