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## The Next Big Thing: Resilience

By Jamais Cascio

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If the financial crisis has taught us anything, it is that brittle systems can fail catastrophically.

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ith increasing fervor since the 1980s, sustainability has been the watchword of scientists, environmental activists, and indeed all those concerned about the complex, fragile systems on the sphere we inhabit. It has shaped debates about business, design, and our lifestyles.

Sustainability is a seemingly laudable goal--it tells us we need to live within our means, whether economic, ecological, or political--but it's insufficient for uncertain times. How can we live within our means when those very means can change, swiftly and unexpectedly, beneath us? We need a new paradigm. As we look ahead, we need to strive for an environment, and a civilization, able to handle unexpected changes without threatening to collapse. Such a world would be more than simply sustainable; it would be regenerative and diverse, relying on the capacity not only to absorb shocks like the popped housing bubble or rising sea levels, but to evolve with them. In a word, it would be resilient.

Sustainability is inherently static. It presumes there's a point at which we can maintain ourselves and the world, and once we find

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the right combination of behavior and technology that allows us some measure of stability, we have to stay there. A sustainable world can avoid imminent disaster, but it will remain on the precipice until the next shock.

Resilience, conversely, accepts that change is inevitable and in many cases out of our hands, focusing instead on the need to be able to withstand the unexpected. Greed, accident, or malice may have harmful results, but, barring something truly apocalyptic, a resilient system can absorb such results without its overall health being threatened.

Like sustainability, resilience encompasses both strategy and design, guiding how choices are made and how systems are created. Stripped to its essence, it comes down to avoiding being trapped--or trapping oneself--on a losing path. Principles of resilience include:

- **Diversity:** Not relying on a single kind of solution means not suffering from a single point of failure.
- **Redundancy:** Backup, backup, backup. Never leave yourself with just one path of escape or rescue.
- **Decentralization:** Centralized systems look strong, but when they fail, they fail catastrophically.
- **Collaboration:** We're all in this together. Take advantage of collaborative technologies, especially those offering shared communication and information.
- Transparency: Don't hide your systems--transparency makes it easier to figure out where a problem may lie.
  Share your plans and preparations, and listen when people point out flaws.
- Fail gracefully: Failure happens, so make sure that a failure state won't make things worse than they are already.
- **Flexibility:** Be ready to change your plans when they're not working the way you expected; don't count on things remaining stable.
- Foresight: You can't predict the future, but you can hear its footsteps approaching. Think and prepare.

Ultimately, resilience emphasizes increasing our ability to withstand crises. Sustainability is a brittle state: Unforeseen changes (natural or otherwise) can easily cause its collapse. Resilience is all about being able to overcome the unexpected. Sustainability is about survival. The goal of resilience is to thrive.

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