**Make the World a Better Place:**

**Design with Passion, Purpose and Values**

**Robert B. Kozma, Ph.D.**

So, let us leave behind a country better than one we were left with.

*Amanda Gorman*

*National Youth Poet Laureate*

*The Hill We Climb*

*2021 Presidential Inauguration*

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*To Dad*

We call them the Greatest Generation

not because they made the most money

but because they sacrificed the most

for the greatest good.

## **Preface**

**Who Should Read This Book**

Well, first of all, if in your design work, you are primarily focused on making tons of money and retiring to a beach villa, this book may not be for you. There are ways to make tons of money in design and there are books to help you do that. But that’s not the point of this book. This book is for people who want to make the world a better place. Design can help you do that, as well. Indeed, I contend, it is the best way to do it.

This book does not focus on a narrow audience. Whether you are an engineer or a teacher, a musician, hobbyist, or homemaker, you are capable of designing. We are all everyday designers and all of us can help design a better world. Here are some specific groups of people who might find this book interesting:

Professional designers and design students. There are, of course, professional books in specific areas of design, such as engineering, architecture, interior design, product design, user experience design, graphic design, and so on. They detail how design should be conducted in each field. This book does not intend to replace those books. Rather, it provides an insight into the more general issues, particularly social and moral issues, that are often not addressed in those more technical, area-specific books. If you are a professional designer, this book will help you to think about your personal actions, as a designer, and those of your employer and clients in a larger context and how the contribution your work might make toward creating a better world. It may help you adjust your career path or select projects or an employer who can help you make the world a better place. If you are a professor in a design field, you may find this book an important supplement to your traditional textbooks.

Other professionals. Lawyers, doctors, teachers, legislators, and other professionals rarely think of themselves as designers. Yet the main focus of your work is to create artifacts—legal briefs, medical treatments, lesson plans, legislation—intended to make changes or improvements for your clients, patients, students, etc. As with professional designers, the book will help you to think about your work in the larger context and help you focus your professional goals and the outcome of your actions, particularly as they might make the world a better place.

Corporate, investment, and foundation officers. Perhaps you are an officer or director of a corporation that is engaged in developing products or services. If so, you probably have many designers on your staff or you hire design firms. This book may help you think about your products and services in a larger context and, perhaps, rethink your business model, not only to create profitable products and services but to improve society and the health of the planet. If you are an investment officer, this may help you focus on the social responsibilities of companies in which you invest. You may also come to include in your portfolio social-innovation startups that may not have the potential for large ROIs but may make significant contributions to social well-being, if they only had access to needed capital. If you are a foundation officer, read this book with an eye for reviewing your funding portfolio so as to create resources for design projects, big and small, global and local, that address the crucial problems that we face today. Of course, you are probably already doing this, but consider including in your qualifications not only universities, R&D institutes, and large non-profits but small community groups and individual designers with great design ideas to improve their communities and the world.

Consumers of designs. Daily all of us purchase and use products, take advantage of services, and are impacted by policies that elected representatives enact. These products, services, and policies are designs. This book is meant to give you a very different perspective on these everyday things. It will help you understand the thinking that went into them—or should have gone into them. And it will help you be a more critical, demanding consumer. It will help you decide to buy or not to buy certain products or services. It will help you demand better designed products, with more positive social impact, less impact on our environment, or less use of limited resources. It encourages you to engage in the political process so that public policies benefit the greater good, rather than narrow special interests.

Everyone else who wants to make the world a better place. Hopefully, this is all of us. It could be you. We all face challenges that affect our world, from climate change, plastics filling our oceans, and homelessness to arranging our work environment and putting a healthy meal on the table. These are all designs. We can all benefit from thinking more deeply about design, We can all benefit from your involvement in the design process. You could be a student deciding on a career, or be mid-career looking to change focus, or at the end of your career searching for purpose in retirement. If your passion is directed toward creating a better world, this book is for you. It is designed to give you a different way of thinking about the world and your role in it. And when it comes down to it, YOU are the product of your own design; you set your purpose in life and act on it to achieve your goals. You can choose to make the world a better place.

**How to Read this Book**

I, like most authors, hope you find value in every chapter, section, and word of this book. On the other hand, I’m reasonable enough to know that within the diverse audience I’m addressing, there are likely to be some chapters you find compelling while others will be irrelevant. Here is a layout that might help you read this book more selectively.

I highly recommend that everyone read Part I, Chapters 1-5 on design and the moral urgency for designing a better world. Part II, Chapters 6-10 present five design traditions: Scientific, Technical-Analytic, Human-Centered, Aesthetic, and Social Movements. Each chapter presents the history of the tradition, describes its characteristics, gives a case study, and explores the sociocultural and moral implications of the tradition. You can read these chapters as a set, of course, or read them selectively, depending on your profession or interest, or skip them altogether.

I recommend that everyone read Chapter 11 on Designing with Passion and Purpose that leads off Part III, Designing with Passion, Purpose, and Values. The other chapters in Part III drill down into specific values, such as reducing harm and increasing happiness, advancing knowledge reasoning and agency, promoting equality and addressing injustice, and building positive, supportive relationship. : Chapter 12, Reduce Harm and Increase Happiness: Chapter 13 on Designing to Advance Knowledge, Reasoning and Agency; Chapter 14 on Designing to Promote Equality and Address Injustice and Chapter 15 on Designing to Build Positive, Supportive Relationships and Communities.

With Part IV, Re-Designing the System, I turn to larger themes. You may want read Chapter 16, on The Economy, Government, and Design to help you understand the larger context that both influences and is influenced by design. Finally, I highly recommend that you read the last chapter, Where Do You Go from Here? This chapter helps you think about how to structure you career and life to design a better world and help create a culture of design.

**Why I Wrote It**

I bring a certain personal background to this book that has influenced me and informed my writing task. I was born in 1946, post-WWII U.S.A., coincidentally the same year that the Eniac was born, the first general purpose computer. I was the oldest of five boys in a working-class family that, over a couple decades, entered the middle class. I was raised in the suburbs of boom-town Detroit, the engine of America’s 20th century manufacturing capacity. As a middle school student, I attended a predominantly Black school in our more-or-less integrated suburban town and I attended a Catholic high school. I was in high school when Dr. King had a dream and when President Kennedy, at his inauguration, said, “Ask not what your country can do for you. Ask what you can do for your country.” During my senior year in high school, President Kennedy was assassinated.

In my late teens, I worked on the assembly line at Ford Motor Company in the summers to pay the rather reasonable tuition of the University of Michigan, a high-quality public post-secondary institution. At Michigan, I started my studies in aeronautical engineering but as the U.S. space program wound down and the Vietnam War ramped up, I transferred to political science and got a B.A. in that field. There was much social turmoil when I was in college, related to the Vietnam War and the Civil Rights Movement. During my senior year, Dr. King ascended to the mountain top. The next day, he was assassinated. Two months later, Bobby Kennedy was assassinated. One of his quotes I found particularly inspirational is, “Some men see things as they are, and ask why. I dream of things that never were, and ask why not.”

I got married at 21, as a college senior. Fresh out of the university with a degree in Political Science, I wondered what to do with my life. I applied to the Peace Corps, Vista (a domestic version of the Peace Corps), and the Teacher Corps. I was accepted into the Detroit Teacher Intern Program, a project between Detroit Public Schools and Oakland University to take B.A. generalists and turn them into teachers. I got my M.A. in Education while teaching at inner-city grade schools in Detroit for four years. During two of those years, I taught in an experimental program that emphasized mastery learning and gave teachers both accountability and professional autonomy in achieving it.

While I was teaching and my wife and I were starting a family, I got a PhD in Educational Technology at Wayne State University, a public, urban institution in Detroit. Upon completion, I returned to Ann Arbor as a research associate for two years at a small, private social science R&D company. For twenty years subsequently, I was a professor and research scientist at the University of Michigan, where I conducted research on the impact of technology on education and taught graduate courses in technology and design. This was at a time when the personal computer was sweeping the country’s educational system and beginning to make its mark on other parts of society. In 1984, I started a small software company to design educational software for the new Macintosh computer. And in 1989-90, I took a sabbatical and was a Dana Fellow for Educational Computing in the Humanities at the Center for Design of Educational Computing at Carnegie Mellon University and took courses from Nobel Laurette, Herbert Simon.

In 1994, as the World Wide Web was exploding and Detroit’s auto industry was imploding, I moved to Silicon Valley to head up a research center at SRI International, one of the nation’s most renowned high-tech R&D institutes. Shortly after, I met and married my current wife and soulmate, Shari Malone. My charge at SRI was to develop and evaluate applications of advanced technology to improve education. During my career, I had many research grants and wrote more than 90 academic journal articles, and chapters in edited volumes. Topics were on how software designs can improve the understanding of complex concepts in chemistry and improve the process of written composition, on the evaluation online learning, and on technology policy and education reform.

In 2002, I left SRI to consult with multi-national organizations, the high-tech industry, and ministries of education on technology-based educational reform policies and programs that support economic and social development. My international clients included the World Bank, the Organization for Economic Cooperation and Development (OECD), the United Nations Education, Scientific and Cultural Organization (UNESCO), Intel, Microsoft, and Cisco, as well many ministries of education and governmental agencies in Singapore, Norway, Chile, Jordan, Egypt, India, Thailand, and other countries. In total, I visited more than 70 countries, in both the developed and developing world, to explore how technology could be used to advance educational reform and innovation. Shari and I also volunteered in rural African villages to help villagers explore how basic technologies might improve their access to education and markets for their farm produce.

In the course of my work, I have examined some of the best—and worst—uses of technological designs. I was *inspired* to write this book by the amazing designs that I’ve seen, as well as the awesome power of the technologies that have enabled them. I was *compelled* to speak by some of the terrible designs, both trivial and significant, that have been imposed on us—sometimes out of carelessness and sometimes out of malice—and the increasingly awesome implications that such designs have, not only on the quality of our lives but on the survival of our species.

Above all, I am motivated by my late father, who told me when I was a young man, “whatever you do, leave the world in a better place than you found it”. My father was very much of the old school, where principles and values mattered. He was a card-carrying member of the Greatest Generation. It is to his memory that I dedicate this book, as well as to my wife, Sharon Malone, my kids, Sean Kozma and Nicole Kozma Tieche, my son-in-law, David Tieche and my grandkids, Justus and Jaelle Tieche, for they are the ones closest to me who will be affected most by the designs we create. I also dedicate it to my younger brother, Brian, whose premature passing caused me to reconsider priorities in my retirement and decide to write this book. And finally, as I sit here writing, at times sequestered in place by the coronavirus pandemic of 2020-2022, I dedicate this book to the world’s medical researchers and healthcare workers. They are the ones who designed the cures and vaccines for this scourge and who are on the front line, putting their lives at risk to save others. They are, indeed, making the world a better place in the face of this catastrophe and sometimes, sadly, in the face of abuse and personal threats. I also dedicate it to our essential workers—farmers, truck drivers, store clerks, and others who we had to count on to get us through this pandemic and who, too often, we take for granted.

**Who Helped Me Write It**

I would like to acknowledge the help and support of my wife and soulmate, Shari, who encouraged me to follow my passion, who tolerated our regular separations while I was “in my bubble”, who critiqued numerous early drafts, and who gave me valuable feedback. I am particularly indebted to Scott Paris for his thorough reading and invaluable comments on all the chapters and to my daughter, Nicole, who proofread and commented on each. I would like to express my deep gratitude to those who have read and commented on early drafts of various chapters: Alec Bash, Julius and Barbara Cassani, Robert Cavalier, Robert Cliff, Chris Dede, Ola Erstad, Paul Fagin, Robert Ferry, Jay Folberg, Mark Guzdial, Ted Kahn, Gary Kozma, Kurt Kozma, Nancy Law, Elizabeth Monoian, Tetyana Nanayeva, Freya Pruitt, Thomas Reeves, Larry Sutter, Tim Unwin, Don Weil, Jane Weil, Tracy Williams, and Andy Zucker. And I would like to thank my men’s dinner group for fifteen years of stimulating conversation and fellowship that lead up to this book.

Finally, I dedicate this book to you, dear reader. For this book is not just a series of personal reflections, observations, and recommendations on design, it is a challenge to you. Design is sometimes thought of as a rarified domain restricted to specialists, such as engineers, computer programmers, architects, industrial designers, graphic designers, and fashion designers. But because, as I contend, design is a fundamentally-human activity, I would like you to consider how we are all designers and capable of designing a better world.

The major challenge to the human race—and to you, personally—is to develop and harness this human capacity, and the tools, materials, and technologies at our disposal, to address the myriad problems facing us, individually and collectively, in the 21st century. These problems play out in small, local ways and in grand, global ways. And they will require the contributions of all of us to solve them. I am asking you to follow my father’s advice: design a world that is better than that which you found.