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Infrastructure and Contemporary Security

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MARTIN COWARD, JUN 22 2015

Life in the urban age is underpinned by infrastructure: cables, wires, pipes, rails, roads and so on. As the connective tissue of the city, infrastructure was a defining feature of urban modernity. In the contemporary era, as the city is eroded as a meaningful unit of analysis, it is infrastructure (or the lack of it) that defines urban life.

However, infrastructure is often not the explicit object of public debate – particularly because it is made up of things that are inanimate, often invisible or out of sight, and largely opaque due to their technical nature. Indeed, Susan Leigh Starr once described the study of infrastructure as the ‘study of boring things’. Far from being boring, however, infrastructure tells us something quite important about our understanding of the vulnerabilities of contemporary, urban life. Indeed, the concepts we use to think about infrastructure shape our understanding of the unifying dynamics of contemporary, urban life and its vulnerabilities. Moreover, once we understand the central concepts used in thinking about infrastructure vulnerabilities, we can also understand what motivates certain contemporary security practices.

Two concepts are key to understanding the importance of infrastructure: **connection** and **flow**.

- On the one hand infrastructures are those cables, wires, pipes, rails, roads and so on that connect individual to individual, firm to firm, place to place, market to market and so on. It is for this reason that infrastructure is often seen as if it were a network – a series of connecting lines drawn between certain places, individuals, firms and so on.
- On the other, infrastructures are the medium through, in, or across which resources vital to the functioning of life flow. Whether it is liquid, bodies, power or data, infrastructure puts the raw materials of contemporary urban life into motion.

We tend to think, therefore, of contemporary, urbanised life as a form of logistical life organised as a network of flows. When we think about life in this way, we perceive its vulnerabilities to lie in the links through which flows are possible. Infrastructure is thus said to be vulnerable insofar as its links and flows can be disrupted – whether that is through physical (e.g., bombing) or virtual (e.g., hacking) attacks.

The concepts of connection and flow are not simple descriptions of an empirical state of affairs. The metaphor of flow encourages us to think of infrastructure – much as we think of a river – as a conduit for bodies of physical or virtual particles. Infrastructure is thus a pipe or channel through which a stream – with all the fluid dynamics this implies – of bodies, goods, ideas, money flow. Similarly, the connectivity of infrastructure is dominated by the metaphor of the network – the connection of nodes by links. Infrastructure is thus seen as a series of linking pathways carrying flows from one node to another.

Our thinking about infrastructure is thus dominated by hub and spoke models of networking and the language of fluid dynamics. As Lakoff and Johnson point out, metaphors govern the way we think about, and thus what we think we can do with, the world around us. The metaphors of connection and flow thus shape our understanding both of what infrastructure is as well as what we can do with it. In particular they create an expectation that connections and flow will be preserved. In turn, this creates discourses of security that valorise connectivity and flow. These security discourses identify blockages or breakages as forms of emergency, seeking to pre-empt them through building

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infrastructure resilience. As such, those infrastructures that echo most strongly with connectivity and flow are highlighted as those that expose society to the most vulnerability. These are the infrastructures prioritised by security discourses. Thus cyber security – which has, in our collective minds come to epitomise networked flow – receives a substantively greater focus in security discourses.

Understanding the metaphors that guide our thinking about infrastructure thus enables us to see both the way in which out our conceptual grammars affect the way we see the world as well as understanding precisely why certain vulnerabilities are prioritised above others. It explains, for example, why we prioritise markets – understood as flows of goods, services and money – over, for example, the static mass of housing infrastructure, even though the latter might be a far more urgent priority globally. If we want to challenge these priorities we will need to rethink the metaphors thorough which we understand infrastructure and, hence, its vulnerabilities.

About the author:

Martin Coward is Senior Lecturer In International Politics at Newcastle University. He researches war and security, especially in an urban context. His most recent work focuses on the link between network metaphors and the pathological sovereignty behind drone strikes. He wishes he went to the cinema more often.