

**International Symposium on Next Generation Infrastructures [ISNGI]
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The Politics of Critical Infrastructures

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Good afternoon everyone,

Thank you, Jens Ivo Engels and Nadja Thiessen, for inviting me to contribute to this panel. And thank you, for carving out this important space, to reflect on the very terms, concepts and assumptions that inform thinking and talking about infrastructures. Terms, concepts and assumptions that seem pretty commonplace and uncontested at this point in time, also, or *especially*, at this very conference.

For example, there is ample mentioning of “critical infrastructures”. That assumes that “all [infrastructures] are equal, but some are, apparently, more equal than others”. Similarly, we talk of “infrastructural resiliency”, through which we, in fact, normalise the premise that resiliency can be a property *of* infrastructures, or *written into* them. Another example is that we talk and think in terms of “resilient critical infrastructures” and thereby assume that resiliency-building is the only kind of productive action that public resources and intellectual efforts should be invested in. And we increasingly refer to “digitalisation” as a “game changer”, through which we accept that the production and protection of privately owned data and private data markets warrant a permanent state of exception and of unprecedented public investments. Even the short outline of our own panel, in its claim that “*everyone agrees that infrastructures should be resilient*”, illustrates that much of our conceptual and linguistic toolkit seems cemented. That it is beyond critical challenge or interrogation.

The main point I want to make today is that reflecting on the circulation and cementing of language, ideas and assumptions matters. Not for the sake of it. Not because some measure of reflexivity may be expected from academics. No, it matters, because how we talk through and with such ideas and assumptions, and, crucially how “we” normalise and institutionalise them through big international gatherings like these, *matters*. Because we contribute to the idea that infrastructures can be reduced to precisely that, to *matters*. To systems that are so complex, so interrelated, so “out of this world” that, if it wasn’t for “our” governance, design, risk assessment and risk mitigation measures, others may harm *them*, to harm *us*.

To talk of and through terms like “next generation infrastructures”, to discuss and delineate which ones are most vital or critical, and to conceptualise interventions as mainly responsive to the anticipation of possible external risk scenarios – all of that reinforces the idea that infrastructures are, at best, to be *acted upon*, be it in terms of national protection programmes or resiliency initiatives, to protect them against threats posed *by others*. This way of talking and thinking backgrounds or obscures that harms and damages are, increasingly, integral to infrastructures themselves and, in fact, actively woven into their business models, their business running and their business operations.

I want to turn to an example to illustrate this. It comes from a 2003 Report for the US Congress, written by a collective of highly influential institutional economists, led by John Moteff, who were asked to provide Congress with a state-of-the-art overview of what constitutes critical infrastructures. Of course, one could argue that the main table produced in the document, shown below, is dated and that the analysis would look very different today.

Table 1. What Constitutes Critical Infrastructure Over Time

Infrastructure	Criteria for Being Considered Critical. Vital to			
	national defense	economic security	public health and safety	national morale
telecommunications information networks	x	x		
energy	x	x		
banking/finance		x		
transportation	x	x		
water			x	
emergency services			x	
government			x	
health services			x	
national defense	x			
foreign intelligence	x			
law enforcement			x	
foreign affairs	x			
nuclear facilities, in addition to power plants			x	
special events				x
food/agriculture			x	
manufacturing		x		
chemical			x	
defense industry	x			
postal/shipping			x	
national monuments icons				x

(Source: Moteff, J. Copeland, C., & Fischer, J. (Jan, 2003). *Critical Infrastructures. What makes an infrastructure critical?* Report for Congress. Washington: Congressional Research Services). Available at: <https://apps.dtic.mil/sti/pdfs/ADA467306.pdf>.

Consider, for example, how in 2003 the “banking/finance infrastructure”, prior to the 2008 financial crisis, was deemed as “only” vital for the nation’s economic security. Or how in 2003, 18 years before the January 6 insurrection of 2021, the destruction of “national monuments and icons” was “only” seen to jeopardise “national morality”. And how in 2003 “telecommunications and information networks” were not considered for anything beyond national defence and economic security.

Of course, this example shows that definitions of what constitutes “critical” infrastructures may shift. But I have picked it, rather, to illustrate that, despite changes in time, context and space, the assessment of infrastructures’ criticality, and, crucially, of justifying public investments in and regulatory easing of them, is still bound by an instrumental and economical view of societal value. In fact, considerations such as “national morale” matter primarily for their impact on markets, as most notably illustrated by how such sentiments are typically operationalised in terms of “consumer confidence”. In the same way, we see that public health and safety is operationalised in terms of healthy bodies that can contribute to the economy, and as bodies that do not rely on the state. Public health is not, for example, a term used to mean the level of communities’ cultural and social thriving, of enabled solidarities and infrastructures of care, or of access to public services.

In other words, the outcome of the analysis may differ, but the method we use today is no different. Because evaluations of the value of infrastructures still only depends largely on if and how an infrastructure can be turned or “securitized” into an object of economic risk.

Approaching the value of an infrastructure through this prism means that “people” are primarily imagined as an infrastructure’s consumers or recipients, as those that are either served by the infrastructure or duped when others seek harm on the infrastructure.

But there are many more other categories of people. Consider the people and institutions whose practices are safeguarded by “rational” assessments and calculations of risk and value. They seem strategically obscured from our thinking about infrastructures. As are the very people who are already at risk and impacted by the infrastructure. Not in some future scenario of “known unknowns” or “unknown unknowns”. But today, yesterday, *and* tomorrow. They are not so much obscured, it seems, as they are rendered invisible. Obvious examples are low-wage and unprotected workers who are exploited, harmed and discarded, in the name of an infrastructure’s resiliency. Like crews at Schiphol Airport. Workers in the digital gig economy. Cleaners at universities. But consider also those communities living and dying in or near ever-expanding airports, gas extraction sites, chemical and steel plants, data-centres, and university campuses, to name but a few infrastructural domains that are typically earmarked as critical and vital.

What is needed to also imagine infrastructures for how they constitute wellbeing, or the flourishing of communities and nature? And how can we think of concepts, such as “infrastructural resiliency” and “infrastructure value”, in terms of infrastructures’ ability to not bring harm on communities?

These questions cannot be asked or answered by systems-within-systems approaches alone. Nor by relying only on engineers, designers, and economists alone. Don’t get me wrong: I am not trying to sell you humanities scholars or social scientists. Because we are used to being invited to the party very late, and to not being invited at all. But if we are to take ISNGI’s call for this year’s conference serious—which is, to pursue “radical transdisciplinary research”—then we should foremost think about how we can write people back into our thinking *and* talking about infrastructures. To take out of obscurity the people and institutions that benefit from current approaches to infrastructures. And to make visible the people and communities who are always and already at risk. And yes, with the risk of this being a sales pitch after all, that is the type of reimagination for which the arts and social sciences constitute a “critical infrastructure”.