GETTING TO ENOUGH

HOW WE'LL SOLVE THE DILEMMA THAT'S DESTROYING OUR WORLD

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The problem:

"Anyone who grasps the severity of humanity's predicament and tries to figure out how we might respond with something like a new organization, technology, or social movement to make things better—not just for ourselves narrowly, but for all of humanity—confronts an unforgiving conundrum, which I've come to call the **enough vs. feasible dilemma**."

Thomas Homer-Dixon, *Commanding Hope: The Power We Have to Renew a World in Peril* (Toronto: Knopf Canada, 2020), p. 35.

The problem (continued):

"On one hand, changes that would be ***enough*** to make a real difference—that would genuinely reduce the danger humanity faces if they were implemented—don't appear to be ***feasible***, in the sense that our societies aren't likely to implement them, because of existing political, economic, social, or technological roadblocks.

On the other hand, changes that do currently appear ***feasible*** won't be ***enough***."

Thomas Homer-Dixon, *Commanding Hope: The Power We Have to Renew a World in Peril* (Toronto: Knopf Canada, 2020), p. 35.
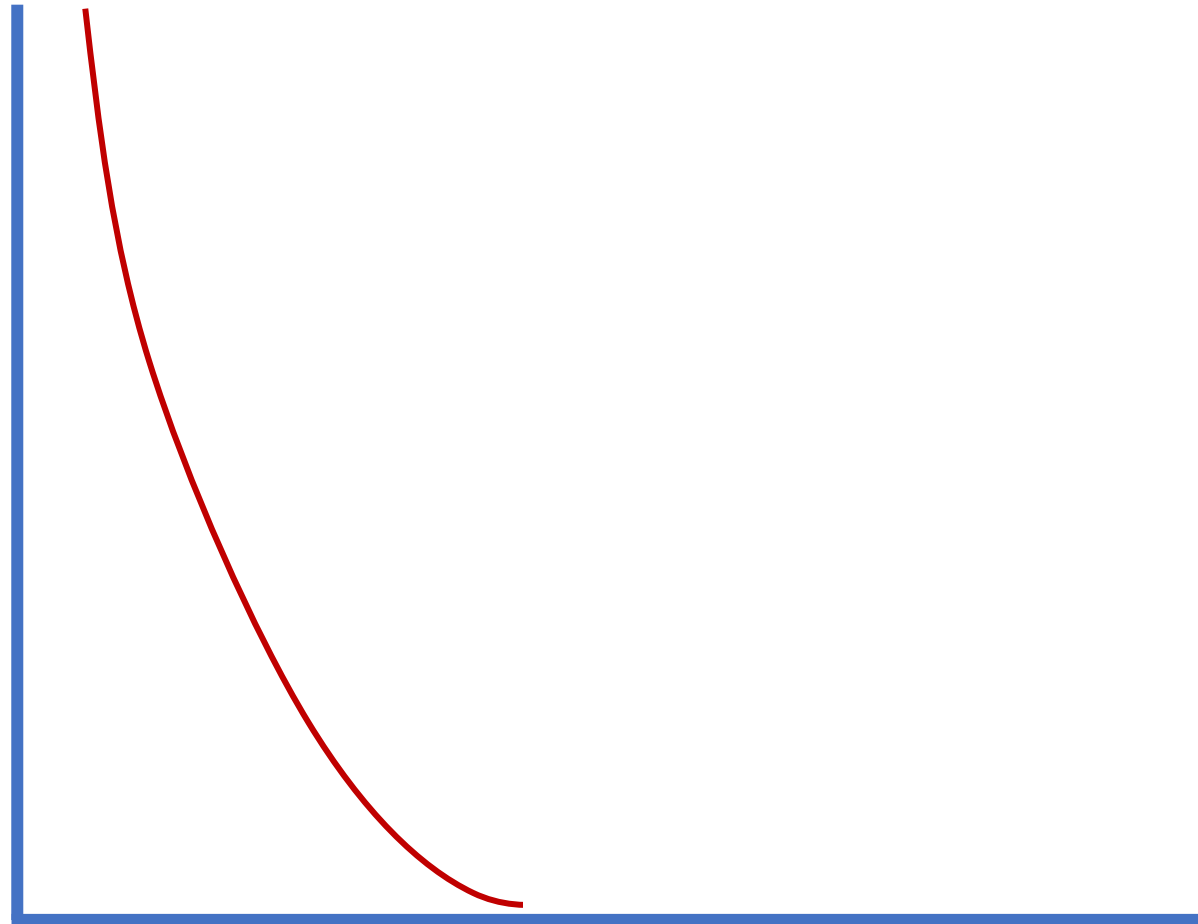
Feasibility
(and number)
of interventions
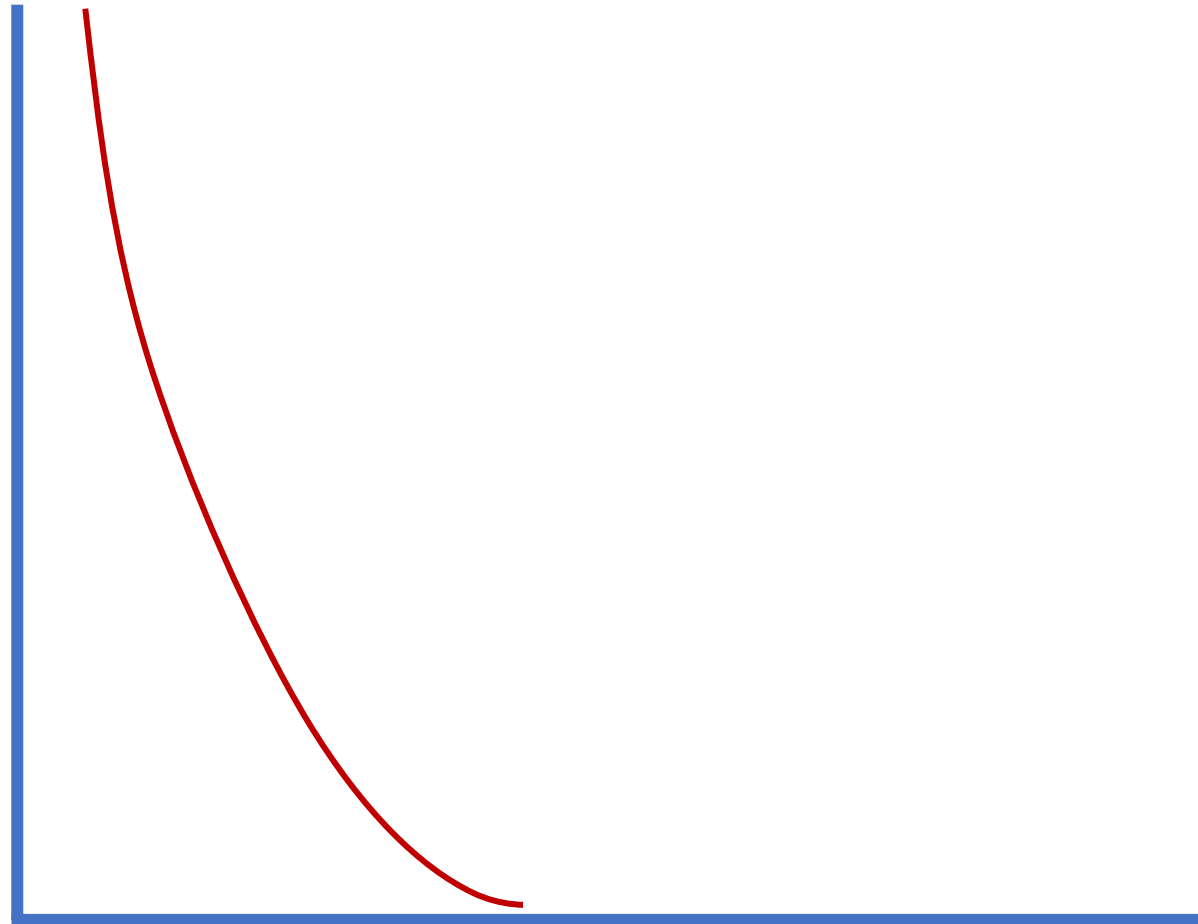
Effectiveness
(and systemic disruptiveness)
of interventions

*We can graph the enough vs. feasible dilemma, by plotting an intervention's effectiveness (say, in keeping warming to 2°) against its feasibility. We **appear** to live in a world where the relationship looks like this.*
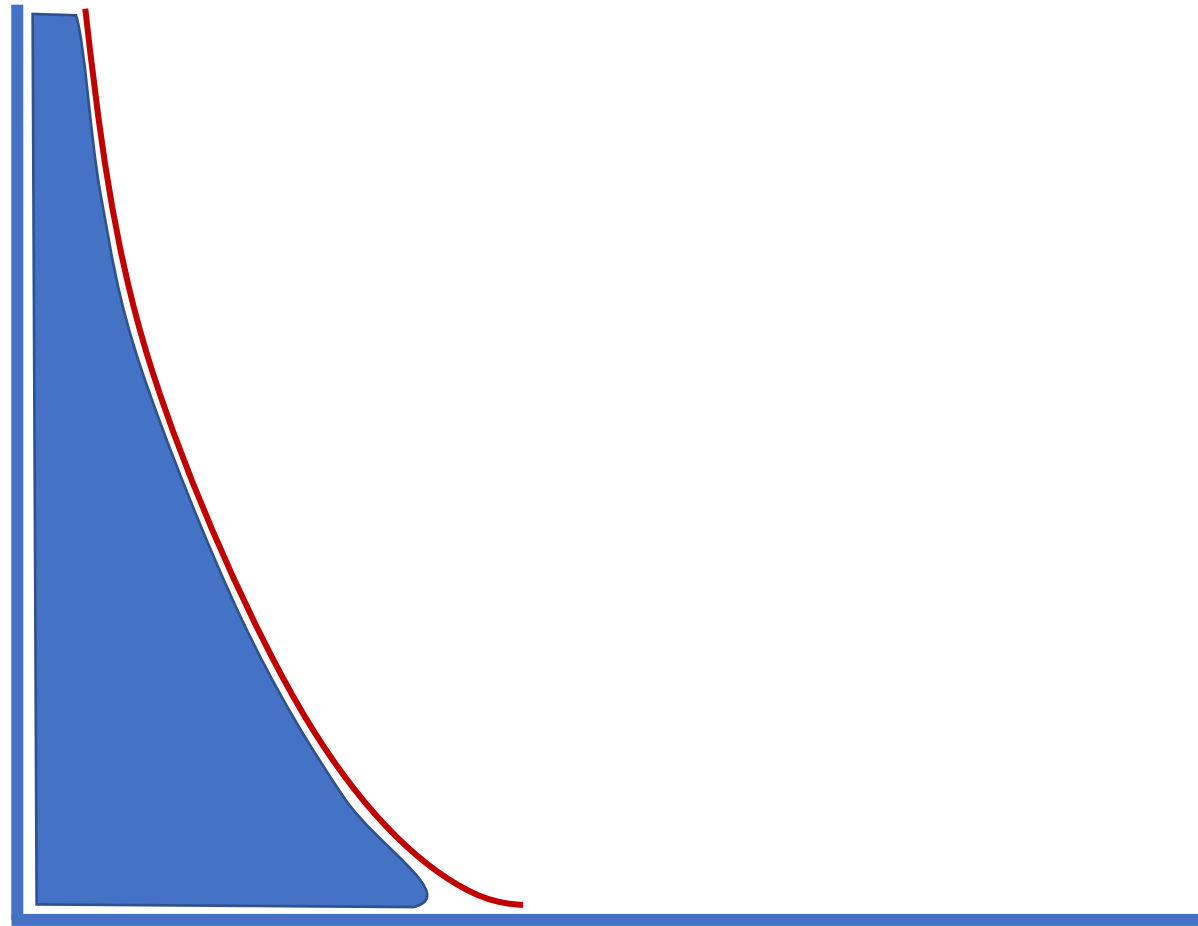
Feasibility
(and number)
of interventions

Effectiveness
(and systemic disruptiveness)
of interventions

*More **feasible** interventions are easier to implement, so we implement more of them. More **effective** interventions generally involve more disruption to our societies' worldviews, institutions, and technologies. People and organizations resist this disruption, so these interventions are less feasible, and we implement fewer of them.*
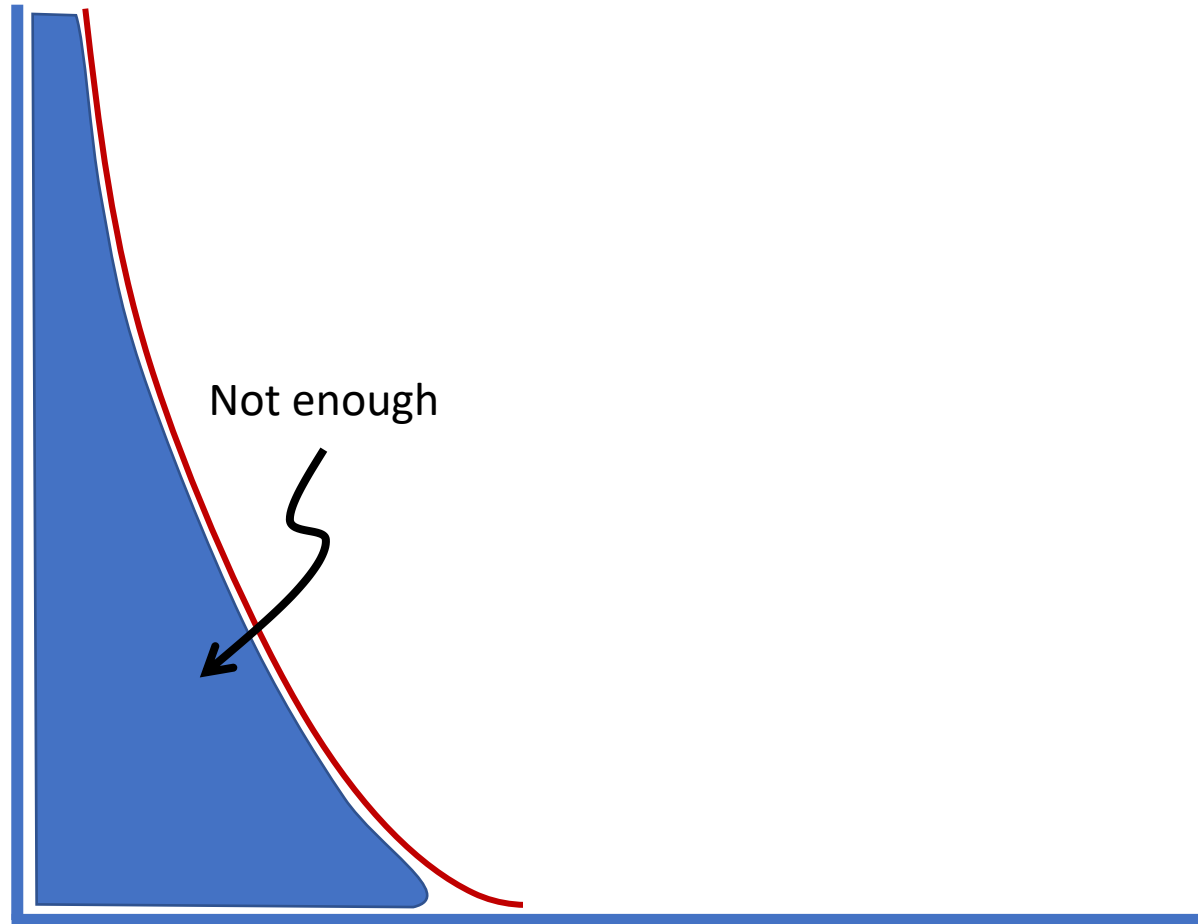
Feasibility
(and number)
of interventions

Effectiveness
(and systemic disruptiveness)
of interventions

*The area under the curve corresponds to the **total potential effectiveness** of all feasible interventions in our current world.*

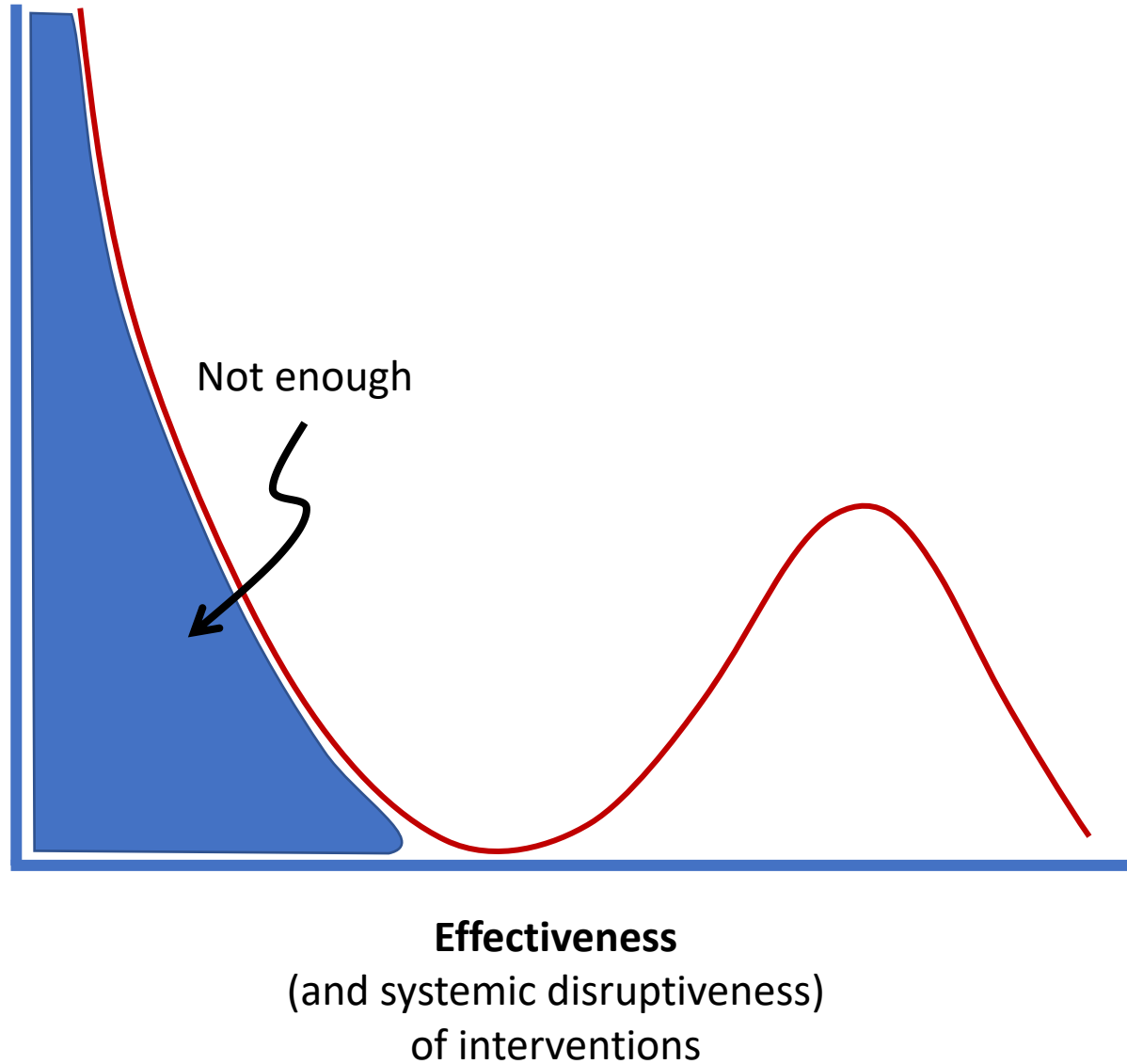**Feasibility**
(and number)
of interventions

Not enough

Effectiveness
(and systemic disruptiveness)
of interventions

But perhaps we're missing something.

Feasibility
(and number)
of interventions

Interventions in the
adjacent possible →
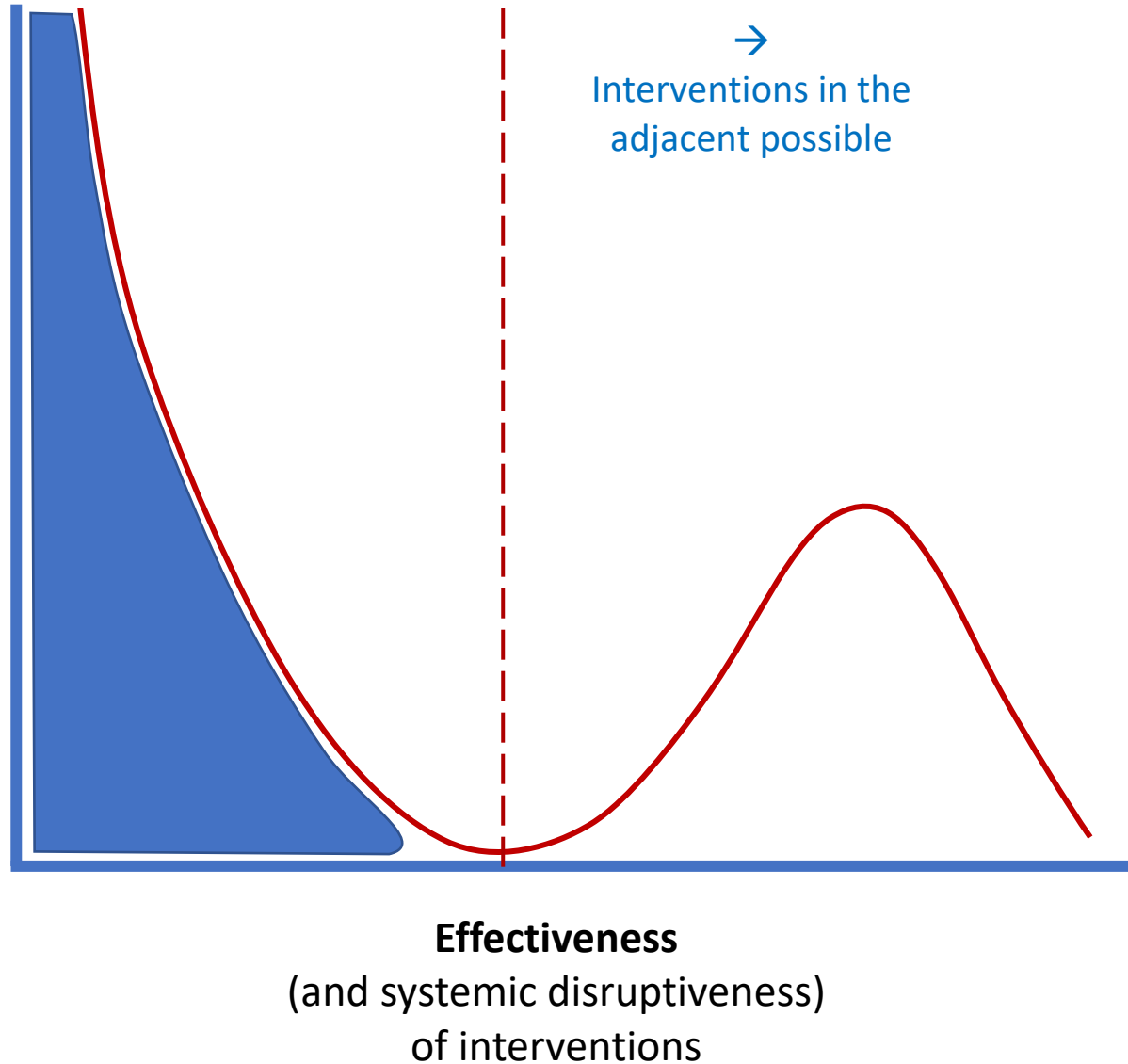
Perhaps additional
effective interventions lie
beyond the boundary of
what we currently
recognize as possible—in
a zone called the
"adjacent possible."

Effectiveness
(and systemic disruptiveness)
of interventions

Feasibility
(and number)
of interventions

System
reconfiguration
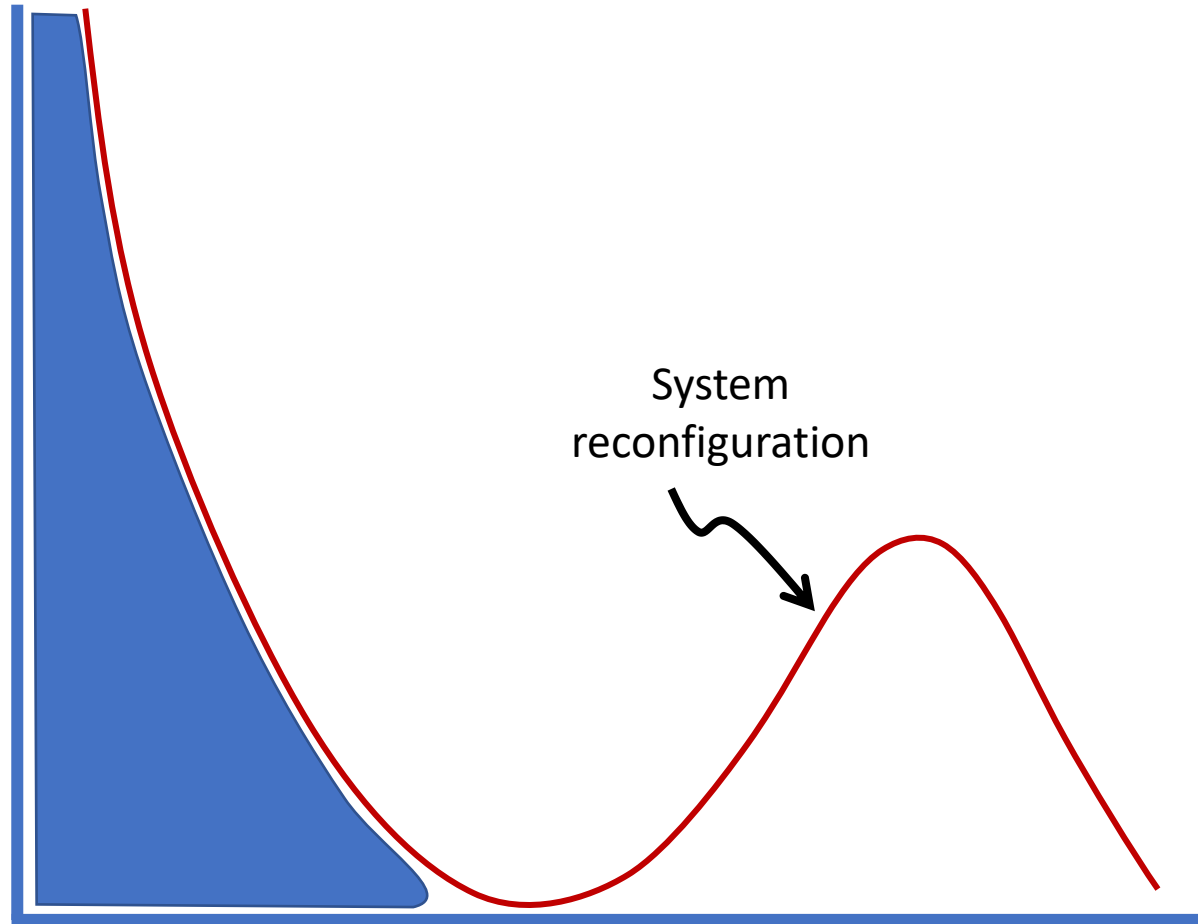
Effectiveness
(and systemic disruptiveness)
of interventions

These currently unrecognized interventions will become possible as societies—their worldviews, institutions, and technologies—reconfigure themselves in response to today's converging environmental, economic, social, and technological stresses.

Feasibility
(and number)
of interventions

Effectiveness
(and systemic disruptiveness)
of interventions

Perhaps enough,
when combined

And together, those newly feasible interventions, along with the ones we're implementing today, may be enough.
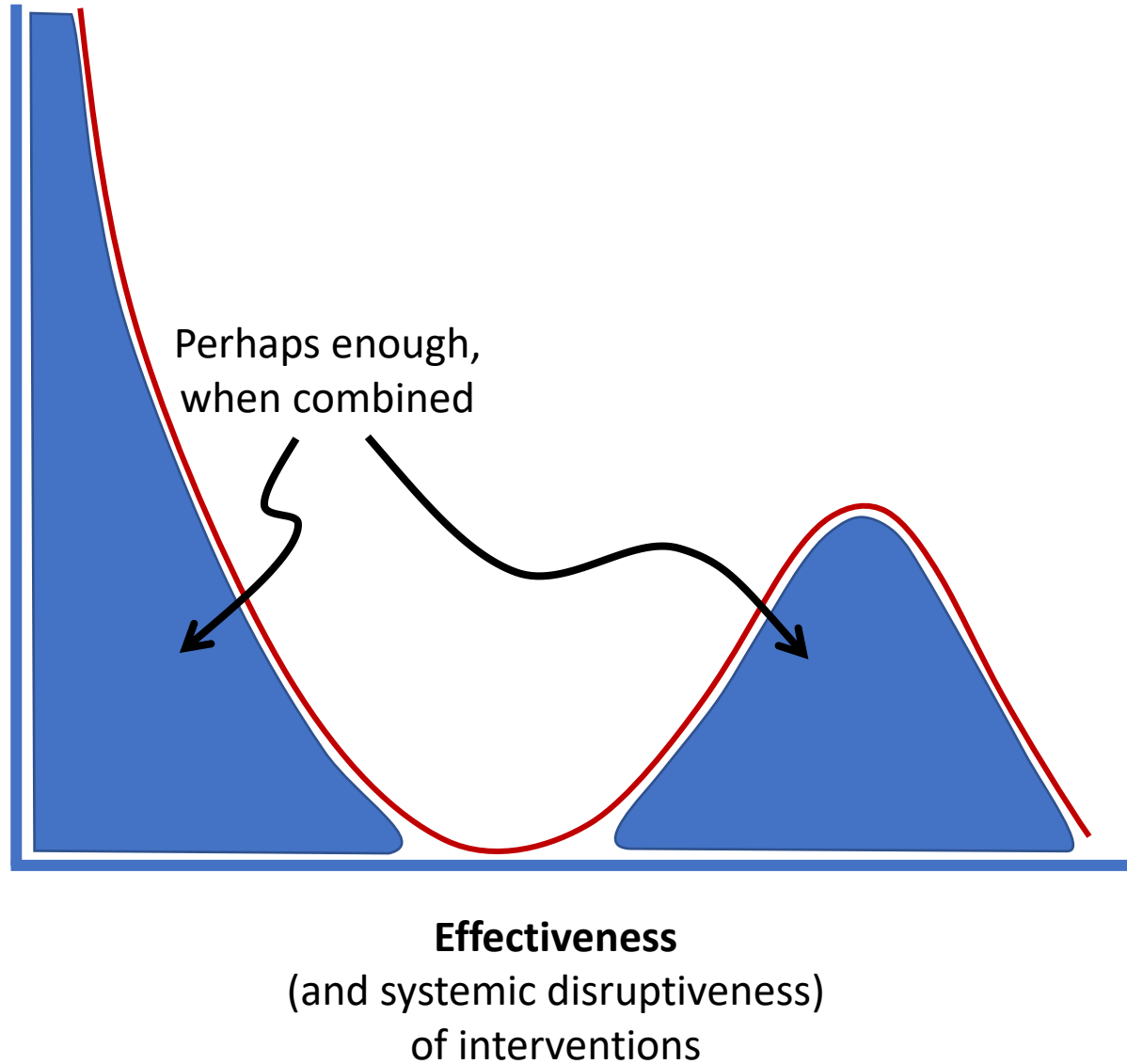
Feasibility (and number) of interventions

Effectiveness (and systemic disruptiveness) of interventions

We focus here

The Cascade Institute's mandate is to identify these interventions in the adjacent possible and make them real.

Feasibility (and number) of interventions
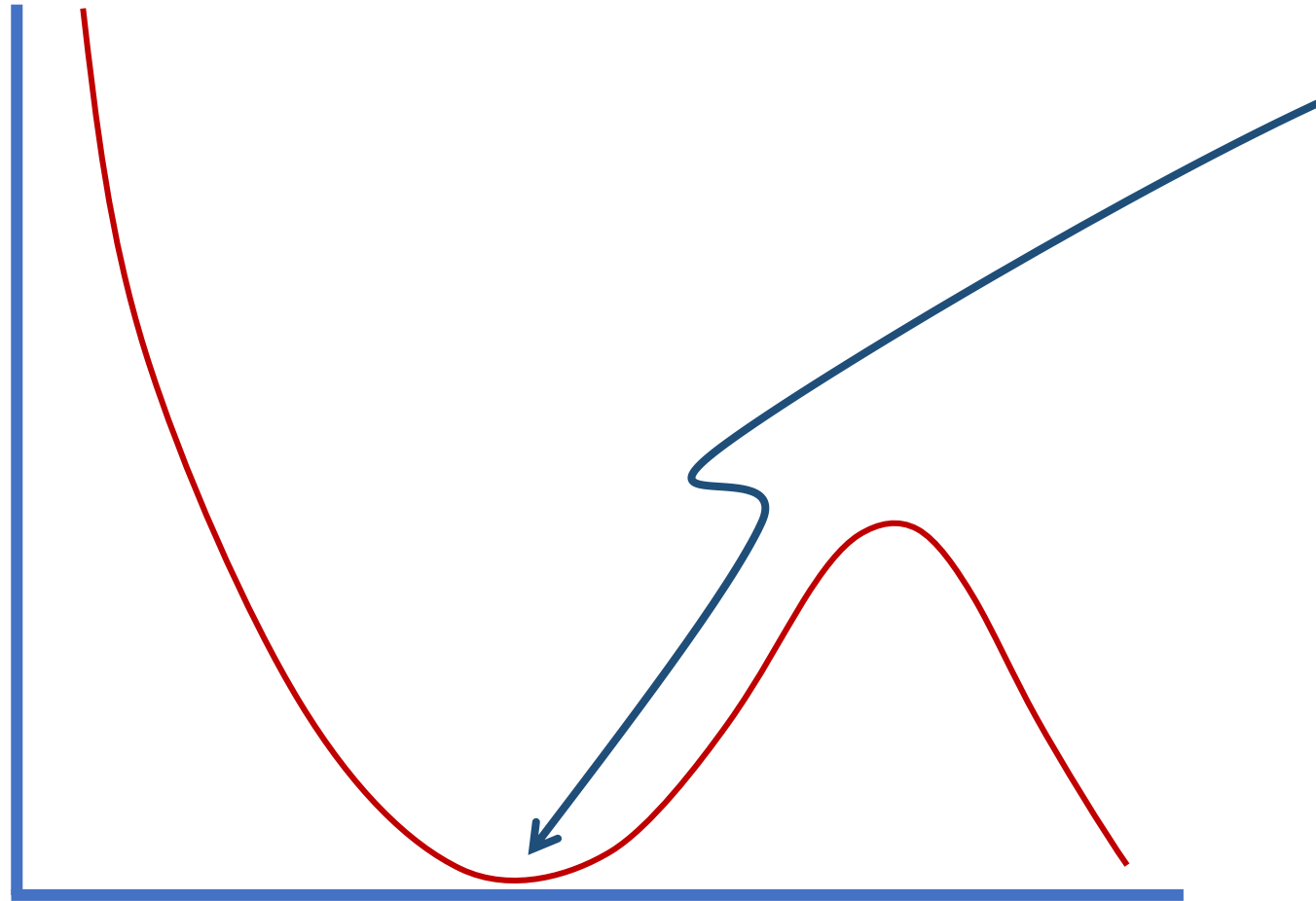
Effectiveness (and systemic disruptiveness) of interventions

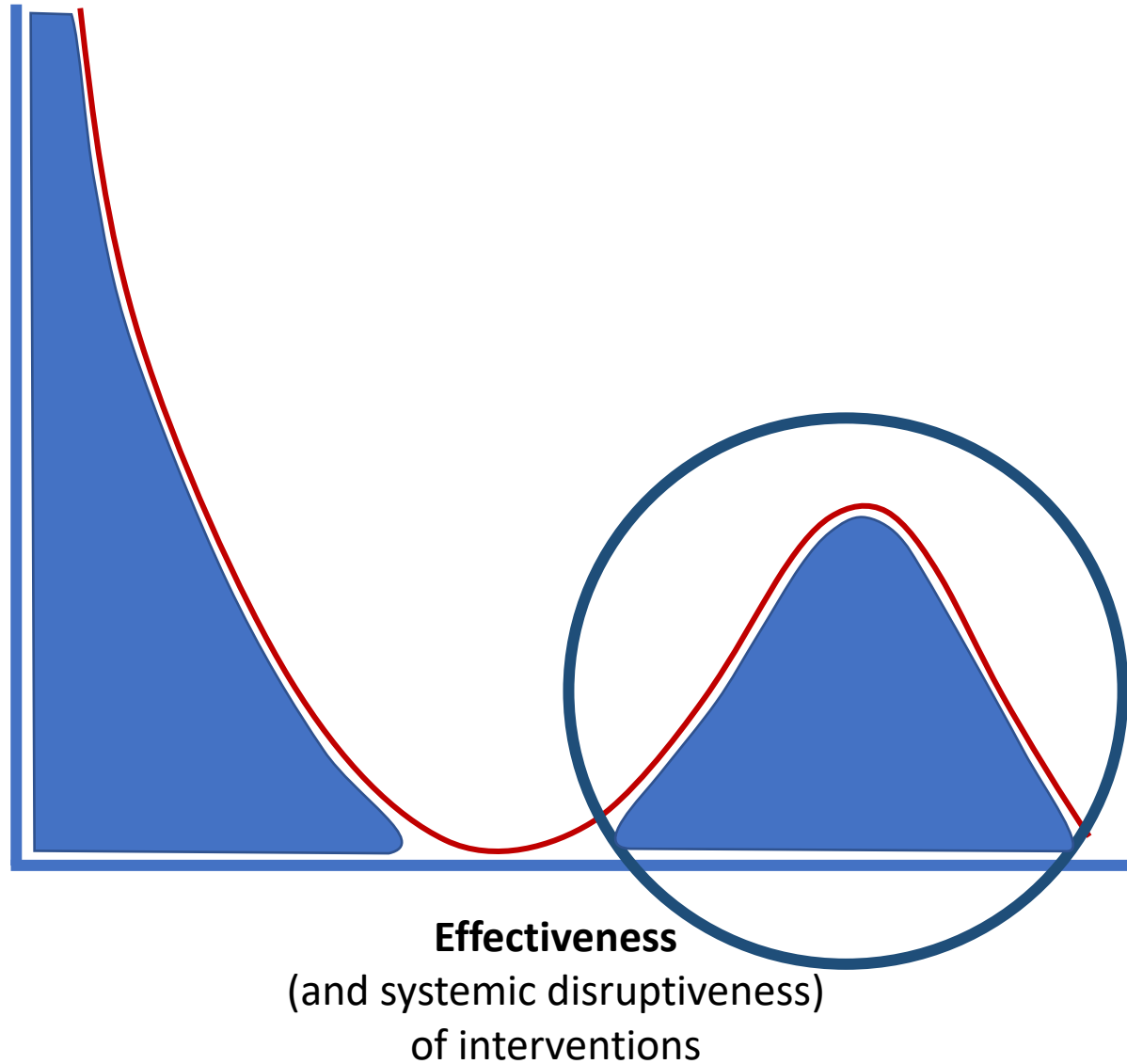*But why does feasibility fall to zero at the mid-range of effectiveness?*

Let's turn the curve upside down to see.

Feasibility
(and number)
of interventions
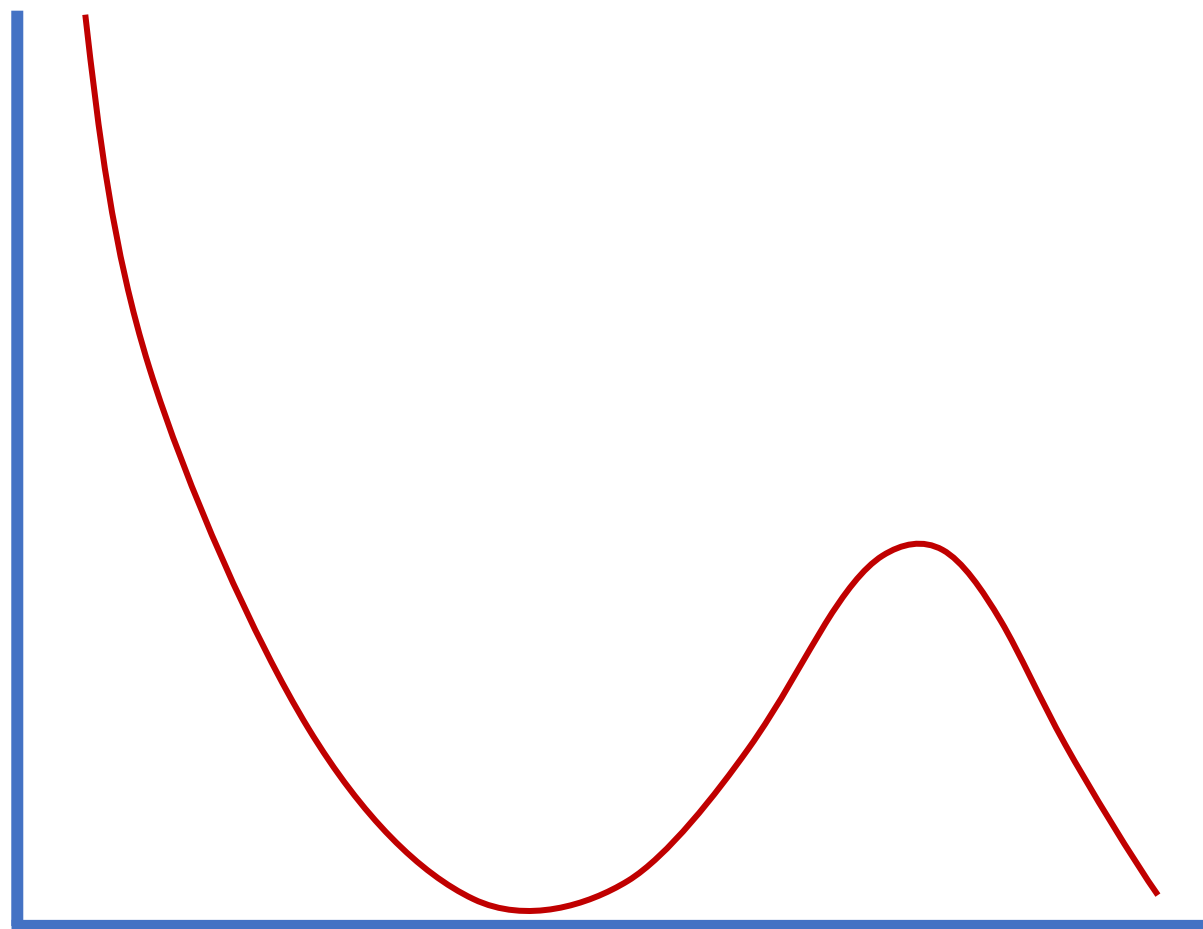
Effectiveness
(and systemic disruptiveness)
of interventions

Rotate curve
vertically
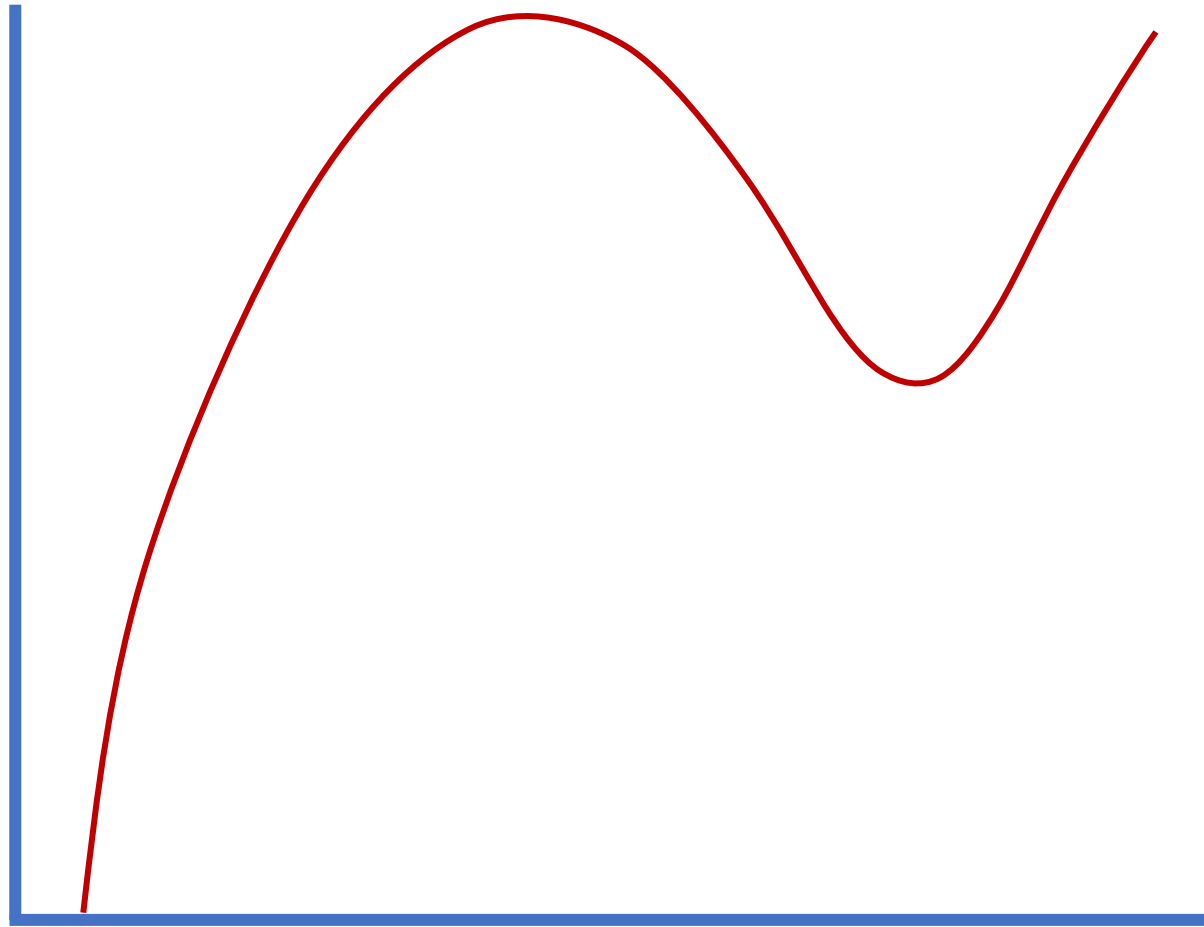
By flipping the curve upside down, we've shifted our focus from the feasibility and effectiveness of solutions within society to the changing states of society itself.

Disruption
(difference from current social configuration)
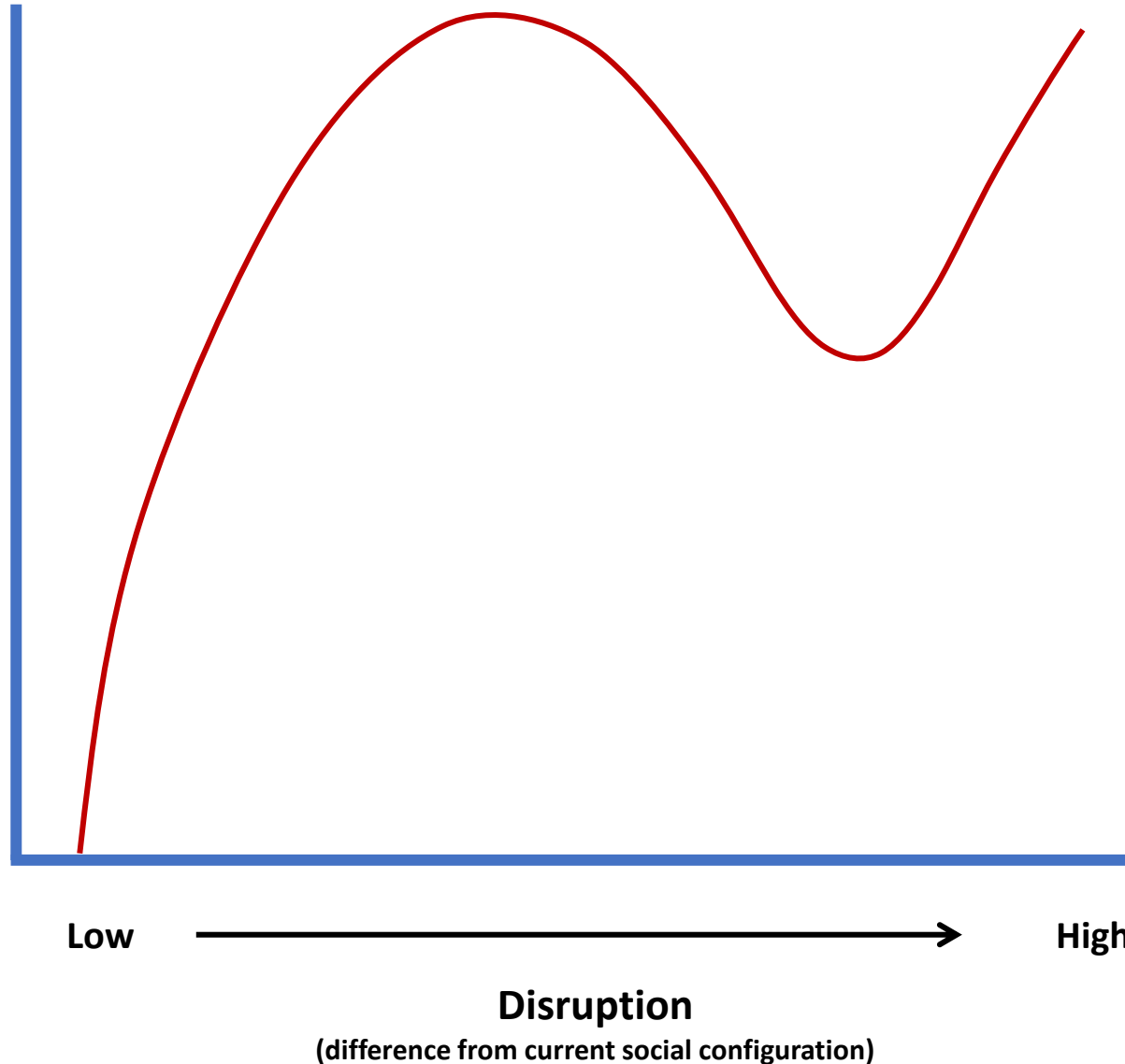
The bottom axis still represents disruption. But now, instead of the degree of disruption induced by a discrete intervention, it's the total disruption of society by all destabilizing forces.

The further right on the axis, the more our society's configurations of worldviews, institutions, and technologies differ from configurations today.

Low ⟶ High

High

Instability
(susceptibility to
nonlinear change)

Low

Low ——————————————→ High

Disruption
(difference from current social configuration)
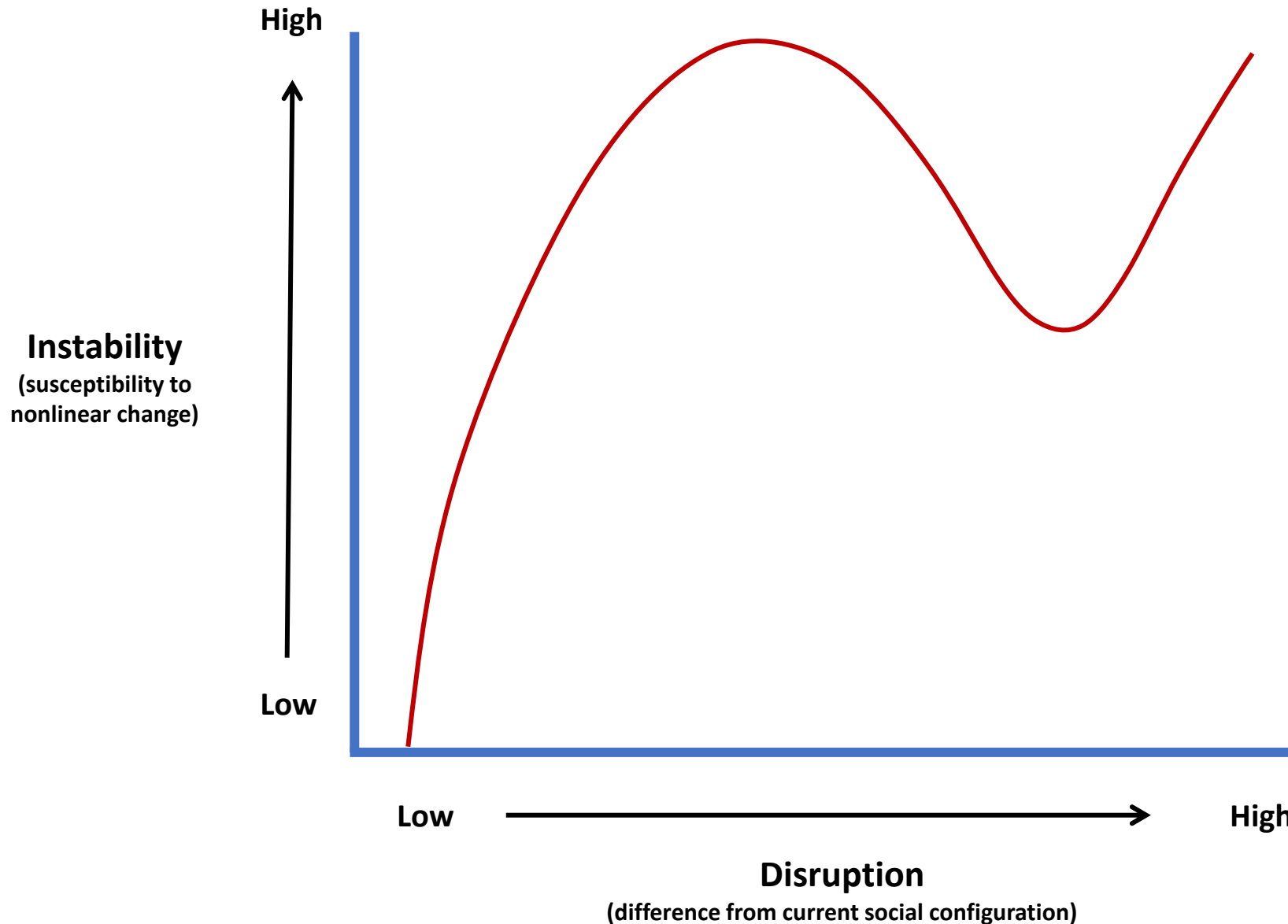
The left axis now represents societal instability, rising from bottom to top.

The closer to the top, the more unstable are our society's configurations. (Technically, this means they're more susceptible to nonlinear change, so a small push can cause an enormous response).

Instability
(susceptibility to
nonlinear change)

High

Low

Low   High

Disruption
(difference from current social configuration)
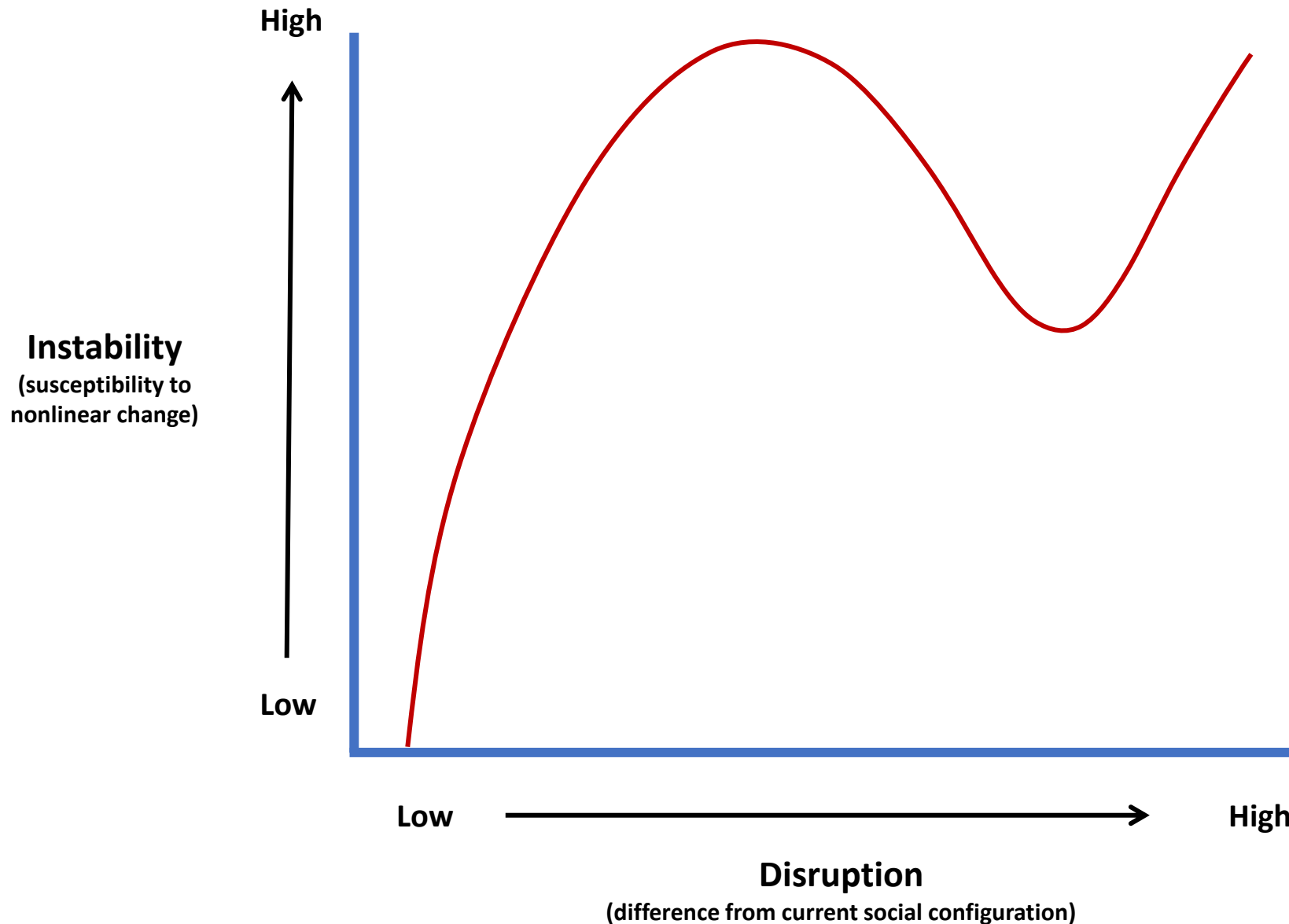
The curve is an example of what complexity scientists call a "stability landscape."

Complexity scientists use stability landscapes to understand how complex systems like an economy or Earth's climate move between stable states, or "equilibria."

High

Instability
(susceptibility to
nonlinear change)

Low

Low ⟶ High

Disruption
(difference from current social configuration)
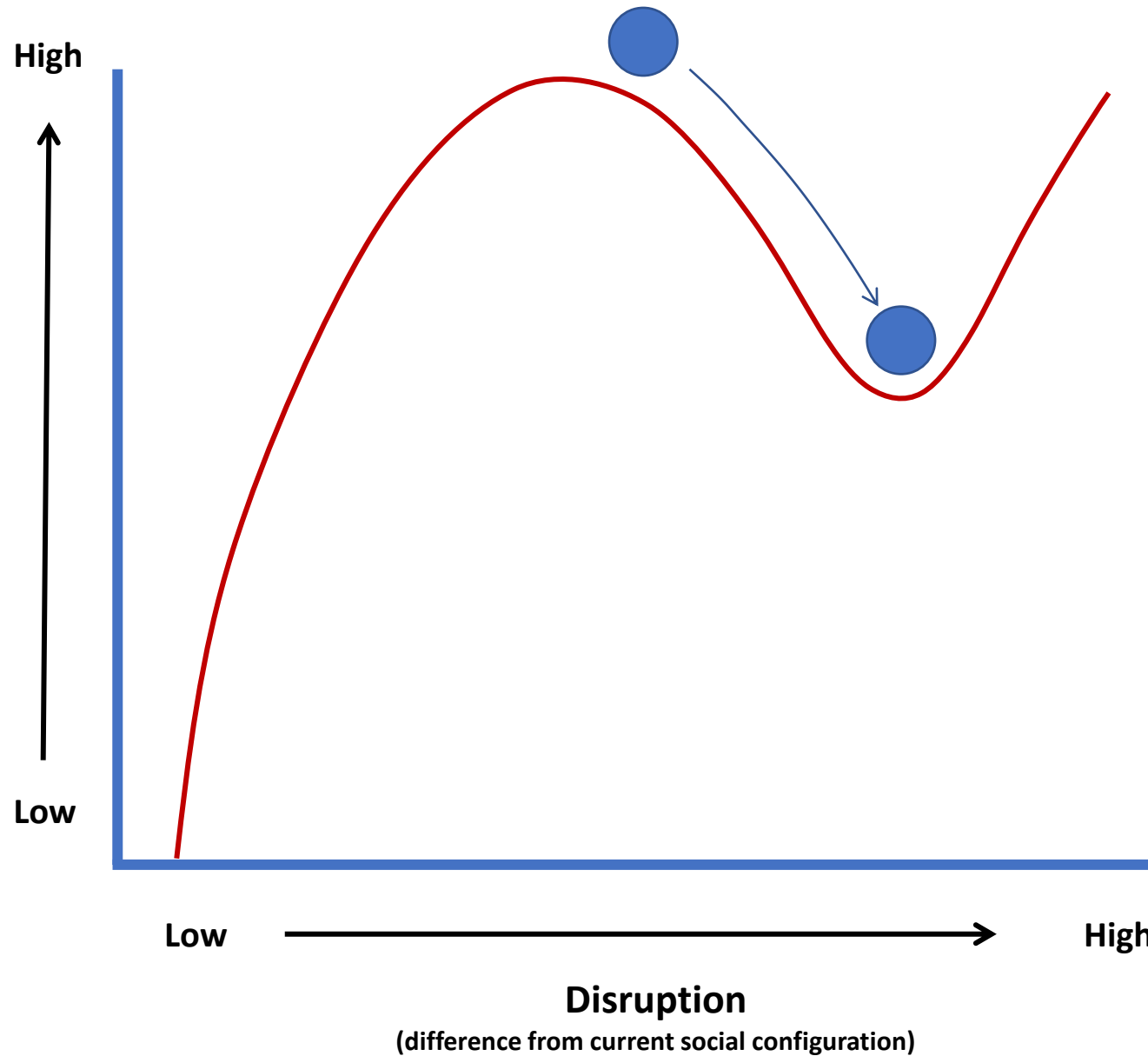
A system's overall state is represented by a ball on the landscape. The ball rolls towards a low point, or "basin of attraction," where it's more stable.

Instability
(susceptibility to nonlinear change)

High

Low

Disruption
(difference from current social configuration)

Low   High
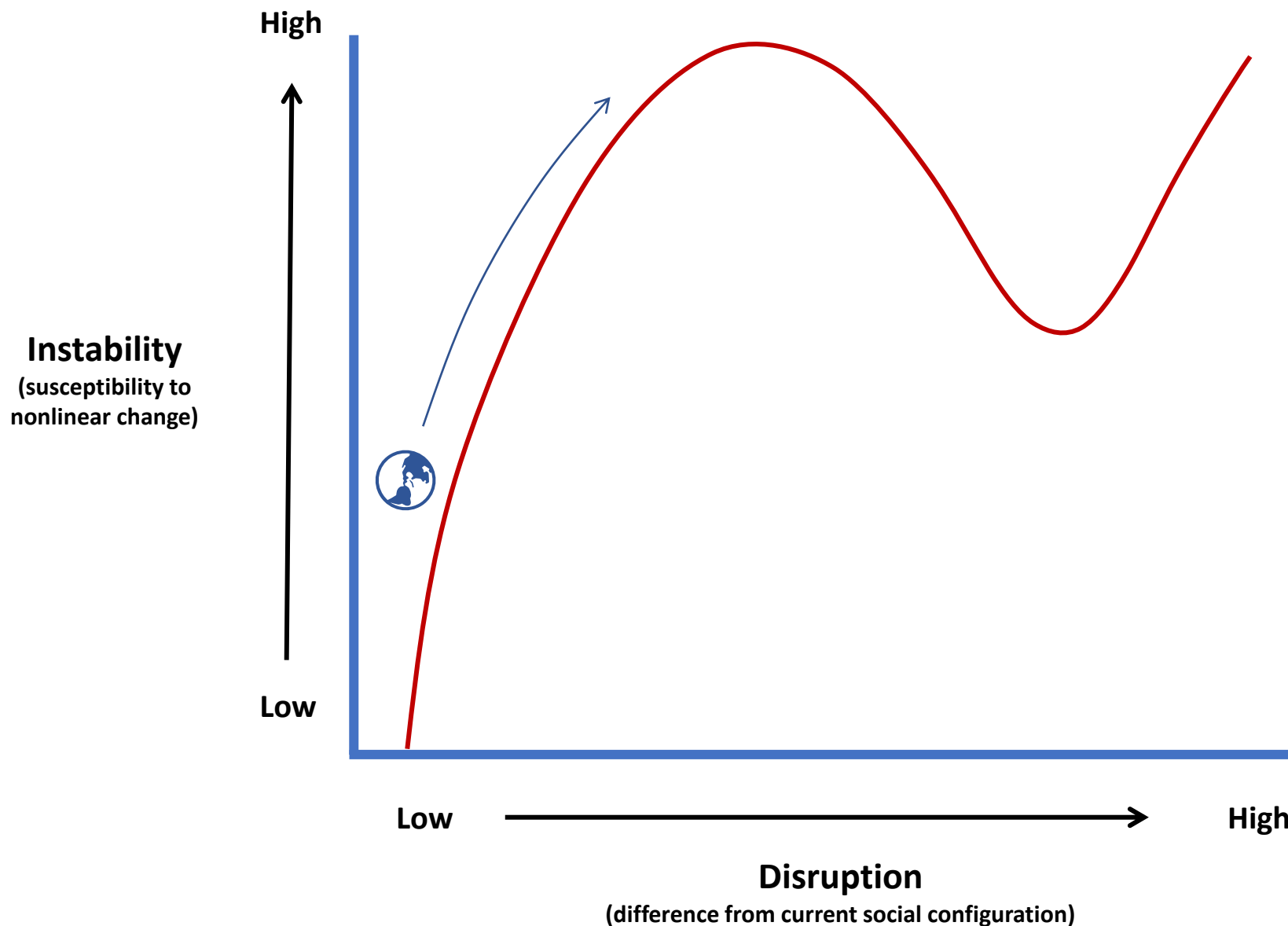
Our societies are currently in a basin on the left side. But multiple crises, like pandemics, war, economic crisis, and extreme climate events, are disrupting them and propelling them up the basin's side.

Instability
(susceptibility to nonlinear change)

High

Low

Disruption
(difference from current social configuration)

Present → Future
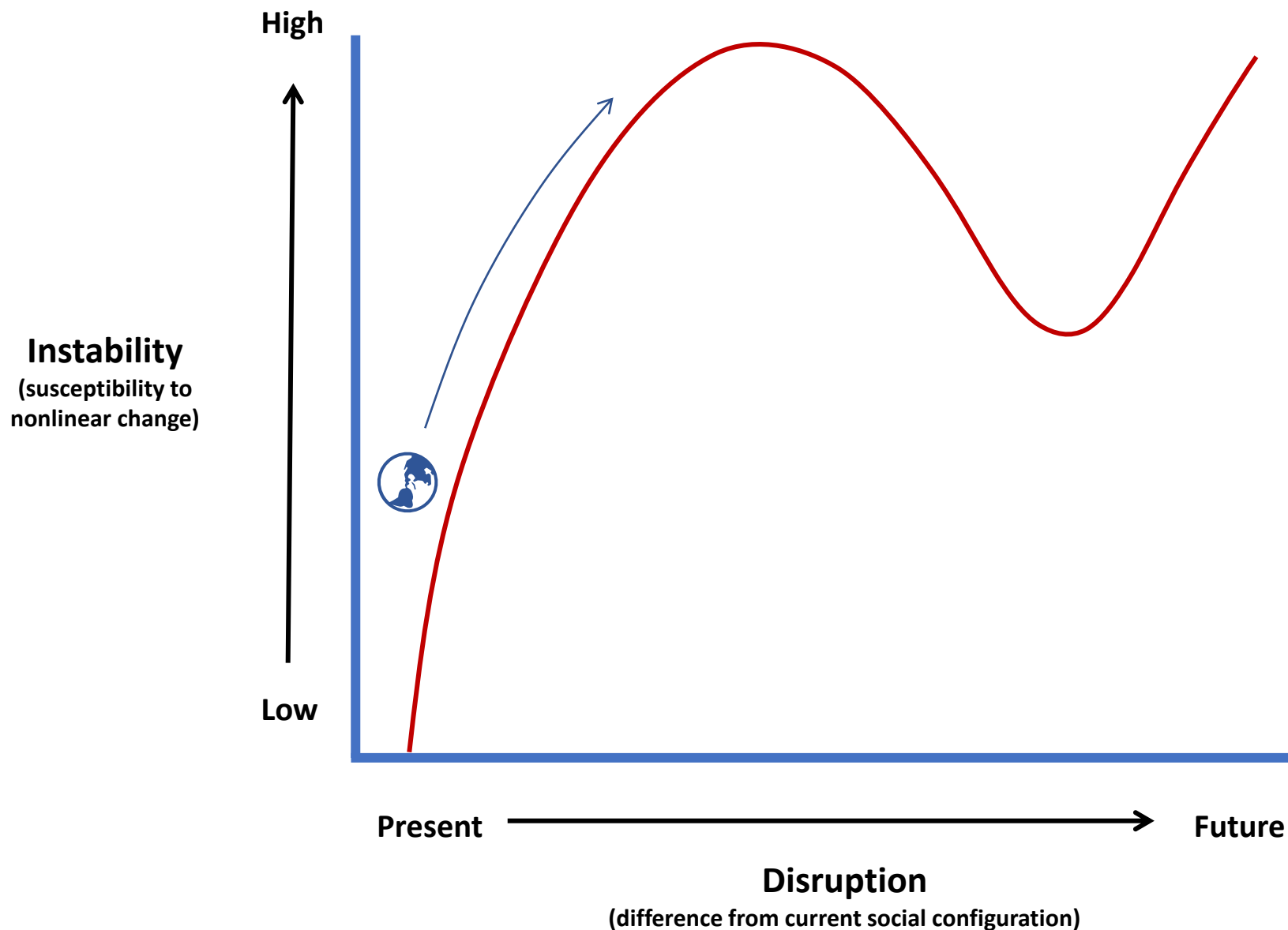
And because we aren't effectively intervening to reduce the stresses driving these crises—that is, because we aren't "getting to enough"—they're becoming steadily more severe.

So the degree of "Disruption" our societies are experiencing is rising with the passage of time from the present into the future.

Instability
(susceptibility to nonlinear change)

High

Low

Disruption
(difference from current social configuration)

Present → Future
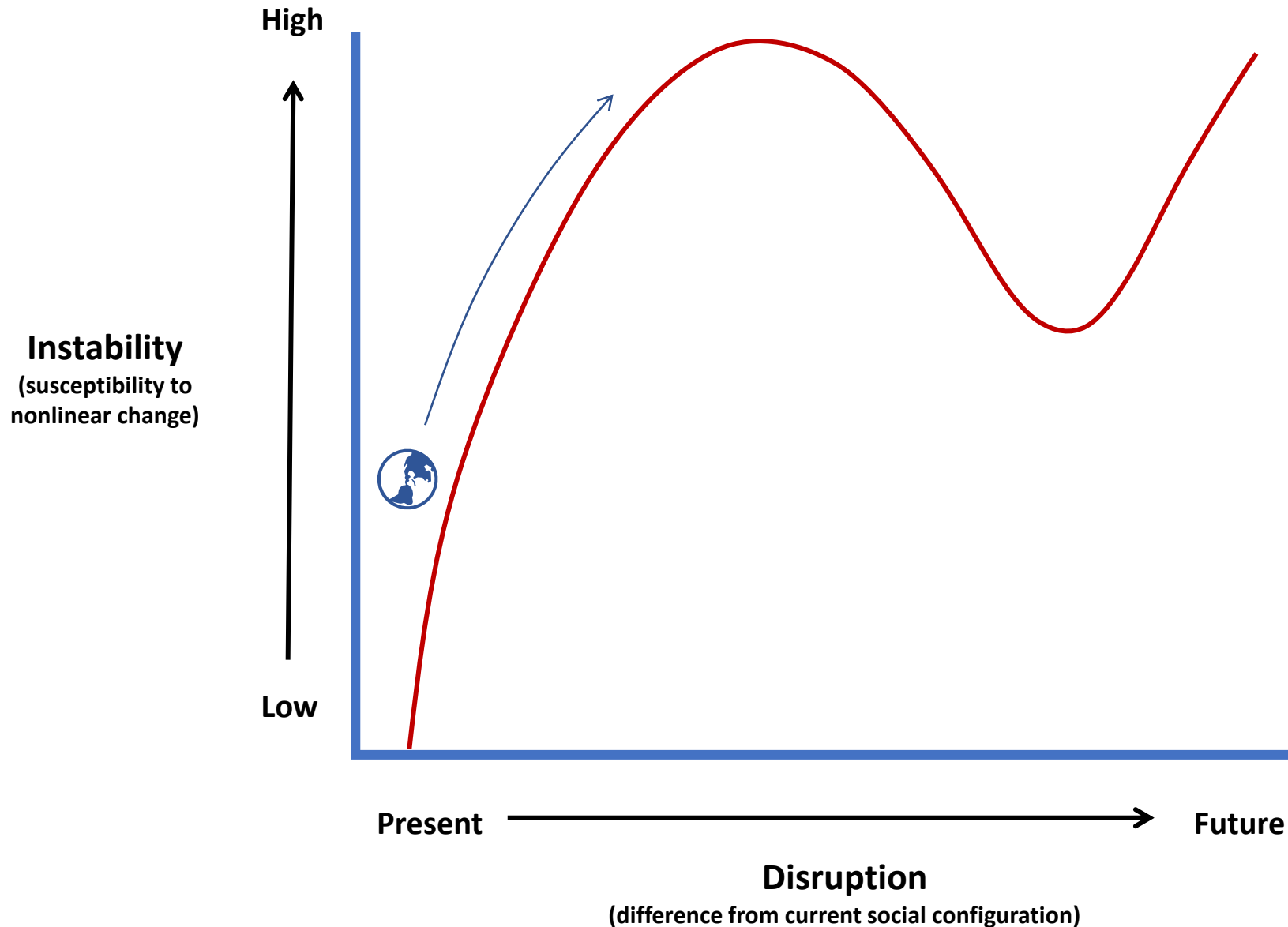
The Institute's "Global Polycrisis" project is working to identify the factors driving our societies out of their current basin of attraction, especially those factors contributing to the synchronization of crises across global systems.

Instability
(susceptibility to nonlinear change)

High

Low

System reconfiguration

Present ⟶ Future

Disruption
(difference from current social configuration)
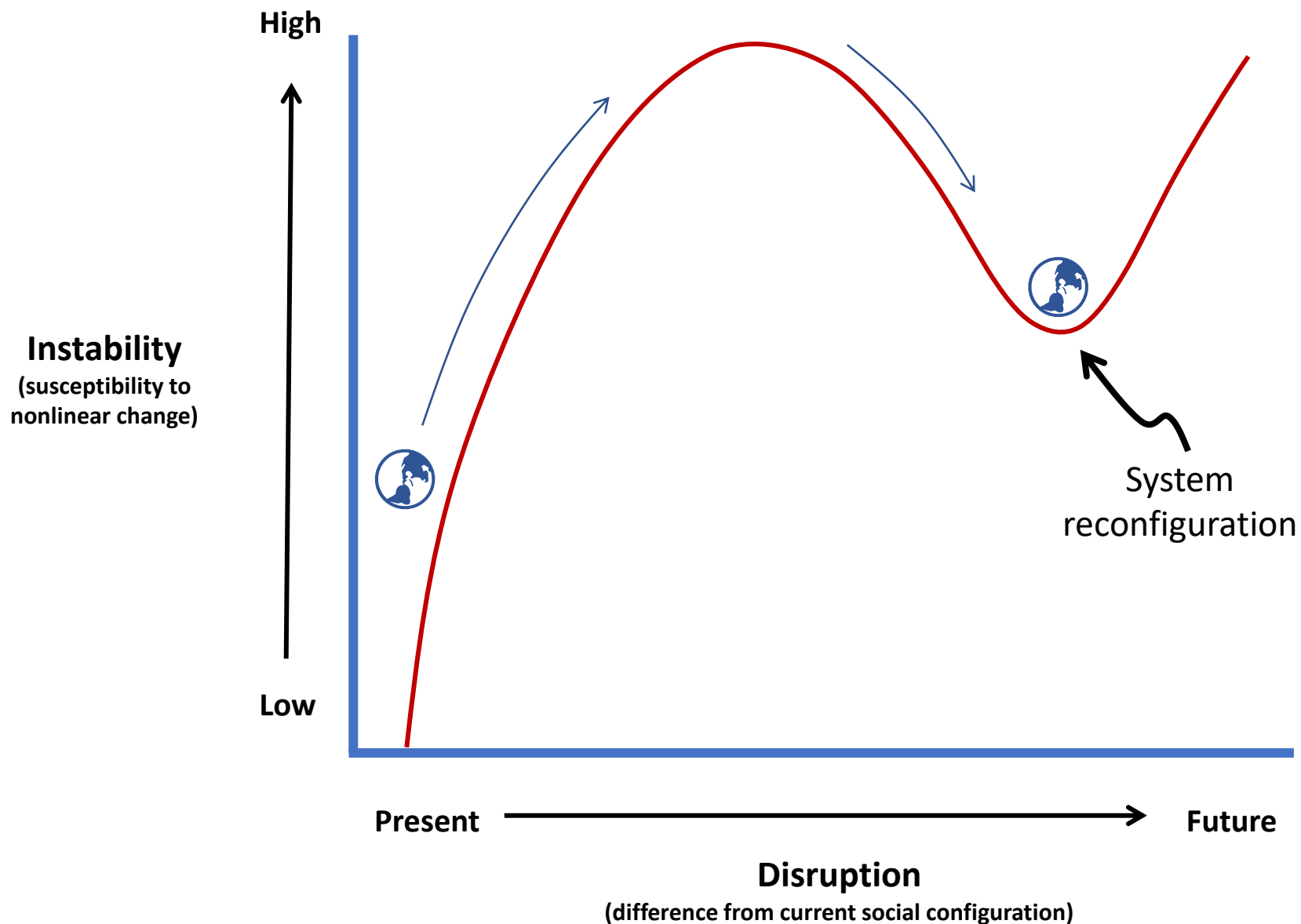
Beyond a certain level of disruption, our societies' worldviews, institutions, and technologies will "flip" to a new stable state, a new basin of attraction. (The zone at the top of the hump represents a period of extreme instability between the two states.)

This reconfiguration could allow for much more effective interventions, as shown in the earlier slides.

Instability
(susceptibility to nonlinear change)

High

Low

System reconfiguration

Present → Future

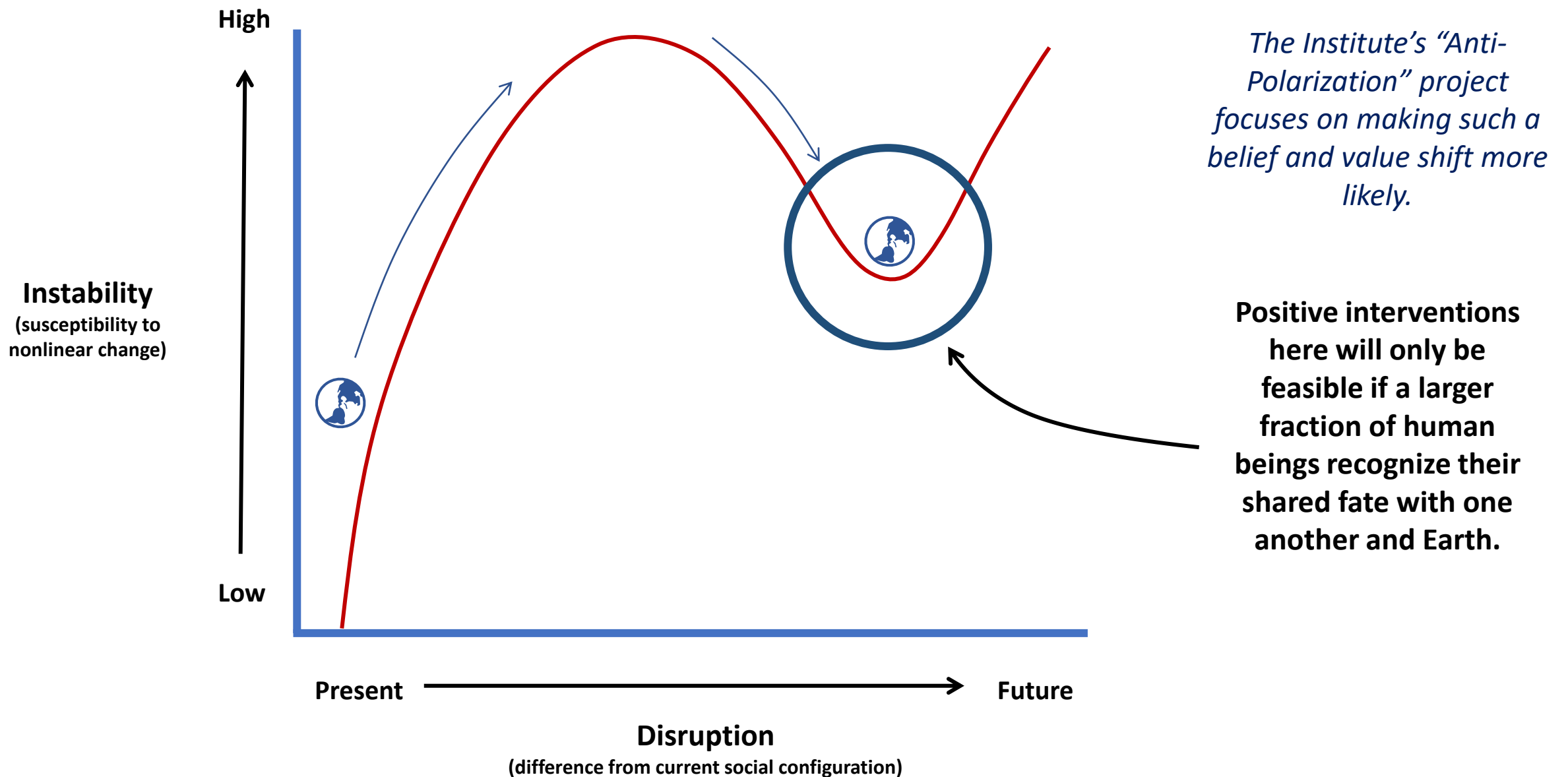**Disruption**
(difference from current social configuration)
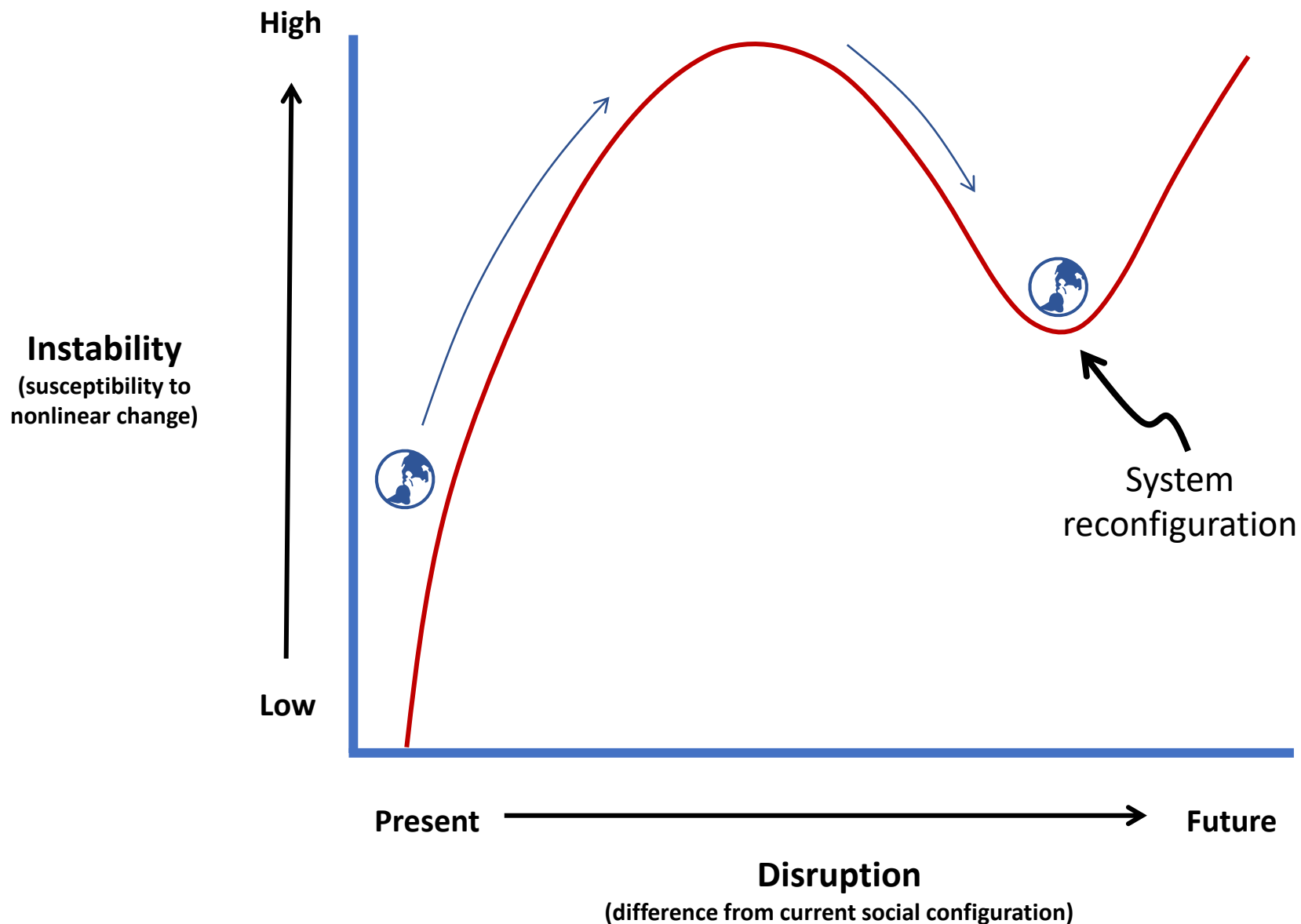
But we'll achieve this positive outcome only if we don't end up at each others' throats. As our societies face converging stresses and multiple crises, the degree to which human beings recognize their shared fate on Earth will largely determine whether we fight each other or collaborate to solve our common problems.

High

Instability
(susceptibility to nonlinear change)

Low

The Institute's "Anti-Polarization" project focuses on making such a belief and value shift more likely.

Positive interventions here will only be feasible if a larger fraction of human beings recognize their shared fate with one another and Earth.

Present ——————————————▶ Future

Disruption
(difference from current social configuration)

High

Instability
(susceptibility to
nonlinear change)

Low

Present → **Future**

Disruption
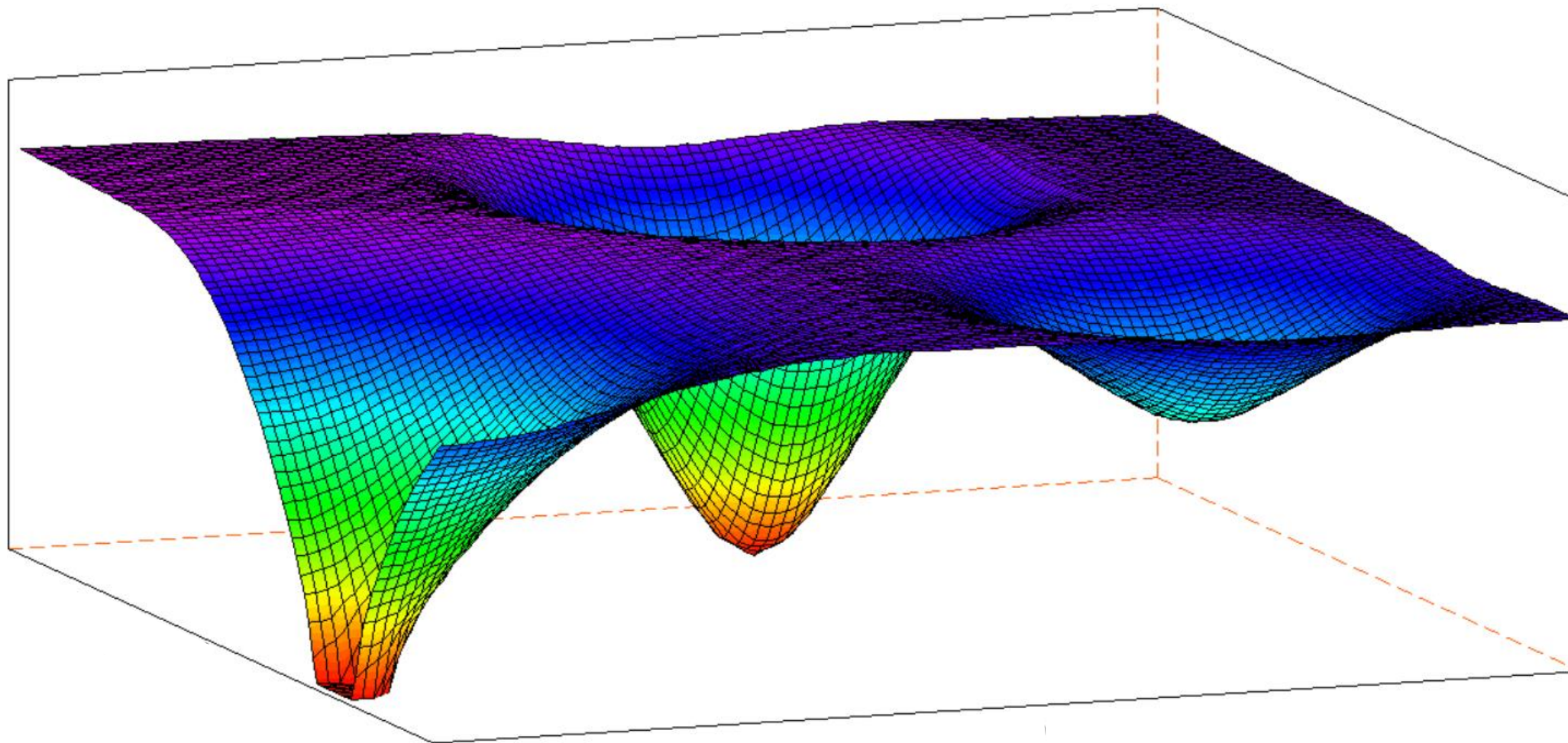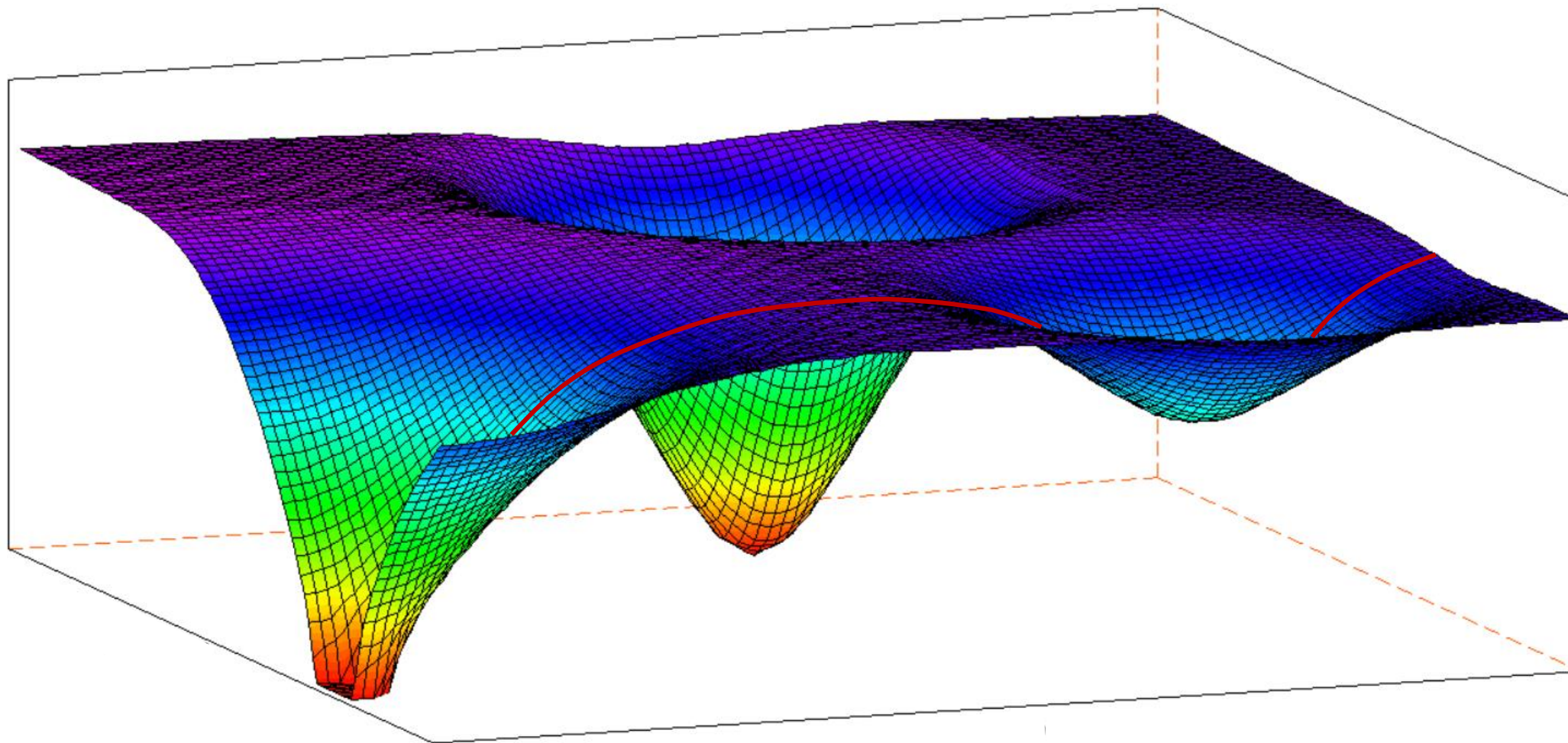(difference from current social configuration)

But there's still more to this story.

This curve represents a two-dimensional "slice" through a three-dimensional energy landscape—a landscape that reveals the choice humanity faces between good and terrible futures.
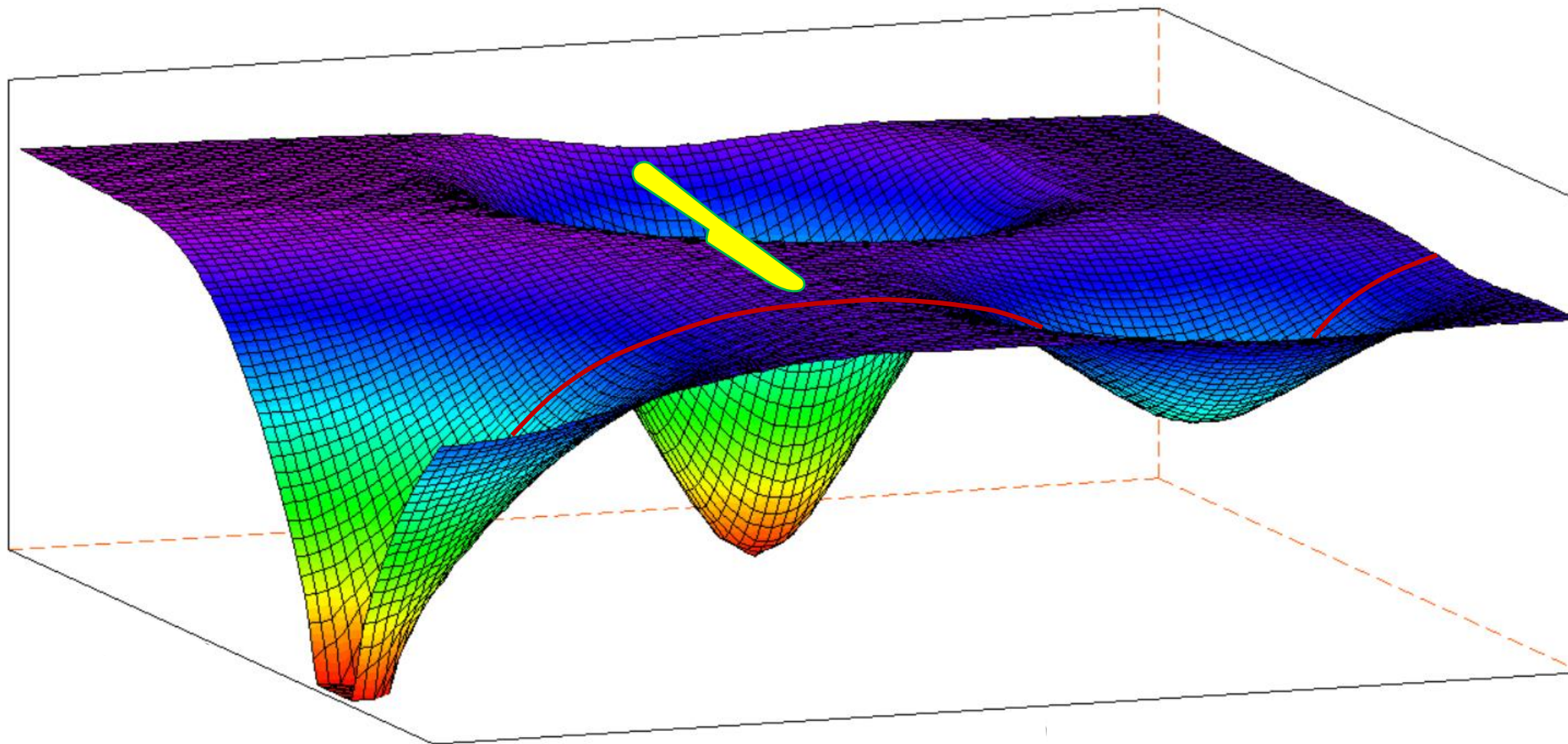
.

It looks something like this.

The previous curve is shown superimposed on the landscape. It runs left to right through the lowest points of the two front basins.

Imagine a knife slicing through the landscape along the red line. The front edge of the landscape would then have the same shape as the curve.
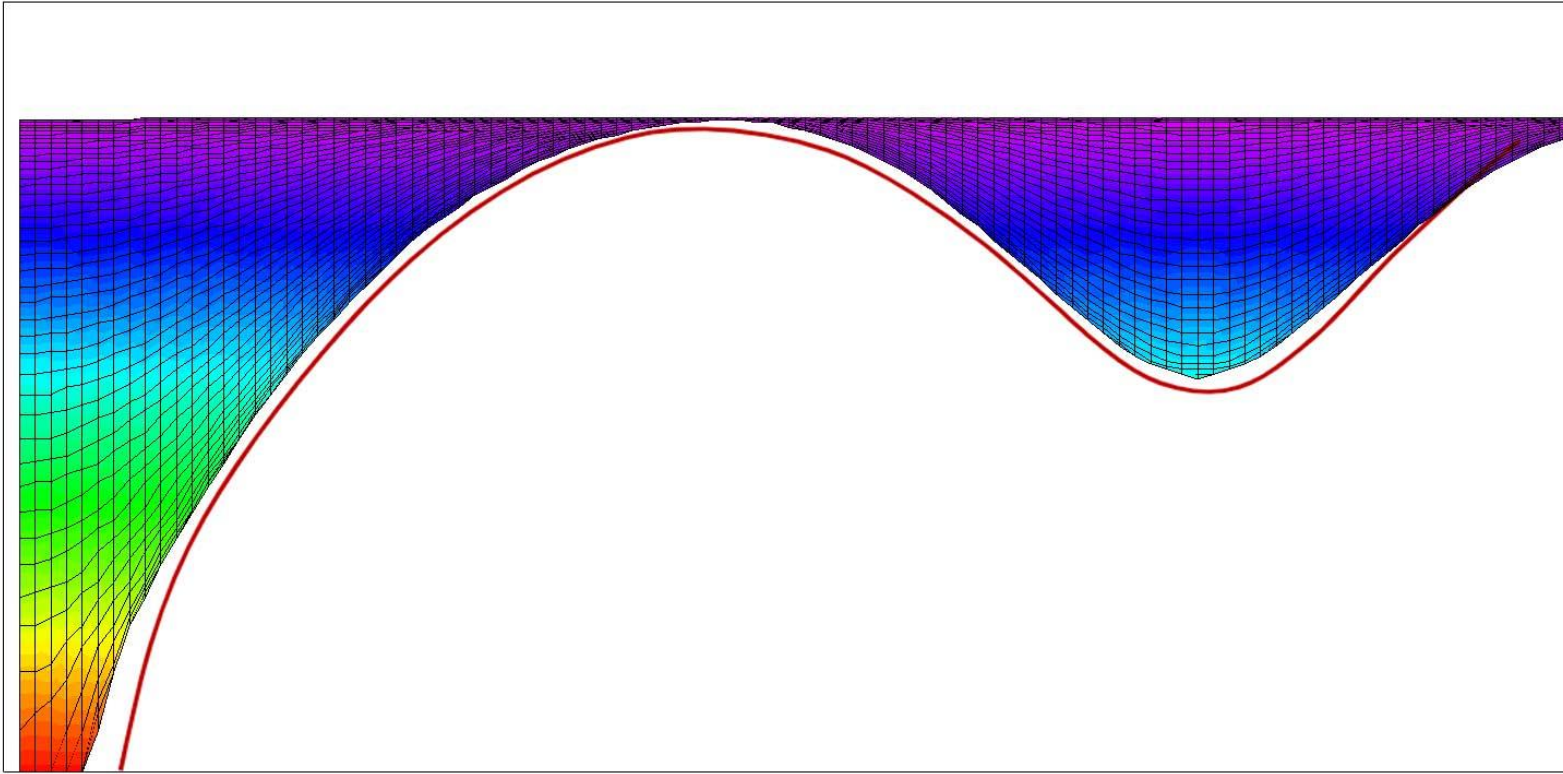
As we see here.

The dimension along the front of this three-dimensional landscape remains "Disruption."

Future

Present

Disruption
(difference from current social configuration)
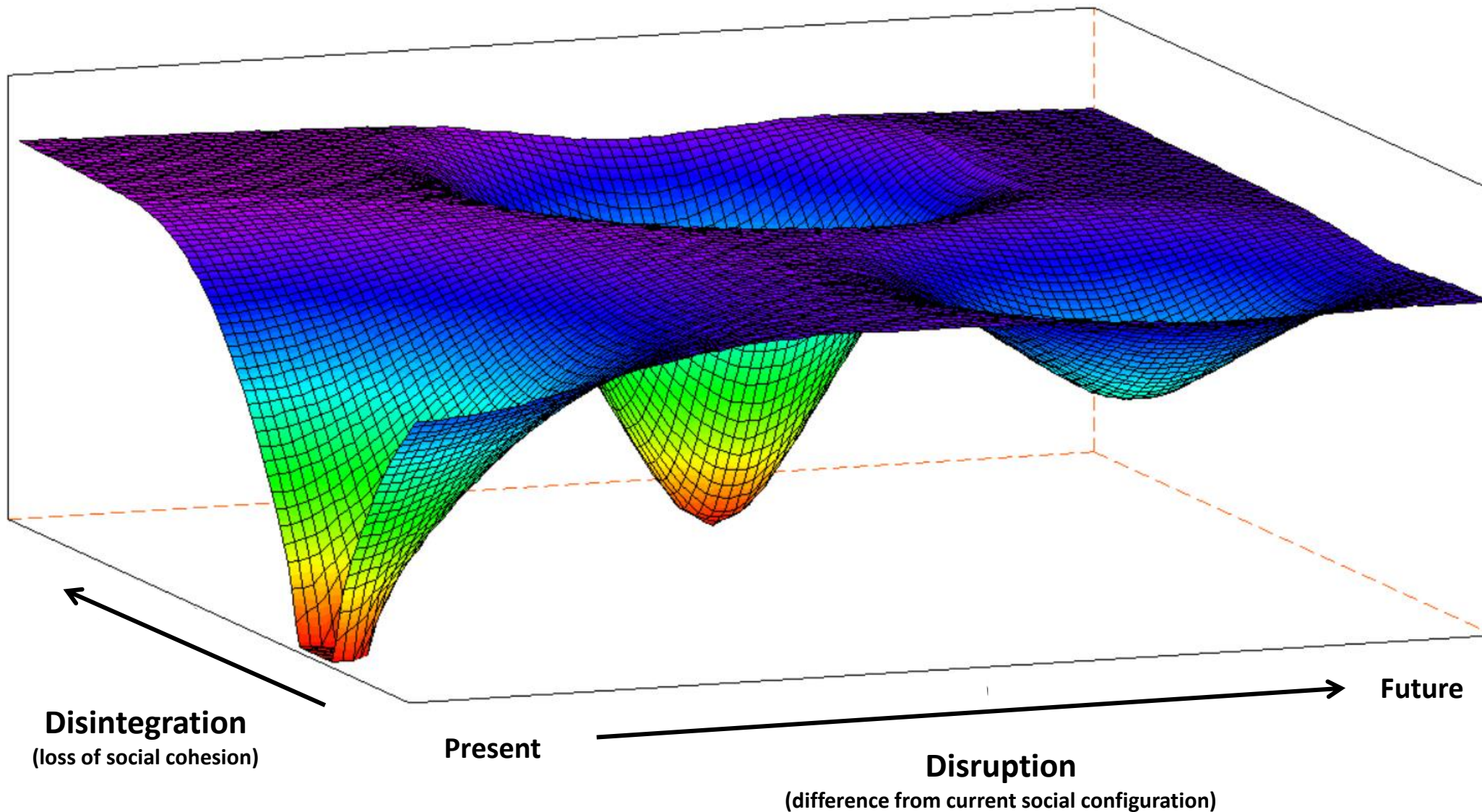
The dimension along the left side is new. It represents "Disintegration," or decreasing social cohesion, including loss of interpersonal and intergroup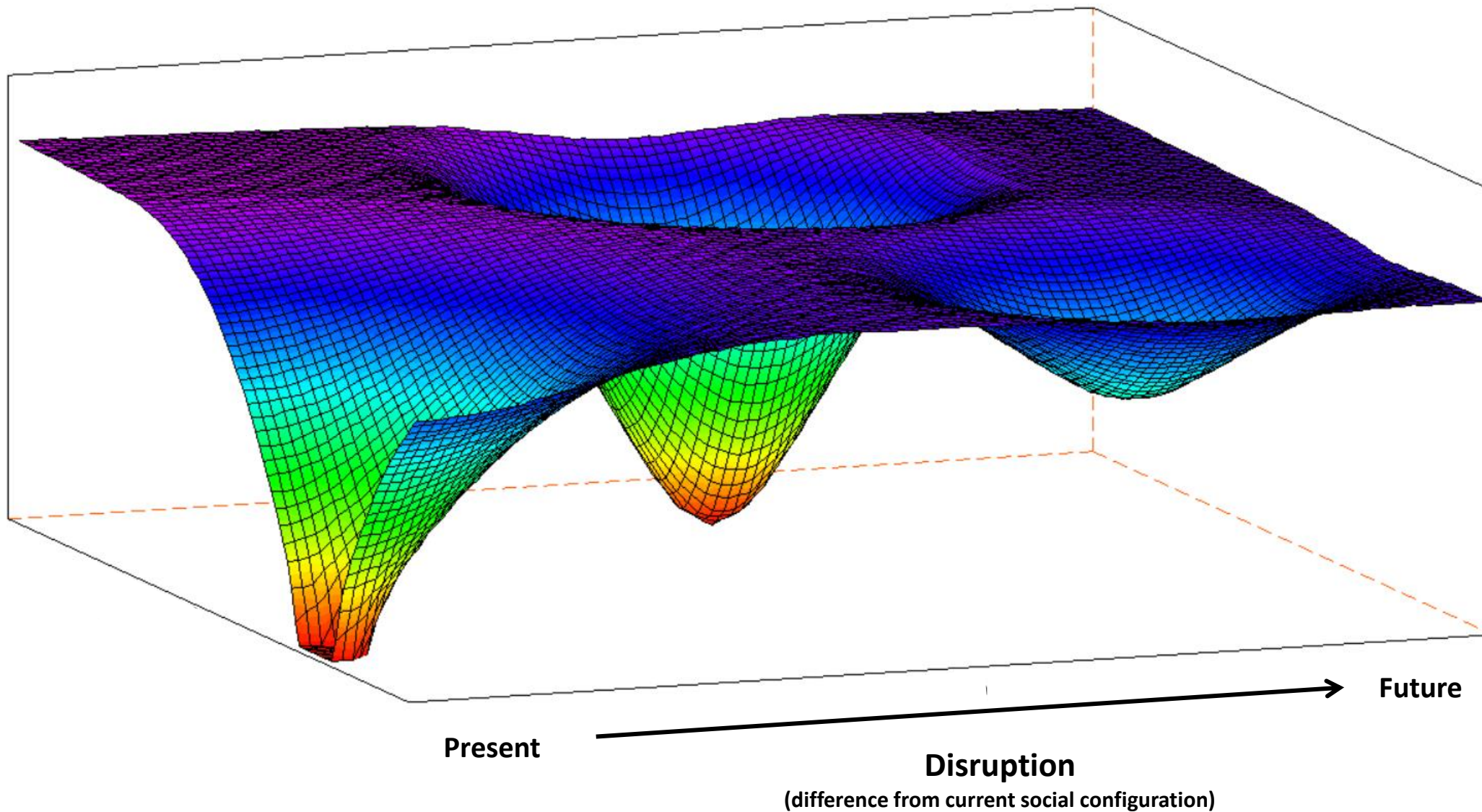 trust, loss of normative consensus across groups, institutional breakdown, and increasing interpersonal and intergroup violence.

Disintegration
(loss of social cohesion)

Present

Future

Disruption
(difference from current social configuration)

Instability
(susceptibility to nonlinear change)

Disintegration
(loss of social cohesion)

Present

Future

Disruption
(difference from current social configuration)

The vertical dimension is again "Instability."

Instability
(susceptibility to nonlinear change)

Disintegration
(loss of social cohesion)

Present

Future

Disruption
(difference from current social configuration)
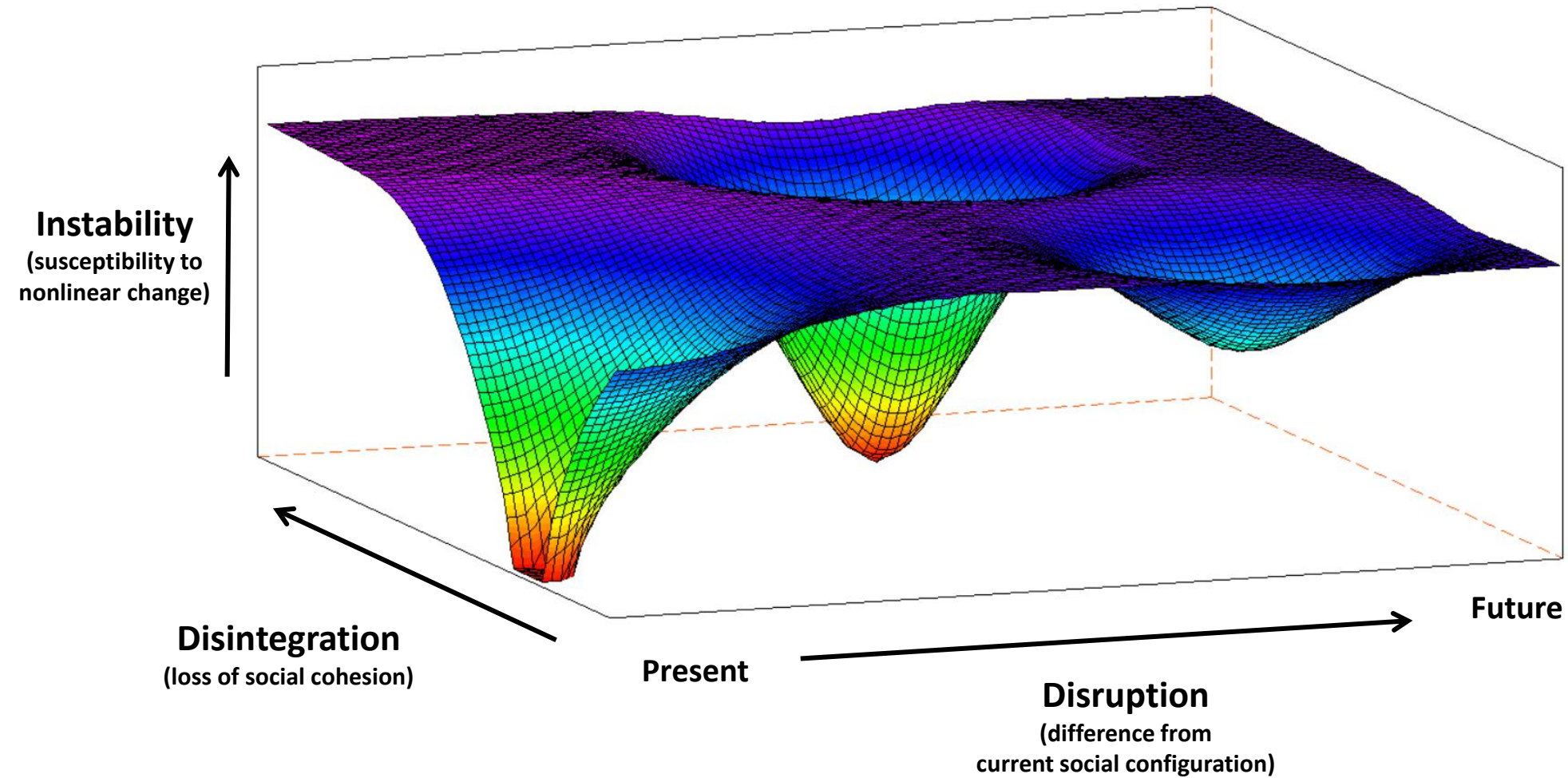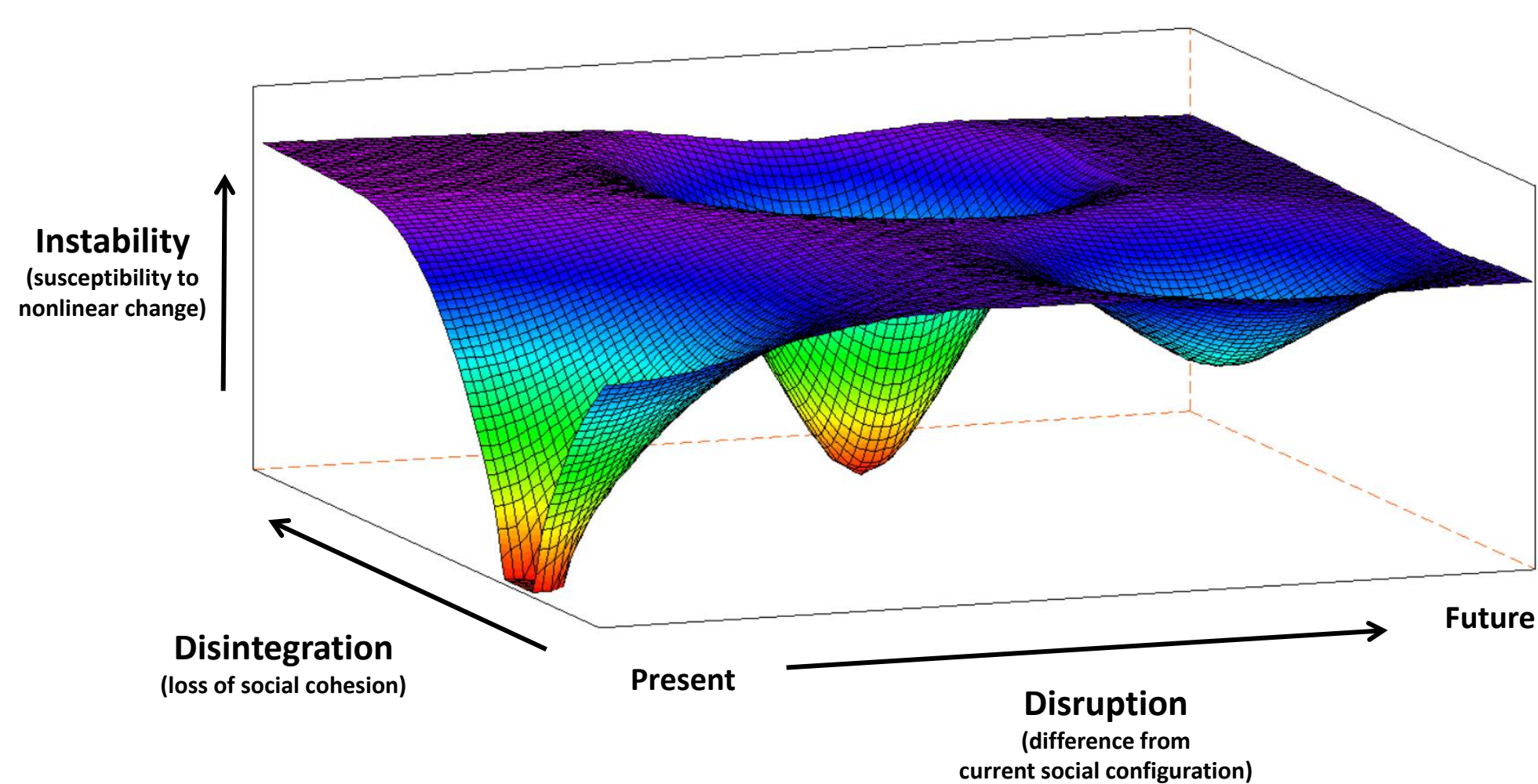
Disruption, disintegration, and instability are three causally distinct variables. So it's quite possible to have a situation of stable disintegration, as represented by the larger basin of attraction at the back.

Instability
(susceptibility to nonlinear change)

Disintegration
(loss of social cohesion)

Present

Future

Disruption
(difference from current social configuration)
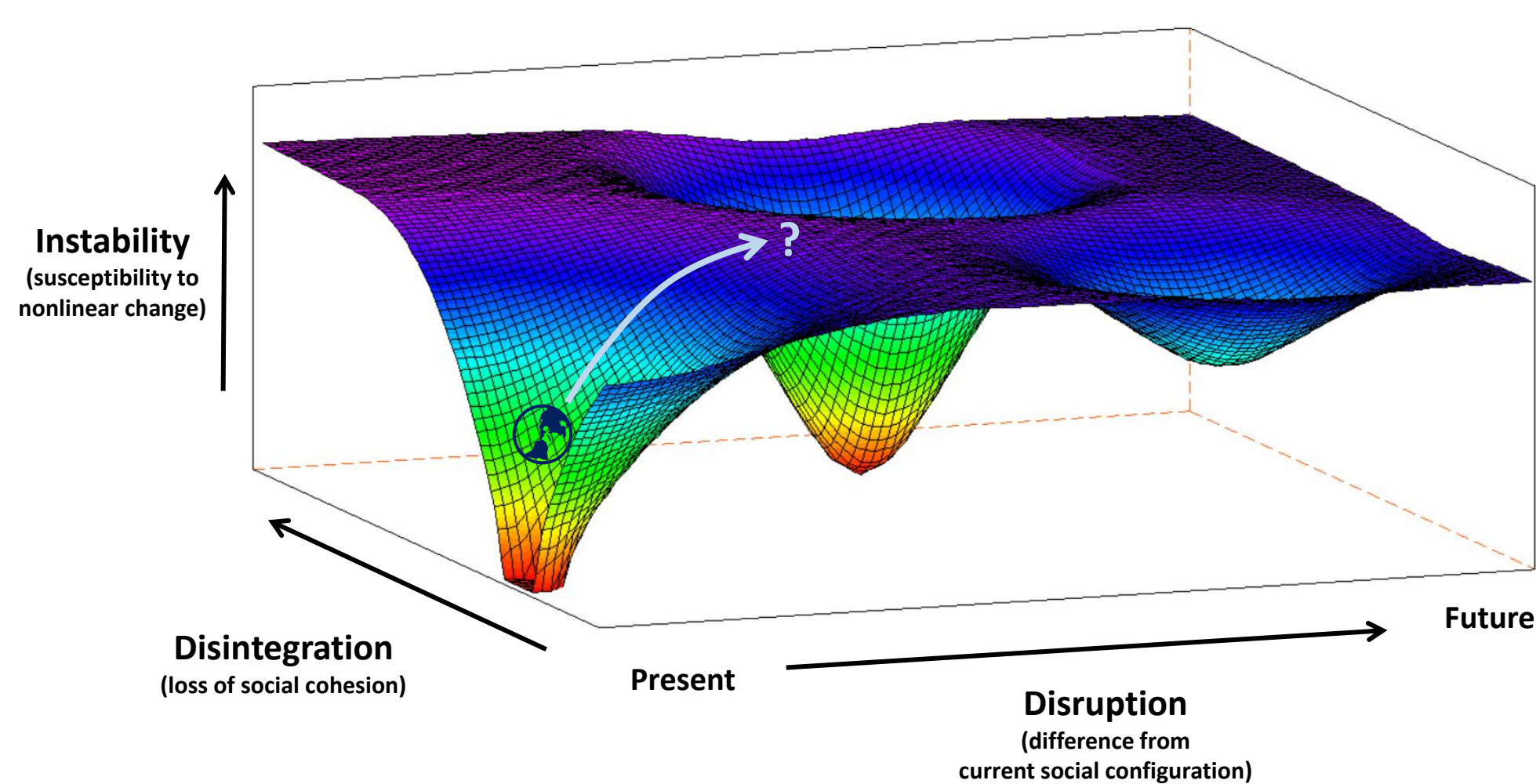
Humanity is currently in the basin at the front lower left, but stresses and shocks of various kinds (and a long-term shallowing of the basin) mean we're being almost certain to be knocked out of this stability zone in the next decades.

Instability
(susceptibility to nonlinear change)

Disintegration
(loss of social cohesion)

Mad Max

Renew the Future

Present

Future

Disruption
(difference from current social configuration)
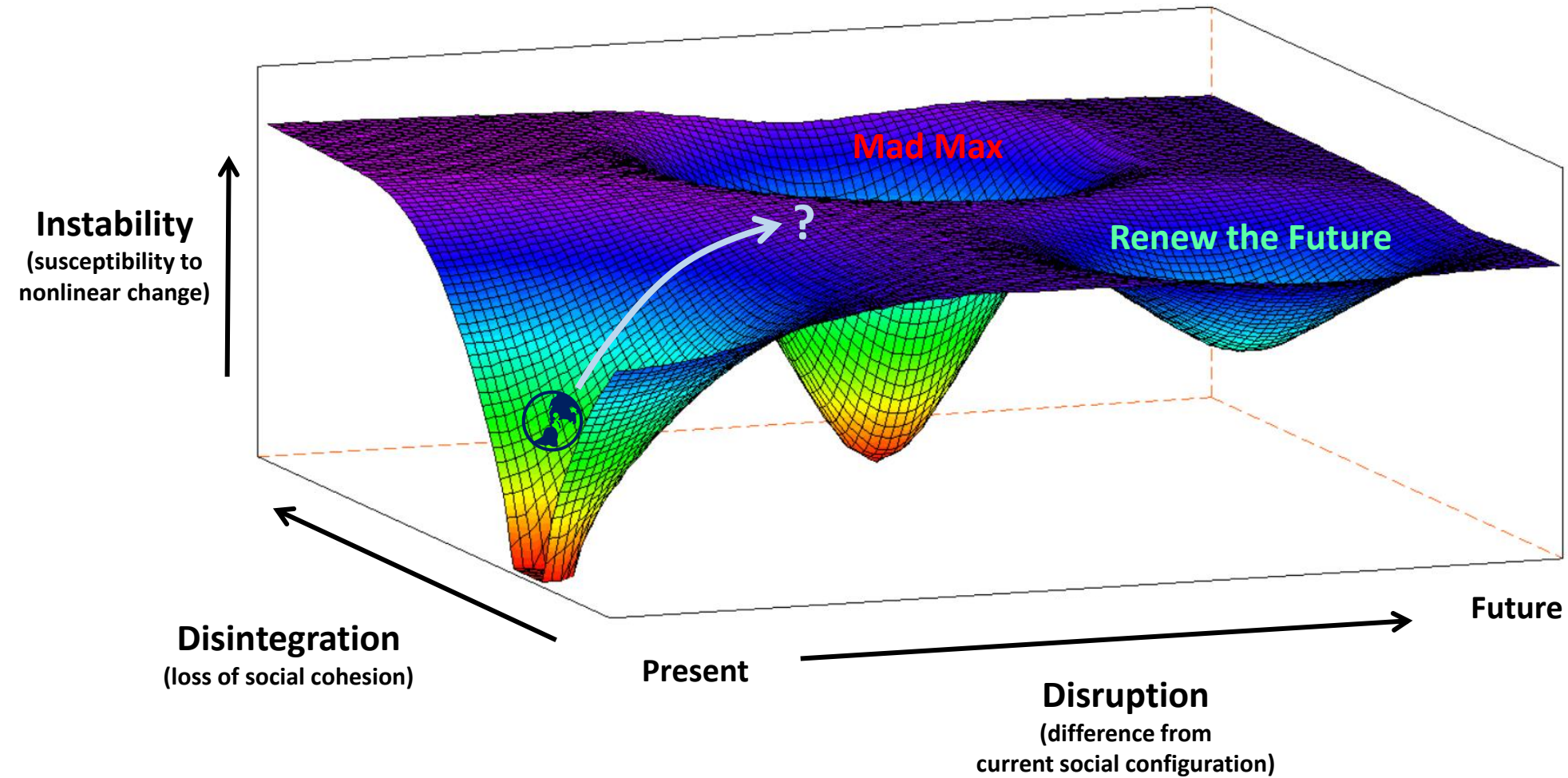
Our two alternative futures are the "Mad Max" and "Renew the Future" basins, as described in chapter 20 of Commanding Hope.

Instability (susceptibility to nonlinear change)

Disintegration (loss of social cohesion)

Present

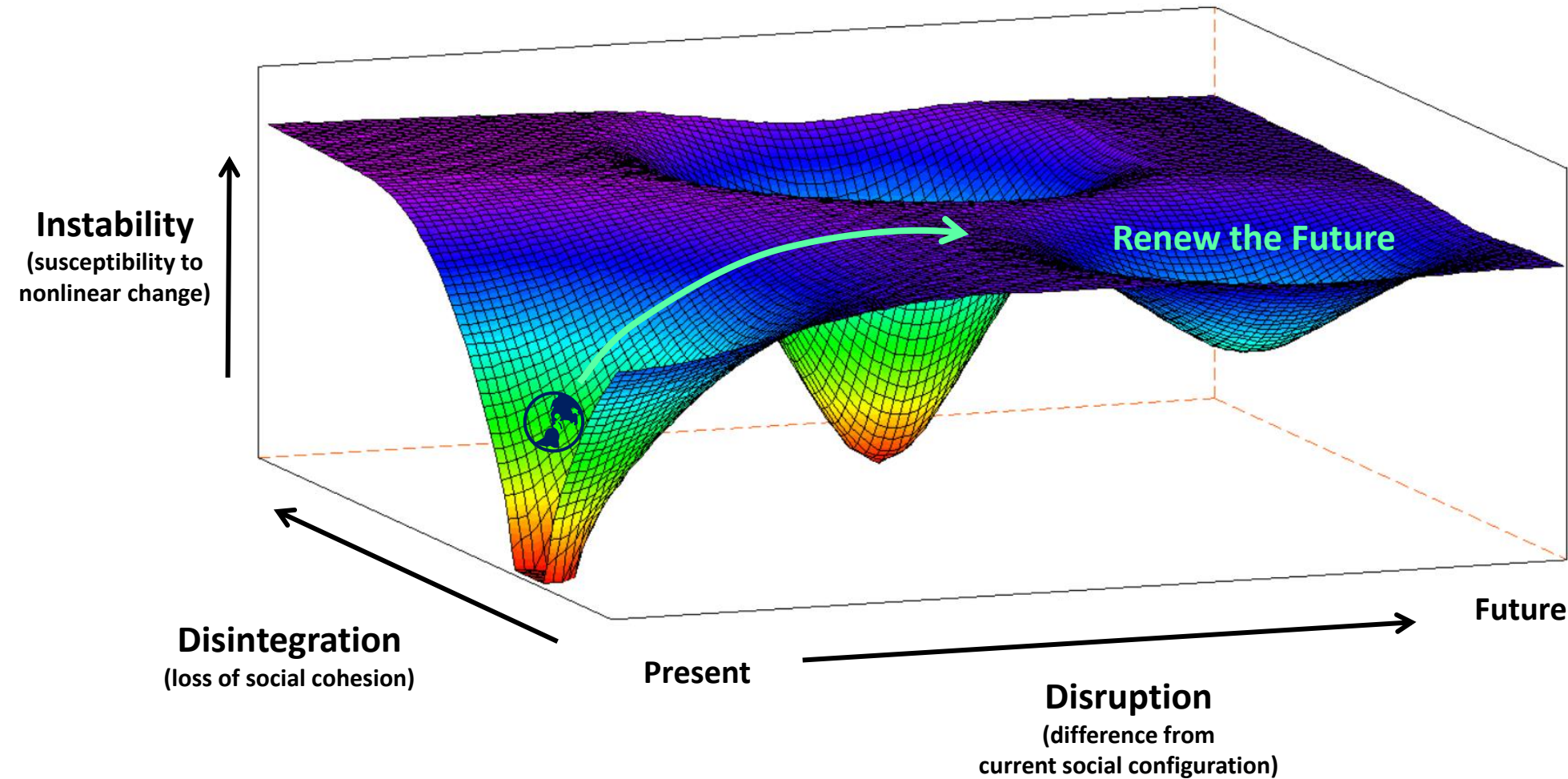**Disruption** (difference from current social configuration)
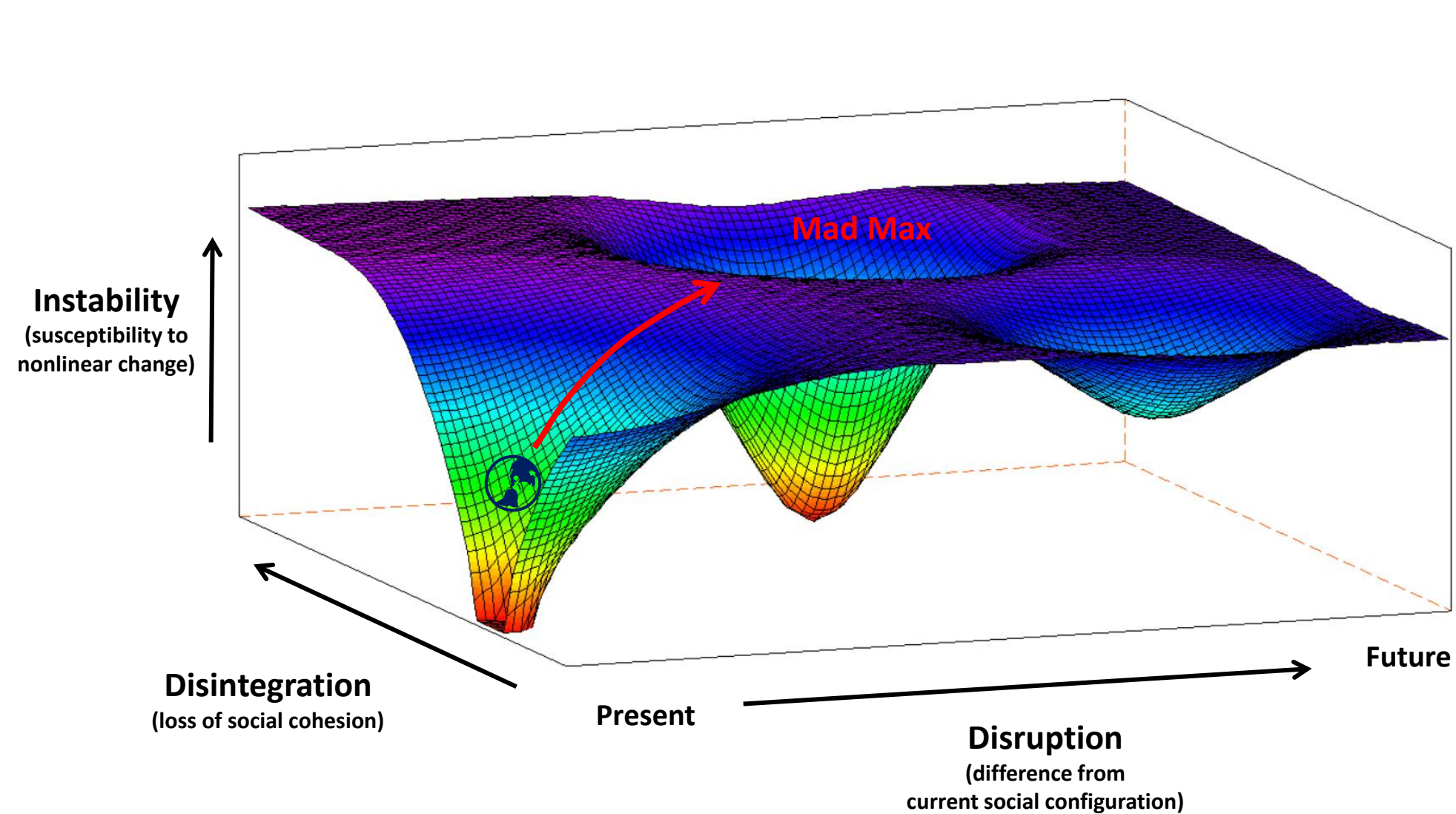
Future

Mad Max

Mad Max represents a future of wholesale loss of institutional stability and social cohesion. Think of the mess in Haiti today writ globally.
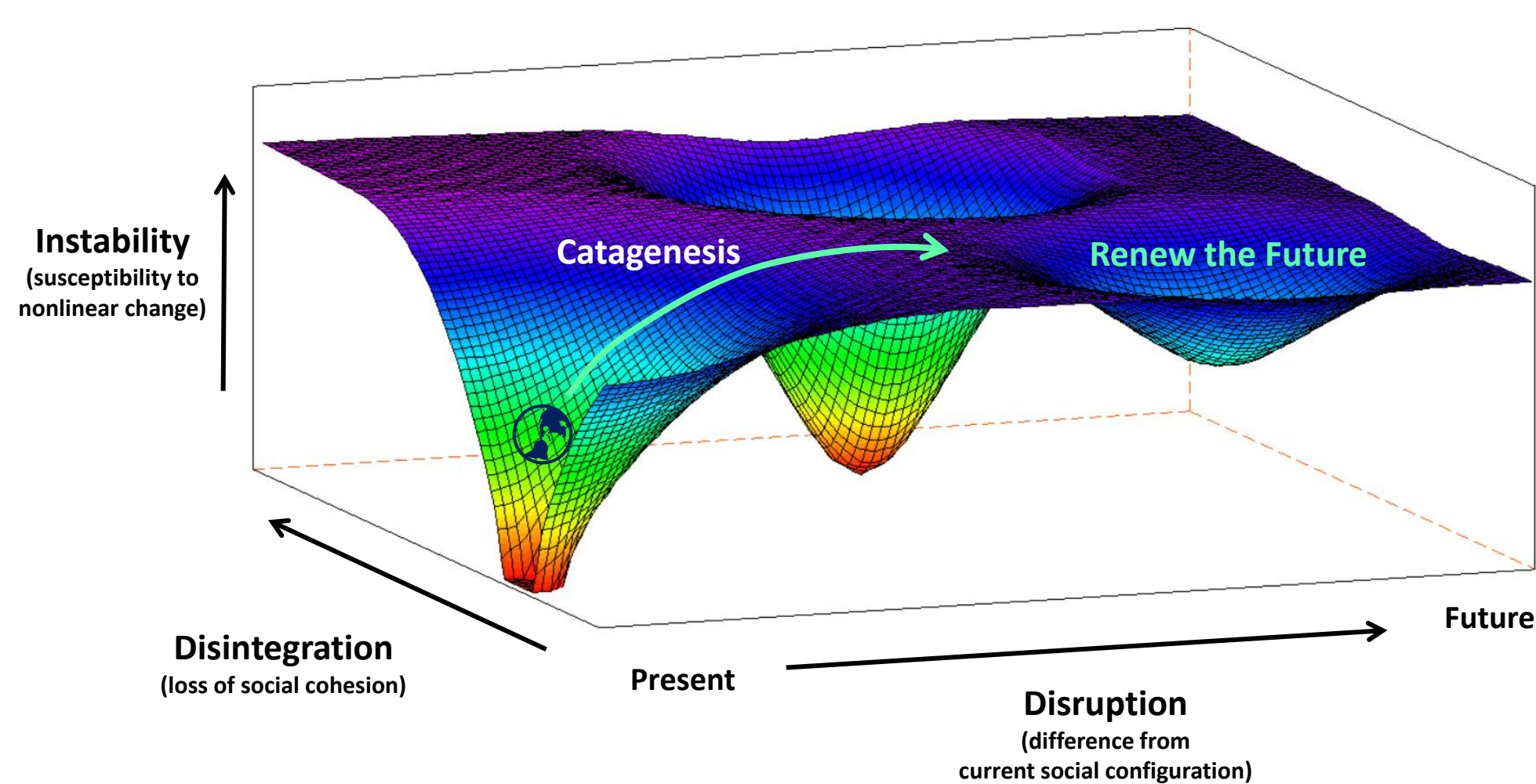
This basin is broad and deep. It represents stable disintegration. If humanity falls into Mad Max, that's likely where we're going to stay.

It's also relatively close; a moderate amount of social disruption, exploited by opportunistic actors, could propel us there.

Instability (susceptibility to nonlinear change)

Disintegration (loss of social cohesion)

Present

Future

Disruption (difference from current social configuration)

Renew the Future

The Renew the Future basin offers a possible socially cohesive alternative, but the basin is shallower and its watershed smaller. It's harder to reach, because getting there entails a more profound reconfiguration of our worldviews, institutions, and technologies (i.e., a greater level of disruption). Also, since it's less stable, it's more demanding. We'll have to work hard to stay there.

Instability (susceptibility to nonlinear change)

Catagenesis

Renew the Future

Disintegration (loss of social cohesion)

Present

Disruption (difference from current social configuration)

Future

The path to the Renew the Future basin would be a process I've called "catagenesis," or renewal through crisis and guided system transformation (described in chapter 11 of The Upside of Down).

It could get us to enough.

Thanks to:

Joe MacInnis, for suggesting I try a 3D representation;

Ruben Nelson, for advice on basin positioning;

Bentley Allan, for pointing out a flaw in the argument's logic;

Mike Lawrence, for helping me turn incomprehensible scribbles on a white board into a working 3D illustration; and,

Chris Carignan, for his brilliant work with SciLab to represent the detailed 3D landscape.