



SUSTAINABILITY AND ECO-SOCIAL CHANGES

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Lesson 2 - Sustainability



What's nature? What's natural?

The **origin-based definition.**

- Nature is everything that exists without human intervention.
- Natural means: it would exist even if humans had never existed



The **composition-based definition.**

- Nature is anything made of biological or geological material.



The **autonomy-based definition**.

- Nature is what operates on its own, without human control.



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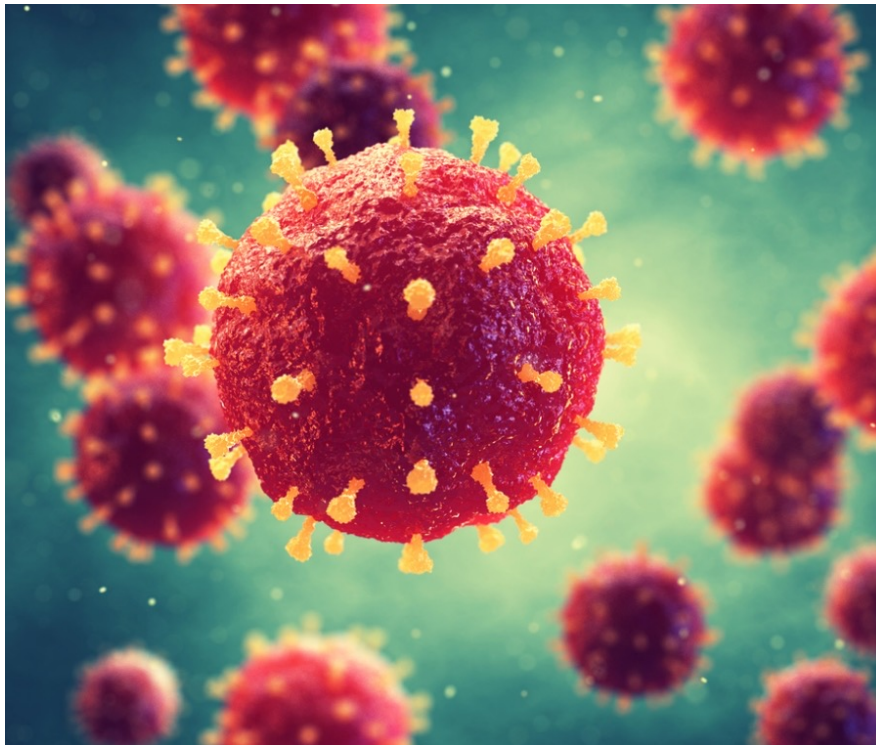
The **purity-based definition.**

- Nature is what is pristine, untouched, uncontaminated by human influence.

If nature means purity, then nature is extinct!

The **value-based definition.**

- Natural means good, healthy, authentic, wholesome





The **relational definition.**

- Nature is not a thing in the world but a *category* that humans use to organize the world.

Its boundaries are socially constructed. They vary across cultures and historical periods. The question is not 'what is nature?' but 'who gets to define nature, and for what purposes'?

Definition	Core Criterion	Problem
Origin-based	Did humans make it or cause it?	Ignores transformation over time
Composition	Is it made of biological/geological material?	Table = tree; ignores process
Autonomy	Does it operate independently of human control?	Feral dog = nature; pet wolf ≠
Purity	Is it pristine, untouched by humans?	Nothing qualifies anymore
Value-based	Is it good, healthy, authentic?	Conflates 'is' with 'ought'
Relational	Who defines it, and for what purpose?	No stable answers; everything is political

So, what is a Golden Retriever?

- **Origin-based:** Nature (it's a living organism), but not natural (humans bred it)
- **Composition:** Nature and natural (biological matter)
- **Autonomy:** Not nature (dependent on human care)
- **Value-based:** Natural (we think of dogs as wholesome)
- **Relational:** Depends who you ask and why they're asking





THE (paradox of the) ANTHROPOCENE

Anthropocene: the new geological epoch in which humans are the dominant force shaping the Earth


To say that 'humans have transformed nature' presupposes that there is something called 'nature' that can be transformed.

But if we have transformed it completely – if human influence reaches everywhere – does the category still make sense?



THE (paradox of the) ANTHROPOCENE

This paradox has direct implications for our definitions:

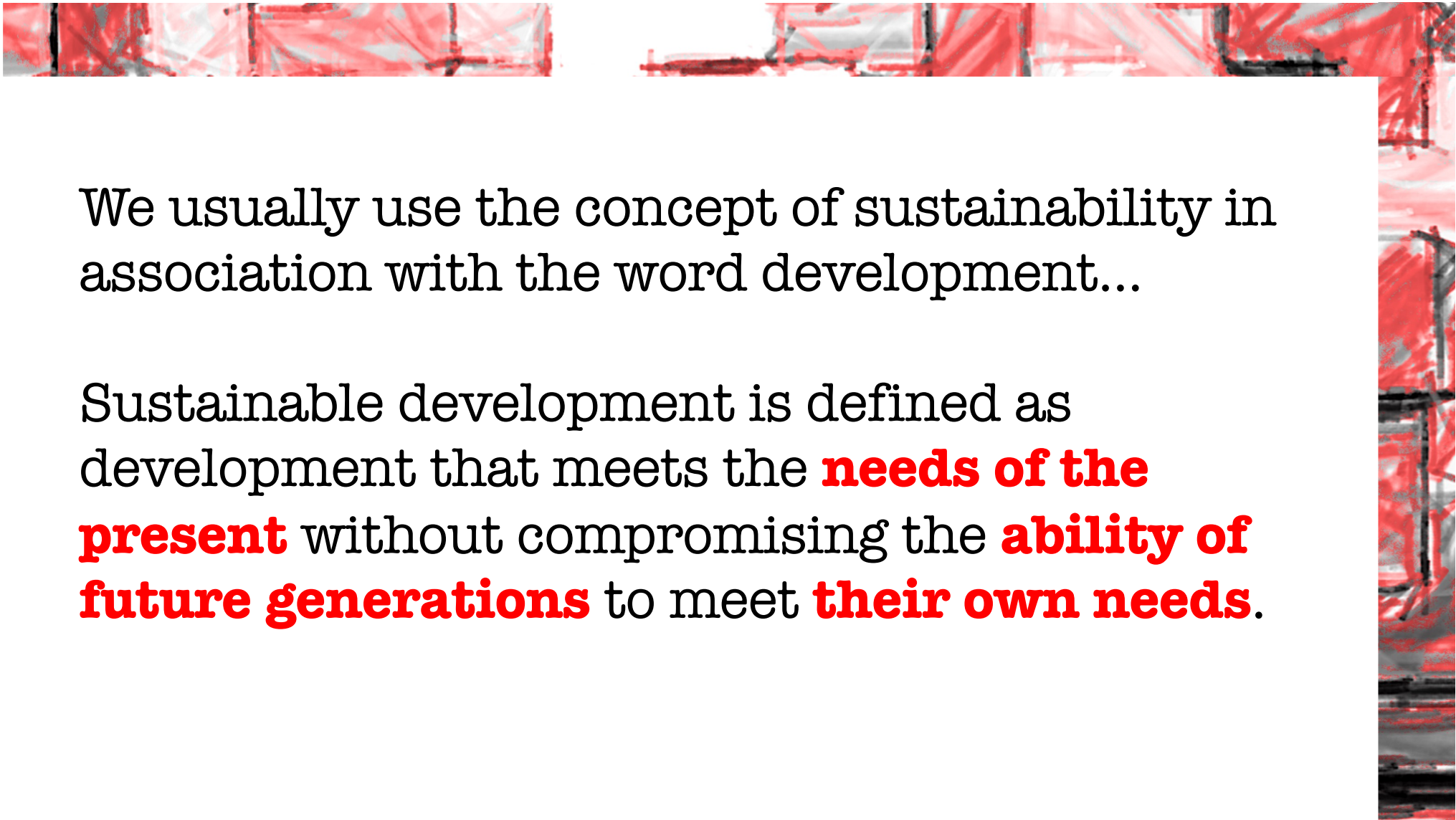
- The **purity definition** collapses entirely – there is no pristine nature left.
 - The **origin definition** becomes unworkable – if the climate itself is now partly human-caused, is rain natural or artificial?
 - The **autonomy definition** becomes fuzzy – ecosystems still operate autonomously, but within parameters set by human-altered conditions.
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Sustainability is a contested and contestable idea.

We all share its general meaning, but each of us interprets it differently.

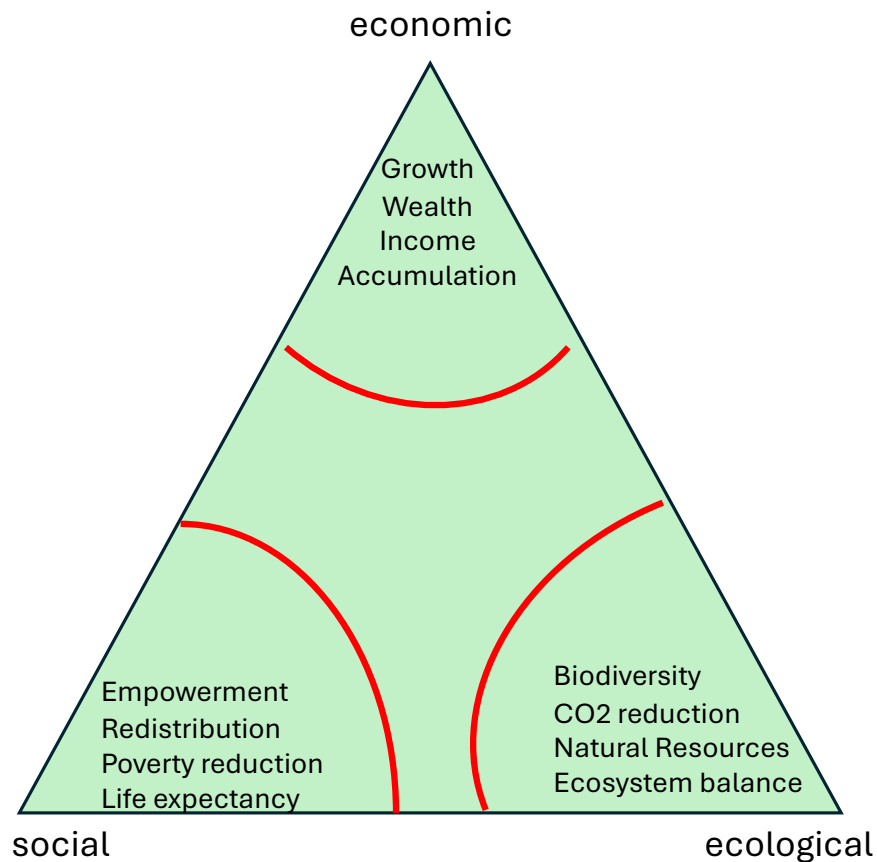
Mainstream definitions of sustainability do not help to reach an agreement

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We usually use the concept of sustainability in association with the word development...

Sustainable development is defined as development that meets the **needs of the present** without compromising the **ability of future generations** to meet **their own needs**.

Sustainability as a compromise between conflicting interests



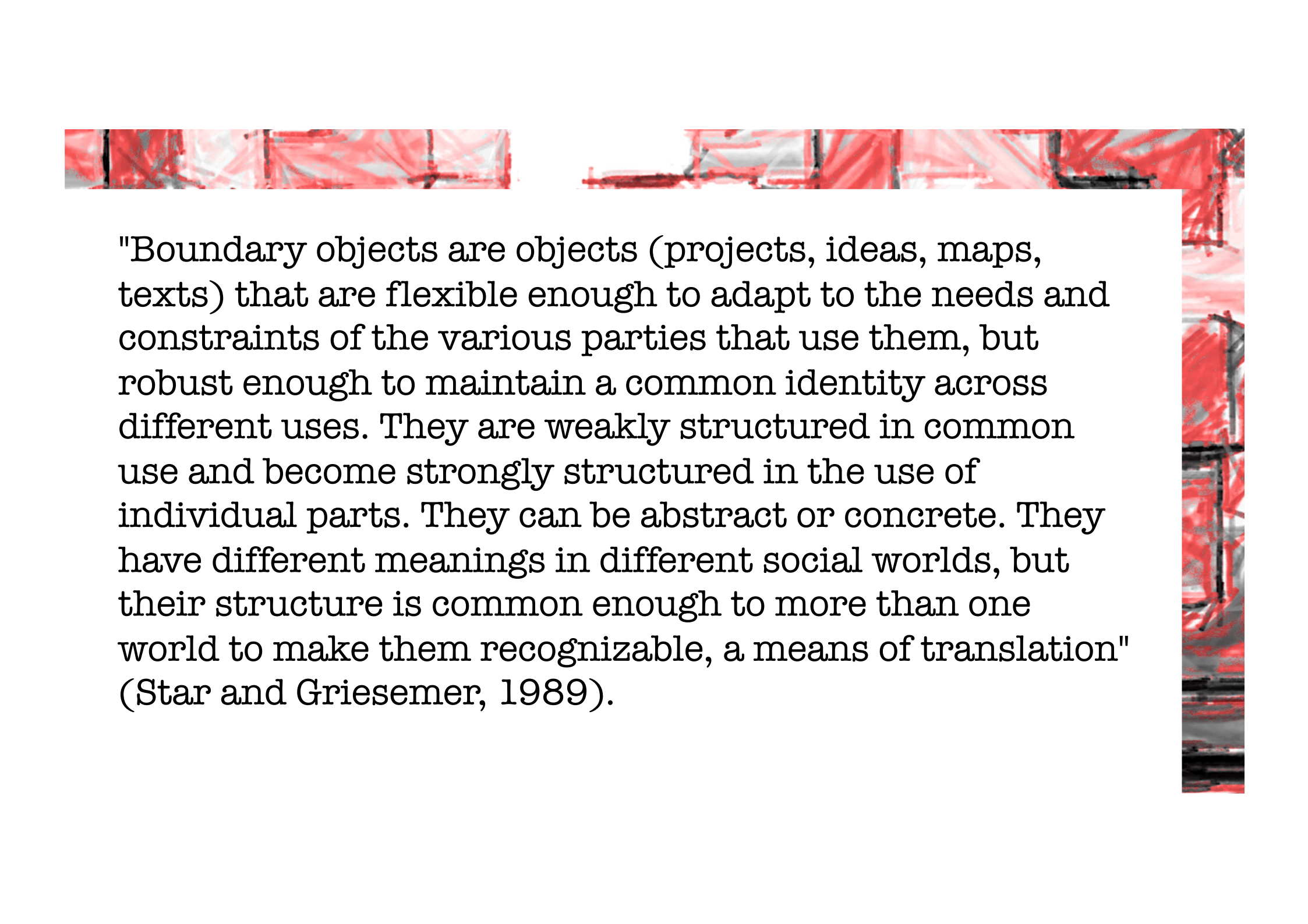
... where do we place the balance?

Probably, it depends on the prevailing contextual trend in public opinion, power, economic and political pressures

... during and after COVID19 the balance has shifted between the environmental and social dimension (green deal, just transition, one health paradigm)

... after the invasion of Ukraine (and then other geopolitical crisis), the balance shifted near the economic dimensione

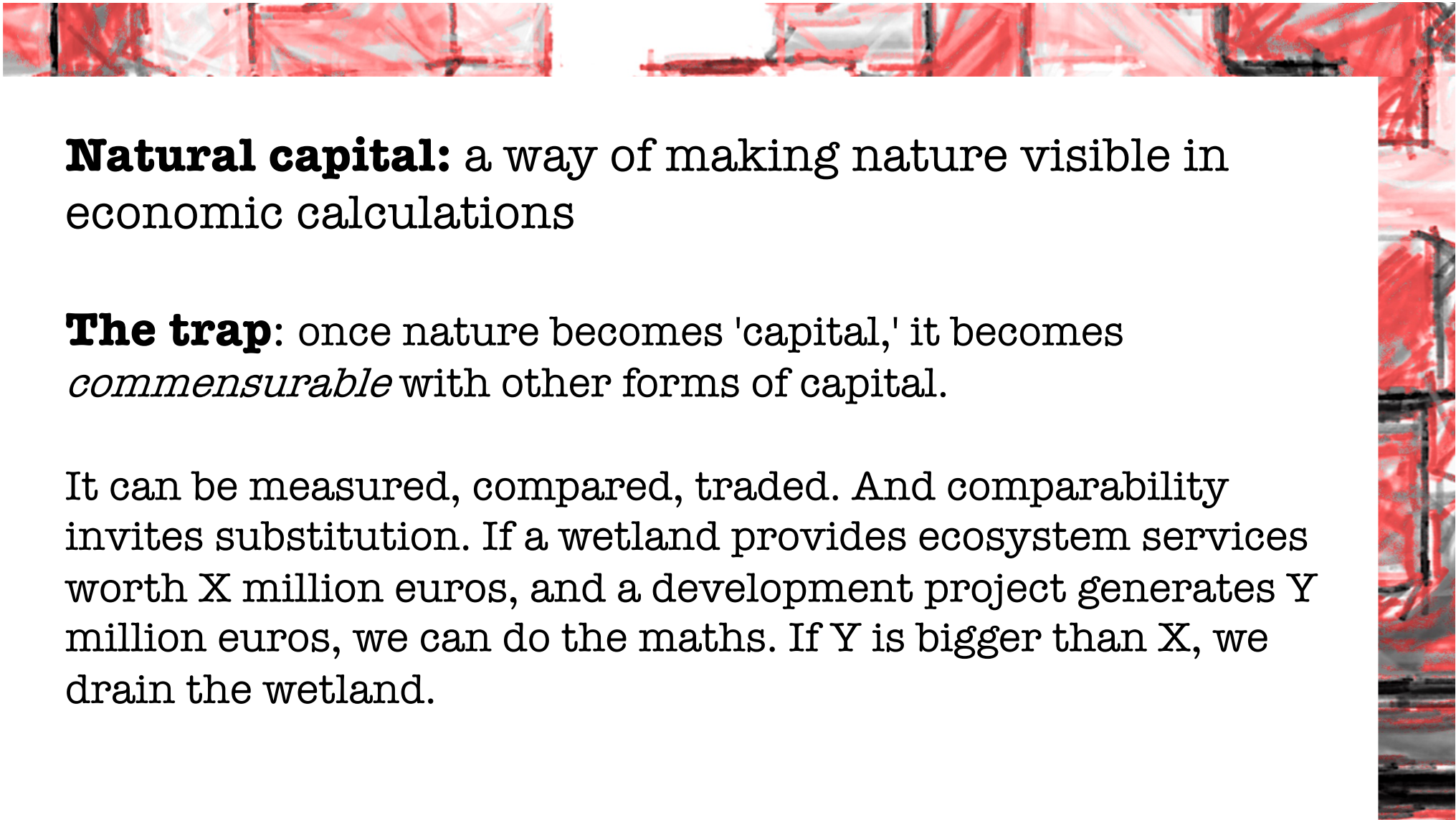
... with the rise of far-right governments the ecological dimension is even weaker

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"Boundary objects are objects (projects, ideas, maps, texts) that are flexible enough to adapt to the needs and constraints of the various parties that use them, but robust enough to maintain a common identity across different uses. They are weakly structured in common use and become strongly structured in the use of individual parts. They can be abstract or concrete. They have different meanings in different social worlds, but their structure is common enough to more than one world to make them recognizable, a means of translation" (Star and Griesemer, 1989).

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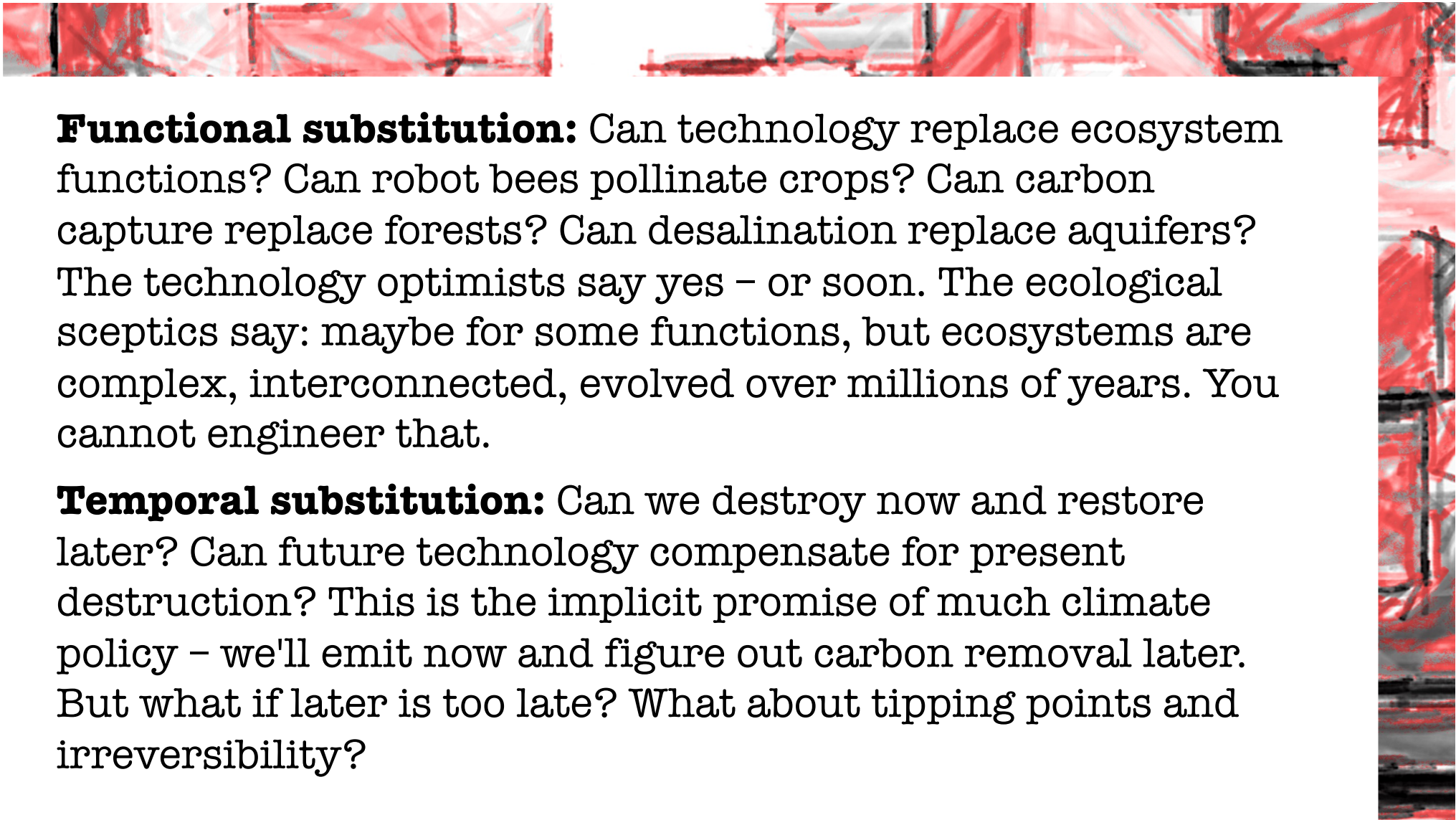
The disagreement is about **substitution**

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Natural capital: a way of making nature visible in economic calculations

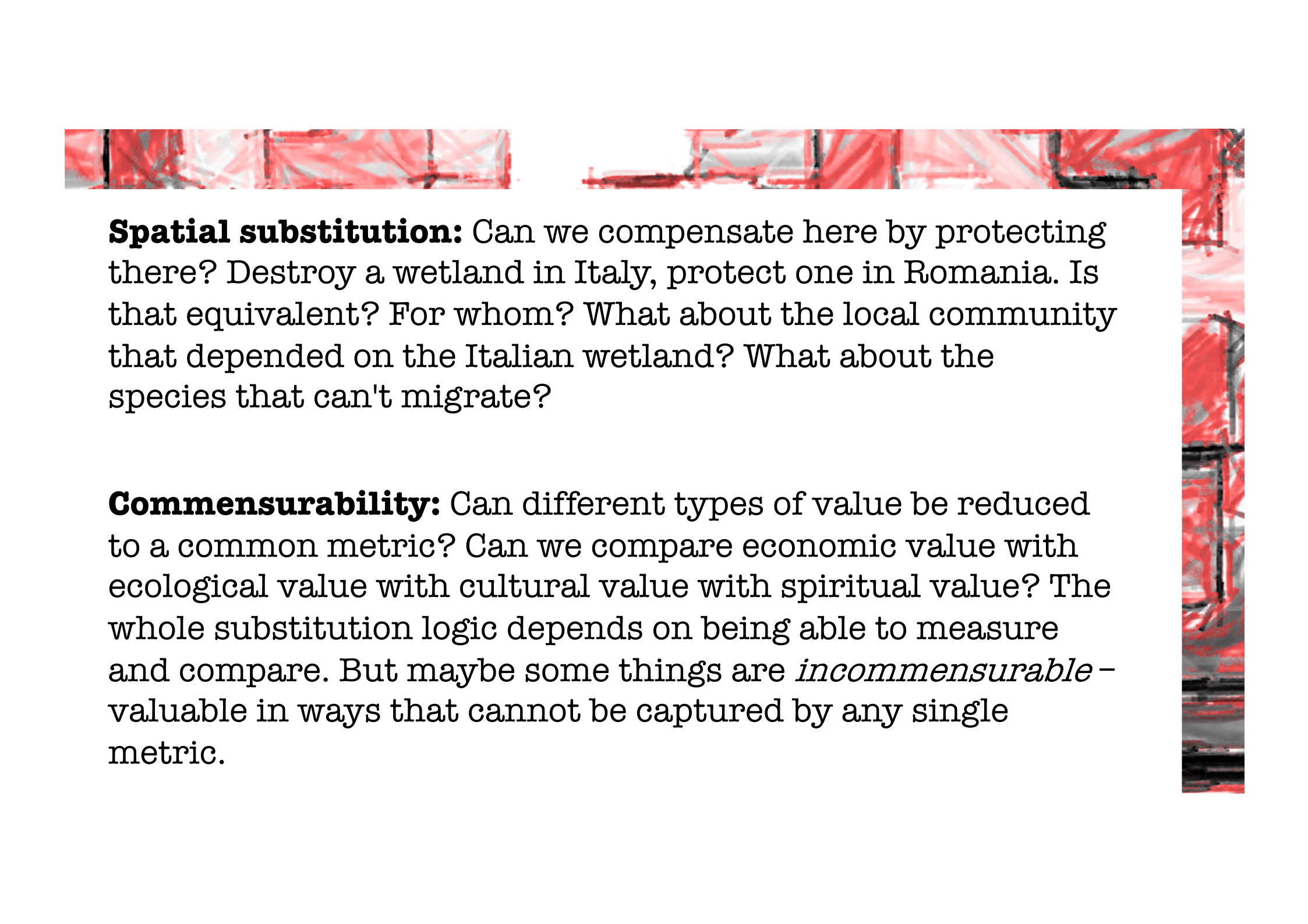
The trap: once nature becomes 'capital,' it becomes *commensurable* with other forms of capital.

It can be measured, compared, traded. And comparability invites substitution. If a wetland provides ecosystem services worth X million euros, and a development project generates Y million euros, we can do the maths. If Y is bigger than X, we drain the wetland.

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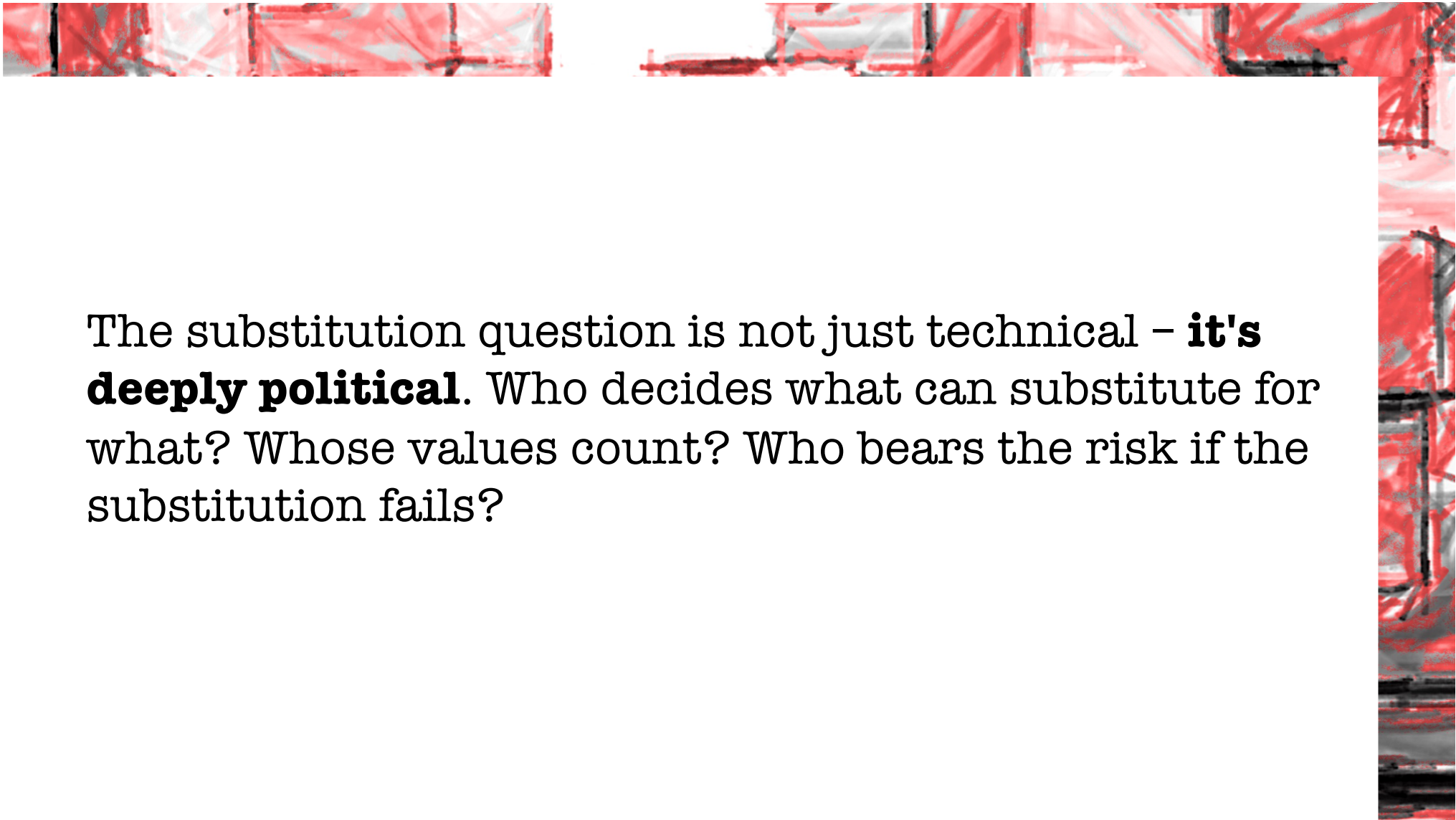
Functional substitution: Can technology replace ecosystem functions? Can robot bees pollinate crops? Can carbon capture replace forests? Can desalination replace aquifers? The technology optimists say yes – or soon. The ecological sceptics say: maybe for some functions, but ecosystems are complex, interconnected, evolved over millions of years. You cannot engineer that.

Temporal substitution: Can we destroy now and restore later? Can future technology compensate for present destruction? This is the implicit promise of much climate policy – we'll emit now and figure out carbon removal later. But what if later is too late? What about tipping points and irreversibility?



Spatial substitution: Can we compensate here by protecting there? Destroy a wetland in Italy, protect one in Romania. Is that equivalent? For whom? What about the local community that depended on the Italian wetland? What about the species that can't migrate?

Commensurability: Can different types of value be reduced to a common metric? Can we compare economic value with ecological value with cultural value with spiritual value? The whole substitution logic depends on being able to measure and compare. But maybe some things are *incommensurable* – valuable in ways that cannot be captured by any single metric.

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The substitution question is not just technical – **it's deeply political**. Who decides what can substitute for what? Whose values count? Who bears the risk if the substitution fails?

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DECISIONAL CASE:
The Almond Valley

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The decision case method

- relatively short written narratives of some real-life situation in which a person, group of people, organization, or community faces a problem or dilemma.
- usually, a social actor in a case has to make a decision and there is uncertainty about how she or he should proceed.
- cases typically are written in such a way that the final outcome is unknown and there is uncertainty about what happened and why.
- cases are open to multiple interpretations, allowing students to use acquired sociological concepts and theories to develop “readings” of the case.



The decision case method

The context – where, when, what institutional configuration

The actors – who is involved, with what interests, resources, constraints

The problem – what is at stake, what makes it a dilemma

The options – what paths are viable (explicit and implicit)

The evaluation criteria – effectiveness, fairness, feasibility, legitimacy...

The expected consequences – for whom, over what time frame



The sociological approach on decisional cases

Attention to inequalities: who bears the costs, who reaps the benefits

Analysis of power relations between actors

Understanding the processes of social construction of the problem (framing)

Sensitivity to mechanisms of exclusion/inclusion in decision-making arenas

Analysis of the dynamics of trust and conflict

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How we will work on cases

- individual reading of the assigned case study
- group work to answer the questions that will be asked
- plenary discussion with one (or more) spokesperson per group