

The Digital World Shapes New Social Structures and Conventions

Interview with Roberta R. Katz

By Jules Naudet

Digital products are changing how we live. Growing up in a hyper-connected world, the new “Generation Z” has developed different behaviors, attitudes, and values.

Roberta Katz, vice-chair of the CASBS board of directors and a senior research scholar at CASBS, coordinates an interdisciplinary set of scholars who have been examining the cultural norms and values of those born during and after the mid-1990s, an age group that has been denominated “Generation Z.” The research, which has looked closely at the traits that define the Generation Z culture in the U.K. and U.S. as well as at the historical trends that have influenced that culture, is the subject of a book entitled “Gen Z, Explained: The Art of Living in a Digital Age.” Katz holds a PhD in anthropology as well as a law degree, and was previously the General Counsel of McCaw Cellular Corporation (now AT&T Wireless) and then of Netscape Corporation. For thirteen years, she served under Stanford University Presidents John Hennessy and Marc Tessier-Lavigne as the associate vice president for strategic planning at Stanford. She also served as President Tessier-Lavigne’s interim chief of staff until early 2017. Katz has been deeply involved in the facilitation of a variety of interdisciplinary research initiatives at Stanford, and she is a current member of the CASBS board of directors. She is also currently chair of the board of the Exploratorium, a science museum in San Francisco.

Books & Ideas: The continuing flow of technological innovations in the aftermath of the Internet revolution has progressively transformed the way we navigate the world today. From high-speed traveling information to over-abundance of content, from cookies to perpetual behavioral monitoring, from on-line banking to bitcoins, from on-line work to prospects of an all-encompassing virtual reality world, it seems that the frames and structures of the world we live in today are undergoing radical transformations. How would you characterize this specific moment of history we are in?

Roberta Katz: I believe we are going through a period of profound transition. If you were living in early 19th-century England, likely in a rural setting, shortly after engines were beginning to change the way work was done, you probably would have been very confused about how much more change was going to occur. But even in your wildest dreams, you would not have foreseen the full social impacts of the Industrial Revolution as they played out by the late 20th century. Life in an urbanized world of ubiquitous cars, trucks, planes, refrigerators, electric lighting, televisions, washing machines and dryers, long-distance telephony, public schooling, and even humans in outer space was inevitably organized very differently from life in pre-Industrial society. Now think about all the changes we have experienced in only the last 25 years, as the Digital Revolution has increasingly remodeled how we were conducting our Industrial-age lives. Those 25 years have been a remarkable time of constant and often dramatic innovation, introducing us to genetic engineering, artificial intelligence, robots, cybercurrencies, and online access to everything from banking to schooling to shopping to entertainment. In this milieu of perpetual innovation, we are confused, unsettled, and unable to imagine, other than in science fiction, where all this new technology will take humans. There are some futurists who even speculate that the future of humanity as we know it will, with the evolution of artificial intelligence, morph into something more machine-like, or superhuman.

The bits and bytes that are the backbone of digital technologies can be variously combined and manipulated in so many ways that the prospects for further discoveries and creations appear nearly limitless; this extreme adaptability is one reason we have seen so many new digital tools come into the marketplace in such a short time. Among the most powerful of these tools, of course, has been the Internet and World Wide Web, with the potential to interconnect up to billions of people at a given time. Such a massively powerful network has in turn given birth to millions of other tools for networked communication -- the many "apps" that we use for work, play, socializing, and learning. What is essential to recognize is that all these digital tools have created

a day-to-day environment of unprecedented speed, scale, and scope for us humans, which is an important contributing factor to our collective sense of being overwhelmed by our experiences while in the middle of this technological and social revolution.

As with the significant technological revolutions of the past, this Digital Revolution is stimulating an equally profound social revolution, which contributes to our bewilderment about the future. The social institutions and values that many people took for granted in the 20th century no longer seem so solid. At least in the US, the nuclear family now can look quite different from the prior “norm” of mother, father, and children; the “gig economy” has come to replace the “9 to 5 workday” and lifelong employment security for many workers; gender and sexuality are increasingly considered matters of personal choice rather than societal convention; and long-held values, such as freedom of expression, privacy, and security, are being challenged in a Big Data world where so much of what we do or say can be recorded, tracked, analyzed, and made public by others. If history is a guide, society will eventually become more accustomed to the new technologies and better able to address the undesirable consequences of their use and will, in turn, be characterized by newly stable social structures and conventions (some of which will look very different from those of today), but in the meantime we are struggling to adapt to all the changes.

Books & Ideas: Structural anthropology has classically posited the hypothesis of a homology or a correspondence between, on the one side, the physical built-in world in which we live and, on the other side, the layout of social groups and the ‘forms of classification’ through which we view ourselves and the world. Would you go as far as extending this analogy to the architectural design of our digital structures? To what extent would you say computer systems, the internet, social media, smartphones, etc. transform the way we make sense of the world we live in and transform the way we try to act within it?

Roberta Katz: There is a saying about architecture that has long seemed true to me: “first you make the building and then the building makes you.” A light and airy house can create one kind of emotional and behavioral response for its residents and, similarly, a dark and heavy home can create an altogether different environment for those who live in it. Not surprisingly, technologists speak of the “architectures” of the digital products they create and, just as with physical buildings, those architectures have a significant impact on the people who then use the products.

All software products contain “rules” for their use, whether those rules are explicit (the exception) or implicit (more typical). This is especially evident when an “upgrade” to a software product, or app, is so substantial that you find you must re-learn how to use it – a situation that can seem quite aggravating at first. In each case, you are adapting your behavior to the changes that the creator of the software is, in essence, forcing upon you. The creators may tell you that the changes are for your benefit, and sometimes they are (e.g., for a security update), but frequently those changes are for the benefit of the creator, who is adding new bells and whistles for its own business purposes. “Personalization” software is a good example: it allows the maker of the software to determine the group(s) of users who most resemble each other so that it can direct advertisers to those groups most likely to buy what the advertiser is selling and can direct providers of information to those groups most sympathetic to the providers' messaging. Such “personalization” influences subsequent attitudes and behaviors of the users.

There is no question that digital products are changing how we live in significant ways. As noted above, the Digital Revolution means we are using new kinds of tools that are extremely powerful. It has been said that Industrial-era tools were essentially tools of brawn – engines replacing horses and enhancing human muscular power – and that Digital-era tools are essentially tools of brain – algorithms enhancing the speed, scale, and scope of what we can process with our minds. Our computers and smart phones are remarkably versatile tools; they are telephone, camera, typewriter, game console, calculator, and so much more, all in one portable device that you can bring with you wherever you go. On the one hand, having all these tools so readily available can make a person more efficient and productive, but, on the other hand, it can make a person less thoughtful, less patient, and simplistically unappreciative of nuance.

The Internet and all the networked communication products it spawned, from online shopping apps to social media to Zoom, have also dramatically changed our understanding of the world around us, including our senses of time and space. In 1980, an international phone call was a significant and costly undertaking, but today many of us routinely engage in online interactions with family, colleagues, and providers of goods and services across the world. Thanks to digital media, we can appear to be actually “present” in places far from where we are physically located. As for time, we are affected not only by the speed of digital tools but by the growing blurring of activities online, especially when we have multiple “windows” open on our screens. Unlike in the physical world, where work and play generally take place at different

times and places, online we can fluidly integrate work and play over the course of a day, engaging in simultaneous activities with people across multiple time zones. It can be 8 in the morning for one participant in an online game and 8 at night for another, but for both players what matters is that they are sharing the same moment in cyberspace. As another example of how these digital tools are changing us, one can point to the software apps that encourage and facilitate collaboration. Wikipedia, GoFundMe, and so many other sites that allow for broad, often anonymous collaborations are changing our understanding of how people can work together and what they can accomplish when they do.

Books & Ideas: Does the materiality of the “old” world becomes obsolete as a consequence of our new ways of experiencing the world? How do you address the fears of those who foresee a danger of going all virtual and of becoming alienated from reality?

Roberta Katz: I don't worry about humans losing touch with the material world as more and more of our lives are spent online. I know some people who saw the movie *Ready Player One* or who listen to Marc Zuckerberg talk about his vision of the metaverse have become more fearful there could be such a future, but I also know that humans, as long as we are indeed human beings, will continue to have some basic sustenance needs that can be met only in the material world. VR (virtual reality) and AR (augmented reality) can certainly cause our senses and emotions to experience the online world in the way we experience the physical world, but the same could have been said of humans in a pre-Digital era -- getting engrossed in a book or TV show or movie can also simulate a "real life" situation. If I have a worry about VR, AR, and other digital products that similarly allow us to manipulate reality, it is about the unintended consequences of their use. Because they can seem so life-like and all-encompassing, they can change people's understanding of what is in fact real. The makers of VR products rightly say this is a good thing: for example, it can help people become more aware of the impacts of climate change or their unconscious bias. But the opposite is also true; VR products can be used to manipulate people into becoming more biased and more prone to violence. Other software products that can distort reality or promote misinformation are also worrisome. For example, software now makes it possible to put one person's head on another person's body and one person's words in another person's mouth in media where it is nearly impossible to detect the manipulation. We have a long way to go in developing rules and norms that will help

us defend against and otherwise control this kind of abusive and potentially quite harmful behavior, both individually and societally.

Books & Ideas: Can you tell us how your research helps understand or navigate the consequences of these transformations? What does it tell us about the impact these changes have on our daily lives?

Roberta Katz: Three academic colleagues and I began our study of the Gen Z age cohort (generally defined as those born between the mid-1990s and the first decade of the 2000s) several years ago. (Gen Zers are also called "postmillennials" and "Zoomers.") The impetus for our study was our shared sense that the university students we were teaching and counseling were qualitatively different from the students we had dealt with only a few years before. We were bewildered and, at times, frustrated by the behaviors we were seeing – for example, students who said they were not completing an assignment when due because they needed time for "self care." These students did not worry about the impact on their grades; they were fine with a lower mark, something prior classes of students would have tried to avoid by staying awake all night if necessary to complete an assignment on time. We four researchers were able to bring our various disciplinary methodologies to bear in this project. We did ethnographic interviews of over 100 students, large-scale surveys of randomized groups of Gen Zers living in the US and Britain, and a linguistic analysis based on a "corpus" of 70 million words scraped from online sites favored by this age group, and then applied a historical lens to our findings. The results of our research are described in a book, entitled *Gen Z, Explained: The Art of Living in a Digital Age*, that was published by the University of Chicago Press in 2020.

What we learned from our research changed our attitudes about Gen Z. Instead of seeing these young people as problematic and wrong-headed, we began to understand that they had developed different behaviors, attitudes, and values from our own precisely because they had grown up in a world that was hyper-connected by the massively powerful and fast Internet and World Wide Web. The networked world that was the "water they were learning to swim in" was one of rapid and continuous change, both technological and social. From birth, their developing brains had been learning how to deal with the unprecedented speed, scale, and scope associated with all these new digital tools of production and communication. Our interviews taught us much about the ways Gen Zers were adapting to life in the Digital Age, and that in turn led us to recognize the compelling need for more inter-

generational conversation about the societal transitions we are all living through. It was encouraging to us to see how these young people, who are so adept at using digital tools, nonetheless are strong advocates for not losing quintessentially human values, like respect and concern for others. When we asked our interviewees to tell us about their favorite form of communication, we expected to hear them talk about emailing, texting, direct messaging, and video chats, but, to our surprise, nearly every single person said their favor form of communication was face-to-face, in-person conversation.

Our hope is that the book will foster more inter-generational understanding and respect, for in this time of profound transition, all of us, older and younger alike, need to consider together how to preserve the best of the past while moving into the future. As we explained in our book:

Social change rarely comes easily, and Gen Zers are already experiencing conflicts between their deeply felt values and expectations and the reality of what they experience. They are wrestling with how to bring about change, and whether and how to do that within or outside the institutions they have inherited. These issues are not unique to them; across the generations, there is speculation about the future of representative democracy, privacy, capitalism, and free speech in a digital age. Knowing when and how to prioritize certain of their own values over others is still a subject of experimentation for Gen Zers. So, too, is the process of answering deep questions about whether – or how – older ideas and values remain meaningful in the digital age. Developing new social structures for the digital age will require a process of finding compromises, yet to be determined and tested, between competing values, and as societies, we are only at the beginning of that difficult process.

Gen Zers are further along in the process of adaptation to the digital age than those who predate them and are therefore poised to lead the way on so many of the issues we have discussed. Just as younger people reshaped institutions and social norms when they left rural areas to move to the cities during the Industrial Revolution, so Gen Zer citizens of today are working out how best to respond to the challenges of the digital age. They are trying to figure out what to carry forward from the past, what to leave behind, and how to build some entirely new social structures and conventions.

Books & Ideas: Does the fact that big Tech companies and States have access to a sort of panopticon creates a real threat to democracy? Do you see ways in which these new technologies could rather empower citizens and consolidate democracy?

Roberta Katz: This is a huge question! As noted above, it is difficult for us to know at this relatively early moment in the transition into the Digital Age what socioeconomic changes will occur over time. including with respect to governance.

What is very important, however, is that we focus on the societal values that underlie democracy so that we can better observe and understand how those values are being hurt or helped not only by digital functionality but by those private and public entities that control usage of the new digital tools of communication and production. I am happy to see that many social scientists are finally turning their attention to these issues, looking deeply at both the technologies and the creators/owners of the technologies to see their impact on the values that have provided the glue that holds our societies together. For too long, technologists assured us that would do no harm and social scientists felt too digitally ignorant to question that assurance, but that era of "techno-optimism" has passed and we can now turn to the serious business of looking critically at the current and prospective socioeconomic (including governmental) impacts of our new digital tools and networked infrastructure.

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