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# The Social Dimensions of a Networked World: Will the Internet Promote Productivity and Fulfillment or Result in a More Volatile and Ruthless World?

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# **The Social Dimensions of a Networked World: Will the Internet Promote Productivity and Fulfillment or Result in a More Volatile and Ruthless World?**

**Ross A. Miller**

## **Introduction**

Technological change has the potential to have profound effects on politics, the economy, and society. Indeed, the Industrial Revolution provides ample evidence of the significant effect of technology on humankind. Today the Internet has transformed the way we communicate, learn, work, and play. What are the dangers and opportunities presented by this new technology? One hundred years from now, will society look back upon this period of technological change as one that led to a more productive and peaceful world, or will they view it as the beginning of a dark period in human history, one characterized by political instability, economic inequality, and societal dysfunction?

In this Keynote Dialog, three outstanding scholars addressed the potential impact of the Internet on our lives: Manuel Castells (Professor of Sociology and of City and Regional Planning at the University of California, Berkeley), Amy Bruckman (Assistant Professor in the College of Computing, Georgia Institute of Technology) and William Davidow (Founder and Partner, Mohr, Davidow Ventures). I begin by presenting an edited transcription of each of their opening statements, then turn to a synthesis of their arguments, and conclude with the key challenges and questions these arguments pose for future research.

## Opening Statements of the Panelists

### Manuel Castells

On the one hand, we are living through one of the most extraordinary periods in human history in terms of creativity, innovation, and wealth generation. On the other hand, we know we have very serious problems. And the problems are not the current downturn in the Silicon Valley or in the new economy at large.

At the macro level, we have an increasing disparity in the world. We have ample evidence that during the years of the new economy inequality, poverty, and social exclusion have increased in the world at large and in many societies. And also at the macro level, we have the increasing volatility of financial markets. We have become interdependent, and we are not going back to nicely organized financial markets.

Right here in our area, which is the most innovative area in the world by all standards, we also have very serious problems. In the 1990s in Silicon Valley, Santa Clara County, the average real wage has declined. But the upper third did very well, which means staggering inequality. We also have major crises in terms of housing, transportation, and, of course, in electricity.

And then we have a major crisis in education. Education is the basis of everything else and will come back to haunt us. I would say that we have an even deeper crisis in the sense of increasing individualism to the point where we cannot connect with each other in society. The recent analysis of the National Social Capital Benchmark Results, by Santa Clara University's Jim Koch and Ross Miller, has shown a lack of civic involvement and a lack of sense of community, which are much more accentuated in Silicon Valley than the U.S. at large. And the U.S. data results are much more accentuated than those from the world at large, which is doing very badly on these two indicators. We are the tip of the iceberg of social isolation, and what really concerns me for the future is our growing institutional and ethical inability to bring together our stock options with our life options.

### **Amy Bruckman**

It is kind of a silly question to ask: is the Internet good for our culture? Or the question we always get: what is the impact of the Internet on our culture? The Internet is not one thing, and its future is not predetermined. A better question is: what do we want the Internet to be? What values do we use in choosing goals - socially desirable goals - for what we hope this technology can do for us? And if we can agree on a vision that we believe is desirable, how do we make it real?

I'm a designer. I try to start with social values and design new technologies to help make those things possible, as a computer scientist. One dimension of this new medium that I find particularly exciting is its potential to help users become creators of content, not just recipients of content. We can see this in a wide variety of fields. For example, in the area of e-commerce people are no longer just consumers, they are also sellers.

In the field of health, people are no longer just patients who sit in the office and receive the proclamation of the doctor. They are going online and talking to each other, learning about their situation, and arriving at the doctor's office informed. In fact physicians will tell you that they are happy about that. A more informed consumer helps them to do a better job, as a number of recent studies have shown. So people are getting both technical and emotional support from each other through this medium. They are not just downloading information about their medical condition but sharing what they know with others to their mutual benefit.

Now, of course, my field is education. There has been a lot of hype about the use of the Internet for education, and it is not about content delivery. Content delivery is not exciting. What is really exciting about this medium is the potential for people to learn from each other, to create electronic learning communities, mutually supportive communities of learners online. In my laboratory, I am working on a number of projects related to education via online communities. For instance in the "MOOSE CROSSING" project, we use a text-based virtual world with a programming language designed to make it easier for kids to program. We have kids mostly 8 to 12 years old learning object-oriented programming. And they learn it from each other in a community-supported, self-motivated fashion.

Another research project is called "PALAVER TREE ONLINE." We have middle school students reading literature that is part of their normal curriculum, brainstorming historical questions based on what they have read, and then talking with older adults who have lived through that period of history. Some eighth graders were reading about the Civil Rights years and one of them asked a senior citizen: "Have you ever heard the I Have a Dream speech?" And the senior responded: "Actually, I was there. What do you want to know about? Let me tell you what it was like to be on the Mall that day and what that experience meant to me."

So the Internet has the potential not just to get kids learning from each other online but also to make thoughtful adults part of the education process for our kids. These are just some examples of how users are becoming creators of content online. I think that this is one way we can empower the individual through this technology and that this is part of the real promise. If you give people good tools and social support for the use of those tools, I believe they will astonish you with their intelligence and creativity at every turn. But it is incumbent on us to create those good tools, and this kind of empowerment of the individual through this new medium is by no means inevitable. There are a lot of competing alternatives for all of our time and attention. But I think it is possible, and I think it is something that we as informed designers in control of the future of this technology can make possible.

### **William Davidow**

When we talk about the information age, we are really talking about a time when interconnections are growing at the fastest rate that they probably ever have in the history of humanity. And the history of humanity is in fact a history of interconnections. Every time we have interconnected things and changed the costs of interconnectivity, or improved the capacity of those interconnections, or made them run faster, or made them easier to use, or more reliable, we have changed the structure of society. The interconnections establish an environment. Government, social institutions, the structure of society, business, commerce, economies, and even our social philosophy are transformed by the environment established by the interconnections.

Today, interconnectivity is changing the form of our governance. Whether you like it or agree with it, new forms of governance are coming into being. Some of the new forms of governance are the World Bank or the World Trade Organization. Other forms of governance are the multinational corporations. Nobody wants to talk of them as governments, but they carry on many of the governmental functions. And new forms of virtual government are going to grow and take place. The problems and challenges we face today are that our current social institutions, government, and business, are not compatible with today's level of interconnectivity.

### About the Author



Ross A. Miller is Associate Professor of Political Science at Santa Clara University, where he teaches international relations, U.S. foreign policy, and research methods. His research on topics such as conflict resolution, ethnic strife, political participation, international trade, and the domestic sources of foreign policy has been published in a variety of journals, including *The American Journal of Political Science*, *Comparative Political Studies*, *Political Research Quarterly*, and *The Journal of Conflict Resolution*. He is currently completing a book with Bob Jackman, *Culture, Institutions, and Politics*, and working on the effect of interest groups on U.S. foreign policy.