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Article

Future Estrangement: Not Having a Place in the Emerging Future

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Abstract

Future estrangement is a profound sense of alienation toward the future. It is the deep-seated feeling that the future is a hostile and bewildering world that we may not have a place in – or may not want to have a place in. This paper outlines numerous impending threats that are the main sources of future estrangement and discusses strategies to overcome this perilous attitude toward the future. Ultimately, reversing the spread of future estrangement will require both addressing its root causes and building resiliency at all levels and in all domains of society.

Keywords

Future Estrangement, Future Shock, Psychological Distress, Solastalgia, Anxiety, Alienation, Resilience, Positive Vision

Future Shock was a 1970 international bestselling book by futurist Alvin Toffler. Following the turbulent 1960s, the book's central thesis – that people were experiencing psychological distress from relentless change – resonated with many who were struggling to cope with a rapidly changing world. Too much change was overloading "the human organism's physical adaptive systems and its decision-making processes" (Toffler, 1970, p. 290) and causing anxiety about the future.

Today, 50 years after *Future Shock* was published, many people are experiencing a more dangerous malady with serious implications for individuals and society. I call it "future estrangement."

Like future shock, future estrangement has its roots in the accelerating pace and complexity of change we're experiencing now and expect to experience in the future. But it cuts deeper, shaking our very belief in a viable future. Future estrangement is a separation from the future, a sense of profound alienation toward the future. It is the gut feeling that the future is a hostile and bewildering world that we may not have a place in – or may not want to have a place in.

The coronavirus pandemic is a new and significant driver of future estrangement because of the myriad and unpredictable ways it will reshape society. A survey of 32 big thinkers revealed a stunning array of possible positive and negative changes that could result from the pandemic, affecting the domains of community, technology, health / science, government, elections, the global economy, and lifestyles (Politico Magazine, 2020). The potential higher-order consequences of these changes are boundless and likely to create profound uncertainty that feeds future estrangement.

But many other long-term factors are contributing to the rise of future estrangement. Like future shock, rapid and accelerating change is an important driver. The pace of change was just beginning to take off in 1970 when *Future Shock* was published, but it has accelerated exponentially in recent decades. The "Great Acceleration," as it has been dubbed, is documented in two dozen graphs covering a wide range of social, economic, demographic, and environmental indicators (Steffen, Broadgate, Deutsch, Gaffney, & Ludwig, 2015). Taken together, the great acceleration graphs paint a startling picture of accelerating change beginning in the years following WWII, increasing slowly at first, and accelerating rapidly in recent decades.

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In addition to the accelerating pace of change, the *complexity* of change has also increased, due in part to the interaction of multiple massive forces. Thomas Friedman (2016) argues that we are currently living through one of the greatest inflection points in history because "The three largest forces on the planet … are all accelerating at once" (p. 3). The three forces identified by Friedman are: rapid technological change driven by increasing computer processing power, economic globalization, and global climate change. The synergistic interactions between these mega-forces amplify complexity and characterize Friedman's "age of accelerations." Each of these forces has countless direct and indirect consequences on their own, but their combination adds greatly to their complex and uncertain future impacts.

The escalating impacts of climate change and the looming prospect of much more calamitous climate disruption to come are a dominant driver of future estrangement. Earth's climate is already beginning to feel unfamiliar due to the growth of extreme weather and environmental anomalies, including the rise of mega-fires, intense heat waves, supercharged storms, frequently recurring "1,000-year" floods, persistent droughts, rising sea-levels, record storm surges, rapidly melting glaciers, loss of sea ice, and precipitous decline in biodiversity. These are just some of the most obvious direct effects of a rapidly changing climate and the higher-order impacts could touch every aspect of our lives. Mora et al. (2018) reviewed 467 possible impacts of climate change, including effects on human health, water quantity and quality, food and agriculture, the economy, infrastructure, and national security. As disruptive as gradual climate breakdown will likely be, it pales next to the challenges that could be created by the wild card of *abrupt* climate change (Lenton et al., 2019) and "climatically-induced abrupt change in social systems" that would result (National Research Council, 2013, p. 152).

Beyond the mounting effects of climate change is broad environmental decline due to pressure on natural systems to meet rising demands for food, fuel, materials, housing, transportation, and all human endeavors. The widespread decline of natural capital and increasing human impacts on the planet's life support systems have been thoroughly documented. As Díaz et al. (2019, p. 1) state, "Most indicators of the state of nature… are declining" and these trends are projected to continue.

The prospect of trying to adapt to such sweeping environmental change is unnerving. Mental distress caused by rapid environmental change has been termed "solastalgia" (Albrecht et al., 2007) and "climate grief" (Cunsolo & Ellis, 2018), conditions that directly contribute to future estrangement as our planet gradually becomes more unfamiliar.

Future estrangement may also be driven and amplified by the array of major emerging technologies with the potential to transform and disrupt our lives in unpredictable ways. For example:

- **Artificial intelligence (AI)**: Rapid development and deployment of AI and advanced robotics could lead to large-scale loss of jobs. AI could upend many sectors of the economy – not just manufacturing – and result in an acceleration of the decades-long trend of "hollowing out" of the middle class (Metz, 2017). Many would be left behind in a jobless future with high and persistent unemployment.
- **CRISPR gene editing**: The ability to alter the genome of organisms quickly by destroying or editing a gene with CRISPR gene editing technology is creating a revolution in genetic engineering and has raised many ecological and ethical concerns (Doudna & Sternberg, 2017; Metzl, 2019). CRISPR – and a host of more precise CRISPR systems called base editors – are developing rapidly and open up the genome of virtually every organism to be edited and engineered. This massive increase in human control over life will bring surprising and disruptive change.
- **Synthetic biology**: Synthetic biology is a rapidly developing interdisciplinary field that uses biotechnology, chemistry, and engineering to create "fundamentally new, biological parts or systems not otherwise found in nature" (Gómez-Tatay & Hernández-Andreu, 2019, p. 1587). The unintended ecological and social consequences of synthetic genomes, artificial cells, and engineered life forms are impossible to predict. While the field holds promise for major breakthroughs in many areas, the unknown risks for the environment and human health are many.
- **Molecular manufacturing (nanotechnology)**: Molecular manufacturing, also called atomically precise manufacturing (APM), is a type of molecular nanotechnology involving the assembly of materials with atomic precision (Umbrello & Baum, 2018). The technology is in the early stages of development but simple forms of APM currently exist. The social and economic consequences of this technology are highly uncertain, ranging from transformative benefits in some sectors to potentially catastrophic effects in others.

Many additional emerging technologies could have far-ranging effects on our lives, such as ubiquitous "smart

dust" sensors, autonomous vehicles, the internet of things, and 3D printing. Like all disruptive technologies, these will have unintended, unanticipated, and often unsettling consequences that could fuel future estrangement.

Evidence that many of the drivers of future estrangement rise to the level of existential threats is provided by the research of the University of Cambridge's Centre for the Study of Existential Risk (https://www.cser.ac.uk/). The interdisciplinary research team at the Centre focus on four main areas: Managing extreme technological risks, global catastrophic biological risks such as pandemics, risks related to the global environment, and risks posed by artificial intelligence. The recent movement of the Bulletin of the Atomic Scientists' "Doomsday Clock" – representing the imminence of multiple grave perils facing humanity – also indicates the seriousness of the threats that are driving future estrangement. Determined by two boards of scientists that include 13 Nobel Laureates, the hands of the Doomsday Clock have been moved closer to midnight in three of the past four years and are now closer than at any point since its inception in 1947 (Spinazze, 2020).

Future estrangement represents a changing relationship between those afflicted with it and the future. Seeing the future as an alien and hostile place in which we don't belong is likely to produce growing personal and social despair. This attitude toward the future – prompted by numerous impending threats – could itself be an existential threat. Our image of the future is vital to our collective viability according to Dutch sociologist and pioneering futurist Fred Polak (1973). His two-volume magnum opus *The Image of the Future* was an exhaustive history of the changing image of the future throughout the span of Western culture. Polak's provocative conclusion was that "The rise and fall of images of the future precedes or accompanies the rise and fall of cultures. As long as a society's image of the future is positive and flourishing, the flower of culture is in full bloom. Once the image begins to decay and lose its vitality, the culture does not long survive" (Polak, 1973, p. 19). In other words, future estrangement – if it continues to grow and becomes pervasive – could threaten the future of humankind.

What can be done to stem the tide of future estrangement? A key line of attack is to strengthen individual and societal resilience. The essence of resilience is the capacity of a system to absorb disturbance and still retain its basic nature and identity. Many strategies for increasing resiliency in ecosystems, social-ecological systems, and organizations have been identified, such as these three key factors identified by Walker and Salt (2006):

- **Diversity**: Maintaining or building diversity of species, ideas, and institutions. More diversity means greater flexibility and capacity to respond to disturbances;
- **Modularity**: Creating modular structures in systems, in which components are strongly connected internally but loosely linked to each other. Modularity in systems "allows individual modules to keep functioning when loosely linked modules fail, and the system as a whole has a chance to self-organize and therefore a greater capacity to absorb shocks" (p. 121);
- **Tightness of feedbacks**: A system has tight feedbacks when a disturbance in one part of the system is felt quickly and can be responded to in a timely manner in other parts.

An often neglected strategy to boost resilience is increasing the capacity for strategic foresight – insights into how and why the future could be different than today (Lum, 2016) – and to use the insights gained to build resilience and improve planning and decision making. Understanding and applying the principles and methods of strategic foresight can help us form realistic expectations for the future, prepare for a range of plausible futures, create a longer-term perspective, anticipate unintended consequences, and shape a preferred future.

Identifying a shared preferred image of the future is critical to overcoming future estrangement: "The most critical task facing humanity today is the creation of a shared vision of a sustainable and desirable society" (Costanza, 2000, p. 1). Futurists have developed many participatory methods for developing positive visions, such as the "aspirational futures" scenario planning technique developed by the Institute for Alternative Futures (Bezold, 2009).

At the individual level, additional strategies to increase resilience and reduce future estrangement include: creating meaningful opportunities for lifelong learning, which can help people adapt to change and capitalize on opportunities that arise in a rapidly shifting landscape; consciously seeking out positive news and information focusing on solutions to counter negativity bias – the tendency to more readily identify problems rather than positive opportunities (Soroka, Fournier, & Nir, 2019); and expanding the availability of mental health services related to ecological grief (Clayton, Manning, Krygsman, & Speiser, 2017).

Ultimately, reversing the spread of future estrangement will require both addressing its root causes and building resiliency at all levels and in all domains of society. As Megginson observed (in the spirit of Charles Darwin), "…

it is not the most intellectual of the species that survives; it is not the strongest that survives; but the species that survives is the one that is able best to adapt and adjust to the changing environment in which it finds itself." (Megginson, 1963, p. 4).[1]

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Notes

1- Quote often erroneously attributed to Charles Darwin in *The Origin of the Species*, but actually from a presidential address by business professor Leon C. Megginson to the Southwestern Social Science Association convention in San Antonio, Texas, April 12, 1963.

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