

Nation of the future



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Nation (noun):
from "natio,"
referring to birth,
species, kind,
and tribe.



INTRODUCTION

As we look toward 2027, we find hyper-connected populations—with a strong distrust in existing institutions—who are actively coordinating their lives, forging new revenue streams, and developing their own political goals in ways that have significantly decreasing dependencies on their local geography and centralized governments. These are the stories of our post-global nations.

Even as migrants from Syria and Afghanistan find themselves scattered across the globe, their low-cost phones represent a vital lifeline to friends, family, and community. This mobile infrastructure is often the only infrastructure they can rely on as they move from camp to camp—it is the one thing that stays the same as everything else changes. Their social networks, their media feeds, their working and learning apps: these are the portable structures that scaffold new national frameworks.

We've seen the shadow side of this trend with ISIS, which plucks adherents from across the world on the backs of social media networks, disseminating extreme cultural beliefs and coordinated activities across the disparate populations of the West.

And we've seen it most dramatically in the political upsets of 2016, with Brexit and the U.S. election. These two events come into focus when viewed through the lens of post-global nations, of entirely different cultures running side-by-side in the United States and Britain—to the point where shared cultures and media have been largely abandoned. Many of us have found ourselves fully entrenched in one or more “filter bubble” nations, completely unaware of the filter bubbles occupied by our neighbors or teachers or police officers. It's becoming increasingly clear that these bubbles aren't just about news; they're about our shared cultures, identities, and world views.

This perspective forces us to reframe social networks like Facebook as inherently political structures, something Mark Zuckerberg likely realizes as he's recently started communicating a lot less like a technology CEO and a lot more like someone who's about to run for political office. It encourages us to reframe alternative media sources like *Breitbart* as

state media arms for post-global nations, reinforcing the values, beliefs, and even facts that define those communities.

Over the next 10 years, these new social and political structures are going to become more defined, not less. They're going to penetrate deeper into our lives as more of our reality is filtered through digital interfaces and mixed-reality environments that transcend our existing borders and erect new digitally-defined boundaries in their place.

Where is this taking us? It was discovered last year that Google Maps displays different political borders depending on where it's being viewed from. If you view Crimea from a western country, it's labeled as a disputed territory between Ukraine and Russia. Viewed from Ukraine, it's clearly labeled as a Ukrainian province, and from Russia as a Russian territory. Imagine a future where you can't even gather consensus on the actual political boundaries of the region you live in. We're basically there.

The reality is that we're not likely headed towards global coherence any time soon. There is no one map of the future, no one reality shared by every person on earth. We have “fake news” now, but in the next decade, as post-global nations further distinguish themselves, we'll likely have to contend with “fake healthcare,” “fake policy,” and even “fake markets.” At the same time, these new social and political structures represent new nations of choice and affiliation, nations of chosen expression, nations of chosen identity.

From the perspective of our customers, our employees, our partners—this is a remarkably different world full of new pitfalls but also new opportunities.

This is your guide to the nation of the future.



forecasts

FILTER BUBBLE NATIONS

As the influence of digital platforms on information and service distribution continues to grow, the “filter bubbles” of the near future will expand in scale and scope, encompassing our shared understandings of science, policy, and even geography. This fractured information architecture will yield alternative realities for shared geographies, perhaps only finding common ground in local geographic disasters.

Changing Fictions

Over the past decade, the shared regional cultures once scaffolded by local newspapers and TV networks have largely given way to individual “filter bubbles” featuring millions of fragmented media streams scattered across social networks and the Internet. For most, news has become primarily non-local in nature, leading to wildly different perceptions of truth and cultural understanding between neighbors and families within the same region or country.

At the same time, the rise of teleworking around the world is eroding dependence on local community culture. Suitable Tech’s Beam robots join coordination platforms like Slack and Upwork in creating robust communication pathways across regional boundaries. Collaborating with distributed communities across different cities and countries has never been easier, while ties to local institutions and cultural networks decrease for many.

Changing Systems

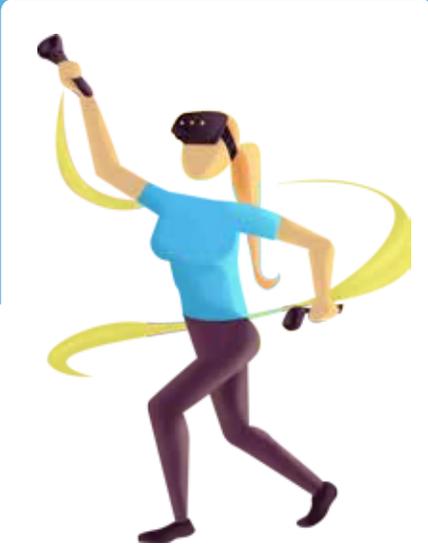
It was revealed in 2016 that Google Maps shows different political boundaries to different users depending on who is viewing it and from where. The popular mapping service portrays the Crimea region as disputed Ukrainian territory for western users, but designates this same area as undisputed Russian territory when viewed within Russia. Similar irregularities exist for the state of Palestine, which does or does not exist in Google Maps depending on the location of the viewer.

Already, this seamless personalization of content is pushing deeper into our individual experiences of reality. It is creating so-called filter bubbles around our shared perceptions of what markets and infrastructure are accessible to us, what medicines and treatments are appropriate for supporting our well-being, and which political boundaries and regulations apply to us personally. These “filter bubble” nations will increasingly supersede national identification for many hyper-connected digital citizens, who may place greater trust in their new networked institutions than their local or national equivalents.

BY 2027

As mixed reality technologies and distributed work platforms mature and proliferate over the next decade, many more infrastructural and cultural services will be made available by Uber-like platforms and Etsy-like markets that delineate their users not by shared geography but by shared access to digital ecosystems, user networks, and economic viability. These distributed services will build on and reinforce the shared beliefs and values of their fractured audiences, creating formal pathways for “fake medicine,” “fake degrees,” and even “fake policy” to take root at massive scales.

For many, these trends will represent the empowerment of new “nations of choice,” while millions of global residents simply find themselves navigating a tiring ecosystem of snake oil empires. At the same time, growing environmental disasters will likely refocus attention on local geographies of identity. The question is: Will these disasters pit neighbor against neighbor in hyper-local battles of survival, fueled by global flows of money, information, and ideology? Or will these shared physical crises help local communities find new common ground as they reassert the primacy of geography, binding competing nations of choice into cooperative local realities?



Connecting the Dots: Urgent Futures



Security and Status

Enthusiasts often emphasize the ability of emerging forms of mixed reality technologies to add visual information to the user's immersive experience. Less often acknowledged is the technology's capacity to block or remove visual information. The same combination of 3D spatial mapping, pinpoint location tracking, and facial/object recognition that allows a mixed reality system to generate a realistic Pokémon or shared drawing board will allow the deliberate blocking or alteration of particular objects or spaces.

These tools will range from personal ad-blockers to community-driven censorship of books or images to “digital rights management” control over the appearance of a physical design. In some locations, specific immersion-experience controls may even be mandatory. Although these visual manipulations will rely on the ubiquity of mixed reality systems to work, it's likely that the growing usefulness, even necessity, of mixed reality tools will result in many users willing to make “reality trade-offs.”



Working the System

As global microworkers shift between tasks throughout the day, they are likely to find themselves particularly vulnerable to fractured geographical and cultural contexts. International call centers have already shown us the effect of cross-cultural work on employees, as many young Mumbai residents have adopted the sensibilities and assumptions of the U.S. customers they spend all day helping over the phone. Gig work is likely to accelerate this fracturing of culture as it often presents workers with context-free tasks: copy editing a random paragraph of text or illustrating assets without any knowledge of their intended use.

Sense-making will fortify itself as a necessary skill in these highly-distributed environments, creating a host of new work roles for people who can quickly synthesize and translate between contexts and disciplines. On the other hand, we should also expect increased incentives for those skilled at manipulating individuals' perceptions of reality, particularly as a response to widening inequality and the structural elimination of many traditional jobs.

WHO DECIDES?

As distributed decision-making platforms expand the capabilities of peer-to-peer governance structures, they will confront an emerging wave of strategy-minded machine learning systems over the next decade. These competing visions of leadership and authority will shape new power struggles for citizens and workers by 2027.

Changing Fictions

Over 2000 years ago, Aristotle identified three alternative governance structures that still drive the assumptions of governments and executive suites today: the rule of one, the rule of a few, and the rule of many. Inconceivable until recently, two entirely new decision-making concepts are now emerging and gaining traction at the extreme ends of this set: decisions made by no one and those made essentially by everyone.

In 2016, residents of post-industrial nations have already grown accustomed to the power of algorithmic decision-making in their Netflix queues, Amazon recommendations, and Wealthfront portfolios. At the same time, customers and workers are taking advantage of crowdfunding platforms, online petitions, and user-voted content sites to facilitate crowd-based development of products, policies, and ideas on a daily basis with millions of invested parties. We see both forces pulling on our society simultaneously, as algorithms replace humans in the daily activity of the stock market and distributed organizations like Black Lives Matter forge new practices for consensus-based leadership.

Changing Systems

Narrow artificial intelligence capabilities are advancing at an epic rate, and every day brings new examples of high-stakes determinations made by machine learning systems irrespective of their human masters. In 2016, a Japanese algorithmic hedge fund outperformed its human designer by correctly predicting market activity ahead of the Brexit vote. IBM's Watson identified a patient's rare form of leukemia after her condition stumped a team of specialist doctors in Tokyo. Anticipating accelerated development in this arena, the Obama White House released regulatory guidance for AI-based systems "replacing decisions made by human-driven bureaucratic processes" in the near future.

As our societies grapple with the superior data-processing and pattern recognition skills of computerized systems, passionate communities of technologists and social entrepreneurs are also pursuing peer-to-peer decision-making systems at larger scales. Portugal launched the first nationwide co-budgeting experiment in 2016, inviting its 10 million citizens to help determine where public money should be spent through specially outfitted ATMs.

BY 2027

As these divergent forces mature and evolve, they will lay the foundation for new power struggles between people, organizations, and decentralized machine learning systems. For governments and board rooms, they offer the potential to clarify and distinguish between decision-making driven by facts and that driven by public sentiment—a key tension in the political conflicts that dominated 2016.

If distributed decision-making platforms and AI-enabled systems can align their complementary advantages, future organizations and communities may be well-positioned to create robust interdependent networks between human stakeholders and their algorithmic analysts. While machine learning systems provide real-time context and strategic insight, final decisions could be discussed, vetted, and approved by large networks of humans impacted by those decisions.

This future landscape presents new challenges for liability, security, and trust in the machine-learning era, but it also provides opportunities as our institutions and communities negotiate the innovative social constructs and power structures of this post-global world.



Connecting the Dots: Urgent Futures



Destabilizing Demographics

In the realm of public decision-making, the question, as always, is whether people will vote based on what's best for them individually or what's best for the group. Consensus-based decision-making often leads to the preservation of the status quo or situations where the loudest (and wealthiest) voices win. As demographic trends continue to destabilize traditional cultural norms, it seems likely that ethnic and allegiance-based voting trends will continue. In high-income countries, algorithmic leadership may eventually offer a reprieve from such identity politics, with policy frameworks not tainted by the threat of in-group dynamics.

Of course, just as U.S. residents have learned to answer surveys in such a way as to suppress the perception of anti-social beliefs like racism, future voting groups and power structures will seek strategies to game algorithmic decision-making mechanisms in their favor. Even as politics evolves, people are likely to remain unmistakably political.



High-delta Markets

High-delta markets offer a plausible compromise to the looming binary of algorithmic vs. crowdsourced decision-making. In high-volatility environments, decisions need to be made constantly, and the consequences of any given decision are necessarily short-lived as market ecosystems continuously shift. Both geographical and network-based markets build resilience for shifting conditions by distributing production to many agents, all of whom are empowered to try new things with the expectation that failure will result more often than success.

For companies and governments, high-delta decision-making offers promise for the distribution of strategy into subgroups that are granted independent approaches and incentives. This distribution may come in the form of improved simulation environments, boutique spin-offs of major brands, or formal shifts of power such as the Internet of Cities. In any case, a try-everything-and-see-what-works approach, though inelegant, can often produce the most resilient long-term successes.

UNIVERSAL BASIC SUBSCRIPTION SERVICE

As subscription-based business models continue to grow, the distinctions between subscriptions, taxes, and tithing will blur in the coming decade, transforming the roles played by companies, governments, and social institutions in people's lives.

Changing Fictions

For millennials around the world, armed with smartphones and volatile incomes, traditional “ownership” of physical goods such as cars, tools, and homes has quickly given way to access-based subscription models that offer personalization and convenience at low monthly costs. Digital-first companies like Microsoft, Netflix, and Instacart have led the way, but SaaS firms like Zuora are now helping any company take advantage of the recurring revenue and higher-value customer relationships offered by subscription models.

High-delta markets in Africa and Haiti are likewise taking advantage of the widespread adoption of phone-based payment platforms to offer subscription lease plans for goods that would be prohibitively expensive for customers to buy outright. In China, subscription businesses like French Cellar have succeeded by guaranteeing the authenticity of premium imported goods that are often counterfeited by opportunistic brick-and-mortar retailers.

Changing Systems

The success of this model is no mere trend. Recent advancements in software-based coordination and payment technologies have made subscription plans dramatically more cost-effective than they were, and they can take advantage of the on-demand delivery infrastructure that's growing up around them.

As Amazon Prime has proved with its ever-expanding list of offerings (now including music and video streaming in addition to same-day shipping in major cities and even restaurant delivery), subscription-based businesses represent a new wave of empire building. For established incumbents, existing customer bases can be leveraged to provide more services, goods, and benefits at scale. For multinationals that achieve some measure of vertical and horizontal integration, subscription business plans may begin to resemble the budgeting process of national governments, crafting a broad spectrum of services for millions of users based on a guaranteed base of recurring revenue.

BY 2027

Over the next decade, we should expect to see subscription-based access models penetrate much deeper into our economic and cultural assumptions. Smart homes and connected cities will cultivate rich ecosystems for on-demand services, including distributed power generation, complex insurance schemes, and self-replenishing amenities. Over time, we may find our growing portfolios of monthly subscriptions bundled into existing membership dues, utility bills, church tithes, and neighborhood association benefits. As the infrastructure for providing both services and subscriptions becomes more accessible and ubiquitous, anything that looks like a subscription service can, and in many cases will, begin to act like one.

For millions of people living in economically precarious situations, the end-goal of these subscription empires might prove to be “life-as-a-service”—a broader vision of the business plan surrounding all-inclusive resorts. Just how many basic human needs can be met for \$9.95 a month? We may soon find out.



Connecting the Dots: Urgent Futures



Working the System

The rapid development of new automation processes has catalyzed a policy push for universal basic income (UBI) by Elon Musk and other entrepreneurs. This novel form of safety net would guarantee all citizens a minimum stipend from the government to ensure basic survival needs in the face of job destruction across many industries.

Countries like Canada and Finland have already undertaken early trials for UBI, in a form that would invariably create audacious new market opportunities for the all-inclusive subscription services of the near future. Imagine a subscription market aimed specifically at the UBI stipend that potentially millions of people would receive each month, with the goal of maximizing the scope of services provided for that fee. Within a couple of years of mass adoption, Amazon Prime UBI might offer one of the few viable business models for serving the post-automation economy.



Designing for Impermanence

A migratory lifestyle, be it by choice or by force, throws many of today's assumptions into question. Chief among them: education. According to the UNHCR, just 50% of refugee children have access to primary education. And even when education is available, catering to typically mixed refugee populations isn't easy. While relying on exclusively online education has failed to gain significant traction so far, subscription models offer a level of digital continuity for tracking where a student is in their learning development, what they have accomplished, and where they should pick up again—tracking that could prove revolutionary. With impact far beyond youth, subscriptions could virtually store and secure important educational achievements, work portfolios, certifications, and even data from the University of Things, supporting a new mobility in both learning and employment.

Beyond education, subscriptions have the potential to provide continuity in a way that place-based governments and services just aren't able to. Whether providing access to political advocacy, a global network of temporary housing or co-working spaces, or even personal security services, subscriptions could be the lifeline behind a mobile, impermanent life.

HIGH SOCIETY

As recreational marijuana tentatively approaches decriminalization in many parts of the world, it has attracted renewed interest from industry, academics, and governments. Loaded as it is with decades of social stigma, expensive prohibitions and gray market investments, the marijuana industry may prove to be a bellwether for shifting institutional authority in the coming decade.

Changing Fictions

The patchwork and uneven process by which cannabis is becoming legalized is creating a rapidly expanding category of gray market services and experiences that touch on everything from pain management and therapy to entertainment and travel. As the multi-billion dollar recreational industry continues along a path of rapid growth, the gradual decriminalization of cannabis has begun blurring the lines between mental health treatment and experiential high—even drawing some communities to brand themselves as “Napa Valley for weed.”

Over the next decade, recreational and therapeutic experiences involving legal or gray market highs will become an increasingly robust market for leisure, mental health, and even regional planning. Efforts currently focused on cannabis-like substances will expand to include a wider array of digital tools—such as electroceuticals and virtual reality—to gain a deeper evidence base for the cognitive and health characteristics of these mind-altering products. Our old narratives around stoners and criminals are surely giving way to a more nuanced picture, even as our regulatory structures struggle to keep pace.

Changing Systems

At the level of global governance, cannabis has been a controlled substance under the United Nation’s Single Convention for Narcotic Drugs since 1961. Today, the convention still prohibits the production, distribution, and consumption of cannabis except under license for specific medical purposes. In a kind of catch-22, government limits on the amount of weed available for medical research have effectively restricted that research, so that relatively little medical value has been clinically validated.

Aside from the UN, there are surprisingly few institutional powers that do not hold specific policy stances or financial interests in the distribution and management of marijuana. As U.S. states like California, Colorado, and Washington flaunt federal law to sell the plant locally, they are joined by countries like Canada, Mexico, and Australia, which have all made strong pushes towards full legalization in the past few years. These efforts have faced widely variable support and hindrance from power groups across the spectrum, including the alcohol industry, medical associations, organized crime, and grassroots activists.

BY 2027

As the post-global nations of the next decade fortify themselves along fragmented cultural and institutional lines, the fate of legal marijuana will likely mark the declining or ascending efficacy of our existing power structures. While global, federal, and regional governments continue to offer contradictory guidance for the substance’s distribution and use, the status of the real-world marijuana market will continue to vary for different communities and in different geographies according to which policy positions are enforced, and who oversees the resulting delivery channels.

All of this will unfold in the heavily-armed context of the global criminal economy. Old fictions of a drug without redeeming value will continue to support prosecution and incarceration, while new economic interests fight for liberalization. Across the globe, strict adherents to the Single Convention will support the continued war on drugs. However, they will find themselves in a fierce fight with a growing cadre of states and business networks that embrace the new markets, looking not only for medical breakthroughs but also for revenues that come from luxury cannabis experiences. Ultimately, these markets will likely create an elite class of users—a high society, if you will—immune to prosecution.



Connecting the Dots: Urgent Futures



High-resolution Health

The pot industry is well on its way to becoming a precision data industry. From precision pot farming to precision medicine, the future of the marijuana industry is all about designing and growing strains that will have guaranteed effects on human minds and bodies, whether for recreation or for health. Such guarantees will require data-intensive analyses of the genomes of the more than 10,000 strains currently on the market. It may even require analysis of the so-called micro-genomes within the mitochondria of pot plant cells: this is where the sex of the plant is determined, and it's the females of the species that have market value.

Because of legal restrictions on marijuana research, much of the groundwork for this science has been laid by a few pioneering entrepreneurs and researchers who have managed to mobilize the public in pot-legal states to crowdsource (and crowdfund) the genetic databases of marijuana strains. Over the coming decade, this open-source science will likely find itself in a global marketplace battle. The conflict will not just be with the pharmaceutical industry, but with alcohol, tobacco, and even big food companies as they all jockey to tap the wealth of high-resolution knowledge about marijuana and human well-being.



Destabilizing Demographics

As we adjust to a world with legal cannabis, so too will we destigmatize the cannabis user. Whether for recreation, therapeutic needs, or pain relief, public polling suggests that cannabis is indeed on track to become as socially acceptable as alcohol consumption. The next wave of demographic transition will challenge our default identities of being “white, male, and Christian” in most high-income countries, alongside the default cannabis user identity, which in some places is a devil worshipper, and in others the hapless stoner hippy or the black thug.

As in most domains, the foundations we built in the past will still complicate our future. Within the United States, historically disenfranchised black and brown people who were disproportionality locked up for cannabis use are now blocked from participating in the legal cannabis business. Unless legalization of cannabis is accompanied by a pardon of past drug-related incarceration, the trend towards ethnic-based inequality will increase, supporting a transition to a minority rule in the United States.

THE QUANTUM BRAIN

As quantum theoretical experiments move out of the precisely controlled environment of physics labs and into the warm and messy world of biology, quantum biological augmentations may, quite literally, change the way some humans think, creating a quantum divide that far surpasses today's digital divide.

Changing Fictions

Ever since the theory of quantum mechanics was introduced in 1900, there has been a general acceptance that while quantum laws function at the level of the very small—atoms and electrons—they are seemingly without practical impact at the scale of everyday life on Earth. Until recently, quantum phenomena have only been observed in the highly-controlled, super-cooled environments of physics laboratories. Biological systems were assumed to be too “wet and warm” to support quantum phenomena.

Over the past decade, scientists have begun to demonstrate that quantum behavior may be routinely functioning in the photosynthesis of plants and the navigational systems of migratory birds, and, perhaps most significantly, in the cognitive processes of the human brain. Here, so-called microtubules, embedded in the cells of neurons, are orchestrating a very different way of perceiving the world, unlike the binary on-off signaling of the higher-order neurons. This previously hidden nervous system exhibits quantum behavior, suggesting a different model for the way human brains, and even consciousness, work.

Changing Systems

The standard neurological model of brain function has guided the evolution of computing and digital processing for more than a half century. These technologies have likewise provided a metaphor for how intelligence works and have spurred many of the scenarios for artificial intelligence. Meanwhile, digital technologies, in many different ways, augment human cognition to give users a striking advantage over non-users in zones that range from learning to imagination to political participation. Hence, a very real digital divide has evolved across various populations.

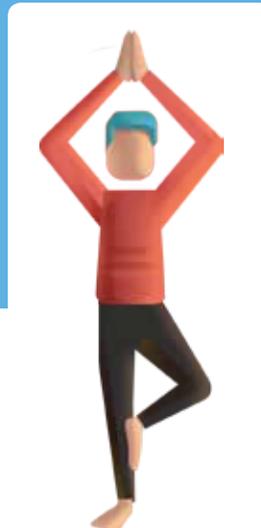
However, the discovery of quantum microtubules within neurons is poised to advance an entirely different set of augmentations, as well as new models for quantum biological computing. This model builds on the controversial premise argued by renowned physicist Sir Roger Penrose that the human brain is not primarily a classic computational system, but rather a quantum perceptual system. It also lays the groundwork for a new metaphor for both human augmentation and technological innovation.

BY 2027

The next 10 years will undoubtedly see the evolution of tools and interventions that use the affordances of this quantum behavior to boost cognition, to avoid well-known cognitive traps that lead to bad decisions, and even to manage emotional disorders and mental illness. Already researchers are inventing medical devices that use ultrasound technologies to stimulate the microtubules directly to treat post-traumatic stress disorder, for example.

As the decade unfolds, quantum experiments in the “warm and messy” environment of the human brain will seek to boost cognitive performance, avoid cognitive traps, resolve mental health diseases, improve and influence decision-making, capture distinctive “cognitive fingerprints,” and perhaps even redesign an individual's brain structures. These techniques will compete with psychotherapeutic drugs to make people happier, while performance-enhancing drugs help users out-think Watson-style digital computers.

Like their digital cousins, these quantum biological augmentations will not be for everyone. But for those with the resources and inclination to expand their minds, they will begin to create islands, if not whole nations, of people who think differently by design. They will begin to build the quantum divide.



Connecting the Dots: Urgent Futures



High-resolution Health

Arguing that human cognition and consciousness is more like a quantum orchestra than a neuron-inspired digital computer, Stuart Hameroff suggests that “brain mappers should look deeper, smaller, faster, inside neurons. Cytoskeletal circuits of mixed polarity microtubules (‘quantum resonators’) are key instruments of the quantum orchestra.”

Microtubules have quantum resonances at ultrasonic frequency ranges, and today’s cutting-edge ultrasonic devices are targeting the brain with these pulses in an attempt to control the brain—to manage moods, restore functions lost to Parkinson’s or Alzheimer’s disease, and perhaps even to overwrite memories in people with post-traumatic stress disorder.

Ultimately, these experiments with new models of human brain function may have greater impacts on human health and well-being than on solving vastly complex problems via computers. As quantum computing intersects with quantum neuroscience, we may, in fact, find ourselves augmenting human consciousness to an extent that our brains, deliberately stimulated, are able to solve those vastly complex problems.



Authorship of Authority

Quantum science is a science of uncertainty: it argues that the more precisely one measures a variable x , the less precise any forecast of a complementary variable y will be. This quantum-level reality is important in the current crisis of truth for two reasons. First, it calls on humans to think probabilistically, not in the absolutes typically taught in school. Second, it challenges the notion that more precise measurements—more precise data—will lead to a more accurate, reliable, and useful description of reality.

It’s possible that quantum brain augmentations will advance human ability to hold multiple and sometimes contradictory views of reality simultaneously—that is, to live more comfortably with uncertainty. At the same time, the ability to change human memories by stimulating microtubules could well erode any trust in memory as the basis for describing reality. Ultimately, the manipulation of the quantum brain could transform how humans trust: truth and trust could be explicitly context-specific, provisional, and subject to an ever-shifting consensus of probabilities that something happened or will happen.

THE DEATH OF JOURNALISM AND THE GOLDEN AGE OF NEWS

As the media industry continues to fracture into millions of digital streams, the economics and viability of traditional journalism face turmoil. With declining newspaper readership, algorithmic content analysis will forge a new foundation for vetting societal knowledge in the future.

Changing Fictions

In 1976, 72% percent of U.S. citizens trusted the integrity of their news media. That number has dropped to just 32% today, a trend that extends across much of the western world. Whereas most people used to receive their news from a handful of local newspapers and TV programs, the number of information sources has exploded in recent years, creating a media landscape dominated by “fake news,” poorly vetted citizen journalism, and cash-strapped news organizations.

Beyond the economic troubles facing traditional journalism lies a more existential challenge: the very concept of journalists as objective observers and narrators of the world’s important events is proving problematic. The Internet has empowered previously suppressed voices to make themselves heard like never before, revealing a spectrum of perspectives—from “Black Lives Matter” to the so-called “alt-right”—that defies the conceit of a single authorial voice. At the same time, the sheer volume of available data in our hyper-connected world creates an overwhelming burden for journalists in the same way it does for lawyers, scientists, and politicians. How can individual humans write narrative stories that capture the current state of our ever-more-complex and fast-moving systems?

Changing Systems

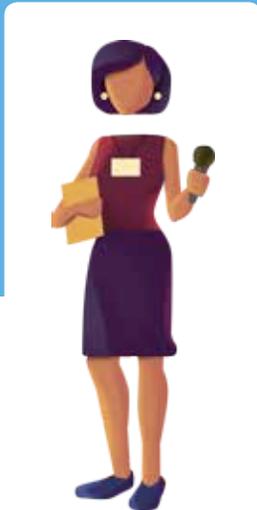
Even if people still trusted and read their newspapers, U.S. newsrooms have struggled to adapt in the era of digital publishing. The biggest losses have come from city-level reporters who publish the proceedings of city council meetings, industry events, and cultural gatherings.

At the same time, many of these basic informational relay services might no longer be necessary. As our connected infrastructure matures, we will find more commonplace situations where publicly relevant video and audio are captured by our devices, wearables, and environmental sensors to be transcribed, analyzed, and interpreted. Rather than relying on subjective reporting of governmental proceedings, business transactions, and traffic incidences, these system-level events could be automatically recorded and incorporated into contextual knowledge databases similar to IBM’s Watson. This knowledge, like Watson’s medical expertise, could be recalled at any time by anyone who needs it, including networks of human and algorithmic fact checkers.

BY 2027

As data-rich technologies evolve alongside sophisticated machine learning systems in the coming decade, the resulting Context Grid may boost our ability to create in-depth, real-time understandings of the world as it exists in any given moment. Instead of newsfeeds that provide an arbitrary collection of stories, these systems will provide relevant information as it pertains to us in our context. The recent explosion of propagandistic “alternative” news may spur an allergic response to subjective narratives, leading many to prefer accounts generated computationally from original source data. These systems could fact-check claims in real-time, identify gaps in known information, and leverage encryption technologies like the blockchain to secure and verify the integrity of sourced data.

This is not to say that artificial intelligence will remove the need to craft shared narratives about the world around us. But in the near future, while our dilemmas surrounding the subjective interpretations of events are not likely to go away, it won’t be for a lack of verifiable information.



Connecting the Dots: Urgent Futures



High-resolution Health

The fragmentation of news and journalism is only the most prominent manifestation of the transition to a new ecosystem of knowledge lacking a single authority and producing overwhelming volumes of data. This fragmentation will soon make itself felt in other knowledge-intensive industries, perhaps most problematically in the domain of health and medicine.

This new data ecosystem is growing out of ever more microscopic studies of humans and the natural worlds they occupy—from research into microbiomes, neuroscience and its hundreds of millions of neurons, and the quantum level behaviors of so-called microtubules in those neurons. Meanwhile, at the macro scale, humans will crowdsource their health data to fine-grained detail with sensors in their toilets, refrigerators, and wearables. In the near-term, the challenge this data poses to the human mind could well produce the radical rejection of medical science much as it has in the political domain, with “fake medicine” acquiring a troubling foothold on the cultural landscape.



Beyond Blockchain

At the heart of the blockchain lies a distributed ledger for verifying transactions in low-trust environments. These transactions are most commonly thought of in terms of financial payments, but the blockchain and its ilk hold just as much potential for transforming the security landscape of record-keeping and source-verification.

While encrypted systems have been deployed for decades to secure sensitive information, the blockchain offers a distributed solution to the problems of data corruption and manipulation. When a known agent publishes information on the blockchain, whether that information represents a purchase receipt, a land title, a vote, or the measurement of a sensor, the source of that information can reasonably trust that their stored data will retain its authorship and original value on millions of computers across the decentralized network. This cannot and will not ensure the veracity of their claim, but it provides a systemic deterrent to low-level manipulation that will likely prove valuable to re-establishing integrity in the essential communication role provided by media organizations and governments.



scenarios

CITIZENSHIP

algorithmic citizenship

A deep learning system contacts and selects candidate citizens for a new nation. The criteria are mysterious, and seem to evolve as candidates accept or reject the invitation.

The invitations started to go out in December of 2026. Although the first social media post about them happened almost immediately, it didn't gain much attention. This relative invisibility lasted until late January 2027, when a semi-famous Instagram celebrity received an invitation and talked about it on her channel, rapidly increasing measurable interest (Google searches, home hub voice queries, public conversations overheard by monitor systems). Just what was the Republic of Freedonia, and why was it inviting certain people to become citizens?

Some of the answers were obvious: the Republic of Freedonia (named after the fictional country in the 1936 Marx Brothers movie *Duck Soup*) was one of the new wave of “platform nations,” non-geographic political entities offering a subset of the rights and privileges accorded to a citizen of a “real” country. A handful of platform nations had already received recognition as actual countries, but all of those had claims on a geographic region that they no longer controlled (Estonia, now a part of Russia, is by far the best known, having begun its “e-Estonia” program while still an independent state). The Republic of Freedonia, conversely, proudly claimed no territory or “geographic baggage.”

It remained unclear who stood behind the Freedonia initiative, and what the precise criteria were for invitation. Within weeks, however, a

genuine Freedonia citizenship offer became a catalyst for instant media—both social and commercial—attention. As Freedonian citizenship included a number of “real country” benefits, including a small Basic Income stipend and legal support, at least half of those invited agreed to accept Republic of Freedonia citizenship. Notably, only people holding citizenship in nations allowing for dual passports received invitations.

In late 2027, the OpenLeaks site published a set of messages that uncovered a part of the mystery. Although the financial and political support remained hidden, the criteria for invitation was stripped bare: a learning algorithm, relying on deep mining of personal information, particularly personality data, sought to build a “*Poeisisocracy*”—rule by creators—a new model of nation based on creativity, inspiration, and orthogonal thinking. What's more, each time an invitee accepted or declined the offer, the details of the algorithm changed to take into account the evolving balance of citizen personality and interests.

Sadly (but not surprisingly), after this revelation, a number of countries with more authoritarian governments began to regard a Freedonian invitation (accepted or not) as a marker of likely dissidence.



POWER

gated communities

Internet of Things markers represent national allegiances. If you're not carrying the right passport/wearing the right pin you're not allowed access.

It started as a dating app. When a Buzzer member came near another member with a complementary profile, a small personal item—a ring, a pendant, occasionally just their phone—would start to vibrate. The user would still have to discover who this potential partner might be, but this active tagging system served to jump-start the process. Across the United States and Europe, Buzzer became an instant hit. Over the next couple of years it evolved into a broader social media platform, connecting people for more than passing romance.

In 2025, a nationalist group hacked the system, and used the profile information to determine if someone should be kicked out of a gathering. People with profiles indicating unacceptable politics, certain religious backgrounds, or a willingness to date interracially would be spotted and unceremoniously booted from events. When people stopped wearing their Buzzer items to rallies, some of these groups started to make holding a Buzzer membership mandatory. Others had grander plans.

France, under a majority National Front government, first proposed a Buzzer-style internal passport as a way to manage the country. Wearing an *Insigne de la Citoyenneté* (IC)—a “badge of citizenship”—swiftly became a necessary part of French public life. Without it, some doors would not open, quite literally. Immigrants had markers on their IC profiles that allowed some locations to bar their entry. All visitors had to carry a version of the IC, marking them as being allowed only a temporary stay. Refusing to carry or wear an IC became a criminal offense.

The expected civil rights uproar surged and faded within months, as the next celebrity divorce or accidental shooting by autonomous law enforcement drones captured public attention.

When the IC system prompted the arrest of a group purported to be planning a terrorist attack, most remaining opposition in France faded. The French IC quickly became normalized, with only international human rights groups continuing to protest. Soon, other countries began to propose and roll out their own versions of the IC, usually described in terms of public safety (with health monitors able to catch early signs of a heart attack, for example), public convenience (being able to simply get on public transit or pick something up from a store, all without having to use cash or credit card), or public security (catching terrorists).

In most locations, particularly those with strong populist or anger-nationalist movements, the badge of citizenship became a mechanism for subtle (and occasionally blatant) discrimination. Some systems would give limited results or provide restricted services if the user did not have the correct type of badge. As the badges interacted with other personal technologies, in some places it became a first-line filter for the kinds of news, entertainment, and even messages that the user would be allowed to see.



TRADE

trans-national trade

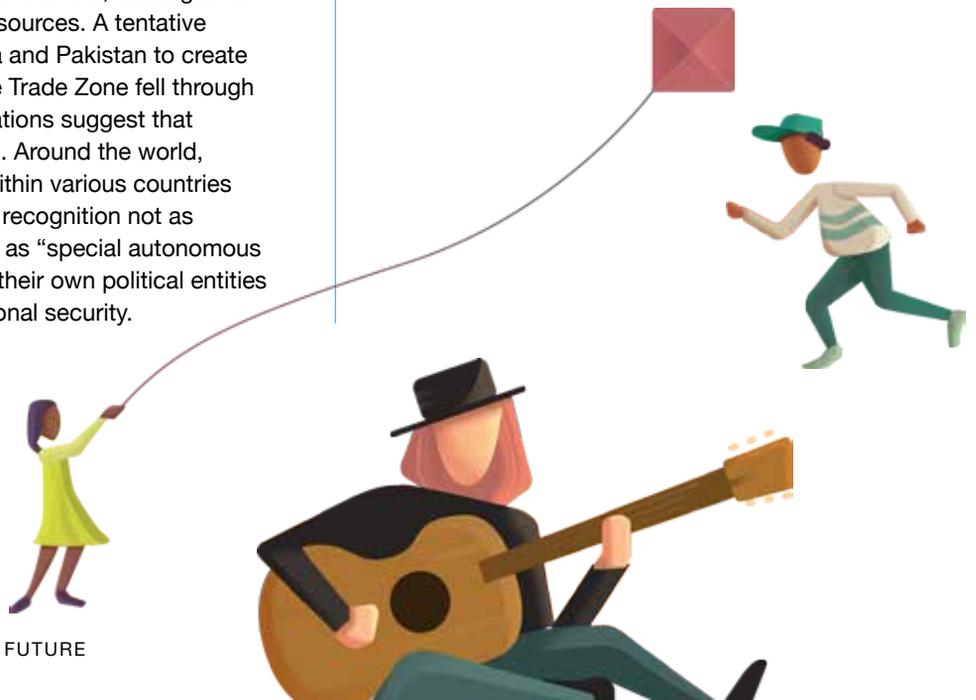
As national governments contend with long-term impacts of globalization, sub-national entities take matters into their own hands.

The 2027 Cross-Pacific Trade Arrangement (usually referred to by the truncated acronym XP) didn't begin the era of sub-state and non-state actors engaging in international treaties, but it did serve as a signifier that these agreements—largely, but not exclusively, concerning trade—were now an important part of the global landscape. The XP provided a structure for trade between Guangdong Province in China and the State of California that would side-step the various fees, tariffs, and restrictions that had arisen due to the U.S.-China trade crisis of the late 2010s and early 2020s. China was eager to see a return to normal trade practices, thus willing to try this approach. Although the U.S. federal government opposed the XP, a series of extremely broad “States’ rights” Supreme Court decisions over the previous 10 years made it possible for California to do this on its own.

Although the XP was clearly the largest sub-state trade agreement yet in economic terms, it was by no means the most ambitious. Dozens of smaller islands in Indonesia and the Philippines created the Sultana Basin Protocol, sharing local economic and cultural resources. A tentative agreement between India and Pakistan to create the Jammu-Kashmir Free Trade Zone fell through in 2025, but recent indications suggest that talks will resume by 2028. Around the world, unique cultural regions within various countries have increasingly sought recognition not as independent nations, but as “special autonomous zones” that could act as their own political entities for issues outside of national security.

It was not always a successful strategy. When the Kurds of Turkey, Iraq, and Iran sought a special autonomous zone for trade between Kurdish cities, all three ruling states claimed it was just another form of rebellion.

Until the Guangdong-California XP agreement, the so-called “Scotland Problem” was the most successful example of sub-state regions seeking greater economic and cultural autonomy. In post-Brexit UK, Parliament fought to hold on to Scotland as part of the country, rather than allowing another independence vote. Scotland residents were outraged, and there were rumors of imminent violence. As a result, London agreed to extend even greater autonomy to Scotland than it had previously allowed, a level of autonomy that would skirt the edges of independence, but still give the UK government the final say on a number of (largely security-related) issues. Among its many consequences, this allowed Scotland to make separate arrangements with the European Union, including a proposal to join the Eurozone by the early 2030s.



INFRASTRUCTURE

accent not recognized

New breeds of distributed infrastructure create opportunities for grassroots movements, including the emergence of rogue standards and protocols.

The clumsiness of voice recognition technologies regarding spoken accents was a familiar trope by 2027. In many places around the world, the misbehaving software was the butt of jokes, but in a few locations, it became something very different: “soft” guerilla warfare.

The return of Russian domination of former Soviet republics and satellite nations in Eastern Europe coincided with the proliferation of voice activated technologies, from self-driving taxis to voice control home appliances. Although they weren’t entirely *common* by 2027, these systems could increasingly be found in major cities from Tallinn to Tirana. Some were designed to be multi-lingual, but most used a basic voice package that only responded to a single language, usually the local dialect.

Initially, Russians visiting the major cities of Eastern Europe would wrestle a bit to make sure that they would be understood by local voice software—a common problem for globe-hopping users everywhere. But by mid-2026, the responsiveness of voice activated systems in Eastern Europe to Russian-accented commands declined, even while the technology’s ability to decode local accents and speaking styles improved. While no evidence could be found showing that the software had been tweaked to misunderstand Russian accents, few officials (local or Russian) doubted that this was the case. It came as no surprise, then, that Moscow started to demand that voice control systems in taxis and public kiosks include a Russian-language module.

This worked, at least at first. A parallel push to add Russian-language text to any public advertising or storefront sign seemed to demonstrate that Soviet-style cultural dominance was on its way back. But then, even the new voice systems

started to fail. Frustratingly for many Russian visitors, locals speaking in Russian to the taxis and devices seemed to work more-or-less fine. Within a few weeks, it became clear that a maintenance patch for the various voice applications had been optimized for Russian spoken with local accents.

But even as software updates returned the systems to proper function, ongoing problems with other technological standards worsened. From self-driving car communication frequencies to ATM access protocols, various minor systems meant to facilitate cross-border convenience would end up being “out of tune” enough to degrade the ability of Russians to operate seamlessly in Eastern European countries. In places with strong opposition to the return of Russian dominance, these forms of monkey-wrenching received quiet official support. In areas with more uncertainty about resistance to Russia, the system disruption happened in a more emergent fashion.

According to one later analysis, the goal wasn’t to drive the Russians out—the goal was to annoy them into deciding to leave on their own.



