

Moments of disfluency in urban flood defences

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Concept

This conceptual paper looks at impactful urban flood defenses – urban flood defenses that affect other parties, in good and bad ways. Urban flood defenses keep the water from damaging the people and the stuff that make the city. The paper, however, is not *about* flood defenses. Instead, it deals with the people and the stuff spurred into activity by designing and implementing the flood defense into the urban fabric. Or more precise, it looks at how these people interact and share information. Large infrastructural projects such as these touch on many interests and bring together many disciplines and ways of knowing. When a flood defense in a city disrupts, or when a growing city disrupts a flood defense, many people who know all sorts of things swarm together over sustained periods of time. For example, modelers of, say, failure mechanisms meet with urban planners and ecologists. Or locally knowledgeable citizens meet with aldermen playing chess on multiple boards. Flood defenses thus bring together disparate parties who need to reason together and have different interest at the same time. From these *knowers*, our term for those whose quintessential activity is making inferences and representations, different abstractions follow.

Imagine camera's hovering over these knowers' heads, and speed up the video, as in a time-lapse. In that flurry of relentless connecting and disconnecting, plans, designs, calculations, probabilities, brainstorming, demands, financial arithmetic, laws, regulations and much else is exchanged constantly between knowers, busy managing their interdependence. Each instance here communicates relationships between things, the outpour and recombination of prior gathered information. The paper looks at how people with different habits of gathering information meet and have to find a way to deal and reason with each other. It assumes habits in gathering knowledge makes us fluent, and shapes what we come to imagine. Fluency frees up the mind to pay attention to social signaling and manage interaction, while shared habits make a vision that coordinates that interaction more likely. Thus, organizations, in this line of reasoning, may have harmonized action and have furthered mutual knowledge between its members so its knowers' move in line with the organizations goals. Or

an individual, say an entrepreneur, who has had many encounters with a specific domain, inductively and deductively and through trial and error, builds up an intuitive expertise, a know-what-to-do in a situated context. A meeting of such disparate knowers with different habits, unsurprisingly, may thus produce the opposite of fluency: confusion, perhaps even conflict. When there is disagreement or misunderstanding, knowers are in an uncertain, chaotic space. That messiness can take, the paper argues, shape in various ways, yet will always include the drafting of representations intended to persuade.

Hormone driven risk taking politicians, experienced or obstinate weathered old men and women up the hierarchy, emotional citizens who live in and use the city, and countless other embodied knowers. . . each of them is as much a shaper of the resulting flood defense as the engineering knowledge or the organizational routines needed to construct it. Patterns occur in their interaction. Experts, who seem plucked from the same shelf, suddenly indulge themselves in the narcissism of minor differences. Know how of builders meets know why of academics and consultants. Abstract reasoners irritate concrete ones. The ethical is consoled somehow with the epistemic. Odd stories bump into fixed narratives. Seekers of closure face trumplers of truth, or the optimal, or accuracy, or the 'virtues' of selfish naked interest. The visual exuberance of presentations ruffles the prejudice of the down-to-earth logician. Innovation fads burst onto the imperishable shores of basic accounting. The flexible clash with the rigid. Large scale or long term must negotiate with local or immediate problems. Centralized salaried servants meet up with free, yet fleeting entrepreneurs. Bullshit meets with heaps of it. Modelers churn out a plethora of possible paths and inflection points for flexible design, while others enlist the witchery of storytellers who line out a glorious vision. What such moments have in common is that each knower is constantly inferring and representing, in the hope the other people at the table fall in line with them. When knowers are at the receiving end, they are constantly evaluating the other's claim with vigilance, but looking for a novelty that information can give.

Ethnographic character and Contribution.

This paper departs from a case-study of a complex urban flood defense in a Dutch city, based on 25 interviews with the key knowers involved. It is also based on various ethnographic observations where

technical knowledge met other technical knowledge, or non-technical knowledge, usually in fixed environments. The data from both interviews and observations have made it apparent that there are recurring patterns in such public reasoning that have been little investigated, even though they are ever present. There seems to be little empirical literature on how disparate parties aggregate information and reason on public problems (Jasanoff 2011). This paper want to throw a crumb in that gap by making a classification of patterns that occur in the interaction of knowers. The author will use this categorization in future case studies.

The paper makes a conceptual exploration, intended as a tool for ethnographic research. Research focuses on moments where disparate knowers meet, and looks for frequently occurring, yet not causally determined patterns. The tool developed in the paper is a labeling, a categorization. It captures how knowers *present* the relationships between things and together the labels communicate what *characterizes* the moment of contested information. Each particular moment will have many labels, just as human characters are unique by combining different traits. These labels may help recognizing an event as it occurs, and in ethnographic research can be coupled with strategies and counterstrategies of people who deliberate on public problems. Below are some *examples* of categories on separate interchangeable dimensions.

- Information may be expressed as **certain**, as **risk** (statistical analysis possible), or marked by **uncertainty** (randomness qualitatively tamable, or not tamable)
- Understanding may be **tacit**, arrived at through feedback, and explicit information hard to convey. By contrast, it may be **conceptual**, more generalizing. Alternatively information may be an **imagination** - possible relationships acknowledged to be not a reality. E.g., a future scenario in a model-run; a sketch of a non-existent building.
- Information may concern **ethical beliefs** (anything communicated to avoid mutual loss and seek mutual benefit, a call for increasing, accelerating or decreasing, decelerating action) or may be **epistemological** (when it aims to tailor action more effectively and flexibly to the environment)

- Information can target our **reflective cold cognition**, or the **reflexive, emotional hot cognition**. (e.g., fancy, supposedly realistic drawings with happy people cavorting around an impressive architectonic icon, or the alarming tone of many problem-statements at the beginning of research proposals:)
- Information can have **degrees of variance**, differing how much it can change under possible transformations: fashions fluctuate rapidly, varying with many transformations, while the pattern of ebb and tide is invariant, depending on the moon and the planet to be roughly on an equal distance. Or information may be invariant within local possible transformations, as long as relations stay stable. They can then fall apart on a wider scale, outside those relations. An example is a municipal policy, invoked as an argument.
- Information can **fit the dominant narrative** or it can be **exotic**, foreign to it. Along similar lines, the information could be considered useful, yet uncongenial for relations, or the information may confuse a group, having no way to fit it in their world view.

Reference

Jasanoff, S. 2012. *Science and public reason*. Routledge