#### Mikko Jalas

'Discussions of flexibility often suppose that people are without connections, or that practices are isolated from each other. This is wrong. Flexibility is about negotiating constraints: If constraints on doing (urgency/injunction; availability, sufficient time) are 'relaxed' is there more flexibility? (to do what)'

Flexibility is a phenomenon of tightly coupled systems where things need to be renegotiated for one or another reason. For example electricity demand management is necessitated by intermittent power production. In same way, the flexibility of shopping is only relevant in a congested and tightly coupled everyday life. If constraints are relaxed, I would say, we have less of flexibility as a phenomenon. I.e. the whole concepts and discussion is only relevant under constraints.

It follows from this that flexibility is not a driving force or technological tractor in it self, but a secondary reaction to constraints. Constraints on the other hand can be scarcities of different kind. Resource scarcities, production output scarcities, but also demand side scarcities as in lack of time, money and/or skill. Flexibility, put simply, refers to the multiple ways things can be done differently within a broader fixed frame of 'goals', timings' and other achievements or characters of an end state.

How does fit the ideas of performativity. Discourses of flexibility exist prior to the real constraints, and this obviously undermines some of the above argumentation.

#### 'flexible supply chains are in tension with those that are efficient and 'lean'.'

This will depend on if we think flexibility as some kind of anticipatory measure against future shocks, or as something that emerges out of scarcity (see above). In the latter case, flexibility is a 'local' optimum and a propensity to change towards efficient or optimal states. If flexibility is a character of anticipation and planning (say alternative logistical arrangement for the sake of potential down-time), the efficiency can only be understood as speculation against 'would be' alternative arrangements.

# 'flexibility is about how people adapt, acclimatize or become acculturated, and how, in the process, they also transform that which they are becoming part of.'

This is important. Flexibility refers not only a variety of means to be used upon need, but a variety of needs to be served by existing means. Demand, thinking through economics, tends to fill all opportunities of consumption and meet up with productive forces.

#### ' the boat'

A boat is used as metaphor for a closed system. It is flexible as it has no connections elsewhere, but of course highly coupled internally. I wonder how important the closed vs open system discussion is for the flexibility discussions? I see it as less relevant.

#### 'mobility' and 'storage' as two key concepts

'Mobility' is flexibility is space. The ability and propensity of people, things, electrons to move around creates a major source of flexibility – probably more prominent than 'Storage' which is flexibility in time and the ability of people, things and electron to pile up, wait, and release. Some systems are exceptionally good at storing things – biosphere stores biodiversity, ice-covered areas damped temperature changes, human brain/body stores experiences and knowledge and accumulates abilities (note that things that enter storage are not the same as the outputs because storage and also order things). Maybe it is important that storages can order things as mechanistically (first in-first out) or in a qualitative way matching demand.

### 'rhythm'

Rhythm remains difficult to think in terms of flexibility and probably one of the most fruitful areas of further thinking. Social simultaneity indicates that the doings of others are the resources for others – e.g. having a meeting requires doings of multiple people. Shifting perspective, the meeting room can be the critical resource and the doings of more distant other people thus give rise to a counter-rhythm. We can hence expect that the doings of others can multiple and contradictory effects. Say fixed lunchtime in France is good for coordination of some work, but (probably) problematic for sharing and efficient use of non-human resources (e.g. power grid).

## 'flexibility technologies'

Lets not only think about flexibility in time, timing and peak shaving. Flexibility technologies include equally multi-use spaces which eradicate the need for mobility. Highly specialized spaces are rigidities that require mobility as a flexibility- band aid. On the other hand specialized spaces give rise to rhythmic space as opposed to homogeneous space.

## 'financial flexibility'

This is an interesting area. Money can be stored, but I am really wondering how to think the effects and terms of this. Stocks and flows do not seem to work in here. Flow is a temporal concept of change over time, but money moves so effortlessly that we only have instant changes if the stocks. We have no 'flows' of money. Interest is a future oriented concept prescribing for (relative) stable futures – similar or organic growth of forest (say 1% per year). I also wonder the combination of storage and the full virtuality of money. It may be that all this really muddling our thoughts on flexibility.