



SOCIAL FUTURES

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EXPLORING SOCIAL FUTURES



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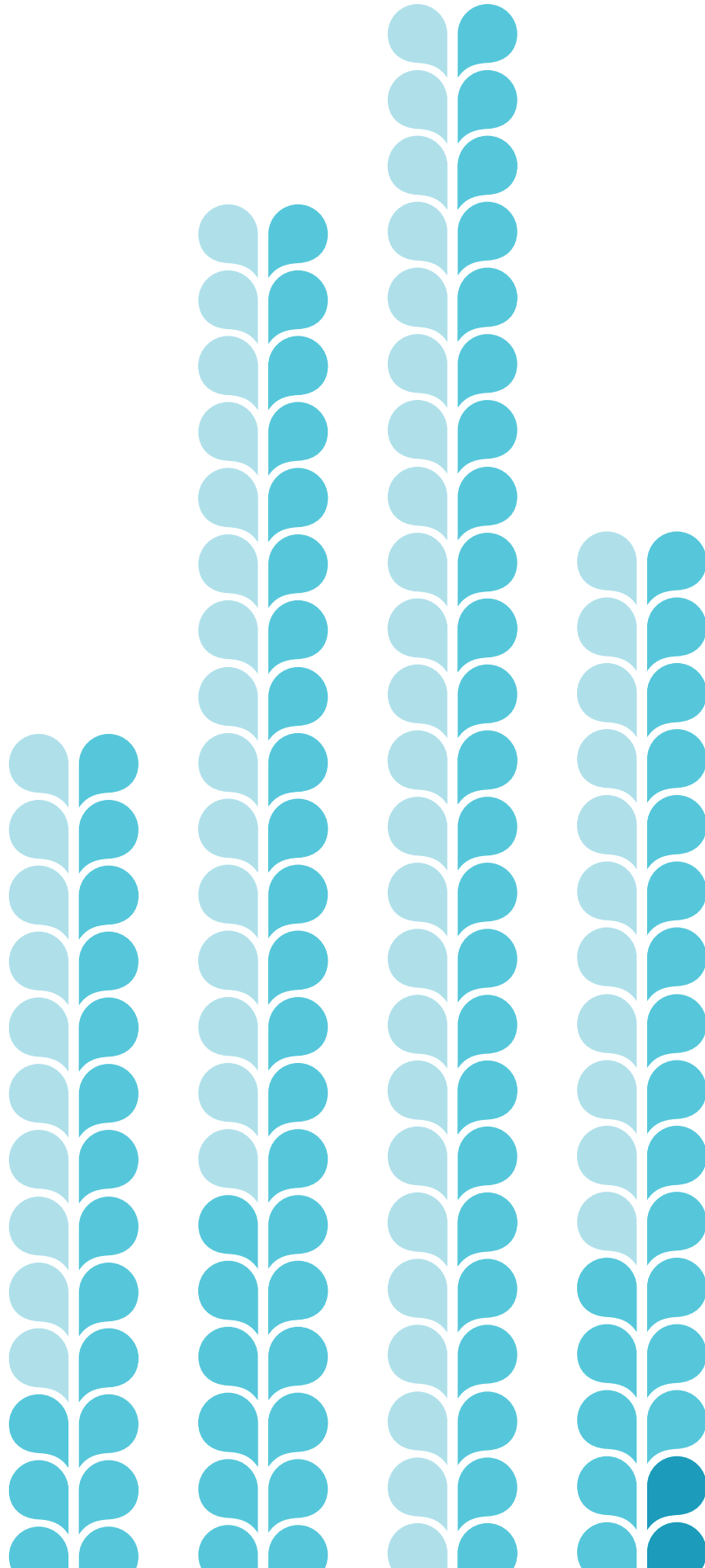
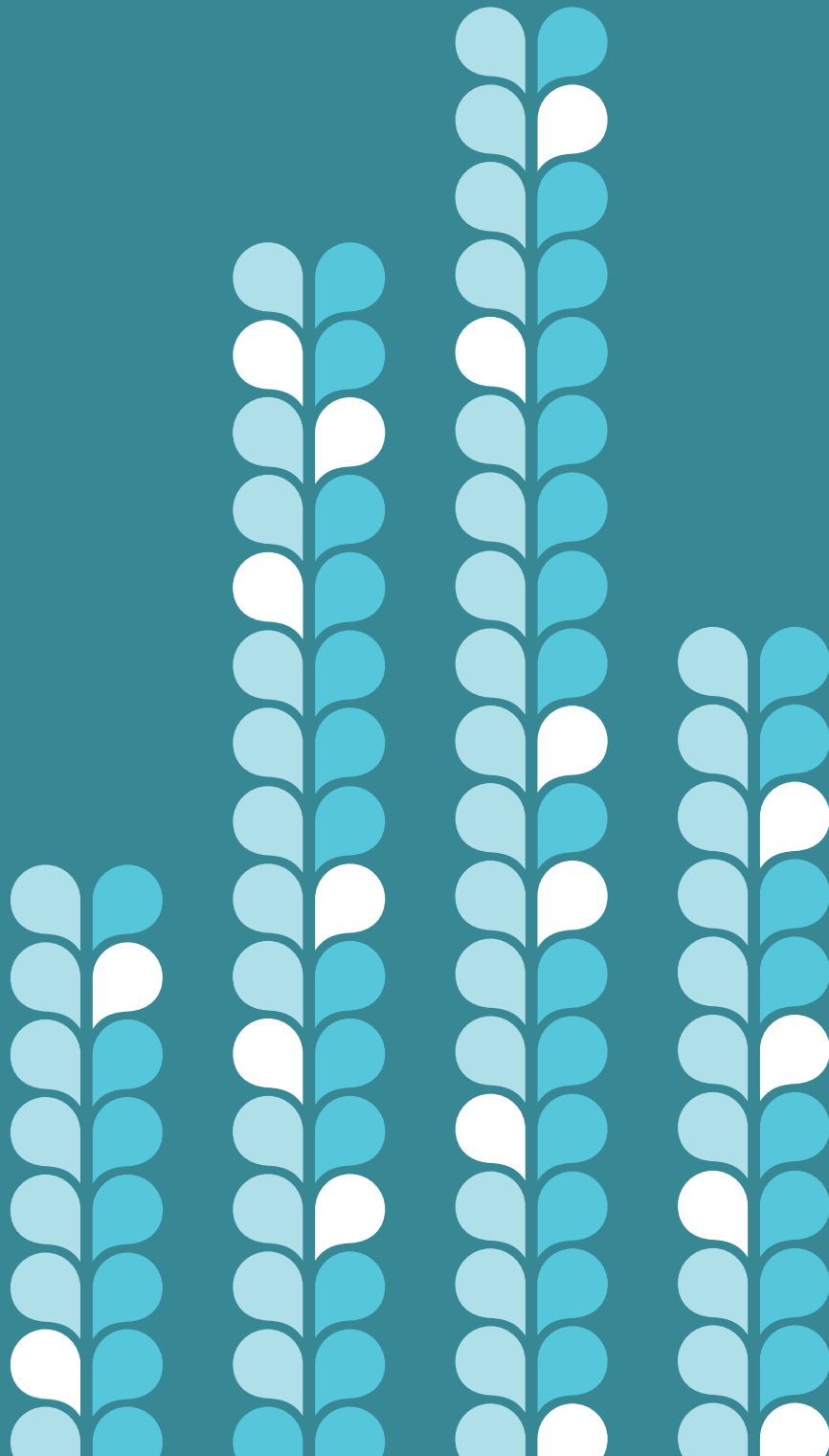


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FOREWORD





Our social systems could see significant change over the coming decades. Our institutions are undergoing transitions, with some showing significant stress. The Next Digital Economy will likely have a disruptive impact on society: core social relationships are evolving, values and measurements of value are being questioned, and new scientific knowledge and technologies could change our relationships with biology and our living environment. These are just a few of the factors that will affect our social lives in the near future.

Changes in social functions, and more broadly in the social systems, will have implications across many policy areas. Beyond reflections on what social futures might emerge, social futures also involve conversations about what social lives we want.

Guided by its mandate, Policy Horizons Canada (Policy Horizons) will explore social futures and related policy questions. In this initial paper, we define what we mean by social futures, frame social foresight as an exploration of what might be changing in the broad functions of social life, and highlight some initial policy-relevant signals of change.

No major foresight project can be accomplished solely by isolated research. Our social foresight will require broad engagement with policy makers, partners, and stakeholders to produce plausible and informed pictures of what could change, and what that might mean for diverse groups of Canadians.

We welcome your comments and participation as we dive more deeply into this domain.

Kristel Van der Elst
Director General
Policy Horizons Canada

SUMMARY

WHAT DO WE MEAN BY SOCIAL FORESIGHT?

Social foresight relates to the diverse, complex, and changing web of sentiments, bonds, and processes by which we relate to each other. It questions how these social functions could change in the future, how these could combine to disrupt the social system, what future social systems might look like, and what those changes mean in terms of policy implications, opportunities, and challenges.

WHY SOCIAL FORESIGHT NOW?

- Social processes and institutions are undergoing strain
- Major disruptions are foreseeable on the horizon
- Foresight literature & expert interviews confirm the value of social foresight

Social foresight could be scoped according to functions of social life that are relevant to the policy landscape for many departments and agencies across government. These include:

- How we connect to one another
- How we make sense of our world
- How we identify as individuals, affiliate in groups, and negotiate differences
- How we make collective decisions
- How we relate to ourselves and others as bodies
- How we relate to the land and ecosystems



CHANGES IN THE SOCIAL

– BROAD TRANSITIONS –

Scientific and technological developments

21st-century governance

Postcolonial cultures

The sustainability of our economies and ways of life

SIGNALS – OF – CHANGE

Superlongevity

Private hands on public space

Enhanced humans

Indigenous futurism

Diversity of household composition

Sources of leadership

Augmented public places

Equity reframed

Opaque algorithms

The political spectrum remapped

Addiction and treatment

Shifts in gender expression

Rethinking economics

On-demand society

Hyperconnected but lonely

Seeking social truth

Connection

Identity and affiliation

Quantified surveillance society

Visions of post-scarcity

Depth of democracy

FRAMEWORK – FOR – SOCIAL FORESIGHT

Sense-making

Collective decisions

Economic insecurity

Epigenetics

Emerging social neuroscience

Anxious about anxiety

Facing up to the past

Embodiment

Land and ecosystems

1 SOCIAL FUTURES



“Human behaviour and societal changes are often shaped by deep, hidden and interconnected forces that—because of complexity—might not be fully apparent for years.”

— P. Ho, Senior Advisor, Centre for Strategic Futures and former Head of Singapore's Civil Service¹

WHAT IS POLICY HORIZONS' FRAMING OF SOCIAL FORESIGHT?

From its origin, the word ‘social’ has referred to a bond founded on a mutually acknowledged community of interest, sustained through repeated interactions. From this perspective, society emerges from ‘the social’. It is a product of the diverse, complex, and changing web of sentiments, bonds, and processes by which we relate to each other. This web shapes our individual biology, behaviour, perception, and experience, as well as our collective institutions and environments.

This framing means that aspects of virtually all areas of human endeavor and experience can fall within the social. The economy is social. Work is social. So are technology, education, art, family, infrastructure, design, politics, and governance.

Policy Horizons’ social foresight work emphasizes the interpersonal sentiments, bonds, and processes across all these domains. It focuses on disruptions to how and where people interact, with whom, how they create meaning and define identities, how they make decisions, and how people relate to their bodies and the environment. It questions how these social functions could change in the future, how these could combine to disrupt the social system, what a future social system might look like, and what those changes mean in terms of policy implications, opportunities, and challenges.

WHY EXPLORE SOCIAL FUTURES NOW?

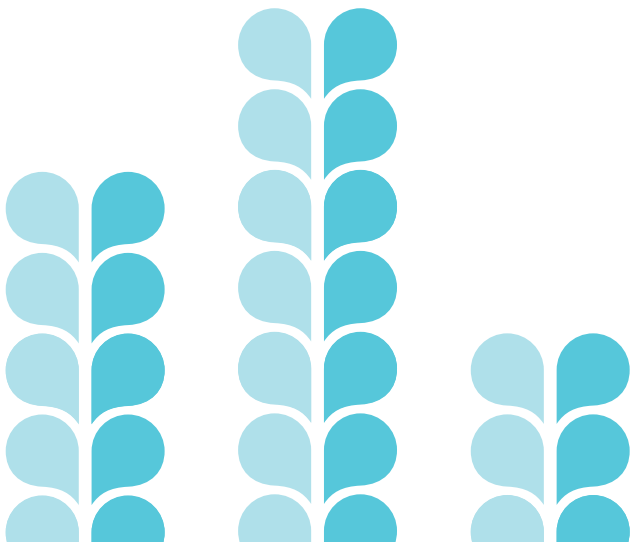
The time is right for social foresight. Other foresight institutions have also begun exploring this.²

Several factors may be driving the shift towards social futures. Policy Horizons' interviews with experts indicate that social processes and institutions, such as environmental decision making, liberal democracy, the welfare state, employment, education, and the information environment, appear to be under great strain – possibly approaching breaking points. Technological or standard economic interventions may not suffice to meet the challenges that these situations represent.

There is also a widespread belief that this strain and instability could persist in the foreseeable future, which makes significant social change probable over the coming years. Most significantly, there is growing awareness of the social experience as a source of disruptive change felt in other domains from city planning to climate action.

This initial scoping report emerges from four streams of research:

- weak signals and insights developed through ongoing horizon scanning
- identification of key trends based on analysis of population statistics and surveys
- a review of relevant social foresight literature
- interviews with 59 academic experts, public intellectuals, researchers, business leaders, and senior public servants





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A FRAMEWORK FOR SOCIAL FORESIGHT

To organize social foresight in a way that helps policy makers across many departments and agencies, Policy Horizons suggests exploring what might be changing in the broad functions of social life, such as:

- **How we connect to one another:** What could disrupt or increase our ability to make contact, trust, develop relationships, empathize, support, accept, and build lives and communities with one another?
- **How we make sense of our world:** What could change in the ways that we receive, process, and weigh information? How might we integrate our feelings and observations, and draw on traditions of knowledge and wisdom? How might we build meaning, communicate perspectives, and develop visions of our social world?
- **How we identify as individuals, affiliate in groups, and negotiate differences:** What could change in the way we describe, categorize, and identify as individuals and as members of groups? What changes could we see in how, where, and why we connect with others? What could change in the ways we understand our differences, treat new claims for equity and justice, and approach diversity?
- **How we make collective decisions:** How could we change the way we develop and consider options, anticipate consequences, mediate conflicting values, and take – or fail to take – effective collective decisions?
- **How we relate to ourselves and others as bodies:** What changes could emerge in the way we understand, care for, heal, modify, and treat bodies? How might emerging science, technology, philosophy, and Indigenous experiences and ways of being change our approach to embodiment, and policies towards health and human development?
- **How we relate to the land and ecosystems:** What could change in our social relationships with our ecosystem? What plausible visions of the future could motivate change on the scale that is required to address our environmental problems, such as climate change and extinction?

Changes in these social functions – combining in broader social systems – will likely have consequences on almost all areas of government activity, from environmental regulation and fiscal policy, to immigration, health, public safety, the justice system, Crown-Indigenous relations, natural resources, and cultural heritage.

All government activities involve people – whether as government employees, members of organizations, experts, or community members. So all governance is fundamentally social. Policy makers can benefit from reflection on what future social systems might look like, what social futures Canadians will want, and the policy implications that could result.

3 CHANGES IN THE SOCIAL

The following section explores some initial policy-relevant signals of change that emerged from our scoping work. Each could potentially produce changes and develop in surprising ways.



The trends and signals discussed below can be understood in the context of larger transitions, including in:

- the sustainability of our economies and ways of life
- scientific and technological developments
- 21st-century governance
- postcolonial cultures

Social foresight can give us clues about how a changing society could design, build, and cross the bridges that could take us through these transitions together.



Some say that loneliness and social isolation should be seen as a public health crisis.³

HYPERCONNECTED BUT LONELY

Recent research suggests that loneliness and social isolation are growing in developed countries, with consequences for public health and safety. The U.S. Surgeon General's 2017 report on loneliness,⁴ and initiatives such as the UK government's loneliness strategy, show that awareness is widespread,⁵ and solutions are not straightforward.

Loneliness has a complicated relationship with networked technology. Although we are digitally connected in ways that were unthinkable only a few years ago, these connections also mediate and sometimes replace human-to-human

contact that would otherwise promote deeper interpersonal bonds and intimacy. As digital fora with new properties take up more time and attention, previous real-world spaces for social connection, such as places of worship, libraries, community centres, and even shopping malls, may see drops in attendance and relevance.

While we could see new varieties of loneliness or disconnection emerge, we could also see new counter-strategies. Loneliness straddles the culture-health divide, and a focus on loneliness may invite us to examine new policy questions, for example in the field of digital public health.

INDIGENOUS FUTURISM

While the federal government must respect Aboriginal rights recognized in Canada's Constitution, Indigenous leaders, organizations, and communities are increasingly pursuing innovative ways and other partnerships to overcome barriers they face in exercising those rights. These innovations sometimes depend on getting outside of Indian Act management (e.g. First Nations Land Management, modern treaties). New forms of self-determination could be a significant source of change in the future.⁶

These promising changes could surface conflicts: robust institutional, legal, and material self-determination may exceed the level of some non-Indigenous Canadians' understanding and support for Reconciliation.⁷ Many non-Indigenous Canadians may be unfamiliar with foundational ideas advanced by Indigenous leaders, such as

pre-existing and concurrent Indigenous constitutional orders and treaties on the land known as Canada.

At the same time, Indigenous futurists are creating alternative symbolic frameworks for a self-determined future that goes beyond Reconciliation. They are correcting the exclusion of Indigenous people⁸ from popular visions⁹ of the future. For example, some Indigenous scholars¹⁰ argue that Indigenous ways of knowing, particularly relating to kinship with non-human beings, could provide a flexible ethical paradigm for thinking about artificial intelligence (AI).¹¹ Others reframe apocalyptic thinking in mainstream popular culture by describing Indigenous perspectives as the cultural knowledge of societies that have already survived apocalypse.¹²



AUGMENTED PUBLIC PLACES

Augmented reality (AR) involves layering computer-generated sensory objects, such as pictures, videos, animated characters, sounds, and even tactile digital experiences, into the physical world. That digital content can be made to interact with the landscape, objects, people, and other living beings. In the near future, smart glasses and other 5G-connected devices could allow people to experience public places very differently. Visitors to a public space may soon be able to [embroider it with their own persistent virtual creations](#), as well as experience content left in the space by others.¹³



the monument, potentially using public places to help us understand our history. In short, shared augmented experience of public places could add new layers to social life.

But the opposite could also be true. Individuals may choose to interact with augmented space only through highly customized ‘skins’ or ‘lenses’, foregoing the breadth of other perspectives to experience only what aligns with their values and preferences. This could be a response to an augmented reality littered with [uncivil](#),¹⁷ [hateful](#),¹⁸ and unwanted explicit content, such as what currently plagues the [comment sections of online news](#),¹⁹ and degrades women’s experiences of messaging applications and dating sites.²⁰ Some people may even choose to digitally erase elements of the physical or social world from their augmented experience. As a result, individuals could find themselves in augmented physical versions of the ‘echo chambers’ or ‘filter bubbles’ that we currently see on social media.

New public policy challenges could emerge if we have little or no sense of what the people physically around us are seeing, hearing, and experiencing. The balance between customization and sharing is a critical uncertainty for social futures.

The days of ‘read-only’ access to public spaces could be coming to an end.

Augmented public space could bring us together in richer, multi-authored, shared social spaces. This could mean less control by property owners and governments over how public places and objects (such as monuments, buildings, and infrastructure) look, sound, feel, and behave. As a result, public places could become more chaotic, interesting, funny, lively, disturbing, informative, and relevant. **The stories presented in these places** could become highly pluralistic. Indigenous knowledge may interact in new ways with other location-based stories presented by governments, owners, and visitors.¹⁴ Conflicts about monuments of [historical figures](#)¹⁵ with [complex legacies](#)¹⁶ could play out directly in the space occupied by

DIVERSITY OF HOUSEHOLD COMPOSITION

Household composition is changing. One-person households are now the most common type (28.2%²²), mirrored by a rise in condo ownership.²³ In a countercurrent, a third of young adults aged 20-34 live with their parents, reflecting a tendency towards [multigenerational living](#).²⁴ Other forms of cohabitation are emerging, such as ‘[mommunes](#)’ in which single mothers live together, sharing costs and childcare duties.²⁵ Similarly, [cooperative housing ventures](#) are springing up to serve the live-work-play demands of a new working class in cities where housing is unaffordable even for professionals.²⁶ Despite a steady interest in marriage ([millennials aspire to wed at the same rate as adults in the 1970s](#)), we are also seeing a rise of [singlehood](#) and ‘living apart together’.²⁷

Togetherness and contact at home may be changing too, as non-standard work hours affect [shared mealtimes](#) and other opportunities for families to connect.²⁸ Social media, social robots, and [AI friends](#)²⁹ could increasingly replace face-to-face interactions with humans, raising concerns about the decline in [empathy](#).³⁰



The rise of gig and virtual work opportunities for digital nomads could alter location choices. If workers do not need to relocate, they may choose to reside closer to family and friends. Stay-at-home workers may reinvigorate neighbourhood life during the day and create new options for combining dependent care with work responsibilities.³¹

New (or new to the spotlight) approaches to family life are available, such as [having children without men](#),³² the [rise of polyamory in dating](#),³³ and [some millennials](#) choosing to either significantly delay having children or not having any.³⁴ [Declining fertility rates in Canada](#) could affect a baseline element for social policies, including immigration and workforce planning.³⁵

‘Mommunes’ are communes where single mothers can share responsibilities and costs.²¹

SUPERLONGEVITY

Scientists are on their way to building a fully functioning human heart. This April, a team 3D printed a rabbit-sized heart, the first whole heart with blood vessels and cells.⁴⁷

Canadians could live much longer, in a population already experiencing demographic aging. Medium-growth population projections anticipate that Canada will age most rapidly until 2031, when the entire remaining baby boom generation will be over 65 (23% of Canadians, compared to 16.9% in 2016.)³⁶ Centenarians are already the fastest-growing population, up 41.3% in five years³⁷ to 0.023% of Canadians in 2016.³⁸ Canada is among the few aging countries whose total population is expected to grow over the next 50 years, largely due to immigration.³⁹

Healthier lifestyles and a wide range of emergent healthcare and consumer technologies could extend the lifespans and active participation of the next cohorts of seniors. A future with more personalized and predictive medicine⁴⁰ could better prevent and treat major chronic diseases, while fields such as regenerative medicine and senolytics seek to prevent the aging process itself.⁴¹

Seniors' living arrangements could also change: their health and care could increasingly occur at home, aided by smart technologies (smart homes,⁴² Internet of Things,⁴³ self-driving cars⁴⁴) as well as co-housing arrangements⁴⁵ and robots.⁴⁶

For many, longer lives could mean an extension of years in good health. This could offer opportunities to rethink the timing of important life events such as education, childbirth and child raising, work, midlife sabbaticals, and retirement. It could change how Canadians think about relationships and investments across their lifetimes. A larger proportion of long-living seniors could also lead to cultural shifts, such as a diminished focus on youth culture and greater willingness to collectively explore questions of death, purpose, and legacy.

Aging and superlongevity could affect many fields of government policy, from social supports and fiscal planning to transportation, public health, immigration, and workforce planning.



SHIFTS IN GENDER EXPRESSION

Economic or political realignments have historically tended to coincide with shifts in expectations about gender identity and expression.⁴⁸

High representation of women in [postsecondary schools](#)⁴⁹ is expected to narrow gender gaps in many workplaces, though disparities persist in low-skilled labour, posing ongoing health, social, and economic challenges for women. A tendency to couple with those in similar economic and educational brackets (homogamy) reinforces social stratification even as women make gains in the workplace. In parallel, new stories are emerging about relationship formation, and could indicate that some [women are changing their views](#)⁵⁰ due to dissatisfaction or insufficient potential mates within their socio-economic group. [State-funded initiatives such as publicly funded in vitro fertilization](#) are offering women new choices regarding family planning in some countries.⁵¹

‘Dadfluencers’ posting on social media could reshape styles of masculinity and fatherhood.⁶³

Dynamics in households, popular culture, and communities are broadening the range of men’s social roles and [self-understanding](#),⁵² to accommodate greater expectations relating to [caring](#)⁵³ and [fatherhood](#).⁵⁴ Public accountability for unwanted gendered behaviour (e.g. call-out culture, [#metoo](#)⁵⁵) is also reshaping the practical realities of men’s lives. Some men may react



negatively to change and ambiguity in gender roles, as well as to rejection of behaviours that were previously accepted as ordinary or even valued.

They could experience these changes as a threat to their identities and power rather than as opportunities for greater freedom and choice, particularly if automation undermines the advantages they enjoyed in their work. Rising concern about the plight of boys in [schools](#),⁵⁶ male suicide rates,⁵⁷ and incarceration rates of boys and young men – especially Indigenous ones⁵⁸ – make for a complex public policy domain far removed from one that sees gender as a question about the ‘status of women’.

The increasing [visibility of trans and gender-nonconforming people and characters in popular culture](#),⁵⁹ the emergence of [visual codes for non-binary identities](#),⁶⁰ and the use of new media to explore and extend gender⁶¹ suggest that basic assumptions about the body-gender relationship are being reassessed. However, as diverse gender identities are not uniformly understood or accepted, discrimination, marginalization, and violence persist, and [may even be increasing](#).⁶²


ECONOMIC INSECURITY

Economic insecurity has a complicated relationship with anxiety. On the one hand, it is clearly a source of worry. On the other hand, borrowing and lending behaviours seem to suggest widespread and questionable optimism about the future ability to carry and repay debt. Almost [half of Canadian households \(48%\) are \\$200 per month away from insolvency](#).⁶⁴ This could trigger harsh consequences in the event of a major economic downturn or a significant increase in interest rates. Economic insecurity could loom large if Canadian wage and employment levels come under pressure, for example from automation, the decline of [extractive industries](#),⁶⁵ a global economic downturn,⁶⁶ or a major expansion in the globalized gig market for services.⁶⁷

Moreover, prolonged employment insecurity can disrupt access to temporary employment insurance supports, which can amplify negative outcomes for individuals and families. Stress associated with insecurity may divert energy from core relationships, community building, volunteering, political engagement, lifelong learning, and personal development.⁶⁸ Stress and insecurity can also make individuals more supportive of [authoritarian governance](#).⁶⁹ Insecurity also limits families' ability to provide rich [developmental opportunities](#) for children.⁷⁰

Ensuring that social security interventions fit current and plausible future economic and social conditions is a major area of policy concern.





Even today, our many smart devices collect and share swathes of data about our lives, habits, and preferences. What if that data was used to determine your trustworthiness?⁷⁶

QUANTIFIED SURVEILLANCE SOCIETY

In the future, surveillance could become the norm for much of social life, accompanied by the expectation that data drawn from our online and physical social lives will be analyzed and used for both private and public objectives. Networked surveillance technology such as [cameras](#),⁷¹ [sensors](#),⁷² and [trackers](#)⁷³ are being implemented into homes, wearable items, vehicles, businesses, workplaces, and public spaces. Machine learning's ability to interpret the resulting sea of data has increased correspondingly.

If data flows unpredictably between our various social, professional, and economic situations, it could undermine the integrity of the contexts in which we build relationships, experiment, and grow as persons.⁷⁴

Concern about ubiquitous surveillance may cause individuals to move their social life and communications into protected physical and encrypted virtual spaces. They may also self-censor, or proactively curate their words and actions differently to generate desired consequences in a surveillance society that sorts opportunity according to profiles.

If surveillance is ubiquitous, privacy might become a [luxury good](#) available to those who are already 'winning' in a quantified society.⁷⁵ Canada's vast natural spaces, pluralism, and privacy laws could make it a premiere destination for those seeking temporary or permanent relief from the pressure of state and social surveillance, and reputation systems that are emerging elsewhere.

OPAQUE ALGORITHMS

Individuals and groups of people are ‘knowable’ in ways never before possible – both to themselves and to others. In contrast, the sprawling algorithms that sort and process information, including data about people, are threatening to become almost unknowably complex and opaque.⁷⁷

Some argue that not being able to explain exactly how AIs operate and make decisions is acceptable as long as the outcomes are acceptable. This is the case with most human decision making, the argument goes. One major difference, however, is that we cannot analogize from our own minds to machines, so we do not have a reasonable ‘folk theory’ for artificial intelligence. In any case, AI’s ‘explainability’ is a major emerging concern within the broader frame of ethical AI. It takes on particular importance when AI makes suggestions

or decisions that affect human lives, from university admissions and healthcare options to [warfighting](#).⁷⁸

New tools to explain AI are being rolled out.⁷⁹ However, rebalancing what machines ‘know’ about us and what we can know about them will likely require more than technical fixes. The line between commercial secrecy and a duty to explain may need to be renegotiated.

A new focus on making AI more explainable might lead to expectations that public institutions should also fully explain their decision making and operations in close to real time. This would go beyond current legal requirements on governments to make information available to requesters and proactively publish certain types of documents.

ADDICTION AND TREATMENT

Alcohol and drugs rely on distinct reward neural pathways in the brain.⁸⁹

Substance use, addiction, and treatment significantly impact the life chances and experiences of current and future generations, and are powerful determinants of social futures. Research on [neural pathways](#)⁸⁰ and [reward systems](#)⁸¹ are uncovering new understandings of substance use and addiction. Technological and social innovations are emerging, such as anti-relapse and

anti-addiction vaccines;⁸² [directing drug users towards social services](#);⁸³ indigenizing harm reduction;⁸⁴ and new mobile [applications](#)⁸⁵ and [virtual reality](#) addiction treatment.⁸⁶

The rising trend of informal experimentation with the therapeutic potential of [psychedelics](#)⁸⁷ and the possibility of [creating synthetic drugs at home](#)⁸⁸ could also change the shape of substance use, addiction, and treatment.

These could have policy implications relating to the scope of publicly funded interventions, social stigma of drug use, criminalization or decriminalization of substances, policing, border security, and public health programs.



Although it is getting ahead of the science in some respects, there is a rising social story about how the expression of our DNA might be affected by the experiences of our parents or even our grandparents.⁹⁶

EPIGENETICS

The field of [epigenetics](#) – the study of biological mechanisms that modify gene expression in living organisms without altering the DNA sequence – is disrupting the suppositions of the long-running ‘nature versus nurture’ debate.⁹⁰ It is becoming clear that social experiences can ‘get under the skin’. Exposure to toxins, stress, and traumatic situations can create enduring chemical markers on our chromosomes that prime us for certain responses and diseases.⁹¹ Likewise, nurture, exercise, and healthy eating can change the way that our genomes are expressed.⁹² Although germline epigenetic inheritance (directly through the epigenomes of the sperm or egg) has not been definitively proven in humans, there are a number of other pathways by which the exposures and powerful experiences, for example of trauma, can

transfer epigenetically to subsequent generations.⁹³ Researchers are investigating epigenetic loads of factors such as [intergenerational trauma](#) caused by war, prison conditions, environmental toxins, and discrimination.⁹⁴

An understanding of our bodily engagement with ‘the social exposome’⁹⁵ could change the way we design, evaluate, cost, and possibly assign liability for various social, environmental, and economic policies. The ability to measure epigenetic markers of environmental and social stresses in populations may change the dialogue about equity, reparations, and government programming – making debates more grounded in different peoples’ bodily experience of social life.

FACING UP TO THE PAST

The past assumes new significance in policy making as willingness to acknowledge and act on historical injustices grows. Universities with historic ties to slavery in the [UK](#) and [U.S.](#) have adopted restorative justice to make amends.⁹⁷ In Canada, the era of denial and inaction regarding the oppression of Indigenous peoples appears to be ending.⁹⁸ The strength and depth of support for restorative historical justice is a key uncertainty going forward. Widespread adoption of this

approach could invite governments and corporations to take responsibility (or accept liability) for major past damages, including for [the asymmetrical environmental effects of industrial capitalism](#).⁹⁹ In such a future, the consequences of acting on past wrongs could make arguments over historical truth an even greater source of social and perhaps international debate, as well as a site for potential healing and solutions.

SEEKING SOCIAL TRUTH

The current 'post-truth' moment does not seem to arise so much from assertions of 'alternative facts' about the flatness of the Earth, vaccines, or climate change; but from the erosion of the standards and practices we use to establish facticity and social truth. We see this shift in Canadians' apparent [declining respect for science](#),¹⁰⁰ and in the shrinking role of traditional sense-making institutions such as print and broadcast journalism that are under pressure from the new digital information ecosystem.¹⁰¹ Nontraditional digital media deliver unprecedented volumes of information in new and highly democratic formats, such as blogs and podcasts, geared to inform as well as entertain. But these

media also allow malicious actors to distribute their own material, from relatively harmless misinformation to sophisticated adversarial narratives designed to confuse and polarize.¹⁰² The new ecosystem makes it harder for many citizens to tell fact from fiction and sense from nonsense. Some institutions and organizations may respond to the current disorientation by building new platforms that enable thoughtful dialogue and effective ways to test claims.

Unless we agree on standards and practices for seeking social truth, it might be difficult to reach the pluralistic consensus needed to address many of Canada's most pressing challenges.

Skepticism of science among Canadians is at 32%, up 7% since last year. If distrust in science continues to rise, could governments find it harder to take action on climate change or protect the public from epidemics?¹⁰³



ANXIOUS ABOUT ANXIETY

Judging by the volume and variety of public commentary, anxiety has become one of the defining concerns of our time. Frequently [characterized as an epidemic](#), the prevalence of anxiety is a concern in itself, and is subject to many suggested explanations.¹⁰⁴ Some believe it is connected to the 24-hour digital news cycle, which can create [the feeling that we should be connected to important global developments](#) at all times.¹⁰⁵ Another theory is that negative developments are more often portrayed, while positive long-term trends are rarely reported – for example in worldwide public health, income, and living standards¹⁰⁶ – allowing an [anxiety-producing, pessimistic worldview of the future](#) to flourish.¹⁰⁷ On the other hand, scientific data about climate change and the [pace of extinction](#)¹⁰⁸ provide [strong reasons to worry](#).¹⁰⁹

Social media is also frequently cited as [contributing to anxiety](#)¹¹⁰ because of cyberbullying, shallow and gamified relationships, and the tendency to compare one's everyday experiences to highly curated representations of beauty, wealth, and fulfilment.

Some [resist the idea that anxiety should be treated as a pathology](#) because it imports an unwarranted crisis narrative, individualizes the problem, and detracts from the social and material factors that promote resilience.¹¹¹ On the other hand, bringing anxiety to health professionals' attention has opened the door to [new approaches to treatment](#).¹¹²

Anxiety is a policy concern in itself due to its effects on [productivity](#),¹¹³ [healthcare costs](#),¹¹⁴ and the wellbeing of Canadians – especially youth.¹¹⁵



EMERGING SOCIAL NEUROSCIENCE

We are beginning to understand the neurological bases for social life. The relatively new field of [social neuroscience](#) helps explain how human nervous systems co-regulate each other socially, as well as the detailed interaction between biological systems and social behaviours.¹¹⁶

Some examples of promising research in this field include [the sources of pro and antisocial behaviour](#),¹¹⁷ [the mechanisms that allow us to identify and predict others' emotions](#),¹¹⁸ and the [social component of learning](#).¹¹⁹

Basic research could lead to therapies for a variety of social disorders, produce new evidence in understanding crime and victimization, enhance health outcomes, improve education, and strengthen social cohesion.

Neurological views on social life and research about brain plasticity could help determine where – and at what stages of human development – to allocate public funds to promote social and cultural outcomes such as anti-racism, skills development, crime prevention, resilience, and social cohesion.¹²⁰

ENHANCED HUMANS

Technologies such as [bionic limbs](#),¹²¹ [brain-computer interfaces](#),¹²² [gene editing](#),¹²³ and [neurological enhancements](#)¹²⁴ are in advanced stages of development, and could soon be widely available. In an emerging biodigital world, some people will have opportunities to modify their bodies, including their senses, brains, and limbic systems, in entirely new ways. While some of these modifications may restore a common human ability (such as lost sight or hearing) or replace a damaged body part, others may provide superhuman physical and cognitive abilities, or unprecedented additions to the human body. Enhancement technologies could unlock new human potential for those who can [afford](#) them.¹²⁵

Widespread use of these technologies could prompt conversations about equity between those who can afford enhancements and those who cannot. A debate could emerge about what modifications should be offered at the public's expense and for what reasons.

Other ethical questions could arise, such as whether employers can hire on the basis of modifications or request them, which enhancements should be banned, and which should or should not be available to children.

More broadly, we could see a deep questioning about what it means – or should mean – to be human. Discussion about the acceptable limits of human modification could inspire new communities, ideologies, and identities.

Self-administered gene-editing kits are presently available, yet no regulation exists around their manufacturing or use.¹²⁶



EQUITY REFRAMED

Interest in social equity seems to be on the rise. It is increasingly understood as a powerful factor in the overall quality and performance of societies – including as a [social determinant of health](#).¹²⁷

Levels of equity are factored into international comparisons on the wellbeing of populations, for example relating to [children's rights](#).¹²⁸ Meanwhile, social movements such as Black Lives Matter are motivated by the interrelated social, cultural, and economic conditions that combine to create disadvantage. Enhanced awareness is driving advocacy for social justice, especially among young people who may [feel](#)¹²⁹ [disadvantaged](#)¹³⁰ in the current economy. Governments have responded with greater attention to social and economic rights (e.g. in the new [National Housing Strategy](#)

[Act](#), the [Act to Ensure a Barrier-Free Canada](#), and Reconciliation initiatives).¹³¹ Firms also show growing interest in [equitable human resource practices](#)¹³² and essential social needs, such as [housing](#).¹³³ These developments are changing our understanding of human social and economic needs, and could also alter views on equity, for instance by seeing [diversity as a source of innovation](#).¹³⁴

New models of equity are being advanced, such as socioeconomic [affirmative action](#),¹³⁵ and more information and metrics could increase pressure on governments and organizations to account for concrete results.



THE POLITICAL SPECTRUM REMAPPED

Although the left/right political spectrum has never fully accounted for nuanced political observations, today it provides even less insight into what individuals actually think. Paradoxically, this coincides with evidence that the political spectrum is polarizing as if there is an irreconcilable difference between left and right.

This phenomenon is frequently explained in terms of online ‘filter bubbles’ and ‘echo chambers’. Although these are real phenomena, [demographic analysis](#) suggests that the people most likely to be polarized are least likely to use the Internet and social media,¹³⁶ and that only a small percentage of Canadians consume hyper-partisan news.¹³⁷ According to some survey research, polarization seems to result from [identification with a political party as a brand](#)¹³⁸ rather than on the basis of policy

ideas,¹³⁹ a phenomenon that is [less pronounced in Canada than in the United States](#).¹⁴⁰ Survey respondents in the [U.S.](#)¹⁴¹ and [UK](#)¹⁴² struggle to identify which issues and positions are left or right, and also generally agree about policy issues and solutions much more than they disagree.

New political movements are emerging around climate change. [Ecofascists](#)¹⁴³ combine ethnonationalism and environmentalist logic, labour unions and environmentalists are collaborating in a [Bluegreen Alliance](#),¹⁴⁴ and [far-left and far-right partisans](#)¹⁴⁵ collaborate in France’s Yellow-Vest movement.

If polarizing brand-based politics began to lose influence, we could see many new pragmatic or provisional alliances on specific issues.

PRIVATE HANDS ON PUBLIC SPACE

The changing roles of large corporations and ultra-wealthy individuals could disrupt assumptions about the social functions and relative capacities of public and private actors.

In 2017, Sidewalk Labs, an Alphabet Inc. company, responded to a request for proposals from the public sector for an “Innovation and Funding Partner” to redevelop a plot of riverfront land in Toronto.¹⁵²

Tech firms and billionaires especially are playing major social roles, some of which look like governance. Facebook has announced plans for a global non-fiat currency,¹⁴⁶ Twitter and other platforms are regulating large volumes of speech,¹⁴⁷ the Gates foundation is targeting diseases to eradicate,¹⁴⁸ and Elon Musk’s ventures are building out the capacity to explore space.¹⁴⁹ Some Iqaluit residents claim that Amazon’s ability to deliver fresh foods to the North is having a larger benefit than the federal government’s Nutrition North program.¹⁵⁰ Major investors can also influence labour conditions and environmental practices by setting their own policy requirements.¹⁵¹ In some cases, firms and super-wealthy individuals are even proposing to design and administer municipal public spaces, playing roles usually assigned to governments.

VISIONS OF POST-SCARCITY

The rapidly declining cost of solar and wind energy point to an impending shift toward cheaper renewable energy for building and transport.¹⁶³ Cheaper energy is just one source of lowered input costs across industries that could reduce the cost of living.



In some scenarios – and perhaps over the longer term – labour-saving advances, dematerialization, and bioengineering could raise general living standards to the point that economic policy could focus on abundance rather than scarcity. This would involve a change in mindsets, not just in material conditions.

To date, consumers have seen decreases in the cost of clothing, music, photography, and electronics, but the prices of some essential goods and services such as housing, transportation, healthcare, and groceries have remained level or increased. But there are indications that these costs could also fall over time, as innovations in such areas as digital healthcare¹⁵³ and drug discovery methods,¹⁵⁴ house construction,¹⁵⁵ electrified transport¹⁵⁶ using renewable energy sources,¹⁵⁷ and vertical farming¹⁵⁸ enable unprecedented efficiency. As telepresence technologies improve, options to work remotely while living outside expensive cities could decrease housing costs for many.¹⁵⁹ Greater economic abundance could reduce dependence on undesirable, exploitative, or dangerous jobs and support conditions that allow individuals to make better long-term decisions.¹⁶⁰ Some futurists see the possibility of abundant utopias – including such visions as “fully automated luxury communism.”¹⁶¹ Others suggest that human attention could move up Maslow’s hierarchy, focusing on belonging, esteem, and self-actualization.¹⁶²

All transitions can be difficult, even towards abundance. Canadians who earn their income from industries that see falling costs early in the transition may not feel the gains that well-paid workers in the least or last disrupted industries would experience.

In 2019, New Zealand abandoned GDP in favour of the Happiness Index as a metric for national prosperity. A widespread adoption of such metrics could change government policy making and priorities around the world.¹⁷⁰

RETHINKING ECONOMICS

Dissatisfaction with persistent inequality and environmental degradation, along with growing awareness of the Next Digital Economy's disruptive potential, are leading many to question some assumptions at the core of 20th-century political economic theory.¹⁶⁴ Zero growth and degrowth, Universal Basic Income/Services, and [Sustainable Finance](#) have gained credence among mainstream economists. Standard instruments such as GDP and [social discount rates](#) have come into question.¹⁶⁵ Experiments with alternate forms of economic organization (e.g. the 'commons'), and valuation (e.g. [the Happiness Index](#)), are already under way.¹⁶⁶ Meanwhile, some [corporate leaders](#)¹⁶⁷ are integrating social and ecological considerations into [planning and operations](#).¹⁶⁸

It is not yet clear whether a consensus will form around new theories and measurements to support the effective [long-term](#) allocation of resources required to achieve the United Nations' Sustainable Development Goals.¹⁶⁹



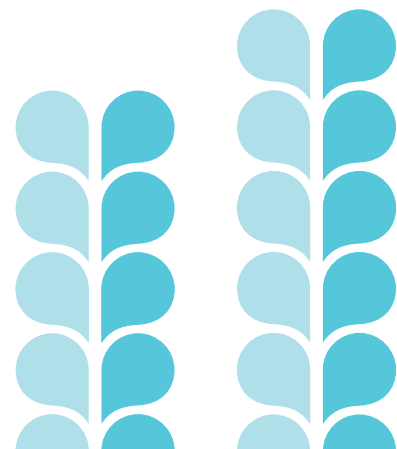
Canadians on democracy and populism: 57% believe Canada is governed democratically; 59% are only 'moderately convinced' representative government is the best way to govern; 77% reject rule by a 'strong leader,' and 91% reject military government; 80% would support a candidate who favoured common people over the elite; 68% oppose the idea that people who disagree with the majority are a threat; 53% would be swayed by appeals to national pride.¹⁷⁶

DEPTH OF DEMOCRACY

An overwhelming 77% of Canadians support democracy, a 12% increase since 2017.¹⁷¹ A 62% majority also regularly engages in democratic processes, particularly at the community level. This is notable, given the resurgence of elected '[strongmen](#)'¹⁷² who push against democratic restraints, and some [survey evidence](#) suggesting that a significant fraction of youth in liberal democracies would prefer a 'strong leader' unfettered by representative institutions.¹⁷³ Global countercurrents notwithstanding, the debate in Canada seems to centre not on whether democracy is better than its alternatives, but whether we are living up to our democratic ideals. 44% of the population desires greater scope to exercise their rights to political participation. An

even larger 60% believe that citizens are insufficiently aware of their rights and responsibilities because of poor civics education.¹⁷⁴ At the same time, between 25 and 33% of Canadians appear to question whether new Canadians should have the same democratic rights and responsibilities as Canadian-born citizens.¹⁷⁵

Tensions between the democratic ideal and unstable understandings of citizenship could have major implications for the social institutions that prepare citizens for democratic responsibility and social solidarity.



SOURCES OF LEADERSHIP

Sources of leadership appear to be in flux. Research suggests that Canadians are now more inclined to look to CEOs than politicians for leadership.¹⁷⁷ In cultural and social realms, opinion leadership seems to shift away from traditional sources and toward social media influencers,¹⁷⁸ celebrity activists such as [Greta Thunberg](#),¹⁷⁹ and online content from comedians,

pop-academics, and cultural personalities such as [Joe Rogan](#),¹⁸⁰ [Jordan Peterson](#),¹⁸¹ and [Natalie Wynn](#).¹⁸²

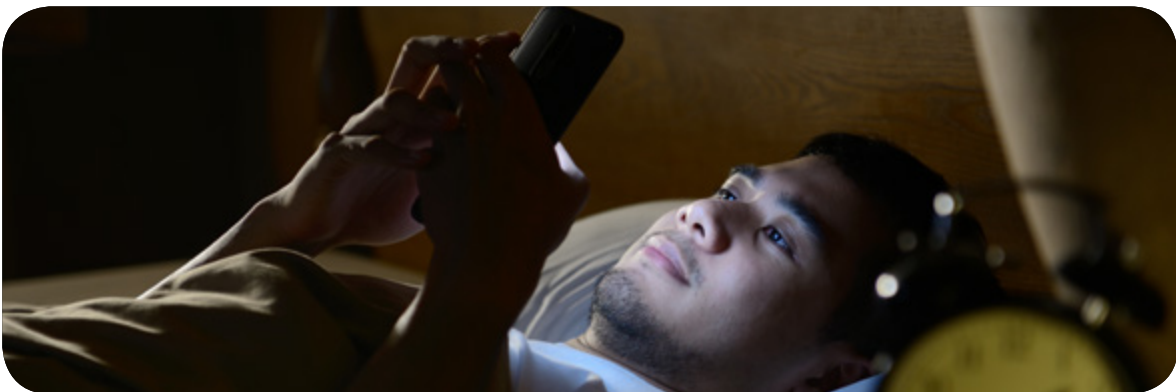
Changing sources of leadership and authority seem likely to affect the way that we think about democratic participation, and how we accrue social, political, economic, and cultural capital.

ON-DEMAND SOCIETY

Better data and new value chains mean that [goods](#)¹⁸³ and services can increasingly be customized to the individual and made [available on demand](#).¹⁸⁴ More than that, people can be wrapped inside an instantaneous on-demand consumer environment. Algorithms anticipate, suggest, and seek to satisfy our spontaneous interests and desires. This is currently most noticeable on social media and online shopping platforms, which are said to leverage “[dark pattern](#)”¹⁸⁵ tactics to simulate feelings of desire or compulsion by stimulating dopamine systems.¹⁸⁶ This could spread into many more areas of social life through sophisticated personal AI assistants, and into material culture

through rapid 3D printing and logistics. Instant, precise gratification of individual preferences could become the assumed primary virtue of the systems we use. This is already changing the context for government officials who design and deliver services to the public.

The value of shared social and material experience could be trumped by a desire to have our short-term impulses gratified through interaction with algorithms instead of people. The social arts of consensus building, compromise, and taking a longer view may need to be consciously exercised and promoted so that they do not atrophy.



CHANGES IN THE SOCIAL

– BROAD TRANSITIONS –

Scientific and technological developments

21st-century governance

The sustainability of our economies and ways of life

Postcolonial cultures

SIGNALS – OF – CHANGE

Superlongevity

Private hands on public space

Enhanced humans

Indigenous futurism

Diversity of household composition

Sources of leadership

Augmented public places

Equity reframed

Opaque algorithms

The political spectrum remapped

Addiction and treatment

Shifts in gender expression

Rethinking economics

On-demand society

Hyperconnected but lonely

Seeking social truth

Quantified surveillance society

Visions of post-scarcity

Depth of democracy

Epigenetics

Economic insecurity

Anxious about anxiety

Emerging social neuroscience

Facing up to the past

FRAMEWORK – FOR – SOCIAL FORESIGHT

Connection

Identity and affiliation

Sense-making

Collective decisions

Embodiment

Land and ecosystems



CONCLUSION

In this paper, we defined our concept of social futures and highlighted some of the policy-relevant signals of change that could affect the broad functions of social life.

Our upcoming work will further explore how these and other signals of change could play out, the disruption they could cause for social systems when combined, and what future social systems might look like.

With this in mind, Policy Horizons looks forward to engaging with partners and stakeholders to explore plausible futures and identify forward-looking insights relevant to policy making.

Our overall aim is to produce strategic foresight that will help policy makers prepare for potential disruptive change, seize opportunities, mitigate risks, and build bright futures with Canadians.

NOTES

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We look forward to further collaboration with partners and stakeholders as our study of social futures moves ahead.

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