

Technology and Democracy

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Abstract. U.S. society is in the throes of deep societal polarization that not only leads to political paralysis, but also threatens the very foundations of democracy. The phrase “The Disunited States of America” is often mentioned. Other countries are displaying similar polarization. How did we get here? What went wrong?

We argue that the current state of affairs is the results of the confluence of two tsunamis that have unfolded over the past 40 years. On one hand, there was the tsunami of technology – from the introduction of the IBM PC in 1981 to the current domination of public discourse by social media. On the other hand, there was a tsunami of neoliberal economic policies. We posit that the combination of these two tsunamis led to both economic polarization and cognitive polarization.

Summary

This has been a decade of ACM milestones. In 2012, ACM celebrated the Turing Centenary.¹ In 2017, ACM celebrated 50 Years of the ACM A.M. Turing Award.² On June 10 of this year, ACM celebrated ACM’s 75th Anniversary (ACM75).³ But the differences in tone were palpable. The 2012 and 2017 events celebrated the achievements of computing and its remarkable ascendance as a technology. While the 2017 event did end with a panel on “Challenges in Ethics and Computing,” such challenges were a major focus in 2022, and a participant found “the whole thing a little . . . depressing.”

The somber tone of ACM75 cannot be separated from concurrent events. On June 9, 2023, a U.S. House of Representatives select committee opened public, televised hearings investigating the Jan. 6, 2021 attack on the U.S. Capitol, laying out evidence of an attack on U.S. democracy orchestrated at the highest level of U.S. government. The school shooting in Uvalde, TX, on May 24, 2022, was also on many minds, remembering that an 18-year-old gunman fatally shot 19 students and two teachers and wounded 17 others. Brian Bennett wrote in Time magazine, “Even as America’s firearm massacres provoke profound shock, change seems out of reach.”⁴

¹ <https://turing100.acm.org/index.cfm?p=home>

² <https://www.acm.org/turing-award-50/conference>

³ <https://www.acm.org/75-celebration-event>

⁴ <https://time.com/6182996/biden-ualde-guns-new-zealand/>

U.S. society is in the throes of deep polarization that not only leads to political paralysis, but also threatens the very foundations of democracy. The phrase “The Disunited States of America” (tracing back to Harry Turtledove’s 2011 novel with this title) is often mentioned. “The U.S. is heading into its greatest political and constitutional crisis since the Civil War,” wrote Robert Kagan in the *Washington Post*,⁵ raising the specter of mass violence. How did we get here? What went wrong? Historians will probably spend the next 50 years trying to answer such questions, but the crisis is upon us. We need some answers now!

The last 40 years have launched a tsunami of technology on the world. The IBM Personal Computer—Model 5150, commonly known as the IBM PC, was released on Aug. 12, 1981, and quickly became a smashing success. For its Jan. 3, 1983 issue, *Time* magazine replaced its customary person-of-the-year cover with a graphical depiction of the IBM PC – “Machine of the Year.” A computer on every work desk became reality for knowledge workers within a few years. These knowledge workers soon also had a computer at home. With the introduction of the World Wide Web in 1989, many millions could access the Web. The commercialization of the Internet in 1995, and the introduction of the iPhone in 2007, extended access to billions.

The socioeconomic-political context of this technological tsunami is significant. There was a resurgence of neoliberalism marked by the election of Margaret Thatcher as Prime Minister of the U.K. in 1979, and of Ronald Reagan as President of the U.S. in 1980. Neoliberalism is free-market capitalism generally associated with policies of economic liberalization, privatization, deregulation, globalization, free trade, monetarism, austerity, and reductions in government spending. Neoliberalism increases the role of the private sector in the economy and society and diminishes the role of government. These trends have exerted significant competitive pressure on the economies of the developed world. To stay competitive, the manufacturing sector automated extensively, with the nascent distributed-computing technology playing a significant role. The implications are still with us.

A 2014 paper by MIT economist David Autor provided evidence that information technology was destroying wide swaths of routine office and manufacturing jobs, while creating new high-skill jobs.⁶ The result of this labor polarization is a shrinking middle class. Autor’s data showed that this pattern of shrinkage in the middle and growth at the high and low end of the labor-skill spectrum occurred in the US as well as in 16 European Union countries. The immediate outcome of this economic polarization is growing income and wealth disparities.

On top of this, information technology is flooding Internet users with more information than they can digest, so tech companies engage in mass personalization, and now we mostly read information that confirms our preconceived opinions. This exacerbated further the “filter bubbles” that were created earlier in the broadcast media, following the abolition, in 1987, by the U.S. Federal

⁵ <https://www.washingtonpost.com/opinions/2021/09/23/robert-kagan-constitutional-crisis/>

⁶ <https://www.nber.org/papers/w20485>

Communications Commission under President Reagan, of the “Fairness Doctrine,” which required holders of broadcast licenses both to present controversial issues of public importance and to do so in a manner that reflected differing viewpoints fairly. Economic polarization was thus followed by cognitive polarization, creating political polarization.

Computing has become highly important in everyday life during the past 75 years. In addition to its numerous benefits, however, it has also played a major role in driving societal polarization. The somber tone of ACM75 appropriately recognized this.