Thematic Introduction

Bill Baue & Ralph Thurm

Bioregional Regeneration as Collapse Resilience

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A recently published review in Trends in Ecology & Evolution uses ideas from resilience theory to clarify thinking about collapse. The paper reviews the study of collapse across economics, archeology, and ecology and then suggests a new framework for studying collapse in social-ecological systems. Photo: Destruction by

> *"Collapse is the shadow of resilience, consequently studying collapse is indirectly the study of what makes a system resilient"*
>
> Garry Peterson, co-author

Stockholm Resilience Centre *System Collapse and Resilience: Understanding collapse* 2018

All Civilizations Collapse

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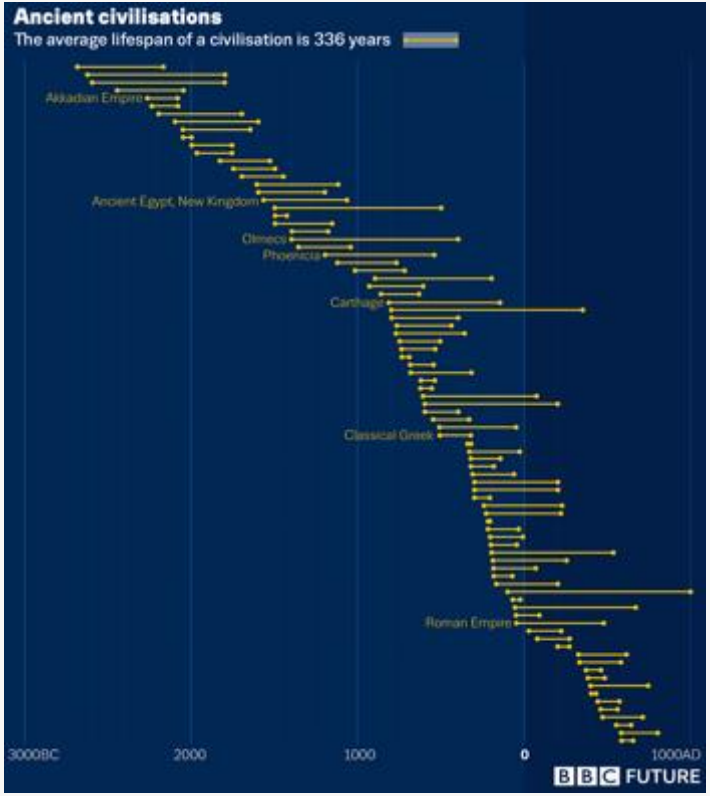

A state is a set of centralized institutions that imposes rules on and extracts resources from a population in a territory.

All states throughout history eventually ended.

The average lifespan of a state is 326 years.

The largest states – mega-empires covering over a million square kilometers – are more fragile, lasting on average just 155 years.

Luke Kemp, *Goliath's Curse*

Kemp *Are We on the Road to Civilization Collapse?* 2019
Kemp *Goliath's Curse* 2025

Civilization Concentrates Power in a Ruling Elite

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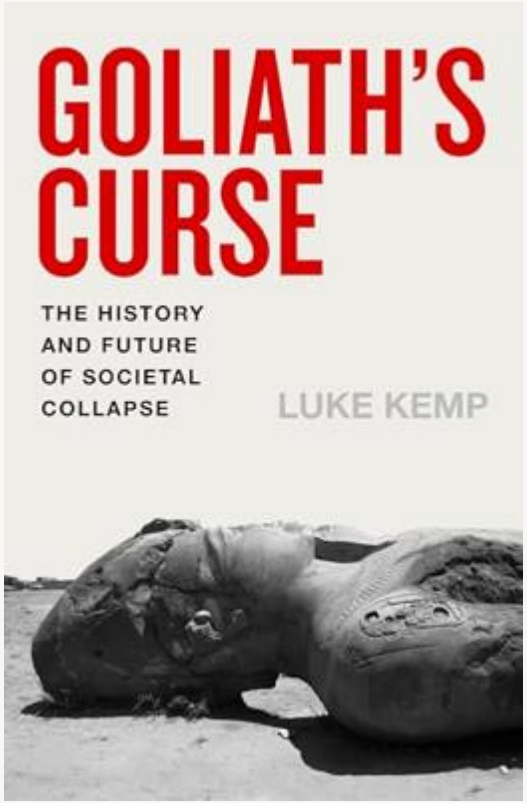
Civilizations are organized around densely populated settlements, divided into more or less rigid hierarchical social classes of division of labour, often with a ruling elite and subordinate urban and rural populations, which engage in intensive agriculture, mining, manufacture, and trade.

Civilization concentrates power, extending human control over the rest of nature, including over other human beings.

Wikipedia *Civilization*



Collapse involves a rapid and enduring loss of each of these ingredients of civilization:

- Hierarchy: government bureaucracy
- Population density: urbanism
- Energy capture: agriculture etc

Kemp

Kemp *Goliath's Curse* 2025

Civilizational Collapse = Carrying Capacity Overshoot

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100% of all empires and civilizations in the historic record were not sustainable.

All of them overshot their ecological & social carrying capacities.

Joe Brewer, Design School for Regenerating Earth

Brewer *Regenerative Food Systems in Times of Collapse* 2026

Uncivilized? Civilizational Culture Suffers Psychological Projection

The irony is that the very term “civilized” (derived from the Latin *civilis* via the French *civilisé*) has long been weaponized to gaslight societal cultures deemed “inferior” (*uncivilized / barbaric / savage*) for lacking the distinguishing features of civilization – and yet these very cultures have proved the most resilient and sustainable, outliving the swell-and-topple dynamic of their larger (more “civilized”) neighbors.

Indigenous communities throughout Oceania, for example, have persisted for 60,000+ years by continually refining their cultures and First Laws self-governance practices in dynamic, intimate, reciprocal, regenerative relationship with Mother Earth.

These are the very cultures that *civilized* cultures distinguish themselves from, branding them (explicitly and implicitly) *uncivilized, inferior, unrefined*.

It seems civilizational culture suffers psychological projection.

Baue, Thurm *et al* r3.0 *Seeds* Volume 2 2026

Civilization is predicated on class (and often race and sex) hierarchies, enforced via state monopolization of violence.

Interestingly, it is this very cleaving of access to power that dooms civilizations to collapse.

Peter Turchin's cliodynamic (scientific study of history) database identifies *elite overproduction* (or competition for limited power) as the single most constant factor in civilizational collapse.

Distilling this dynamic down to its essence: hierarchical power defines civilization; and competition for this concentrated power dooms civilization.

What is Resilience?

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resilience

Resilience is commonly defined as *the capacity of a system to absorb disturbance and re-organize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks.*

Resilience.org *What is Resilience?*
Walker, Hollings et al *Resilience, Adaptability and Transformability in Social–ecological Systems* 2004

Basins of Attraction

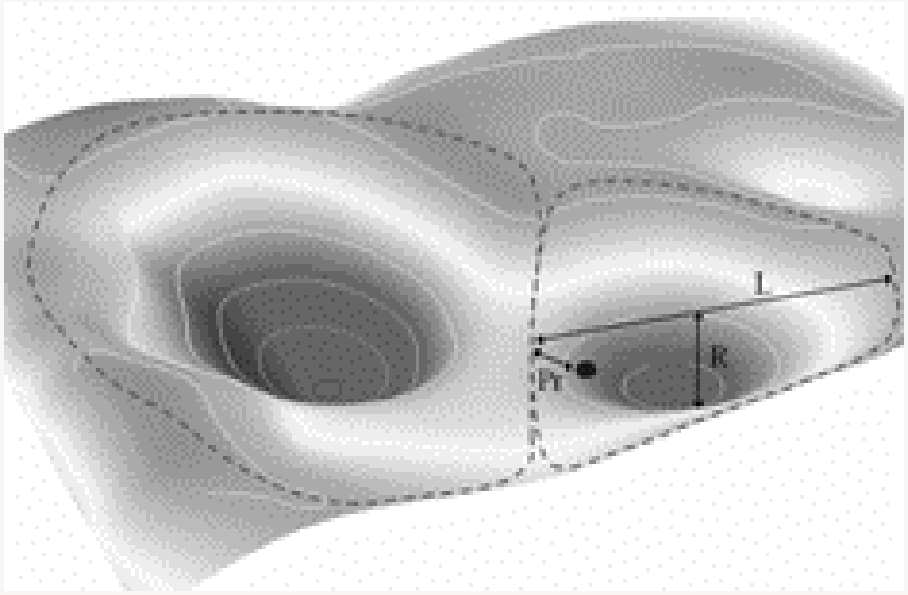

Fig. 1a. Three-dimensional stability landscape with two basins of attraction showing, in one basin, the current position of the system and three aspects of resilience, L = latitude, R = resistance, Pr = precariousness.

A “basin of attraction” is a region in state space in which the system tends to remain.

The people in this system might consider some basins to be desirable and the objective might be to prevent the system from moving into an alternate, undesirable basin from which it may be difficult or impossible to recover.

Walker, Hollings et al *Resilience, Adaptability and Transformability in Social–ecological Systems* 2004

Stability Landscapes (and Undesirable Basins…)

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At times societies or groups may find themselves trapped in an undesirable basin that is becoming so wide, and so deep, that movement to a new basin or sufficient reconfiguration of the existing basin becomes extremely difficult.

At some point, it may prove necessary to configure an entirely new stability landscape—one defined by new state variables.

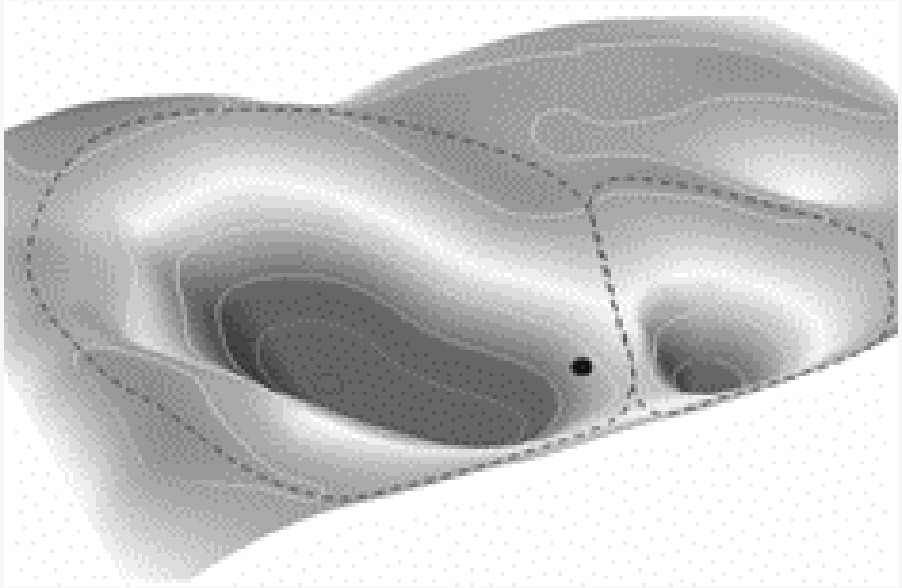

Fig. 1b. Changes in the stability landscape have resulted in a contraction of the basin the system was in and an expansion of the alternate basin. Without itself changing, the system has changed basins.

Walker, Hollings et al *Resilience, Adaptability and Transformability in Social–ecological Systems* 2004

Basins of Attraction & Tipping Points

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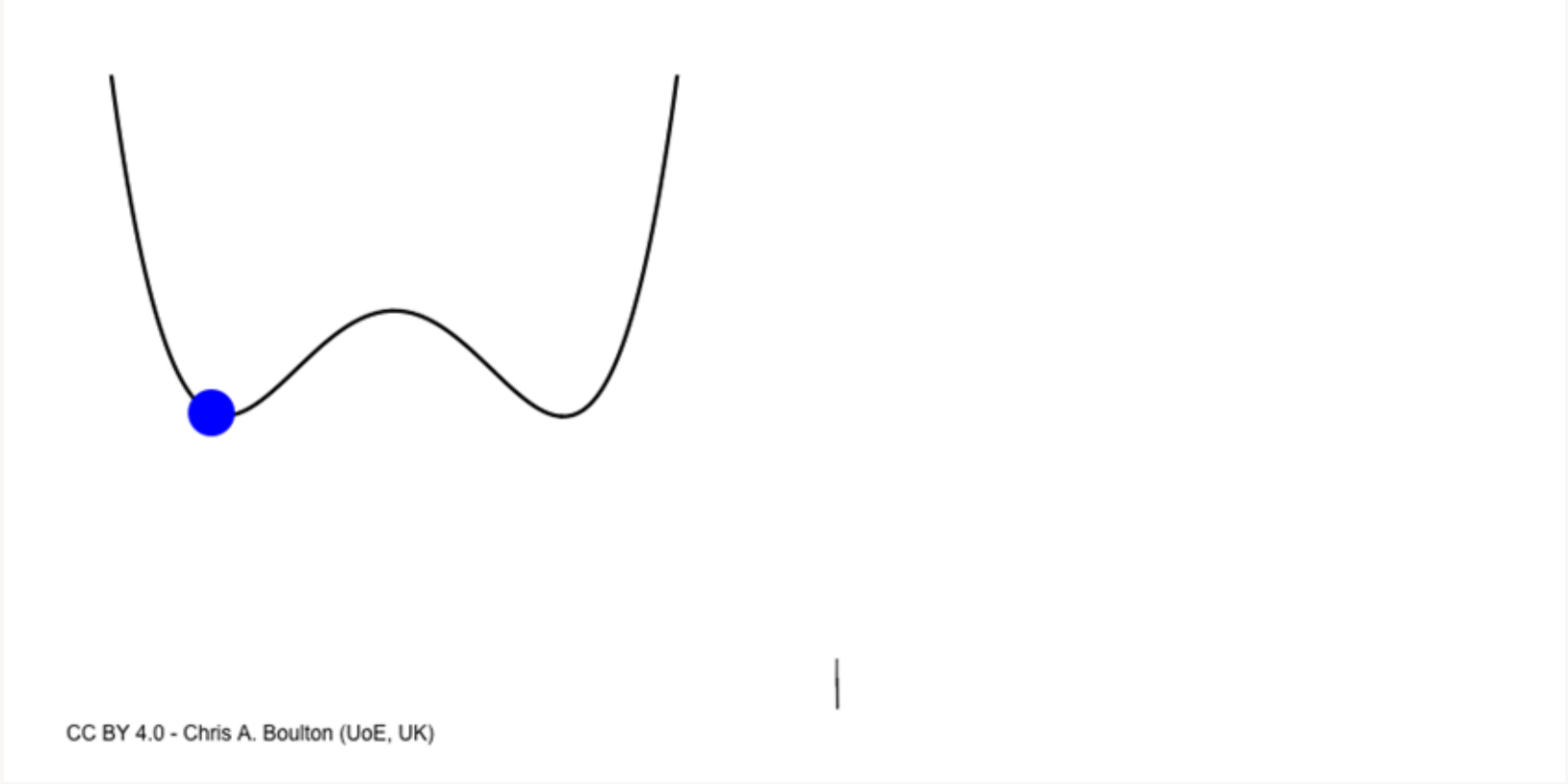

CC BY 4.0 - Chris A. Boulton (UoE, UK)

CarbonBrief *Tipping points: How could they shape the world's response to climate change?* 2022

Anti-Resilience: From Bouncing Back to System Transformation

Redesign Resilience Regeneration

HARVARD CIVIL RIGHTS - CIVIL LIBERTIES LAW REVIEW

Anti-Resilience: A Roadmap for Transformational Justice within the Energy System*

*Shalanda H. Baker***

Resilience has slipped into the collective consciousness as something to be desired, sought after, a normative good to which communities devastated by horrific events and individuals who have experienced tragedies aspire…

However, the idea that we should all merely "bounce back" after experiencing trauma obfuscates important questions: What are we bouncing back into? Are the circumstances into which we are returning unjust or unequal? If so, rather than "bouncing back," should we not work to remedy the underlying inequities first?

anti-resilience—The quality of resisting the obfuscation of systemic violence enacted upon communities of color and the poor in the name of energy. The act of engaging in a politics of anti-racism and anti-oppression that exposes the roots of structural inequality and vulnerability, and illuminates the path for system transformation.

Baker *Anti-Resilience: A Roadmap for Transformational Justice within the Energy System* 2019

Collapse Response Continuum

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Collapse Ignorance: Unaware of the inevitable ecological and social systems collapses that are impending or already unfolding.

Collapse Awareness: Recognition of the potential for ecological and social systems collapses.

Collapse Denial: After becoming aware of the potential for ecological and social systems collapses, some respond with denial of this potential and/or denial of the impending or unfolding status of these collapses.

Collapse Avoidance: The belief that ecological and social collapses can be averted if we only work feverishly enough (often, within the very paradigms creating the collapses in the first place).

Collapse Acceptance: Coming to terms with the impending and unfolding inevitability of ecological and social collapses.

Collapse Resilience: Recognizing the inevitability of ecological and social collapse by enhancing resilience that can 1) mitigate the severity of collapses and 2) adapt to emergent post-collapse scenarios.

Baue *Collapse Response Continuum* 2026
Baue, Thurm *et al* r3.0 *Seeds* Volume 2 2026

Collapse Resilience: De-Patterning & Re-Patterning

If collapse is essentially baked into the DNA of civilization, wouldn't human cultures be well advised to identify the key elements that contribute to inevitable civilizational collapse, and remove them from social structures?

Might we be able to navigate collapse resilience in a way where we co-create a post-perturbation equilibrium that avoids the persistent pattern of collapse dynamics?

And wouldn't this de-patterning also need re-patterning, creating a U pattern?

Baue & Thurm *From Collapse Resilience to Collapse Transcendence to De-Patterning & Re-Patterning* 2026
Baue, Thurm *et al* r3.0 *Seeds* Volume 2 2026
Image: Theory U

Recognizing the current inevitability of ecological & social collapses by enhancing resilience that can

1. mitigate the severity of collapses;
2. adapt to emergent post-collapse scenarios; and
3. identify the social patterns that exacerbate & trigger collapse dynamics (such as competition for power), and move away from them ("de-pattern") by moving toward alternative, prosocial patterns ("re-pattern") that reinforce social & ecological integrity.

Baue *Collapse Resilience as De-Patterning & Re-Patterning* 2026
Baue, Thurm *et al* *Seeds* Volume 2 2026

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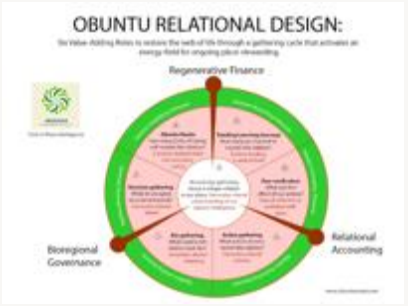
Relational Kinship

Bioregional Knowledge Commons

Bioregional Relational Governance



Wendell Berry: Bottom of the Bucket → Making Earth

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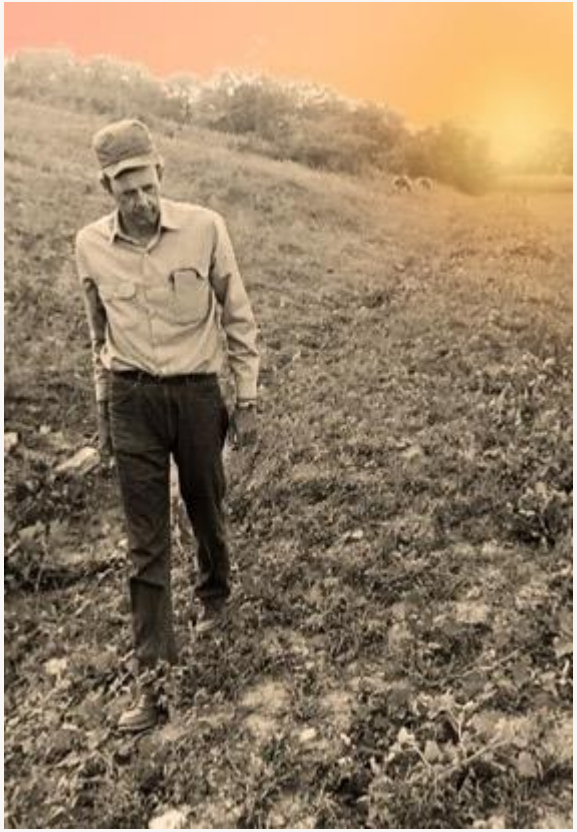

"For many years my walks have taken me down an old fencerow in a wooded hollow on what was once my grandfather's farm. A battered galvanized bucket is hanging on a fence post near the head of the hollow, and I never go by it without stopping to look inside.

For what is going on in that bucket is the most momentous thing I know, the greatest miracle that I have ever heard of: it is making earth. The old bucket has hung there through many autumns, and the leaves have fallen around it and some have fallen into it.... insects have flown into the bucket and died and decayed; birds have scratched in it and left their droppings or perhaps a feather or two.

This slow work of growth and death, gravity and decay, which is the chief work of the world, has by now produced in the bottom of the bucket several inches of black humus."

Bioregionalism as Collapse Resilience: 3 Elements

"I look into that bucket with fascination because I am a farmer of sorts and an artist of sorts, and I recognize there an artistry and a farming far superior to mine, or to that of any human. I have seen the same process at work on the tops of boulders in a forest, and it has been at work immemorially over most of the land-surface of the world. All creatures die into it, and they live by it…

A human community too must collect leaves and stories, and turn them into an account. It must build soil, and build that memory of itself — in lore and story and song — which will be its culture. And these two kinds of accumulation, of local soil and local culture, are intimately related…

A human community, then, if it is to last long, must exert a sort of centripetal force, holding local soil and local memory in place. Practically speaking, human society has no work more important than this."

Wendell Berry, "The Work of Local Culture", *What Are People For?* 1990

Thank you!

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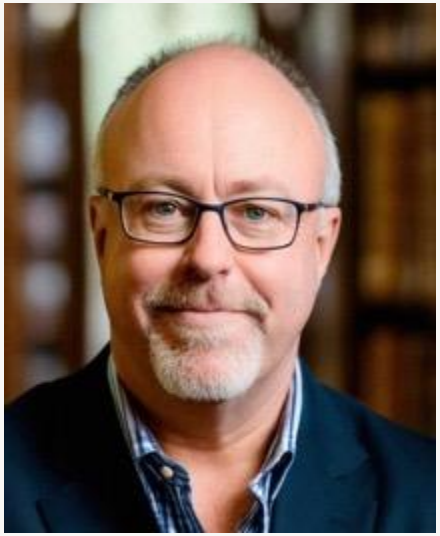

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