

Revisiting socio-technical ecologies of innovation

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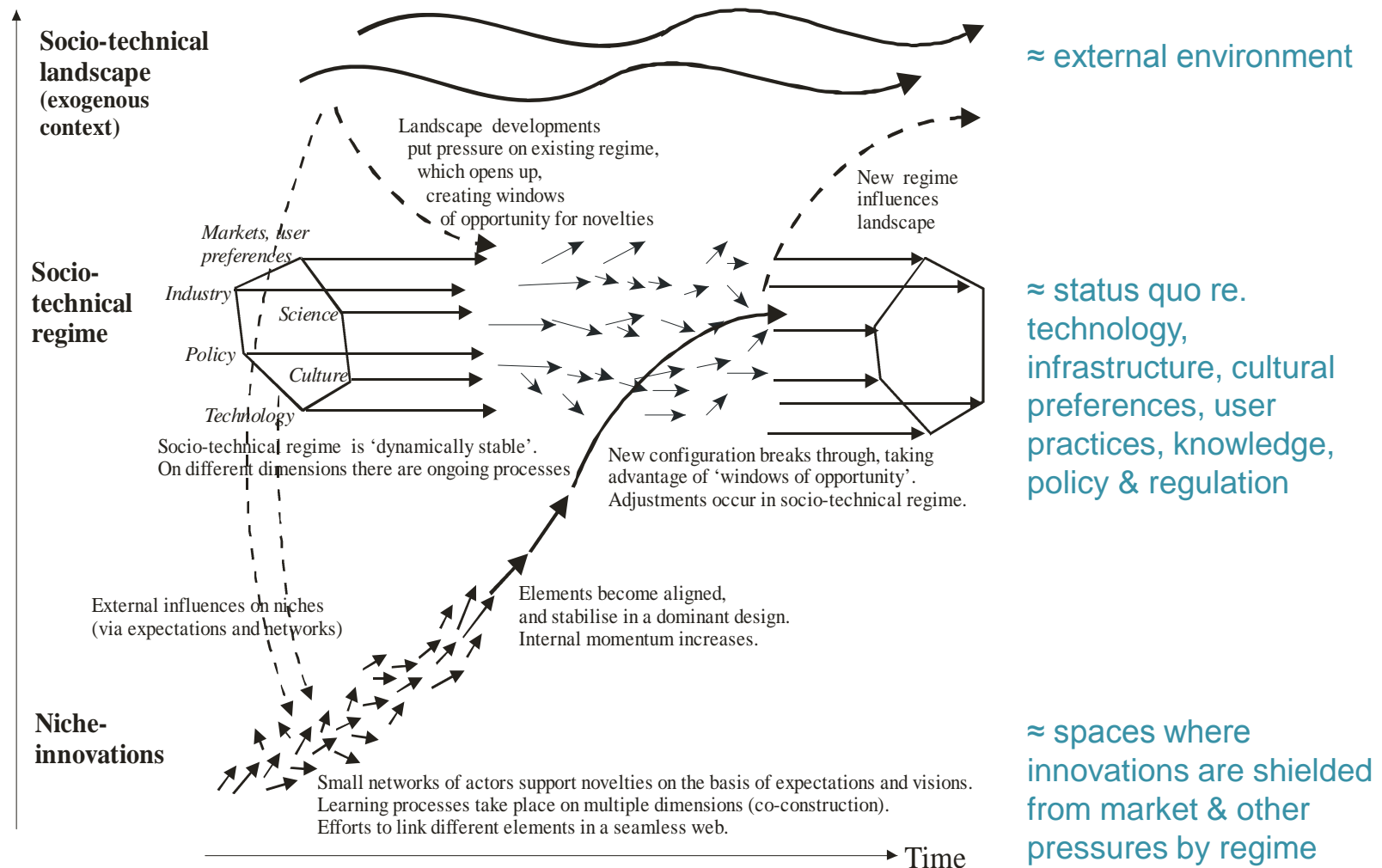


Context

- a) Classic time-geography's aspiration to understand the interactions between nature, society and technology more topical than ever
- b) Popularity of 'transitions' in politics, policymaking and academia in UK and elsewhere in Europe – 'multi-level perspective'
- c) Empirical research on low energy innovations in urban transport in UK cities – focus on a wide range of different innovations

Multi-level perspective (MLP)

Increasing structuration
of activities in local practices



Source: Geels (2012)

A spatial turn in MLP research

A range of different impulses, including:

- a) Smith *et al* (2012, 2014): unclear what protective spaces are/do and how they come into being
 - b) Raven *et al* (2012): 'spatialise' MLP by tracing how spaces are constructed through interactions within actor networks
 - c) Coenen *et al* (2012): introduce geographical scale and concepts such as institutional thickness
- ⇒ Strong reliance on insights from relational geography, STS scholarship (ANT), and institutional economic geography

Drawing on time-geography can complement and strengthen the emergent spatial turn in MLP studies

Thinking on social construction and relational space in those studies – and geography and STS studies more generally – can help in addressing blind spots in Hägerstrand's time-geography



Time-geographies of innovation

Distinctive dimensions of research in Lund in 1970s:

- a) Orientation on **integration** – understand invention, early innovation, diffusion and saturation in single framework
- b) Strong **resource** dimension – constrained availability of inputs and packing capacity of space-time
- c) Focus on ‘**collateral processes**’ – need to establish ‘**pockets of local order**’
- d) Emphasis on **effects** of innovations at both micro and macro levels – this includes (unintended) second- and higher-order effects and assemblages of innovations

Contributions by time-geography

Three examples:

- 1) Aid in understanding the formation of protective spaces (Smith *et al* 2012, 2014)
- 2) Aid in tracing the spatial expression of actor networks (Raven *et al* 2012)
- 3) Aid in overcoming the 'productionist' logic and orientation of MLP – the privileging of 'supply' over 'demand'

Contribution #1

Formation of **protective spaces** that shield, nurture and empower innovations – not only through discursive but also through material, resource oriented strategies – **pockets of local order**



Transport for London

Contribution #2

Spatial expression of **actor networks** – understand how resources are generated and made available that are significant to the emergence and growth of niches – **collateral processes**



Contribution #3

Overcome **productionist** logic and orientation – focus on interlocking of different **projects** in particular sections of space-time, and the opportunities to fill **slots** and the effects this generates



Conclusion

More conceptual and empirical work is needed – move beyond ad hoc empirical examples

Time-geographies of innovation developed in Lund in 1970s can help advance the recent spatial turn in MLP scholarship, and vice versa

Thank you

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