

Trust in Digital Infrastructures

Global Perspectives, Histories, and Politics

Concept: *Florian Hoof*, fhooftfm@uni-frankfurt.de

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ConTrust Research Initiative

Modern societies are critically dependent on digital infrastructure (Parks & Starosielski 2015), and this is especially evident when infrastructure fails. But beyond situations of outage, infrastructures appear to us to be “as ordinary and unremarkable to us as trees, daylight, and dirt” (Edwards 2002). Because of their size and scale, they are also largely invisible and unaccountable. To act confidently in such a “middle ground between knowledge and non-knowledge” (Simmel 1922) requires infrastructural trust. The tension between the extreme dependence on infrastructures and the taken-for-granted nature of infrastructures points to forms of impersonal or generalized trust that straddle these two sides. Infrastructural trust appears as something that cannot simply be achieved or attained, but rather as part of a conflictual “set of slowly emerging rules, standards and networks of communication” (Breckenridge 2014) that over time generate potentials for the exercise of political power.

According to infrastructure studies, something becomes an infrastructure when a conflict-laden process is transformed into a working agreement that everyone can agree on. This socio-material consensus eventually “sinks into the background” and turns a problem into a “transparent” (Star & Ruhleder 1996) solution, ready to hand. Infrastructure can then function as a transparent medium “that facilitates and shapes modes of mediation” within societies (Hoof & Boell 2019; Boell & Hoof 2020). Examples include conflicts over technological standards, the introduction and regulation of digital platforms, or the so-called digitization of public administration. Once established, in order to retain its status as a medium, infrastructure becomes a site of constant “maintenance and repair that keeps modern societies going” (Graham & Thrift 2007). From this perspective, infrastructures are less technological than “human infrastructures” (Lee, Dorish, Mark 2006) because they are always tied to membership in a particular community of practice (Bowker & Star 1999).

Focusing on the historical and socio-material dimension of infrastructures, the workshop will consider different forms of trust and misleading trust in infrastructures. What is the justification for infrastructural trust (Forst 2022), which is not only based on interpersonal relations, but is also mediated by institutional structures? Can the deployment, maintenance, and regulation of infrastructure be understood as a series of conflicts and negotiations that stabilize forms of “second-order institutional trust” (Warren 2018)? What happens to infrastructural solutions tied to Western communities of practice as they circulate on a global scale? In what ways does infrastructural (mis)trust enable or prevent cultural, social, and economic activity (Larkin 2008)? How does the “logistical imagination” (Hockenberry et al., 2021) of digital media infrastructure relate to the signaling of trust?

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Workshop Abstracts

Debt and Trust Infrastructures in African History

Keith Breckenridge, WITS Institute for Social and Economic Research, University of Witwatersrand, Johannesburg

This paper examines the motivations and consequences of the racial prohibitions of formal debt contracts and land mortgaging that colonial administrators introduced on the African continent a century ago. Several different philosophies of paternalism and progressivism motivated colonial administrators to shield Africans from the disruptive effects of capitalist finance. The consequences of these prohibitions have been profound, shaping severely curtailed information architectures, creating fiscal architectures limited by capitation (rather than property) and encouraging the wholesale off-shoring of financial assets. The most powerful effect of debt paternalism (then and now) has been to curtail the institutionalisation of trust. The current projects of digital public infrastructures -- supported by the wealthiest donors -- seek to apply automated identification and credit surveillance systems to the problems of trust in individuals, without consideration of this long history of missing trust in property and firms.

The Aesthetics of the Global Value Chain: A Supply Studies Approach to Globalization, Trust and Conflict

Vinzenz Hediger, Film Studies, Goethe-Universität Frankfurt

In 2011, economist Dani Rodrik argued that globalization, democracy and national self-determination cannot co-exist. By looking at logistics providers like the Danish shipping giant Maersk and how they engage public trust through media, this contribution discusses how this conflict currently plays out in the organization of contemporary global value and supply chains. The increasing use of blockchain technology in logistics in particular exemplifies how the aspirational buildup of transnational infrastructures challenge the nation-state paradigm of democracy.

Can Zero Trust be Trusted? Shifting Epistemologies of Trust in Digital Infrastructures

Florian Hoof, Media Studies, Goethe-Universität Frankfurt

Digital media infrastructures are not only “centers of computation,” as Latour put it, they are also peripheries of securitization. This paper outlines a praxeological framework for analyzing the politics and epistemologies that emerge when trust in critical digital infrastructures becomes essential to societies. Digital trust has long been treated primarily as a functional problem to be solved by strongly fortifying digital infrastructures. However, the ubiquity of digital infrastructures, the rise of security breaches, and state-sponsored cyber-attacks have led to an epistemological shift in the conception of digital trust. For perimeterless security approaches, such as the zero-trust security model, not only digital infrastructures but also the social fabric of society appear as potential security risks. I argue that our inextricable dependence on trust in digital infrastructures both justifies and is justified by a prediction-based polis that expands the boundaries for the exercise of political power.

The Role of Trust in Platform Regulation

Alexander Peuckert, Civil, Commercial and Information Law, Goethe-Universität Frankfurt

Online platforms such as social media and online marketplaces are infrastructures of great social importance. On the one hand, they enable communication and transactions in novel ways. On the other hand, they also pose new risks to individual users and society as a whole by allowing and sometimes amplifying the dissemination of illegal and harmful content. The European Union's Digital Services Act (DSA) aims to address these challenges. It sets out rules for a "safe, predictable and trustworthy online environment that facilitates innovation and in which fundamental rights ... are effectively protected". In his presentation, Alexander Peuckert will provide an overview of the regulatory measures designed to create a "trusted online environment". He will highlight the vagueness of the concept of a "trusted online environment" and critically assess whether the DSA itself is a trustworthy regulation.

Investigating Discourses of Trust and Trustlessness in Blockchain Infrastructures

Anna Weichselbraun, Ethnology, Universität Wien

In my contribution I draw on a recent special issue I co-edited in which we approach trust through the technologies and infrastructures within which it is articulated, negotiated, or obviated. This we do in order to understand how such infrastructures transform an irresolvable intersubjective problem (can you really ever trust someone else?) into a space of ethnographic engagement with the many ways that intersubjective relations are constituted (if also through technology). Based on the example of discourses about trust and trustlessness in blockchain, I examine blockchain as a digital infrastructure through which trust is claimed to be made and made visible. Rather than mobilizing trust as an object whose meaning is always already given or assumed, I want to instead discover and theorize it through the empirical material, while also understanding its usage historically.

Invited Guests

Lizzie Richardson, Digital Geography, Goethe-Universität Frankfurt

Steven Gonzales, Fixing Futures Research Group, Goethe-Universität Frankfurt