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A more tech-driven and challenging world

What the 'New Normal' will be like in 2025 for families

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The expert predictions reported here about the impact of the Internet over the next ten years came in response to one of eight questions asked by the Pew Research Center Internet Project and Elon University's Imagining the Internet Center in an online canvassing conducted between November 25, 2013, and January 13, 2014. For this project, they invited more than 12,000 experts and members of the interested public to share their opinions on the likely future of the Internet and 2,551 responded to at least one of the questions we asked.

The Web-based instrument was fielded to three audiences. The first was a list of targeted experts identified and accumulated by Pew Research and Elon University during the five previous rounds of this study, as well as those identified across 12 years of studying the Internet realm during its formative years. The second wave of solicitation was targeted to prominent listservs of Internet analysts, including lists titled: Association of Internet Researchers, Internet Rights and Principles, Liberation Technology, American Political Science Association, Cybertelecom, and the Communication and Information Technologies section of the American Sociological Association. The third audience was the mailing list of the Pew Research Center Internet Project. While most people who responded live in North America, people from across the world were invited to participate.

When pandemics sweep through societies, they upend critical structures, such as health systems and medical treatments, economic life, socioeconomic class structures and race relations, fundamental institutional arrangements, communities and everyday family life.

A new canvassing of experts in technology, communications and social change by Pew Research Center and Elon University's Imagining the Internet Center finds that many expect similar impacts to emerge from the COVID-19 outbreak.

In a nutshell, they say the 'New Normal' in 2025 will be far more tech-driven, presenting more big challenges.

Extract of Pew Research Center, February 18, 2021. "Experts Say the 'New Normal' in 2025 Will Be Far More Tech-Driven, Presenting More Big Challenges."

Available at https://pewrsr.ch/3vp7b7Z

Outline accompanying tables

Emerging change: As the global pandemic unfolds, experts predict people will develop greater reliance on swiftly evolving digital tools for good and for ill by 2025

The pandemic proves that world-upending phenomena can emerge from anywhere. The turn to living and working more intensively within digital communications networks shows the value of these complex systems. The pandemic brings more focus on both the upsides and the downsides of digital life.

- Tele-everything is embraced: The broad adoption of "remote" processes – tele-work, telemedicine, virtual schooling, e-commerce and more – is growing. In 2025, there will be more people working from home, more virtual social and entertainment interactions and fewer forays in public than has been in the case in recent years.

- Humans' yearning for convenience and safety fuels reliance on digital tools: The pandemic has rearranged incentives so that consumers will be more willing to seek out smart gadgets, apps and systems. This will speed up adoption of new education and learning platforms, rearrange work patterns and workplaces, change family life and upend living arrangements and community structures.

- The best and worst of human nature are amplified: The crisis is enhancing digital interconnectedness that engenders empathy, better awareness of the ills facing humanity and positive public action. On the flip side, some individuals, cities and nation-states will become more insular and competitive as survival mode kicks in. Xenophobia, bigotry and closed communities will also increase.

Worries: As the global pandemic unfolds, experts fear growing social and racial inequality, worsening security and privacy and the further spread of misinformation

The advantaged enjoy more advantages; the disadvantaged fall further behind. Concerns particularly focus on the growing power of technology firms. Many suggested solutions have a double-edged quality because they threaten civil liberties. Automation could take many humans out of the work equation.

A plurality of experts think sweeping societal change will make life worse for most people as greater inequality, rising authoritarianism and rampant misinformation take hold in the wake of the COVID-19 outbreak. Still, a portion believe life will be better in a 'tele-everything' world where work-places, health care and social activity improve

Asked to consider what life will be like in 2025 in the wake of the outbreak of the global pandemic and other crises in 2020, some 915 innovators, developers, business and policy leaders, researchers and activists responded. Their broad and nearly universal view is that people's relationship with technology will deepen as larger segments of the population come to rely more on digital connections for work, education, health care, daily commercial transactions and essential social interactions. A number describe this as a "tele-everything" world.

Notable shares of these respondents foresee significant change that will:

- worsen economic inequality as those who are highly connected and the tech-savvy pull further ahead of those who have less access to digital tools and less training or aptitude for exploiting them and as technological change eliminates some jobs;

- enhance the power of big technology firms as they exploit their market advantages and mechanisms such as artificial intelligence (AI) in ways that seem likely to further erode the privacy and autonomy of their users;

- multiply the spread of misinformation as authoritarians and polarized populations wage warring information campaigns with their foes. Many respondents said their deepest worry is over the seemingly unstoppable manipulation of public perception, emotion and action via online disinformation – lies and hate speech deliberately weaponized in order to propagate destructive biases and fears. They worry about significant damage to social stability and cohesion and the reduced likelihood of rational deliberation and evidence-based policymaking.

At the same time, a portion of these experts express hope that changes spawned by the pandemic will make things better for significant portions of the population because of changes that:

- inaugurate new reforms aimed at racial justice and social equity as critiques of current economic arrangements – and capitalism itself – gain support and policymaker attention;

- enhance the quality of life for many families and workers as more flexible-workplace

arrangements become permanent and communities adjust to them;

- produce technology enhancements in virtual and augmented reality and AI that allow people to live smarter, safer and more productive lives, enabled in many cases by "smart systems" in such key areas as health care, education and community living.

These six themes were commonly expressed by these experts in their responses to a question that asked them to consider the changes that were set in motion in 2020 by the COVID-19 outbreak and describe what the "new normal" might look like in 2025.

Some 47% of these respondents said life will be mostly worse for most people in 2025 than it was before the pandemic, while 39% said life will be mostly better for most people in 2025 than it was pre-pandemic. Another 14% said most people's lives in 2025 will not be much different from the way things would have turned out if there had been no pandemic.

Among the 86% who said the pandemic will bring about some kind of change, most said they expect that the evolution of digital life will continue to feature both positives and negatives. These expert views link in interesting ways with public attitudes. A Pew Research survey in August 2020 found that 51% of U.S. adults said they expected their lives to remain changed in major ways even after the pandemic is over.

This is a nonscientific canvassing, based on a non-random sample. The results represent only the opinions of the individuals who responded to the queries and are not projectable to any other population.

The bulk of this report covers these experts' written answers explaining their responses. They sounded many broad themes about the ways in which individuals and groups are adjusting in the face of the global crisis, describing the most likely opportunities and challenges emerging as humans accelerate their uses and applications of digital technologies in response. It is important to note that the responses were gathered in the summer of 2020, before the completion of the presidential election in the United States and before COVID-19 vaccines had been approved.

As these experts pondered what was happening in mid-2020 and the likely changes ahead, they used words like "inflection point," "punctuated equilibrium," "unthinkable scale," "exponential process," "massive disruption" and "unprecedented challenge." They wrote about changes that could reconfigure fundamental realities such as people's physical "presence" with others and people's conceptions of trust and truth.

And the spread of lies via social media and other digital platforms is likely to further damage all social, political and economic systems.

- Inequality and injustice are magnified: The pandemic and quick pivot to the use of digitally driven systems will widen racial and other divides and expand the ranks of the unemployed, uninsured and disenfranchised. Power imbalances between the advantaged and disadvantaged are being magnified by digital systems overseen by behemoth firms as they exploit big data and algorithmic decision-making that are often biased. More people will be pushed into a precarious existence that lacks predictability, economic security and wellness.

- As risk grows, security must also; privacy falls and authoritarianism rises: The health crisis spawned by the pandemic and broader dependence people have on the internet heighten threats of criminal activity, hacks and other attacks. Optimized security solutions may further reduce individuals' privacy and civil liberties. They are likely to expand mass surveillance, as authoritarian states will use this as an opportunity to silence dissent and abuse citizens' civil rights.

- Threats to work will intensify from automation, artificial intelligence, robotics and globalization: In order to survive, businesses are reconfiguring systems and processes to automate as many aspects as possible. While artificial intelligence (AI) and robotics will enhance some lives, they will damage others, as more work is taken over by machines. Employers may outsource labor to the lowest bidder globally. Employees may be asked to work for far less; they may have to shift to be gig and contract workers, supplying their own equipment, and they may be surveilled at home by employers.

- Misinformation will be rampant: Digital propaganda is unstoppable, and the rapidly expanding weaponization of cloud-based technologies divides the public, deteriorates social cohesion and threatens rational deliberation and evidence-based policymaking.

- People's mental health will be challenged: Digital life was already high-stress for some people prior to the

required social isolation brought on by the pandemic. The shift to tele-everything will be extensive and that will diminish in-person contact and constrict tech users' real-world support systems and their social connections.

Hopes: As the global pandemic unfolds, experts urge that calls for social justice be heeded and that technology design focus on human well-being

- Social justice will get priority: The reawakening of public movements for social justice and economic equality may create more-responsive government and sociopolitical systems that are more attuned to diversity, equity and inclusion. This includes a focus on closing digital divides.
- People's well-being will prevail over profit: Businesses may start to value serving the greater good above the typical goals of market capitalism. This could produce policies to fund broader safety nets such as universal health care, universal basic income and broadband as a basic utility. A reckoning for tech companies and their leaders might also occur.
- The quality of life will improve: The transition to home-based work will reduce urban air pollution, overcrowding and transportation gridlock. It will enhance the overall quality of life, create a better environment for family life, allow more accommodations for those with disabilities and inspire other enhancements.
- AI, VR, AR, ML will yield good: Artificial intelligence, virtual reality, augmented reality, deep learning, machine learning and natural language processing will make virtual spaces feel much more real, in-person, authentic and effective.
- Smarter systems will be created: Municipal, rural, state and independent services, especially in the health care sector, will be modernized to better handle future crises, quickly identifying and responding to emerging threats and sharing information with all citizens in timely and helpful ways.

They wondered, too, if humans can cope effectively with such far-reaching changes, given that they are required to function with "paleolithic emotions, medieval institutions and god-like technology," in the words of biologist E.O. Wilson.

Among the scores of changes they see is the emergence of: an "Internet of Medical Things" with sensors and devices that allow for new kinds of patient health monitoring; smart millimeter-wave machines to diagnose people with disease symptoms; advances in synthetic biology and computational virology that improve drug testing and targeted disease therapies; diagnostic screenings that cover a person's diet, genes and microbiome; handheld detection devices that citizen swarms use to address environmental problems; and a new class of telecare workers.

Additionally, these experts forecast the creation of 3-D social media systems that allow for richer human interaction (sometimes via hologram avatars); mediated digital agents (interdigital repetitive or time-consuming tasks; a "flying Internet of Things" as drones become more prolific in surveillance, exploration and delivery tasks; ubiquitous augmented reality; an expanded gig economy built around work-from-home free agents; urban farming that reaches industrial scale; advances in trusted cryptocurrency that enable greater numbers of peer-to-peer gradually taking over significantly more locally based, on-demand manufacturing; "local in spirit and local in practice" supply chains; a robust marketplace of education choices that allow students to create personalized schooling menus; "tele-justice" advances that allow courts to handle large numbers of cases remotely; "truth valuation" protocols that diminish the appeal of disinformation; and small, safer nuclear reactors for energy production.

At the more everyday level, these experts also think there will be better speech recognition, facial recognition (including sentiment discernment from facial expressions), real-time language translation, captioning and autocorrect capacity, sensory suits, robust video search, body motion sensors, 3D glasses, multimedia databases and broader network bandwidth that will enable full 3D virtual experiences and developments in AI allowing it to serve more of people's needs.