



Essay

The Only Three Trends That Matter: A Minimum Specification for Future-Proofing

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Abstract

Trend mapping and analysis are common practice for organizations. However, the emphasis on trends, and the sheer volume of predictions about the future, might be creating confusion about what society should prioritize. Introducing a minimum specification for future-proofing may help cut through the noise and surface what is needed for us to ensure a sustainable, viable future for humanity. This essay will introduce the proposed specification, the rationale behind it, and will illustrate the value of taking this approach by using the discourse on the future of work as an example.

Keywords

Minimum Specification, Future-Proofing, Experiential Futures, The Future of Work, Climate Change, Democracy, Equality, Artificial Intelligence

Trend reports are a common outcome of foresight and forecasting initiatives. There are no shortages of predictions and speculations about what the future may hold on a plethora of topics. Though trends may be useful in understanding, analyzing, and extrapolating from the current state, they are also problematic. Despite their appeal, trends:

- Are a reflection of the past because all data is historical by nature;
- Simplify and compartmentalize data, the analysis and interpretation of which is subject to human error;
- Are simple, linear, and incidental, not systemic (we follow single threads and not how they weave together or influence each other in the present and in the future);
- Do not account for wildcards and unpredictable events;
- Do not capture unintended consequences;
- Become more difficult to predict the further we look into the future;
- Encourage extrapolating the past into the future, rather than creating new visions and innovations;
- Support an economic and technology-driven mindset (for example, what to invest in next) which often overlooks other critical aspects of a system, including the impending climate catastrophe;
- May emphasize noise rather than knowledge;
- Can be vague, misleading, or wrong, especially when they capture short-lived fads;
- Are not all equal.

Given the sheer number of trend predictions, it can be difficult to determine what is critical and warrants attention. As a result, what matters may be lost in the noise. For instance, trend reports highlight technological trends as much, if not more than, environmental ones, even though a global climate catastrophe will supersede all other concerns. As a result, what trends we privilege and how we communicate those trends may be problematic, in and of itself.

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Not to mention that when you make a thousand and one predictions, you are bound to get some right, which further distorts the value trends have.

To that point, I would argue there are only three trends that matter:

1. Climate change and the havoc it will wreak.
2. The battle for an equal, just, and democratic society.
3. The rise of artificial intelligence.

These three megatrends significantly impact what it means to be human, how we relate to each other, and whether or not we survive the next century. While other trends may have short-term appeal and/or financial benefits, it is the above three that will dominate and shape our reality in the years to come.

I propose that the above three trends should serve as a minimum specification for future-proofing, and innovating in a way that is coherent with the emerging reality.

When we design for the future and from the future, we should ask:

1. How does it support long-term environmental sustainability?
2. How does it enable justice, equality, and democracy?
3. How is it helped or hindered by artificial intelligence; is it ethical technology?

Why This Approach?

We live in an increasingly complex world with intricate connections. Each of the three megatrends can create havoc on its own but will exacerbate and antagonize each other in ways we have yet to imagine when combined. It is critical to acknowledge that these three megatrends are occurring at once, and not in isolation. As we face increasing levels of complexity and uncertainty, we must take a systemic view of our future.

Climate change

We have reached a critical point in history. According to the Intergovernmental Panel on Climate Change (IPCC), we have 10 years to mitigate (not prevent) the substantial consequences that climate change will have on the world (Leahy, 2018). All the data suggests we are in trouble. Our circumstances become more precarious when we consider that a single standard deviation in weather can trigger violence and conflict (Burke, Hsiang, & Miguel, 2015, p. 1). What happens when global weather patterns become more erratic? Climate change will impact everything. There is no Planet B.

An equal, just, and democratic society

Along with climate change, the tides of populism are rising around the world (Shuster, 2018). Tech companies like Facebook are eroding the fabric of democracy and wield more power than entire countries (Osnos, 2018). Even recent announcements and debates about Crispr challenge the very foundations of what it means to be equal (Court, 2018). Our socio-economic and political climate has significant and far-reaching consequences that impact every aspect of life and the systems we live in. The growing consensus is that we “live in a time of fear” (Bremmer, 2018).

The rise of artificial intelligence

The issue with artificial intelligence is not just the advancement of technology but the ethics and morals that underpin it. Who decides what is ethical and moral? At the moment, fundamental decisions about the future of ethics and morality are driven by entrepreneurs. Policy has struggled to keep pace with technological progress and remains reactionary in the face of mass disruption. Furthermore, artificial intelligence may undermine our perception and experience of reality. Technology such as DeepFake can create realistic digital versions of us that say and do things we have never said or done (Baker & Capestany, 2018). Ultimately, we need to question what artificial intelligence means for our humanity.

What is the implication? Innovations, policies, or strategic planning initiatives that do not equally consider climate change, the battle for equality, justice, and democracy, and artificial intelligence are deficient. Our visions of the future need to account for all three trends, and how they interact with each other, to help us prepare for the challenges ahead.

We have now reached a point in history where continuation scenarios of unlimited economic growth are no longer probable futures; they are a fantasy. As foresight researchers and practitioners, do we have a social responsibility to stop creating, disseminating, and using these images? If so, we need to rethink the frameworks by which we imagine, design, scrutinize, and act upon futures so that our work helps us achieve more sustainable outcomes.

How we test ideas also matters. When we discuss the concept of future-proofing or future-fit, we often do so in the context of organizational strategy. Though frameworks such as windtunneling help us assess whether or not a particular strategy suits an organization, we need more systems-oriented methods and constructs to design for a societal or civilizational scale.

A minimum specification for future-proofing that accounts for the most critical of our systemic issues is one such framework. It allows individuals and organizations to vet their work against a simple baseline standard, with the hope that they reject ideas and initiatives that are problematic from a systems perspective. If we equate future-proofing with systems-oriented outcomes rather than organizationally beneficial ones, we may have an opportunity to bridge the gap between social futures and organizational strategy.

The Future of Work: An Example

Discourse about the future work focuses on artificial intelligence and automation. The barrage of reports by consultancies, think tanks, government organizations, etc. tend to zero-in on this one trend, with less acknowledgment that climate change and our social climate will have a severe impact on the future of work too. I have seen plenty of scenarios that feature robots and none that discuss severe weather. The lens of artificial intelligence and automation fails to capture the true scope and complexity of the problem.

When we expand the future of work to include the first two trends, we have to acknowledge that the emerging reality may be radically different than the visions we are preparing for. By adding climate change into the mix, conversations and scenarios about the future of work resemble an unsustainable fantasy. Set artificial intelligence and automation aside for a second; what happens to the future of work when our planet can no longer sustain us? Do we even have a future, let alone one in which we need to worry about jobs? What jobs do we need to perform now to ensure our planet remains viable? Our technophilic visions of the future of work suggest that such a future will arrive in a protected bubble, unaffected by the Earth decaying around it. It might not be the robots we need to worry about, rather the air, water, and soil we need to live.

Factoring in the decay or progression of an equal, just, and democratic society is also essential. Democracy is a fragile narrative, not a given. Without democracy, the nature and purpose of work would change. The loss of jobs is fueling social tension, but these very tensions and their political implications also impact jobs (Burrow, 2012). The two reinforce each other. Gender equality has the potential to increase U.S. GDP by \$4.3 trillion, yet it is treated as a separate issue from artificial intelligence and automation (Ellingrud, et al., 2016, p. 7). Add these considerations on top of climate change and artificial intelligence, and the future of work becomes even more precarious.

Why is it that we continue to look at these issues in isolation? And what work should we actively create or destroy to prepare for these possibilities?

Job ads from the future

To further the conversation around the future of work, I created a set of 'Job Ads From the Future' to challenge the current line of thinking. The future of work is about more than artificial intelligence and automation; it is also about climate change and the battle for an equal, just, and democratic society.

It is important to note that these are speculative pieces exploring the intersection of the three trends. They are not predictions or suggestions. These experiential futures are designed to provoke conversations. In this context, the minimum specification is not only a lens to explore and critique the future of work, it is also a design brief - a relevant boundary for possible futures.

Job #1: Re-Creationists

As more species die-out or reach the point of extinction, we may turn to a combination of synthetic biology, genetic sequencing, 4D printing, and artificial intelligence to recreate what we've lost. Not everyone will like the idea of this role; some will want to biologically engineer new creatures. Others may want to apply what they've learned to humans.

Job # 2: Reality Rehabilitator

Will fantasy and the virtual world become more appealing as the environment declines and democracy erodes? In the future, we might want to escape into pristine worlds that give us a sense of agency and control. Who will and won't have access to these worlds may become a point of contention.

Job #3: Truth Triage

Are you sure you know what's real? When fake news and DeepFakes become the norm, how will we separate fiction from reality? What will we believe if the world around us collapses? Perhaps knowledge seekers (like journalists) of the future will rely on truth triage teams. These teams will create and deploy filters to determine what is real and what is not. Whoever decides what is true, may also decide what constitutes reality.

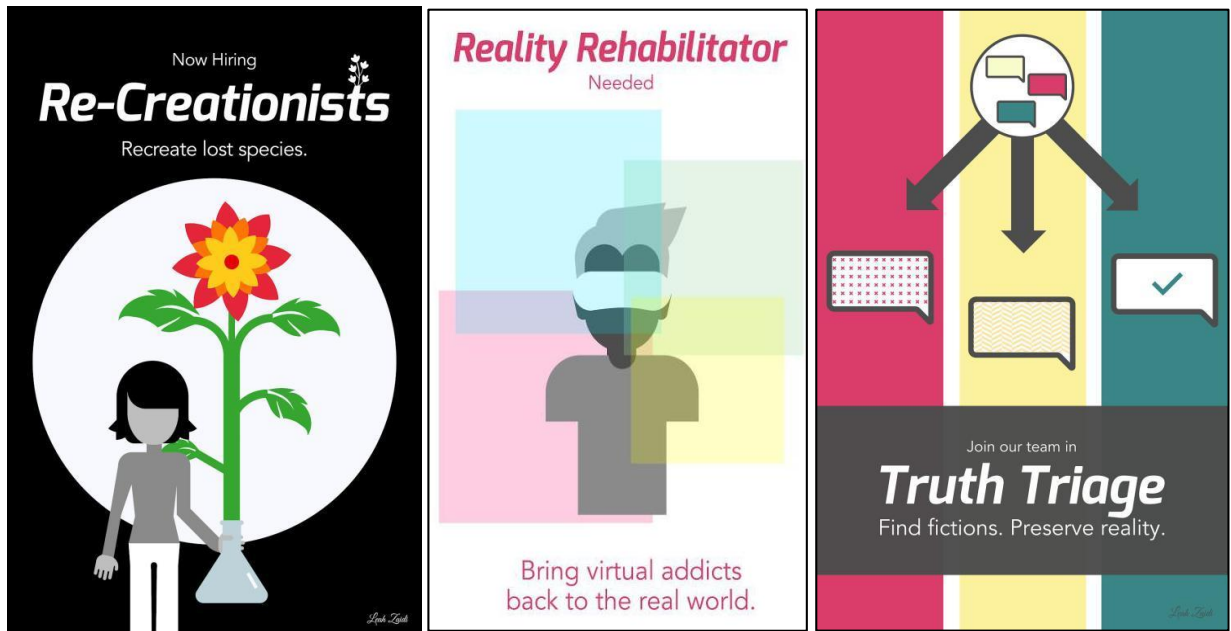


Fig. 1: Job ads (Job #1, Job #2 and Job #3)

Job #4: Social Intelligence Engineer

Creating and maintaining sustainable systems is no easy feat. In the future, we may need people to work with sophisticated algorithms to co-design a more socially and emotionally intelligent society. We may go as far as designing for mass positive behaviour, all to ensure that the world is a sustainable, equitable, and just place. Keeping the peace may be part of your job description.

Job #5: Actualized Life Programmer

But what about the individual, you ask? Wouldn't it be nice if someone helped you self-actualize? Actualized Life Programmers work with you, your smart home, your wearables, and the smart city grid to help you become the best version of yourself through environmental and behavioural conditioning. We'll all live happier, healthier, and more sustainable pre-determined lives. Privacy not included.

Job #6: The Moral Coder

Maybe we need to go one step further still. Humanity is flawed and destructive. Some may try to decipher, hack, and refine our genetic code so that we begin to reflect our better natures. Artificial intelligence will make it easier for us to understand ourselves, but who decides what stays and what goes? In whose image do we redesign humanity?

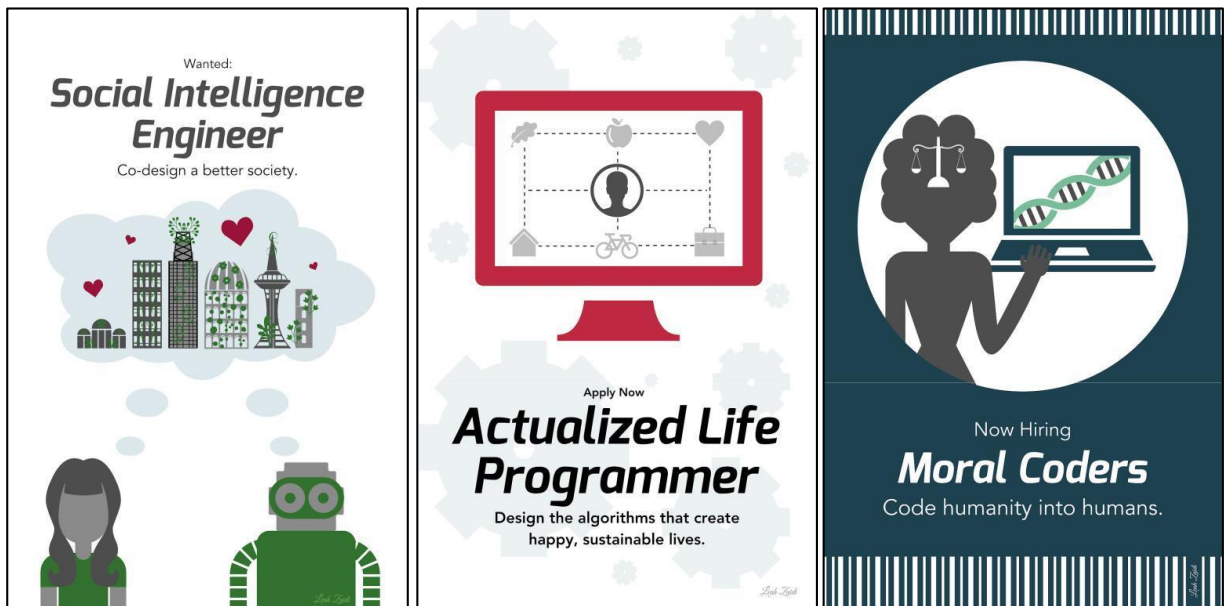


Fig. 2: Job ads (Job #4, Job #5 and Job #6)

Job #7: Forest Feeder

Climate change results in mass extinction and loss of biodiversity. In an attempt to salvage nature, forest feeders make the ultimate sacrifice by serving as hosts to nano-bacteria that break down plastics and toxins in the environment. Their nutrient-rich bodies may allow them to transport semi-synthetic bacteria to far-off locations and perform bio-maintenance tasks along the way. Once they pass, the nano-bacteria continue to thrive in their bodies and help replenish a deteriorating Earth. In exchange, their loved ones are compensated and honoured for their loss.

Job #8: Extinction Tour Guide

Maybe our efforts are not enough. With mass extinction looming, some may want to see it all before it's gone. Specialized tour guides will lead the last pilgrimage as we say goodbye to the planet as we know it. Perhaps some will capture the images to recreate them in virtual worlds. Such a pilgrimage may only be available to the privileged, even though we will all share the loss.



Fig. 3: Job ads (Job #7 and Job #8)

Conclusion

Whether we are discussing strategies, policies, products, services, etc., we need to acknowledge the complexity of our collective emerging future. The future of any given domain is impacted by a multitude of trends colliding and intersecting with each other. The most critical of these trends are those related to climate change, the battle for democracy, equality, and justice, and the rise of artificial intelligence and automation. When we stop focusing on trends and start focusing on systems, we will have a better, more complete understanding of what possibilities may emerge next.

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