Technology Regulation

History and Principles

In this Video…

- What is regulation?
- What does it mean to regulate technology?

What is Regulation?

- Regulation (ex ante) versus liability (ex post) (Shavell, 1984)
  - E.g. speed regulations vs accident (tort) liability
  - Standards set by regulators before accident vs set by courts after
  - Different strengths and weaknesses
- Regulation falls on a spectrum (Moran, 2002)
  - Formal regulation: legislation, subsidiary legislation, etc
  - Quasi-regulation: standards that fall short of law, but have some kind of state backing, often through endorsement or enforcement
    - E.g. "soft law" like Codes of Practice
  - Self-regulation: standards written **and** enforced by industry bodies
- **To understand regulation, we need to examine:**
  - What things regulate?
  - What things are regulated?
  - How and Why?

What Things Regulate?

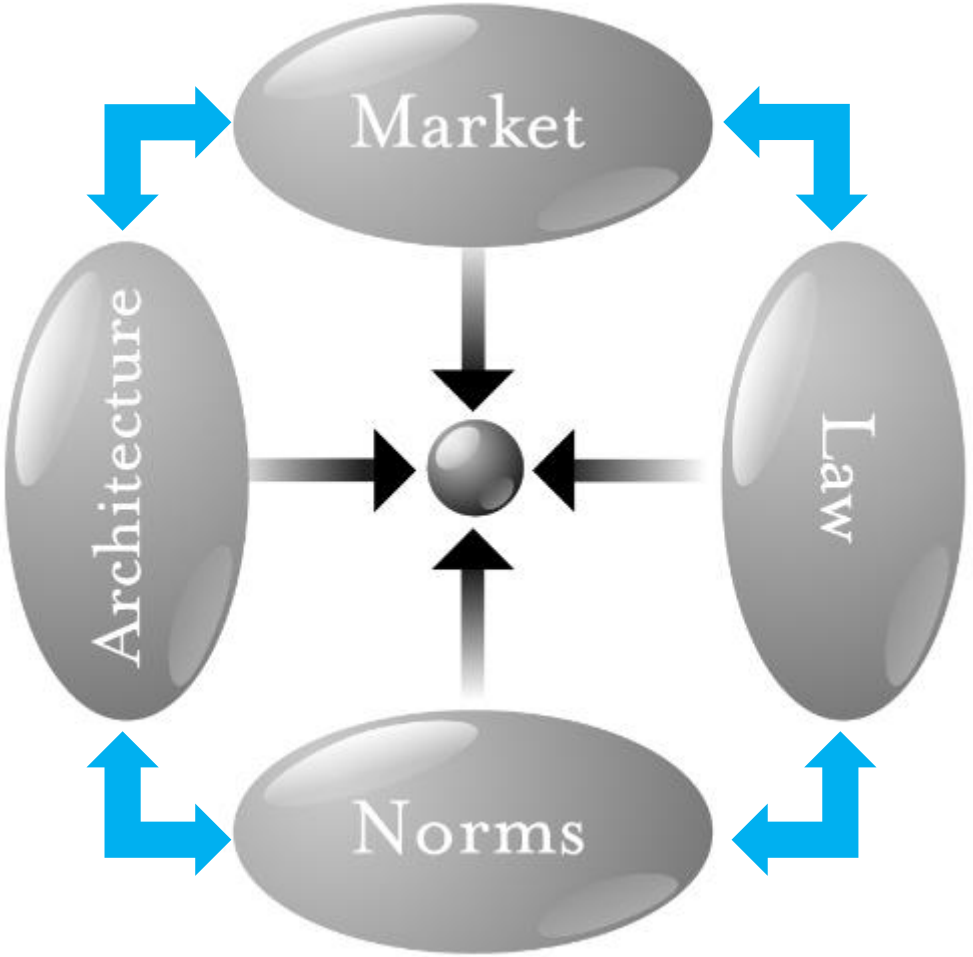
Revisiting Code as Regulator

- **Lessig**: code … selected by code writers … constrain some behavior by making other behavior possible, or impossible. In this sense, they too are regulations, just as the architectures of real space code are regulations.
- As a regulator, "cyberspace creates a **new threat to liberty**…not new in the sense that no theorist had conceived of it before, but in the sense of **newly urgent**"

- Lessig uses "regulation" in the **broad sense** of **general constraints on behaviour**
  - This would **include** liability.

The Pathetic Dot

- Supply, Demand, Price



- Physical Space
- **Code**

- (Formal) Regulations
- Liability rules
- Other legal types (property rules, inalienability rules, etc)

- Culture, custom, ‘soft’ law

The Car Radio Example

- We could change penalty to life imprisonment – threatened ex post sanction may make people stop
- Or, program radios to only work with a single car
- "The same constraint can be achieved through different means, and the different means cost different amounts"
  - "From a fiscal perspective, it may be more efficient to change code than law"

Key Insights

- **Architecture matters, and always does**
  - Consider where your law school was located, and how that shaped behaviour
- Affects and is affected by law
- **Technology is a type of architecture**
  - More recently also, "choice" architecture (Sunstein and Thaler)
- That is special because it is **"newly urgent"**

- Law can act directly on the target (person), or indirectly by changing other modalities

What Things Are Regulated?

Bennett Moses on Law, Reg, and Tech

- Many meanings of regulation
  - General intentional influence on behaviour (Koops)
  - Influence on behaviour following standards/goals with intended outcomes (Brownsword et al)
  - Focus on **behavioural influence** more than **positive rules**
  - **See also: Lessig's from earlier**

- Technology as the ***regulatory target***
  - But, usually not well-defined beyond examples of cutting edge tech
- **"Technology regulation"** as a means of reducing harm from tech

What is the *Subject* of Regulation?

In most contexts in which technology regulation is discussed, the problem is associated with technology, and in particular with real or potential environmental, health or social harms that result from technological artefacts and processes. 'Technology regulation' could thus be the means employed (sometimes by government, sometimes more broadly) to reduce or eliminate such harms. **This may be done by treating 'technology' as the regulatory target, and prohibiting the creation of particular artefacts or the use of particular processes.**

But, in line with the broad concept of 'regulation' and the fact that regulation is more likely to target social conduct than technology itself, **it may be done through more subtle influences on designers and users, for instance by mandating particular courses in university engineering degrees or providing professional rewards for safety innovation.** In such cases, the aim is to influence people in ways that will (hopefully) influence the shape of technological artefacts and processes.

The target of technology regulation is thus complex. Much depends on how one defines 'technology' and whether one restricts the definition to 'tools and crafts' or incorporates all 'means'.

Q: Are we regulating technology, or regulating people?

The 'Right' Way to Look at Tech Reg

- Moses suggests that "tech reg" scholarship has something to say more generally about law and how it deals with (socio-technical) change

- "Technology-specific" regulation as opposed to risk-specific regulation and 'tech-neutral' regulation

- **Argues that the best "lens" is not 'tech regulation'** but focusing on how to "protect values and minimise harm in light of an evolving socio-technical landscape"

Yeong Zee Kin on Tech Regulation

The regulation of technology is best understood by first recognising that this label is a misnomer. The law does not regulate technology in and of itself, but how technology is applied and supplied. (p 67)

- How does this compare with Moses' conception of TechReg?
  - Differences stem from what is understood as "technology"
  - Do we include the business and social systems around the hardware?

Yeong Zee Kin on Tech Regulation

- "Technology regulation" refers **to the body of laws and regulations that apply to how technology is applied and supplied**. (p 68)
  - These serve certain policy goals
  - Choice between legislation and regulation shaped by several considerations
  - Laws seen as more overarching, with ex post enforcement
  - Regulations as applying to specific roles, with ex ante standards and requirements
- This is an important framework, though the inclusion of **both law and regulation** in the definition of "regulation" has potential to confuse.
- **Consider, in this framework:**
  - What things regulate?
  - What things are regulated?
  - How and why?

Yeong Zee Kin on Tech Regulation

- Chapter delves into certain examples of “technology laws”, such as those applying to electronic transactions, internet infrastructure, radio spectrum, online content and platforms, etc

- In the next few segments we will cover some of these examples in more detail, starting with **electronic transactions**

How Regulations Develop

The Collingridge Dilemma

At an **early stage in a technology's development, regulation was problematic due to the lack of information** about the technology's likely impact. **At a later stage, regulation was problematic as the technology would become more entrenched**, making any changes demanded by regulators expensive to implement. …

This suggests that regulators wishing to influence technological design (to avoid or minimise risks of health, environmental and social harm, for instance) need to act at an early stage when the situation is more malleable. At an early stage, however, **little is known about the prospects for the new technology, the harms it might cause or the forms it might take.** Thus regulators face an 'uncertainty paradox', where **they are forced to make decisions in the absence of reliable risk information or foreknowledge of technological developments.** The extent to which these twin obstacles prove to be a dilemma depends on the rapidity and unpredictability of technological change, as well as the diffusion pattern associated with the technology in question.

(from Moses' paper)

The Legal Tortoise and the Tech Hare?

- Time (and socio-tech change) as the key antagonist to law
- Is it always true that law crawls while tech leaps?
- **Important concept** that underpins many practical debates
  - "It is too early to regulate now as doing so will stifle innovation"
  - "We must regulate now before the risks actualise"

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