

How building with people who face barriers benefits everyone, especially during crises

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Imagine approaching a curb in a wheelchair. The step is only a few inches, but for some of us, it might as well be a wall. Now imagine that wall turned into a slope. With that single design change, movement becomes possible again.

But more than that, others start to benefit too — a parent pushing a stroller, a traveller rolling luggage, a worker with a handcart.

A simple but liberating modification, made to include those once excluded, ends up changing everyone's experience for the better. In my field of inclusive design, this innovative magic became known as “the curb-cut effect.”

Curb-cut thinking has inspired countless inventive leaps, including the creation of the typewriter, emails, text-to-speech, voice recognition, captions and image recognition

— to name just a few. All were initially motivated by the desire to address a barrier experienced by someone who was excluded by the existing design, resulting in advances that benefit many more.

Ultimately, building the world this way affords us more adaptive choices when unexpected situations arise. But inclusive design does not mean designing *for* disabled people, which is a paternalistic view that positions them as passive recipients of benevolent accommodation. It means designing *with* them.

Scaling the curb-cut principle

This phenomenon is more than a clever design trick to build new products and increase the customer base. As our society becomes less stable, I can't help but think about the macro curb-cut effect and applying the same phenomena to complex societal systems. During the COVID-19 pandemic, it became clear that when our systems are designed with people who are struggling, they work better for everyone when we all find ourselves struggling.

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I saw this as a reality at OCAD university where I teach. Ten years before the onset of the pandemic, the Inclusive Design program was co-designed with students who face barriers to university education. This included students who had jobs, care responsibilities, couldn't afford to live in Toronto or experienced accessibility barriers due to disabilities.

The program gave students the choice to attend in person, online or asynchronously. All curriculum materials were provided in accessible formats. Most importantly, each new cohort began by building a cohesive learning community with collective responsibility for the success of their peers.

Self-determination was emphasized, balanced by mechanisms to exchange compassionate, constructive feedback with fellow students.

While the education sector struggled to adjust to the disruptive reality of the pandemic, our program required no such adjustment. The necessary tools, processes, mindsets and social support structures were already in place.

Diversity as an adaptive advantage

Global thought leaders stress that we are in a period of escalating global risks. Living on this planet is a precarious balancing act, and we have entered a period of

disequilibrium. This entangled disequilibrium is affecting all domains of our existence.

And those who seek influence and control exploit the resulting existential fear and promote the eugenicist fallacy, or a “survival of the fittest” mentality.

Eugenicists and social Darwinists believe that society is strengthened by eliminating those who are deemed less fit. They believe that “survival of the fittest” is, in fact, the engine of evolutionary advances and the key to the continuation of the human race. They argue that a monoculture of perfect beings provides security and strength.

But evolutionary scholars such as Terrence W. Deacon have shown that human advances, like the development of language, are made possible during periods of relaxed selection, when diversity can thrive. It is systems designed to support diversity that offer adaptive choices in times of crisis, leading to greater societal resilience.

Monocultures, on the other hand, can be felled by a single blow.

Epidemiologists Richard Wilkinson and Prof. Kate Pickett showed that inequality is correlated with all other societal ills. Economist Thomas Piketty extended the argument to economic stability, arguing that unless economic inequality is addressed the whole democratic order will be threatened.

As an antidote, social scientist Scott E. Page showed how making room for diverse needs, and thereby diverse perspectives, within an organization helps to navigate complexity.



It is systems that are designed to support diversity that offer adaptive choices in times of crisis, leading to greater societal resilience. (Unsplash)

The cultural bias toward efficiency

But we are culturally primed to reject a curb-cut approach.

The industrial era, our capitalist ideology and our reliance on statistical reasoning to predict and determine truth have instilled a less dramatic form of eugenicist reasoning in our assumptions and conventions.

The industrial era demanded replaceable workers, this required standardized learners from our systems of education. The competitive market culture soon learned to value quick wins, efficiency and speed.

Business gurus such as Richard Koch interpret Pareto's 80/20 principle to mean that we should focus on the homogeneous 80 per cent that take 20 per cent of the effort and ignore the difficult heterogeneous 20 per cent. But it is the marginalized 20 per cent that motivate imaginative leaps and are the first to recognize the signals of emerging risks, not the complacent average consumer.

These priorities are now amplified, accelerated and automated by artificial intelligence (AI). AI is powered by statistical reasoning, and unless deliberately corrected, it privileges what is common and puts aside what is less so.

A culture with statistical bias toward the average then discourages curb-cut thinking.

The limits of majority rule

Perversely, reactions to defend progressive values can also discourage the curb-cut approach. In defending science and evidence, it has been reduced to what is true for the statistical average.

This denies the truth for statistical outliers. Statistically-determined conclusions only hold for the average person and are wrong for or inaccurate about people far from the average.

Democracy is similarly defended by reducing it to “one person, one vote” and majority rule, neglecting human rights. This inadvertently favours the trivial needs of the majority over the critical needs of minorities.

Inclusive design is often misunderstood as remembering to consider people with disabilities. It is more radical than that. Engaging people who face the greatest barriers to design our systems with us will provide everyone with adaptive choices during the next inevitable crisis.

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