

CCC Workshop, August 29 2016

infrastructure
a personal, meta-perspective

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What is infrastructure?

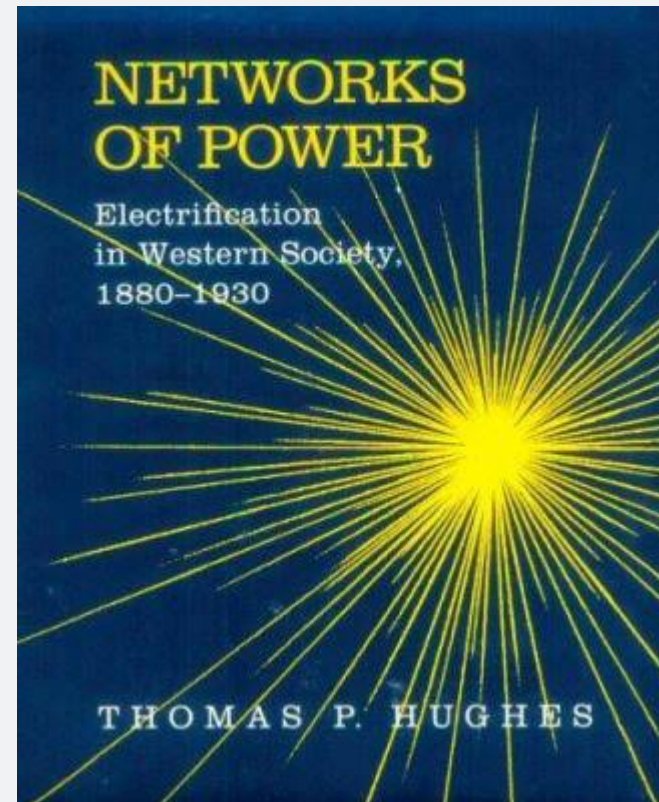
...big, durable, well functioning, systems and services...

Edwards , Bowker, Jackson & Williams, 2009

INFRASTRUCTURE

“the development of electric grids in the United States, Great Britain, and Germany...The form that electric grids take is not determined by internal (mechanical or scientific) necessity, but by external social factors. Thus the electric grid developed very differently depending upon the structures of the local governments that had jurisdiction over them.”

Innovation Group, Center for Nanotechnology in Society review



Yahoo

eBay

Google

1

2

3

CONSUMER "GAME", 4Cast

Prediction market in a game
Twitter first, website first?
**infrastructure as
legacy launch practices**

CONVERSION/PAYMENT FLOWS

Platform transitions and
user journeys
Seams between eBay and PayPal
**infrastructure as
business & technical legacy seams**

DEVELOPER TOOLS

Developer tools for
the "Internet of Things"
open source project
**infrastructure as
aligned & conflicting incentive models**

INFRASTRUCTURING

“...a pervasive enabling of resources in network form”

... with many forms of overlapping,
intersecting, conflictual incentive models...

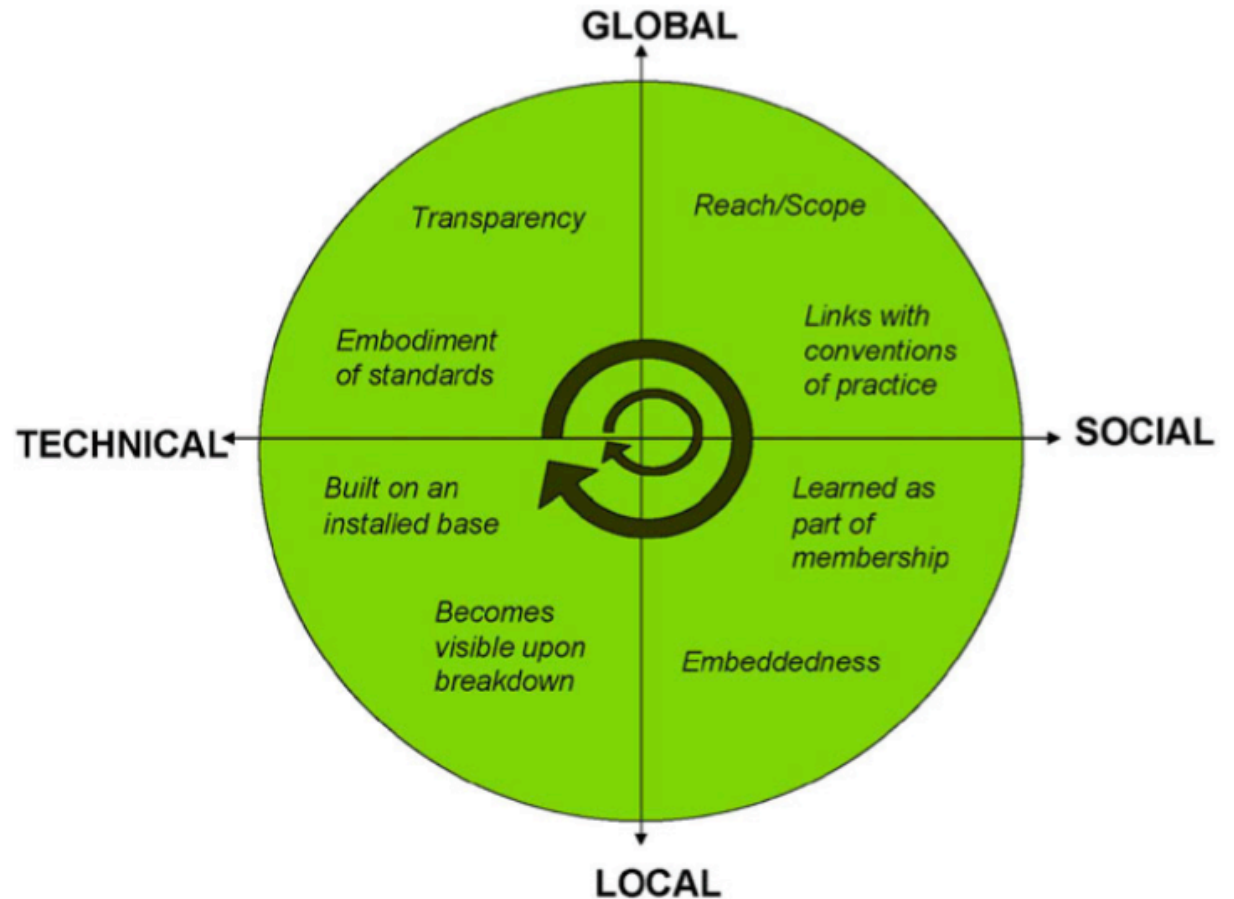
... with many different time frames ...

“....the Long Now of infrastructure...”

INFRASTRUCTURING

“...the key question is not whether a problem is a “social” problem or a “technical” one. That is putting it the wrong way around. The question is whether we choose a primarily social or a technical solution, or some combination. It is the distribution of solutions that support infrastructure in different ways at different moments.”

Bowker et al, 2010



Cyberinfrastructure as *distributions* along technical/social & global/local axes

INFRASTRUCTURE

“An everyday example comes from the problem of email security. How do I distribute my trust? I can delegate it to my machine, and deploy firewalls, password protection, and version controls. Or I can work socially and organizationally to make certain that members of my scientific community understand and police norms about data usage.”

infrastructuring
as
“continuous process improvement”?
as
review, resilience, revoking, rebordering, renewing