

# Seven Concepts for a *Critical Systems Existential Risk* Studies *(CS-ER)*

A heterodox alternative uniting critical theory and systems theory to identify the *generative mechanisms* of existential risk

by Max Ramsahoye

> *"Almost always the men who achieve these fundamental inventions of a new paradigm have been either very young or very new to the field whose paradigm they change. And perhaps that point need not have been made explicit, for obviously these are the men who, being little committed by prior practice to the traditional rules of normal science, are particularly likely to see that those rules no longer define a playable game and to conceive another set that can replace them."*
>
> — Thomas Kuhn, *The Structure of Scientific Revolutions*

## Introduction

Existential Risk Studies (ERS) is an emerging field concerned with mapping, managing and mitigating 'extreme risks' to human civilisation and sentient life. Over the past two decades, the field has developed into a global network (of research institutions, initiatives, conferences and fellowships), published a number of major books and entered into mainstream political discourse. Recently, a series of works have attempted to formalise the field as an academic discipline, reflect on its history and steer its future development. In particular, the subject of academic pluralism - the range of methodological approaches within the field - has been raised, with particular attention to the status of 'systems' and 'critical' approaches.

To frame this in Kuhnian terms, Existential Risk Studies (ERS) has passed into a new *research paradigm* of 'seeing existential risk as a phenomena emergent from complex systems' (Beard, 2021) and from systemic 'drivers of risk generation' (Kemp, 2021). This *complex systems turn* in ERS is, in large part, a critical rejection of the orthodox 'etiological approach' of' attributing risks to their 'principal direct cause' (Beard, 2021) and the dominant 'techno-determinist threat

*Sidenotes*

The title of this piece is derived from the paper *Seven Questions for Existential Risk Studies*.

The acronym of the heterodox approach is a subversive mirror to CSER the *Cambridge Centre for the Study of Existential Risk*. That said, one of the foremost researchers within this strand of x-risk theory, Luke Kemp, is based at CSER.

f risk as arising 'naturally and apolitically...from inevitable and near-autonomous gical progress' (Kemp, 2021),

vith this re-orientation of the field towards *complex systems theory*, there has also been incorporating *critical theory*: a critical turn in ERS that contends that we should human 'institutions – including corporations and governments' (Jones, 2023) as a major role 'in causing, preventing, and responding to catastrophe' and ultimately e overall level of risk that arises from any particular socio-economic system' (Kemp, espite these calls, it has also been noted that there is still 'limited interest in certain ve perspectives, such as those from heterodox economics' and that the 'critical ERS pproach is still young, and...requires further work and discussion' to 'enhance more prioritization efforts for the field as a whole' (Sundaram, 2022). Towards a synthesis l theory and systems theory in the context of existential risk, this short post aims to ard seven concepts for a 'Critical Systems Existential Risk (Studies)' (CS-ER).

bles on the Great Sea of Life: A Brief History of Existential Risk Studies by SJ Beard and Emile P. Torres 22)

nocratising Risk: In Search of a Methodology to Study Existential Risk by Carla Zoe Cremer & Luke Kemp 21)

## eaning

ceptualisation captures the core dual meaning of the approach as systems-critical of ystems.

*tems-Critical:* the approach is critical of the capitalist world-system that generates reme risks and conceptual language that conceals the systemic, 'capitalogenic' origins isk.

*tical Systems:* the approach is concerned with systems that are critical for the ctioning, perpetuation and securitisation of global capitalism and human civilisation l attuned to the trade-offs/misalignments between the two.

ese two points, the ultimate conjecture of Critical Systems ERS is a global criticism or cepticism' that questions the possibility of (sufficient) risk mitigation, global istential security and civilisational sustainability within 'the capitalocene', under the 'paradigm' and concurrent with the capitalist world-system (or 'meta-system' defined erationism, exterminism, neorealism, militarism, imperialism, malthusianism, social m, military-economic adaptationism etc.).

### l & Anthropogenic Risk? Problematising the Orthodox Risk Etiology

the space of risks, constructing taxonomies, has been a foundational task of al engineering for ERS. A conventional binary classification that structures and the ERS literature is the bifurcation of risks by their origin or cause (etiology) into risks' and 'anthropogenic' or 'technological' risks. These conceptual categories - that e and technologise risk - are an initial point of intervention for the Critical Systems which boldly proposes that most, if not all, risk is 'capitalogenic': generated by the ynamics and optimisation processes of the capitalist world-system

### Concepts (gemini)

### *cio-Economic Orientation (Joseph)*

y Peter Joseph, this concept identifies the fundamental "source code" or DNA of a n—specifically the market system's structural foundation—as the primary determinant of human and social outcomes. It refers to a social order based upon **competition, self-interest, and** which creates a specific "thought syntax" that filters human perception. Joseph argues that this n acts as a hidden, operant conditioning mechanism that inevitably generates systemic oppression, and destabilization, overriding individual moral intent. Unless this root logic is cial and ecological decline are structurally guaranteed.

### *tured Risk (Beck)*

eck distinguishes between pre-modern "natural hazards" (plague, famine) and modern tured risks" (nuclear proliferation, climate change, AI) These are risks born not from a lack of er nature, but from the *success* of industrial modernization. They are the unintended, reflexively byproducts of our own technological and economic advancement, creating a "Risk Society" e distribution of "bads" (pollution, radiation) becomes more central to politics than the n of "goods" (wealth).

### *genic Risk (Moore)*

refinement of the term "Anthropogenic" (human-caused), this concept argues that extreme risks aused by "humans" in the abstract, but specifically by the logic of Capital. Jason W. Moore hat the "Capitalocene" organizes nature and humanity into "Cheap Nature" to be exhausted for ion. Therefore, the drivers of ecological collapse and systemic fragility are specific to the imization algorithms of the global market, not human nature itself.

### *f Doom (Kemp)*

np challenges the narrative that existential risk comes primarily from "rogue actors" or terrorists. he identifies *Agents of Doom* as legitimate, powerful institutions—states, militaries, and

ns—acting rationally within their own incentive structures. These actors accelerate dangerous ies (like autonomous weapons or gain-of-function research) not out of malice, but due to ve pressures, profit motives, or bureaucratic inertia, making the "system" the villain rather than a dividual.

### *ism (Thompson)*

pson used this term to describe the irrational logic of the Cold War nuclear arms race, where the ndustrial systems of opposing superpowers entered a "dance of death." It describes a condition technological and institutional inertia of a weapons system overrides political agency and eason, driving the system autonomously toward mutual destruction (the "thrust towards tion") regardless of the desires of the populations involved.

### *Hardt & Negri)*

ept describes the new, decentered form of global sovereignty that has replaced the nation-state. is the boundless, supranational network of global capitalism that regulates the world order. In t of risk, it implies that there is no single "control room" to shut down dangerous trends; the ating mechanisms are distributed across a global, acephalous (headless) network that is resistant nal political intervention or regulation.

### *litics (Mbembe)*

lbembe expands on Foucault's biopolitics to define Necropolitics as the ultimate expression of y: the power to dictate who may live and who must die. In the face of existential threats (like ange), the system manages risk by designating certain populations as "disposable" or "surplus," in "worlds of death" to maintain the security and comfort of the privileged few. It frames risk ent as a brutal calculation of whose lives are worth saving.

## More Concepts

### *Capital Acceleration (Land)*

from Nick Land and accelerationism, this describes the positive feedback loop between ical innovation and capital accumulation. As tech speeds up, it generates more capital, which er tech, creating a runaway cybernetic process. This acceleration eventually surpasses human control (the Singularity), rendering the future entirely unpredictable and potentially hostile to life, as the market's "desire" for efficiency overrides human needs.

### *Economic Adaptationism (Dafoe) & The Military-Industrial Complex (Eisenhower)*

foe's "adaptationism" argues that in an anarchic global system, nations are structurally l to adopt dangerous technologies (like AI weapons) to avoid being overtaken by rivals—a "race tom" on safety. This creates the **Military-Industrial Complex**, an "iron triangle" of legislators, fficials, and arms manufacturers that creates a permanent war economy, ensuring that the ent of destructive capacity is always prioritized and funded over safety or social well-being.

### *nce Capitalism (Zuboff)*

Zuboff identifies a mutant form of capitalism that claims human experience as free raw material tion into behavioral data. To mitigate the "risks" of market uncertainty, this system constructs a hitecture of behavioral modification. In CS-ER, this represents the closure of human agency; the n is rendered into predictable "automata," reducing the capacity for democratic resistance e very systems endangering the species.

### *Capitalism (Klein)*

ein's "Shock Doctrine" explains how the system instrumentalizes crises. Rather than uniting catastrophes (war, hurricanes, pandemics) are viewed as market opportunities to push through neoliberal policies (privatization, deregulation) while the public is disoriented. It suggests that tial risks escalate, the system will not naturally pivot to safety, but will instead exploit the chaos consolidate wealth and power.

### *Megamachine (Mumford)*

umford viewed modern technocratic society as a "Megamachine"—a social structure where re reduced to mere servo-units within a vast, bureaucratic apparatus. This rigid, hierarchical on suppresses human autonomy and organic feedback in favor of mechanical order. In CS-ER, machine is the vehicle of doom: a system so committed to its own operational parameters that it erve to avoid the cliff.

### *olitics (Han)*

ul Han argues that modern power no longer operates through coercion (disciplinary power) but eduction and "freedom." We voluntarily expose our data and exploit ourselves in the pursuit of ent. This Psychopolitics creates a stabilized system where resistance is neutralized because the re exhausted, depressed, and isolated, unable to form the collective political will necessary to ystemic existential risks.

### *eous (Dis)order (Hayek)*

subversion of Friedrich Hayek's "Spontaneous Order" (the idea that markets efficiently organize s without central planning). In the CS-ER context, this is reframed as Spontaneous Disorder. It t the uncoordinated actions of billions of market actors, each pursuing individual profit, do not harmonious equilibrium but to chaotic "tragedies of the commons" (e.g., carbon emissions, resistance) where the rational individual choice leads to collective ruin.



*Critical Systems Existential Risk*

## Earlier Versions

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Seven Concepts for a Critical Systems ERS [DRAFT]

Critical X-risk (PREVIOUS DRAFT)

Critical Systems Existential Risk | Fearful Symmetries, Max Ramsahoye

[NOTES] Seven Concepts for a Critical Systems Existential Risk Studies…

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## Seven Concepts (gemini)

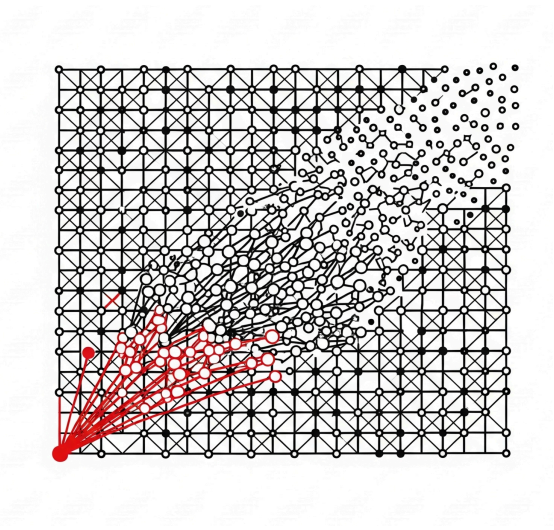
- **Root Socio-Economic Orientation (Joseph)**
- **Manufactured Risk (Beck)**
- **Capitalogenic Risk (Moore)**
- **Agents of Doom (Kemp)**
- **Exterminism (Thompson)**
- **Empire (Hardt & Negri)**
- **Necropolitics (Mbembe)**

## Seven More Concepts

- Techno-Capital Acceleration (Land)
- Military-Economic Adaptationism (Dafoe) & the Military-Industrial Complex (Eisenhower)
- Surveillance Capitalism (Zuboff)
- Disaster Capitalism (Kleine)
- The New Megamachine (Mumford)

  Psychopolitics (Han)
- Spontaneous (Dis)order (Hayek)

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Original Art