10

The Epistemological Delirium of the Risk Society 2.0: The Emergence of Hyperstitions as Regulatory Devices for Securing Interests Through Securitization

Joost van Loon

Introduction: What Makes a Risk Controversial?

In this contribution to understanding risk communication, in particular with reference to "risk-controversies", I want to start by positing that modes of reasoning are always modes of communication. This is because in the tradition of western metaphysics, we (i.e. those trained to think within this tradition) have learnt to rely on either spoken or written texts to understand how reasoning works. As academics, we are used to understanding reasoning, not just in terms of language, with its constitutive elements of semantics, syntax and grammar, but also

I would like to thank the Delmenhorst research group on Communicating Risk and especially Maria Grazia Galantino, Naomi Shulman and Jens Zinn for their constructive comments.

J. van Loon (✉)
Department of Sociology, Catholic University of Eichstätt-Ingolstadt, Eichstätt, Germany
e-mail: joost.vanloon@ku.de

© The Author(s) 2027

J. O. Zinn (ed.), *Rethinking Risk Communication*, Critical Studies in Risk and Uncertainty, https://doi.org/10.1007/978-981-92-5082-0_10

in terms of logic, for example in terms of rejecting contradictions and problematizing ambivalence.

From Aristotle, the tradition inherited the close association between reasoning and rhetoric as constitutive of the political. I understand risk communication as an attempt to affect decision-making and actions in terms of persuasion. Thus, modes of communication engage with rhetorical forms. In *On Rhetoric* (Book I Chap. 2), Aristotle (2007: 38–39) distinguishes between *logos* (reasoned argument), *ethos* (credibility) and *pathos* (emotional engagement). Logos is a rhetorical form that emphasizes "reason" as a combination of logic and evidence which provides a continuity between the abstract and the concrete, with the latter always finding a more generic expression in the former. By contrast, pathos seems to be the opposite of that in all aspects, as it highlights the idiosyncratic, affective, emotional and particular, and operates as a deviation from, or an interruption of, the continuity between the abstract and the concrete. Ethos then seems to take on a remedial figure as it refers to the authority of the speaker as derived from charisma (e.g. prophecy), tradition (e.g. dynasty) or institution (e.g. priesthood) and thereby bypasses the misleading opposition between logos and pathos. Important for risk communication is that Aristotle (ibid: 42) understood persuasion (*pistis*, which Plato (in *The Republic*, n.d.) deployed in terms of belief in the reality of the physical world), as the way in which an example (*paradigm*) is being introduced with the help of a combination of a sign and a probability, to become irrefutable truth.

As a sociologist, however, these musings into the Greek origins of the western metaphysical tradition only serve a modest purpose of enabling an analysis of the empirical philosophies invoked in terms of risk communication. In contexts such as public health, environmental policy, or disaster response, effective risk communication hinges not merely on the transmission of facts but on persuading diverse audiences to adopt certain attitudes or behaviours in the face of uncertainty. The communicator must establish ethos by appearing trustworthy and competent, engage pathos to resonate with the audience's fears, hopes, or values, and construct logos through clear, context-sensitive reasoning. Risk involves probabilities and future-oriented judgments, which are not purely logical but deeply rhetorical—requiring a balance between analytical clarity and

emotional resonance. Thus, risk communication exemplifies Aristotle's view that rhetoric is not mere manipulation but a civic art, oriented towards practical decision-making where knowledge is partial, and action is required.

For example, the ethos of science and the ethos of religion are quite similar when they invoke notions of risk in relation to decisions that people need to make. In terms of Weber's (1956) ideal types of authority, this ethos can be related to (a) the charisma of an individual scientist or priest, (b) traditional notions of (e.g. paternal) authority that are derived from their respective professions, or to (c) the institutionalized authority of science and religion. For example, whereas a scientist may invoke the possible negative side effects of a decision to consume alcohol during pregnancy for the physical health of the baby, a priest may refer to the damaging moral consequences of the same act for the spiritual (or even mental) health of both mother and baby. However, alongside the charismatic, traditional, and/or institutional ethos of science and religion, there are also elements of logos (as explanations why drinking alcohol is bad during a pregnancy) and pathos (as appeals to the personal-affective components of the relationship between mother and baby). This simple example shows how ethos, logos, and pathos are often combined in risk communication.

It is now possible to argue that the more ethos, logos, and pathos "add up", the more persuasive a specific form of risk communication will be and the less controversial a risk becomes. Rhetorical alignment enables the assertion of certainty, which engenders a sense of security. The next question then becomes "What enables these components to add up, or—inversely—what prevents these components from adding up?"

Following the mode of thought associated with Actor-Network Theory (Latour, 2005; Mol, 2010), the starting point for understanding controversies is an incompatibility of interests (cf Callon, 1986). In the example of a pregnant woman drinking alcohol, a controversy might arise when she wants to take Holy Communion (the sharing of bread and wine during Holy Mass of the Catholic Church as a ritual resembling the Last Supper) under both kinds, as the Blood of Christ is a transubstantiation of wine, but still contains alcohol. Even though the Catholic Church

(as institutionalized ethos of religion) insists that communion under one kind (the Body of Christ) already suffices, there are some representatives of Catholicism that might insist that consecrated wine cannot have negative side effects. The problem with this argument is not its logic; after all a God that can perform miracles can also remove alcohol during transubstantiation. Instead, the problem here lies with the physical evidence: transubstantiated wine still contains alcohol. The Church itself insists that whereas transubstantiation is complete, the "accidental properties" of wine, such as alcohol, remain. This doctrine was upheld and affirmed by the Council of Trent of 1551 (Session XIII, Chapter IV) and is also part of the extensive *Catechism of the Catholic Church* (1994). Therefore, it is at this moment that for those believing that pregnant women can accept the Blood of Christ, logos and ethos have to be abandoned for the sake of pathos: It becomes a highly personalized, affect-laden decision in which one as such not very controversial risk—that of damaging the child—is offset against another perceived and much more controversial risk—of a denial that God can work miracles, which is a weakness of faith. The example shows that when pathos no longer aligns with logos and/or ethos, a controversy emerges. This controversy exists because of incommensurable interests: health versus faith (but only if the latter takes on a rather extreme form). The separation between logos and pathos—i.e., between reasoning and feeling—is the rupture which for Plato inaugurates philosophy. When a rift emerges between *noesis* (true knowledge derived from the pure intellect of forms) and *eikasia* (imagination), a crisis emerges that calls for critical thinking. When *noesis* and *eikasia* no longer add up, a cognitive dissonance emerges, e.g. when something that may sound reasonable, does not "feel right". Whereas we are very used to thinking that "science" is always on the side of *noesis,* this has been questioned during the emergence of what Beck has called the Risk Society.

The Risk Society 1.0

The first step of the argument—risks become controversial when their rhetorical elements no longer add up because they stem from incommensurable interests—generates a second question: under what conditions will controversial risks increase in intensity and/or frequency?

The concept of Risk Society as developed by Ulrich Beck (1992) is widely known. Drawing from the example of the nuclear catastrophe at Chernobyl, Beck develops a general thesis that a threshold has been passed at which the scientific-technological capacity to cause global catastrophes has exceeded the existing socio-political capacity to control them. At a later stage, Beck focused more specifically on the inertia of the nation-state as an institutional anchoring of problem-solving, which led him to advocate a notion of cosmopolitics (Beck, 2007) as an advocacy of an integration of democratic-political engagement on a world-wide scale. Cosmopolitics is not restricted to mere parliamentary decision-making, but also includes the sub-politics of social movements and the need to democratize scientific practices and institutions.

Whereas Beck's *Risk Society* enabled him to also engage with processes such as individualization and mediatization, there was no clear attempt to theoretically integrate these as more than synchronized phenomena. This is because the kind of societal diagnosis that his thesis relies on is primarily framed in terms of "modernity" as a confluence of political-economic and socio-cultural transformations that may vaguely resonate with historical-materialist analyses but without any engagement with dialectics. As a result, the Risk Society 1.0 is associated with the assumption that class struggle, based on the unequal distribution of goods, is being replaced with identity politics, which are based on the (less unequal) distribution of bads. The Risk Society 1.0 could thus be understood as informing the thesis that the bourgeois mind-set (e.g. liberal individualism) has started to realize its own existential insecurity.

The underlying notion—that "we" (this is indeed the Eurocentric "we") are all both at risk and held accountable for it (obviously not all to the same extent, but this was not something that was at the heart of Beck's thesis)—has provided a very fertile ground for risk-studies. A key resonating concept for these studies is the concept of "insecurity".

Indeed, as McKenzie Wark (2012: 83) writes in *Telesthesia:* insecurity "is just a way-station in the self-production of security". Beck had started writing on the *Risk Society* before the Chernobyl Disaster. At that time, he was working on questions of social structures and labour markets, which were dramatically changing from the late 1970s onwards, due to the onslaught of "Neoliberalism" as a framework for political, economic, social and cultural reform. Beck had noticed a process of precarization of labour and its consequences for the increasing financial and social insecurity of a growing number of people, especially young adults.[1]

The rapid rise of the ecological question—especially with the formation of green environmental politics and pacifist anti-nuclear armament politics as alternatives to traditional socialist class politics—which also swept across social scientists working in universities—perhaps seduced him (and many others) to abstract from the concrete everyday life *experiences* of insecurity in relation to employment and financial stability towards a more generic notion of existential insecurity in relation to *anticipations* of future catastrophes. In social theory, this shift was noticeable as one in which a critique of capitalism transmorphed into writings about modernity and postmodernism and an embrace of "poststructuralist theory" that radically rejected dialectical historical materialism and with it, the ability to question its own basic assumptions. Thus, what Beck failed to consider is the question what enabled this practice of abstraction from actual precarity in relation to labour, to generic existential insecurity related to ecological-nuclear catastrophes? Beck abandoned the mundane logic of labour market developments under Neoliberalism and embraced the emergent green ecological critique as if the two were completely different realms of reality without any common cause.

However, one insight that the Risk Society Thesis did allow us to highlight is that risks have become increasingly controversial. That is to say, the feedback loops between securitization and insecurity have

[1] This opens up the issue of the relationship between (un)certainty and trust, which is always historically specific. In Beck's analysis, Individualization is an autonomous process that manifests itself, for example, in an increased subjectivation of language use, measured in terms of the rise of idiosyncrasies. The suggestion that this is an autonomous process, however, bypasses his own argument of the delegitimation of institutions. It should be clear by now, that both subjectivation and the delegitimation of institutions have the same political-economic roots and that the notion of cultural autonomy is a red herring.

started to multiply and with it, logos, pathos and ethos have started to diverge on a growing number of controversies. Whereas in the post-war Euro-American welfare state, there was a general notion that insecurities were individual and could be treated locally, through the deployment of scientific-technological innovations or legislative-bureaucratic adjustments, the Risk Society thrives on the proliferation of insecurities *through* practices of securitization. For Beck, the main domain of rhetoric where this took place was that of ethos, especially in terms of the delegitimization of institutionalized science.

Thus, the Risk Society is the threshold where the main currency is related to the securitization of insecurity.[2] It can be seen, for example, on finance markets with the growth of trade in derivatives and hedge funds as well as the privatization of insurance (Van Loon, 2005). It affects international relations with the expansion of the anti-terrorism paradigm that now regulates not only airports and immigration laws but also, for example, lyrics and social media posts. It also unfolds in terms of environmental regulations and (global) public health management, for example in terms of vaccinations, health screenings and compulsory testing.

However, whereas each of these aspects, which Beck (2007) himself summarized under the label "World Risk Society", the question arises whether these can still be understood through the same mode of abstraction that Beck called "reflexive modernization"? The securitization of insecurity seems to have undergone an epistemological break. That is, the misalignments between ethos, logos and pathos that constitute the proliferation of risk-controversies seem to have imploded the very possibility of differentiation between truth claims and opinions. That is to say, an increasing number of practices of securitization seem to have abandoned the epistemological common sense of "good science".

[2] Beck did not really engage with how the currency of risk relates to capital, although he did stress that a key characteristic of the Risk Society is the collapse of the Insurance Principle. Most large techno-scientific projects are undertaken without any insurance coverage. Because of the absence of an engagement with dialectical historical materialism, Beck did not invoke a notion of real abstraction, which would have enabled him to argue much more convincingly that risks and opportunities are two sides of the same coin. Elsewhere (Van Loon, 2014), I introduced the concept of risk-flow to show how risks morph into other risks and/or opportunities.

The Risk Society 2.0

This emergent issue points towards what I would like to call "the Risk Society 2.0". As has been argued in the previous section, Risk Society (1.0) is a generic transformation derived from a growing incredulity of scientific authority. Beck refers to this as a decline in the power of the institutionalized ethos of science in the wake of incommensurable truth claims between royal science and the subversive science of new social movements, which has been amplified by an incongruity of time: science is often too slow for political decisions in the face of a possible catastrophe.

However, there is a second force at work. Whereas "royal" science (science that has been officially sanctified, e.g. in the same way as a "royal society") claims for itself the status of *noesis*, subversive science (often paired with common sense) is being denounced as *eikasia*. As the rift grows (cf Irwin & Wynne, 1996), so does the uncertainty about the actual difference between *noesis* (as knowledge geared towards truth) and *eikasia* (as feelings geared towards affirmation, which are susceptible to "subjectivation", as the manufacturing of personalized options as commodities).

By contrast, the Risk Society 2.0—which goes beyond Beck's diagnosis—is characterized by what Latour (2018) called "an epistemological delirium", i.e. the erosion of *noesis*. For Latour, this delirium manifests itself most acutely in debates surrounding climate change, where existential interests related to planetary health are played off against political-economic interests of securing the wealth of a small group of rich people. The latter, however, wield enormous institutionalized ethos in terms of capital, law, politics, and public relations and public opinion management (*eikasia*). Especially in terms of the latter, they have shifted the rhetorical foundations of discourses on climate change from logos to pathos. An example of this is the prominence of positioning oneself in relation to climate change as a matter of belief.

As the epistemological delirium spreads, *eikasia* is all that remains. Those trapped by it can only believe something when it feels right. Risk communication that taps into those feelings—for example suggesting

that transgender men prey on cis women in public toilets as a justification for banning gender-affirming care—still enables securitization, even if any sense of *noesis* espouses this as completely ridiculous. Not acknowledging this, however, makes risk communication increasingly ineffective. The epistemological delirium that derives from a denial of *noesis*, of logos, of logic and evidence is able to reject any coherent and reasonable account of why our planet is in a precarious state.

The fact that this noetic logos does not stand on its own but resonates with the institutionalized ethos of ecological and geological sciences that is represented by the Intergovernmental Panel on Climate Change (IPCC, 2023)[3] makes no difference. The fact that it also resonates with the pathos of, for example, Fridays For Future that tries to appeal to decision-makers to take the future of young people into account, can be easily dismissed as "fear mongering". Whereas these forces add up and make a strong case why climate change, especially when related to the dramatic decline of biodiversity (IPBES, 2019), poses a challenge of apocalyptic proportions,[4] the epistemological delirium can easily deny this coherence as it may not "feel right".

However, the epistemological delirium does not emerge from nowhere as some kind of autonomous, emergent culture. It is a product of the same culture industries, which have produced the negative dialectics of individualization and consumerism (Adorno, 1973). One might even be able to prove that it is a deliberate manipulation of needs. The most notable interests that do not add up to the logos, ethos and pathos of concerns over climate change and the decline of biodiversity are related to the hoarding of wealth and resources that is commonly referred to as "capitalism". The most common argument against decision-making that seeks to reduce global warming is that the costs of such measures do not justify their benefits. This is usually paired with undermining the logos of climate change science by calling into question its evidence-based

[3] The Sixth Assessment Report of the IPCC that was published in 2023 was the work of 721 scientists and thousands more reviewers. If all technologies and human and non-human research participants that were involved and their global spread are also included, it is clear that the actor-network of climate change research is immense.

[4] A landmark publication on the decline of biodiversity is the *2019 Global Assessment Report on Biodiversity and Ecosystem Services* by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

reasoning and deflecting it as "ideologically motivated". Any substantive action against climate change and the decline of biodiversity would imply not only massive redistribution of wealth but also the need to engage with modes of life that are very different from those enabled by the Capitalist Mode of Production.

This is at the heart of Jason W. Moore's (2015) *Capitalism in the Web of Life*. Moore argues that the current ecological can only be properly understood through a dialectic historical-materialist frame of analysis, which he refers to as "World-Ecology" (ibid: 3). World-Ecology explains how conceptions such as Nature, Society and the Human have emerged as intellectual tools in support of the reconfiguration and management of an emergent imperial-patriarchal capitalist world order that was driven by European colonialism at the end of the (so-called) middle ages. This analytical framework has been completely absent from most analyses of risk, and explains why the notion of Risk Society still strongly relies on the voluntarist assumption that it is politically motivated and can be removed via the ballot box. However, if the symptomatic analysis of the unfolding of the Risk Society points towards world-ecological processes, then we (as those we care about the future of Planet Earth) may have to accept that the apocalyptic unfolding into an epistemological delirium is not simply the consequence of human stupidity.

The epistemological delirium of Risk Society 2.0 thus expands the controversy within the ethos of science, which marked Risk Society 1.0, to all forms of knowledge. Science has become an ideology, a religion and a political perspective all at once. Reality has become a multiplicity of virtualities, in which every statement of fact is automatically a statement of belief. This is why Latour (2005, 2007) was right to reject a politics of science based on "statements of facts"; instead of matters of fact, he argued for a politics of science that emphasizes "matters of concern". Latour thereby at least implicitly acknowledged that in Risk Society 2.0 the central challenge is not to deny that science is political, but to explore the difference between good and bad science as a political question, related to concrete interests.

One of the reasons for the rapid spreading of the epistemological delirium is the expansion of the virtual, in particular in terms of the digitalization of communication media (Van Loon, 2000). Immersive,

augmented, virtual realities no longer require specialized VR equipment and technologically sophisticated laboratories. The speed with which artificial intelligence can create "statements of fact" exceeds that of fact checking them, even if the latter is also performed by AI-based applications.

The epistemological delirium is not some kind of cognitive deficiency; it is a technologically induced perpetual misalignment of ethos, logos, and pathos. Let us not fool ourselves into thinking that climate-change deniers are convinced beyond a shadow of a doubt that they are right. Why else would the richest men in the world all invest in space travel? Why else would they invest so much money into the PR-based politics of climate change denial, rather than scientific research itself? Why else do they support ethno-nationalist extremism as an alternative to democracy? These actions simply prove that these men have serious doubts about their own epistemic politics. They act as if they have understood that the epistemological delirium, which they have themselves strongly contributed to, might have become their own undoing, yet are at the same time doomed to perpetuate it.

Hyperstitions

One of the key lessons of Risk Society 1.0 has been that risks are virtual objects with real consequences (Van Loon, 2002). The substance of risk is that of probability related to the size and intensity of impact, which under the Capitalist Mode of Production is subject to real abstraction.[5] Simply put, risks can flip into opportunities, as both are a function of

[5] Real abstraction is a concept related to the conversion of labour into exchangeable goods that Karl Marx (1867/1983) developed in *Capital*. However, I am using the work of Alfred Sohn-Rethel (2022) here, as it resonates much more clearly with the historical perspective of Moore's World-Ecology paradigm. Real Abstraction refers to a unique form of abstraction that is rooted not in conscious thought but in the very social and material practices of commodity exchange under capitalism. Sohn-Rethel argues that this form of abstraction is foundational to the development of both capitalist social structures and the way human cognition itself is shaped, revealing a deep interconnection between economic forms and epistemological processes. This in turn, effectively supports Pasquinelli's (2023) thesis that artificial intelligence derives from the division of labour as part of the intensification of the capitalist mode of production during industrialization.

capital. The reality of risk is not the danger it refers to, but the consequences of acknowledging and valuing the possibility that this might happen. I have deployed the concept of *virtual risk* (Van Loon, 2000) as it expands traditional understandings of risk by emphasizing the potentiality and emergent nature of hazards that are not yet fully actualized but exist in a state of real possibility shaped by social, technological, and symbolic factors. Unlike classic risk models focused on quantifiable probabilities and outcomes, virtual risk captures how risks are constructed, mediated, and experienced through anticipation, imagination, simulation and communication—especially in late modern societies marked by rapid technological change and complex networks. This notion highlights the fluidity and contingency of risk, where dangers are not fixed entities but dynamic phenomena whose reality depends on cultural narratives, power relations, and the ways they are represented or enacted. Risks are virtual objects, simultaneously real and abstract, which shape social behaviour and governance long before any tangible harm occurs.

In this sense, Risk is exactly what Nick Land (2011) once referred to as "hyperstition": a combination of hyper (a rapidly accelerating spreading of affect) and superstition (a belief that is not anchored in an experience of reality). This is more than merely a "social construct", in that it is not enough for people to collectively merely *believe* something to be true for it to become real in its consequences (as in the so-called *Thomas-theorem*).[6] This realization has to be accomplished practically—through material transformations and/or real abstractions—for which technology is essential.

> Hyperstition is fiction that makes itself real. It is a class of ideas that, by virtue of their circulation and belief, bring about their own reality. Unlike simple superstition, hyperstition functions through recursive, nonlinear feedback loops in culture and technology, generating effects that propagate and accelerate change. (*Land,* 2011*:* 136)

[6] This distinguishes hyperstitions from social constructions as described by the so-called Thomas Theorem: "If men define situations as real, they are real in their consequences." (Thomas & Thomas, 1928: 572)

Both real abstraction and hyperstition (as performative abstraction) refer to circulation as engendering individuation, However, whereas real abstraction focuses on the historical-material necessity of circulation, hyperstition—at least in the way that Land introduced it—seems to be completely serendipitous because it is exclusively anchored in *eikasia*. It is thus logical to posit that hyperstitions are epiphenomena of real abstraction; it is the digitial-technological infrastructure that enables their rapid and rabid proliferation.

Conversely, in the Risk Society 2.0, many of us are therefore increasingly trapped inside an epistemological delirium because of the spreading of hyperstitions that take the form of (controversial) risks appearing to us as iterations between securitization and insecurity. Because those trapped in *eikasia*[7] are increasingly alienated from direct experiences of reality, as they are constantly encouraged to disbelieve what they have experienced and replace their disbelief with hyperstitions, they are increasingly depleted of the ability to discern if something really happened. Instead, truth claims backed up by technologically enhanced representations of reality such as AI-generated images and deep-fakes, whose connections to what has actually taken place remain obscure, are increasingly colonizing what was formerly known as the public sphere. The relevance of hyperstitions does not depend on which risks are being considered, only their technologically enhanced resonance and circulation matter.

A key aspect of the proliferation of hyperstitions is time. Like rumours (Castañeda, 2000), hyperstitions do not have a history. They are instantaneous. As soon as they appear, they have always been there. In that sense, they operate with exactly the same logic as Carl Schmitt's (2003) Sovereign Act: the act with which Sovereign Rule is being established (Barbour, 2010). It not only redefines the geography of the sovereign territory but also instantaneously redefines the history of sovereign rule, projected backwards in time so to speak.

[7] For the sake of sociological clarity, the entrapments of *eikasia* disproportionally affect those who rely on mainstream and social media to understand the world, compared to those who remain more grounded in existential insecurity. For example, those who are trapped in Gaza and are subjected to a genocide face the consequences of hyperstitions (e.g. around terrorism and insecurity) without having been involved in their creation; they do not experience subjectivation, but only objectivation.

This makes hyperstitions dangerous tools in the hands of those who pursue their own interest at the expense of others. Unfortunately, this is exactly the hallmark of technofeudalism (Varoufakis, 2021) and cyber-fossil capitalism (Pasquinelli, 2017). To be able to transform a statement into a faît accompli is what characterizes the current Regimes of, for example, the USA, Israel, and Russia. When Trump, Netanyahu or Putin claim something to be true, it becomes true in its consequences, not because enough people believe it, but because the claims are technologically realized; and this is because the distinction between virtual and actual reality is at best ambivalent and at worst non-existent within the Risk Society 2.0 (Van Loon, 2002).[8]

Not surprisingly, hyperstitions are closely tied to interests. One of the oldest sociological texts on interests is that of Albion Woodbury Small (1905: 198), whose entire sociological theory derives from one specific sentence: "in the beginning, there were interests". For Small, the very conception of the social is that of *inter-esse*; between-beings. Small identifies six different basic forms of interests: health, wealth, knowledge, justice, beauty, and sociability. His argument is that these interests are mutually exclusive, as one interest always has to be prioritized over the others. "Interests are unequivocal, intolerant, exclusive" (ibid: 201). This also enables him to posit that "each Individual is a simple or a compound interest-factor" (ibid: 202), which in turn strongly resonates with the notion of *Actant* as developed in ANT and most notably by Madeleine Akrich (1992). For Akrich actant refers to any entity—human or non-human—that participates in a network and contributes to action or outcomes. An actant is thus not defined by what it is *in itself*, but by what it does within a relational network. Adopting Small's analytical framework: what an actant does relates to a compound of interests and not a singular individual.

[8] The question whether this is any different from traditional forms of propaganda is justified, especially if one considers the argument made by Ellul (1968) that propaganda is not defined by its ideological but by its technological features. However, the fact that with digital media all forms of communication have become interchangeable, and can also generate their own content, could be understood as an epistemological break from ideology in its analogical form.

In Actor-Network Theory, the concept of *Interessement* (Callon, 1986)—which focuses on the translation of interests as part of network-building—suggests that interests might be better understood as relational quantities. Interests can be translated and attuned to each other. This, however, enables a critique of ANT itself, as it fails to logically pursue the modes of translation beyond the rather voluntarist and liberal notion of negotiation. A more dialectical version of materialism would understand the very possibility of Interessement, i.e. of translating different interests into the same Obligatory Passage Point (i.e. a proposal to resolve a controversy, cf. Callon, 1986) as derived from practices of real abstraction. Interests can be quantified in terms of (for example) exchange value and thereby calculated as equivalences in processes of attunement.

Thus, the technological realization of hyperstitions as creating the conditions of our current epistemological delirium is not independent of real abstraction and the machinations of technofeudalism (Varoufakis, 2022) and cyber-fossil capitalism (Pasquinelli, 2017). They are both sides of the same (bit)coin. Indeed, the very idea that bitcoins "have" value has itself been turned into hyperstition as bitcoins absorb an immense amount of resources and energy from the offline world and pump it into the online world where artificial intelligence may already be harder pulling on the strings that we are able to ascertain.

Clustering Interests to Identify Matters of Concern

Thus, rather than understanding Risk Society 2.0 as a completely new object of analysis, we (as a think-collective interested in risk communication) can simply continue with the same old hypothesis that it is the culmination of certain interests overruling other interests. Using the six categories of Small, we can perhaps identify specific interest clusters; which may help us overcome the rather debilitating dualism of "life" versus "profit" which seems to be the current stalemate of the epistemological delirium surrounding the climate-change-risk-controversy.

Invoking the tools of rhetoric analysis, we can understand one specific cluster of ethos-logos-pathos to be associated with climate-change denial

as it privileges private wealth over planetary health, knowledge, justice, sociability, and beauty. This is communicatively realized through the deployment of a traditional ethos of imperialism and patriarchy,[9] a logos that leans on spreading doubt rather than providing actual alternative explanations, and a pathos that induces distractions ("don't worry, be happy") but also hatred.

A second cluster is that of green-neoliberal tinkering, which also prioritizes wealth over all other interests, but seeks to form alliances with them as well, especially by emphasizing the connections between wealth and health. Its ethos is more progressive and less patriarchal but still imperial. In contrast to climate-change denial, it still adheres to the institutionalized authority of science, and focuses on the dual logic of the technical fix and intelligent, ethical consumption, and this is complemented with a rather optimistic, individualistic pathos of "moral citizenship", "virtue-signalling", and the paradoxical liberal intolerance of intolerance.

A third cluster emphasizes both justice and health and stresses that without a redistribution of wealth and a fundamental restructuring of the relationship between economy and ecology on a world-wide scale, planetary health will not be secured. This is the ethos of eco-socialism, which is progressive and anti-imperialist, but remains outside of most mainstream institutions. Its logos strongly relies on both theoretical logic (e.g. World-Ecology as dialectical Historical Materialism) as well as scientific evidence, but also resonates with non-western forms of knowledge, wisdom and experiences. Its pathos is more apocalyptic and more attuned to what may be required after everything has collapsed, which may also incorporate the use of certain forms violence (road blockades, vandalism).

Of course, there could be more clusters, and this should really be an empirical exercise. My account is merely an illustration of how interest-based sociology can align with analyses of communication rhetoric. What should be clear is that risk communication can and should be analysed as specific forms of rhetoric that seek to align and translate particular interests as matters of concern. The fact that most—if not all—risks are

[9] See for example Federici (2012, 2018).

now manifestations of hyperstitions and subjected to practices of real abstraction, however, should make all of us wary of the role of political epistemology.

The epistemological delirium is omnipresent because most—but not all—of us have become deeply affected by alienation. Alienation is closely associated with commodity fetishism as both are products of real abstraction.[10] That is to say, alienation is not a choice. Even those who acknowledge alienation and the power of hyperstitions are not necessarily immune to them. Whether we like it or not, the likes of Trump, Netanyahu and Putin (as figurations, i.e. actants, rather than individuals) determine the fate of this planet, and the rest of us have no good reason to assume that this will work out fine. Nor can we assume that their kakistrocratic[11] appeal to a sizeable minority of people is anomalous and will disappear if the rest of us simply apply more technologies of enlightenment.

However, there are also rays of hope. The misalignment between logos, ethos and pathos can only be covered up by hyperstitions to some extent. Sooner or later, reality hits back simply because alienation is not limitless. Even those who are strongly mesmerized by Trumpian hyperstitions, for example, may find out that their trees are dying because of draught. At some point, some AI-based combat drone may kill its pilot and prevent its own shutting down. When risks become catastrophes, hyperstitions evaporate. Apocalypse is a harsh teacher (not in a positivistic, but in a dialectical-historical-materialist sense).

[10] I use the term alienation in terms of a particular manifestation of proletarianization, as an imaginary relationship to one's real conditions of existence that excludes a sense if their historicity.

[11] Kakistocracy is derived from kakistos (the worst) and kratein (to rule) and means: "rule by the worst".

The Banal Apocalypse and the Web of Life

The warnings by Marx (1867/ 1983), Sohn-Rethel (2021), and Stiegler (2010) about real abstraction and proletarianization[12] have proven to be justified. The epistemological delirium has accelerated the disintegration of the relative autonomy of science—which already started decades ago—and transformed all matters of fact into matters of belief. Indeed, it is not hyperbolic to claim that many if not most of us are already living in post-apocalyptic times, as what is currently happening had already been revealed a long time ago. As already mentioned, Matteo Pasquarelli (2023) has eloquently shown that artificial intelligence has not suddenly created a new world order. Its roots date back to the origins of capitalism, as it reorganized the functions of knowledge and information as means to increase efficiency. Its logic is exactly the same as that of capitalist accumulation; it derives from the same practices of real abstraction. It has always engaged with the attuning of abstraction and extraction and it has always played a major role in engendering alienation and proletarianization.

What Pasquinelli (2017) has dubbed "cyber-fossil-capitalism"—highlighting the interdependency between digital abstraction and material extraction - is the material condition of the Risk-Society 2.0. This is why hyperstitions are never purely ideational; this is why ideology is never purely ideational. As has already been explained with reference to Latour; the epistemological delirium is the misalignment between matters of fact and matters of concern. However, this misalignment is not an autonomous, spontaneous cognitive dysfunction. Instead, the destruction of *noesis* is real, as proletarianization is real.

This has profound consequences for how to understand "banal risks"; i.e. the ones that do not seem controversial because their ethos, logos, and pathos all seem to add up and "common sense" seems to prevail.

[12] Stiegler reinterprets proletarianization not just as the loss of ownership over the means of production (as in classical Marxism), but more broadly as the loss of know-how (savoir-faire), life-skills (savoir-vivre), and critical knowledge (savoir-théorique) due to the externalization of memory and technical cognition into machines and media systems. This process, he argues, intensifies through modern digital technologies, leading to a disempowered, disindividuated subject—no longer able to think or act on behalf of the common good.

Indeed. The main victim of the epistemological delirium is not science but common sense. If hyperstitions start to replace actual experiences, they do so because they can disintegrate the alignments between ethos, logos and pathos, because of intensified alienation and proletarianization. This misalignment is first encountered as trauma: an extreme experience of disorientation, disembodiment, and disconnection of the senses.

Trauma designates an embodied state of exception and a suspense of what in modern thought refers to as agency. Traumatic experiences undermine a sense of reality as stable and predictable. The embodied state of exception is a cognitive and epistemic rupture with reality. In a post-apocalyptic world, trauma becomes a universal condition as we—some much more than others—are experiencing the end of the world-as-we-know-it. This is why the epistemological delirium affects so many people. Institutions such as science, public administration, law, and "quality journalism" which used to provide a stable ordering of knowledge, are permanently under suspicion. However, a traumatized mode of subjectivity still desires unification, to rebalance its relationship with its environment, and hyperstitions seem to provide this function free of charge to many.

Of course, there is no such thing as a free lunch. Hyperstitions are never disinterested. As a product of cyber-fossil capitalism, hyperstitions serve specific metabolic forms of power: those that impose themselves upon all forms of life through abstraction and extraction. This is why hyperstitions are entropic; their promised compensations are nothing but amplifications of dependency through alienation. The banal apocalypse (Doel & Clarke, 1998) has already happened (Van Loon, 2002), but many of us may still be too traumatized to recognize it. Those that have experienced the harsh reality of living in a post-apocalyptic world—for example in Palestine, Ukraine, Sudan, Somalia, Yemen, the Amazonas or by many among those recently deported from the USA—however, can already teach us what it is going to be like for the rest of us.

What the banal apocalypse reveals is the fragility of the web-of-life. As a term made famous by Fritjof Capra (1997) and very effectively integrated into the dialectical historical materialism of World-Ecology by Jason W. Moore (2015), web-of-life abolishes the bifurcation of nature and society (or human being or technology). Work/Energy cannot be

categorized in that way, as that would be a reification of the metabolic rift and a complete misconceptualization of the relationship between extraction and abstraction. For the last 500 years, imperialism, patriarchy and capitalism have been three major (unified) forces that have deployed practices and technologies of extraction and abstraction to serve the interests of a few at the expense of "the rest of us" (which includes trillions of non-human life forms). It is not surprising that climate change and the decline of biodiversity are currently the biggest threats to sustainable life within the web-of-life. Instead, an increase in collectivized trauma is generated by increased entropy and a reduction of complexity and not in spite of it. It is also no mystery that this traumatization manifests itself very concretely in terms of, for example, racism, misogyny and general proletarianization. The cynicism with which the few who benefit from the imperial-patriarchal structures of cyber-fossil capitalism have now turned those traumatic experiences into a celebration of sadistic libidinal self-valorization, also known as "identity politics" (such as that of nationalism), however, is not only scandalous in a moral sense, it is also offering opportunities for the formation of a more comprehensive conatus of resistance.

It is within this formation that the field of risk studies might find itself able to offer a humble contribution. By relentlessly showing not just how risks are deployed in the reproduction of entropic socio-political orders but also how these same risks expose cracks and fissures in these orders, studies of risk enable us to embrace a post-apocalyptic mind-set that is no longer dealing in matters of concern that are framed in terms of "what if…" but instead, invoke matters of concern that are framed in terms of "how to …".

References

Adorno, T. (1973). *Negative dialectics*. Routlegde and Kegan Paul.

Akrich, M. (1992). The De-scription of technical objects. In W. E. Bijker & J. Law (Eds.), *Shaping technology/building society: Studies in sociotechnical change* (pp. 205–224). MIT Press.

Aristotle. (2007). *On rhetoric. A theory of civic discourse. Second Edition* (Trans. George A. Kennedy). Oxford University Press.
Barbour, C. (2010). Sovereign times: Acts of creation. *Law Culture and the Humanities, 6* (2), 143–152.
Beck, U. (1992). Risk society. Trans. M. Ritter, *Towards a new modernity*. Sage.
Beck, U. (2007). *Weltrisikogesellschaft. Auf des Suche nach der verlorenen Sicherheit*. Suhrkamp Verlag.
Callon, M. (1986). Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St. Brieuc Bay. In J. Law (Ed.), *Power, action and belief: A new sociology of knowledge?* (pp. 196–233). Routledge.
Capra, F. (1997). *The web of life: A new scientific understanding of living systems*. Anchor Books.
Castañeda, C. (2000). Child organ stealing stories: Risk, rumour and reproductive technologies. In B. Adam, U. Beck, & J. van Loon (Eds.), *The risk society and beyond: Critical issues for social theory* (pp. 136–154). Sage.
Catechism of the Catholic Church. (1994). Geoffrey Chapman.
Doel, M., & Clarke, D. (1998). Transpolitical urbanism. Suburban anomaly and ambient fear. *Space and Culture, 2*, 13–36.
Ellul, J. (1968). *Propaganda: The formation of Men's attitudes*. Alfred A. Knopf/Vintage Books.
Federici, S. (2012). *Revolution at point zero: Housework, reproduction and feminist struggle*. Common Notions/PM Press.
Federici, S. (2018). *Re-enchanting the world: Feminism and the politics of the commons*. Kairos/PM Ppatriress.
IBPES. (2019). *Global assessment report on biodiversity and ecosystem services*. https://ipbes.net/global-assessment
International Panel on Climate Change. (2023). *Climate change 2023 synthesis report.* https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf.
Irwin, A., & Wynne, B. (Eds.). (1996). *Misunderstanding science? The public reconstruction of science and technology*. Cambridge University Press.
Land, N. (2011). *Fanged noumena. Collected writings 1987–2007*. Urbanomic/Sequence Press.
Latour, B. (2005). *Reassembling the social. An introduction to actor network theory*. Oxford University Press.
Latour, B. (2007). *Elend der Kritik. Vom Krieg um Fakten zu Dingen von Belang*. Diaphenes.
Latour, B. (2018). *Down to earth: Politics in the new climatic regime*. Polity.

Van Loon, J. (2000). 'Virtual risks in an age of cybernetic reproduction'. In Adam, B., Beck, U. and Van Loon (Eds.), *The risk society and beyond: Critical issues for social theory*. (pp. 165–182). Sage.

Van Loon, J. (2002). *Risk and technological culture: Towards a sociology of virulence*. Routledge.

Van Loon, J. (2005). 'Risk and Knowledge'. In Rooney, D., Hearn, G and Ninan, A. (Eds.), *Handbook of the knowledge economy* (p. 54–66). Edward Elgar.

Van Loon, J. (2014). 'Remediating risk as matter-energy-information flows of avian influenza and BSE'. *Health Risk & Society, 16*(5), 444–458.

Marx, K. (1983). *Das Kapital. Kritik der Politischen Ökonomie*. Erster Band, Hamburg (1867).

Mol, A. (2010). Actor-network theory: Sensitive terms and enduring tensions. *Kölner Zeitschrift für Soziologie und Sozialpsychologie, 50*(1), 253–269.

Moore, J. W. (2015). *Capitalism and the web of life: Ecology and the accumulation of capital*. Verso.

Pasquinelli, M. (2017, April). The automaton of the Anthropocene: On Carbosilicon machines and Cyberfossil capital. *The South Atlantic Quarterly, 116*(2), 311–326.

Pasquinelli, M. (2023). *The eye of the master: A social history of artificial intelligence*. Verso.

Plato. (n.d.). *The republic*. https://www.gutenberg.org/files/1497/1497-h/1497-h.htm.

Schmitt, C. (2003). *The nomos of the earth in the international Law of the jus publicum Europaeum*. Telos Press.

Small, A. W. (1905). *General sociology. An exposition of the Main development in sociological theory from Spencer to Ratzenhofer*. University of Chicago Press.

Sohn-Rethel, A. (2021). *Intellectual and manual labour: A critique of epistemology, historical materialism book series* (Vol. 224). Brill.

Stiegler, B. (2010). *Taking Care of Youth and the generations*. Stanford University Press.

Thomas, W. I., & Swaine-Thomas, D. (1928). *The child in America: Behavior problems and programs*. Knopf.

Varoufakis, Y. (2022). Technofeudalism. *Yanis Varoufakis*. (blog). Retrieved August 2, 2022, from https://www.yanisvaroufakis.eu/category/technofeudalism/

Wark, M. K. (2012). *Telesthesia: Communication, culture & class*. Polity.

Weber, M. (1956). *Wirtschaft und Gesellschaft. Grundriss der verstehenden Soziologie* (4. Auflage ed.). Mohr.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits any noncommercial use, sharing, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if you modified the licensed material. You do not have permission under this license to share adapted material derived from this chapter or parts of it.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

