

9 **Game CHANGERS** Major transformations with the potential to disrupt the future for health and well-being

FORESIGHT futurists uncovered 72 trends (changes over time that are already happening) and emerging issues (faint signals of possible future trends) in their Futures Scan, in which they examined the present for hints about what the future could hold. However, these trends and emerging issues aren't happening in isolation from each other. Many share the same driving forces, and many more have the potential to combine in unexpected, transformational ways—to be Game Changers. Below, we briefly outline nine Game Changers that could disrupt wide swaths of society, including health and well-being. FORESIGHT developed them as part of an exercise intended to explore the futures for health and well-being from a completely different direction to generate unexpected insights.

Watch our Game Changers video series at: <http://bit.ly/FORESIGHT9gamechangers>



Environmental Breakdown Our physical environment destabilized.

Human demands on the environment are exceeding the capacity of global ecosystems and undermining the very ecosystem services on which civilization and nature depend. Current trends suggest we may be nearing a tipping point beyond which many natural systems will be unable to recover.



Synthetic Biology Engineering new lifeforms.

Advances in genetic manipulation tools are enabling scientists to not only edit existing lifeforms but to create entirely new, synthetic organisms. Such innovations are making possible a wide range of potentially transformative applications, from using microbes to produce pharmaceuticals and biofuels, to creating pollution-eating machines and organic, programmable microbots.



Machines The built environment becomes its own ecosystem.

Today's Internet of Things (the network of computers embedded in everyday objects) has the potential to become an ever-expanding, ever-more complex ecosystem of autonomous and intelligent machines, where machines no longer merely provide basic services (smart home monitoring, autonomous transport) but also companionship (caretaker robots, AI/robot pets/friends), warfighting, and even human augmentation (nanomedical bots and cybernetic implants).



Rise of Competing Points of View A growing struggle for identity, truth, and culture.

As the global center of economic gravity shifts East with the rise of China, Western culture's hold on global attention could slacken while previously marginalized cultural voices and points of view gain prominence, providing a useful critique of currently dominant assumptions.



Digital Fabrication

Using machines to design and build individually, precisely, and quickly.

Advanced digital fabrication tools have the potential to produce virtually any object or device from basic feedstocks and digital plans. The result could be a dematerialized global economy with digital files being traded and production of goods being done locally. Digital fabrication tools could also greatly improve equitable access to consumer goods and could even transform human health through the printing of on-demand, rejection-less organs for transplant.



New Economies: Collaborative and Post-Scarcity

Collaborative economies and a post-scarcity world without want.

Should sophisticated, easy-to-use digital fabrication tools ever become widely available, the potential exists for every person to become a producer/designer/prescriber and for every product to become open source/generic. Universal access to goods, the undoing of intellectual property, and the loss of jobs that could result could undermine the current economic system and necessitate new forms of post-scarcity economics and societal organization.



Privacy, Data, and the Right to Self

Who has access and influence over your actions and preferences?

The confluence of data hacking, ubiquitous sensors and drones, and the quantification of all aspects of life, is likely to make maintaining personal privacy harder and harder while empowering those who control access to such information. Advances in AI and quantum computing could potentially end privacy altogether.



Rise of Authoritarianism

Wanting, promising, and maintaining power and control.

After half a century of increasing liberalism, values and the political pendulum seem to be swinging back towards isolationist attitudes that demonize ‘the other,’ accompanied by a desire for the reassurance of strong authorities. Such a swing, if taken to an extreme, could lead to the rise of more authoritarian governments, placing freedoms at risk, making already vulnerable and marginalized groups even more vulnerable, and jeopardizing global cohesion.



Rise of Self-Organized Citizen Movements

The politically decentralizing possibilities of technology.

Social networking, crowdsourcing, and real-time monitoring tools have the potential to spawn new forms of people power like self-organized communities and movements able to challenge and even supplant the state.

**The world is changing fast. It's time we design a future for health together.
Our work begins with FORESIGHT.**

Learn More www.ForesightForHealth.org

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