

# A Brief Introduction to the Multi-Level Perspective (MLP)

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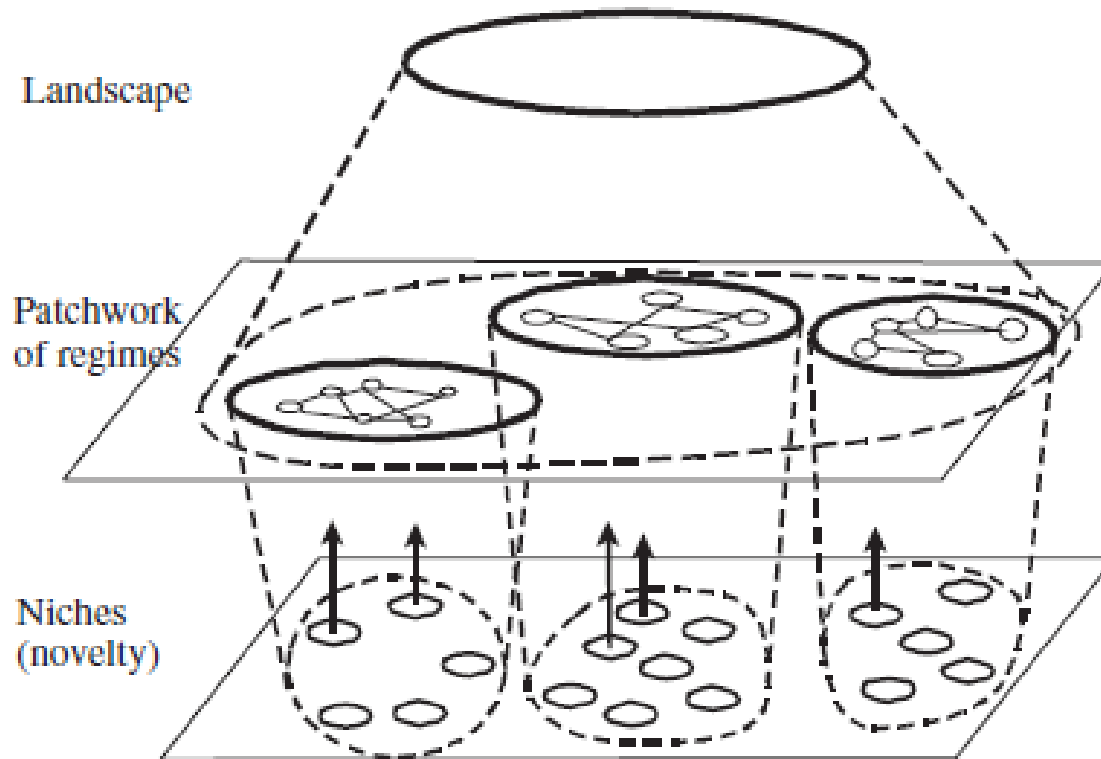
New Thinking For Energy



# In brief...

- What is it?
  - A means for explaining how technological transitions come about
  - A means to understanding the interaction of actors, environments and innovations
  - A bridge between evolutionary economics and technical studies

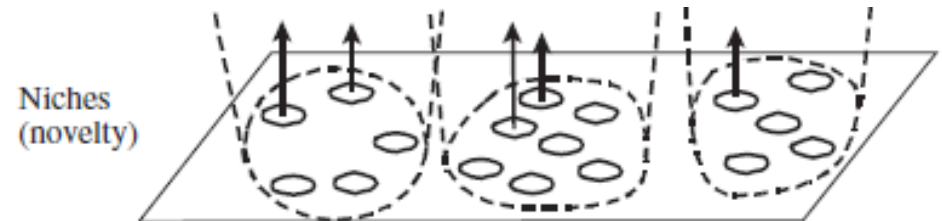
# Basic Explanation of the levels...

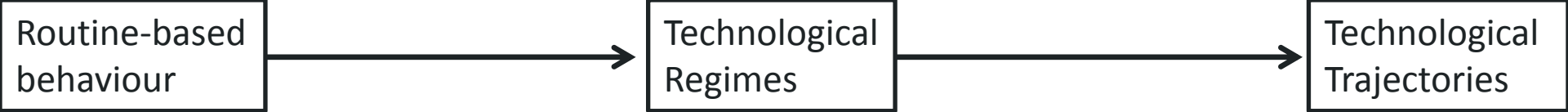


. Multiple levels as a nested hierarchy (Geels, 2002, p. 1261).

# Micro Level - Niches

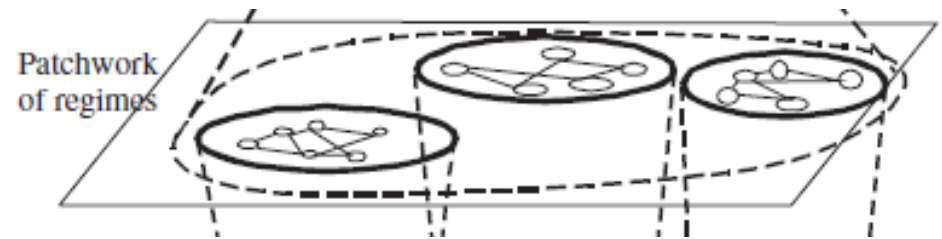
- This is where radical innovation happens
- ‘Act as incubation rooms’ from normal market forces – allow for research and learning through experience
- Provide space and time for supporting networks to be established eg. Supply chains, industry contacts
- Eg. Military investment in jet engines and radar
- Can be created by landscape developments





# Meso-Level - Regimes

- The 'rule-set or grammar' of processes, technologies, skills, corporate cultures and artefacts embedded in institutions and infrastructures.
- Cultivate incremental improvement along a trajectory
- Can affect change in the landscape
- Regime shifts are the result of a cascade of changes over time



Stability

Incremental Improvement  
(along trajectory)

# Moving from niche to regime

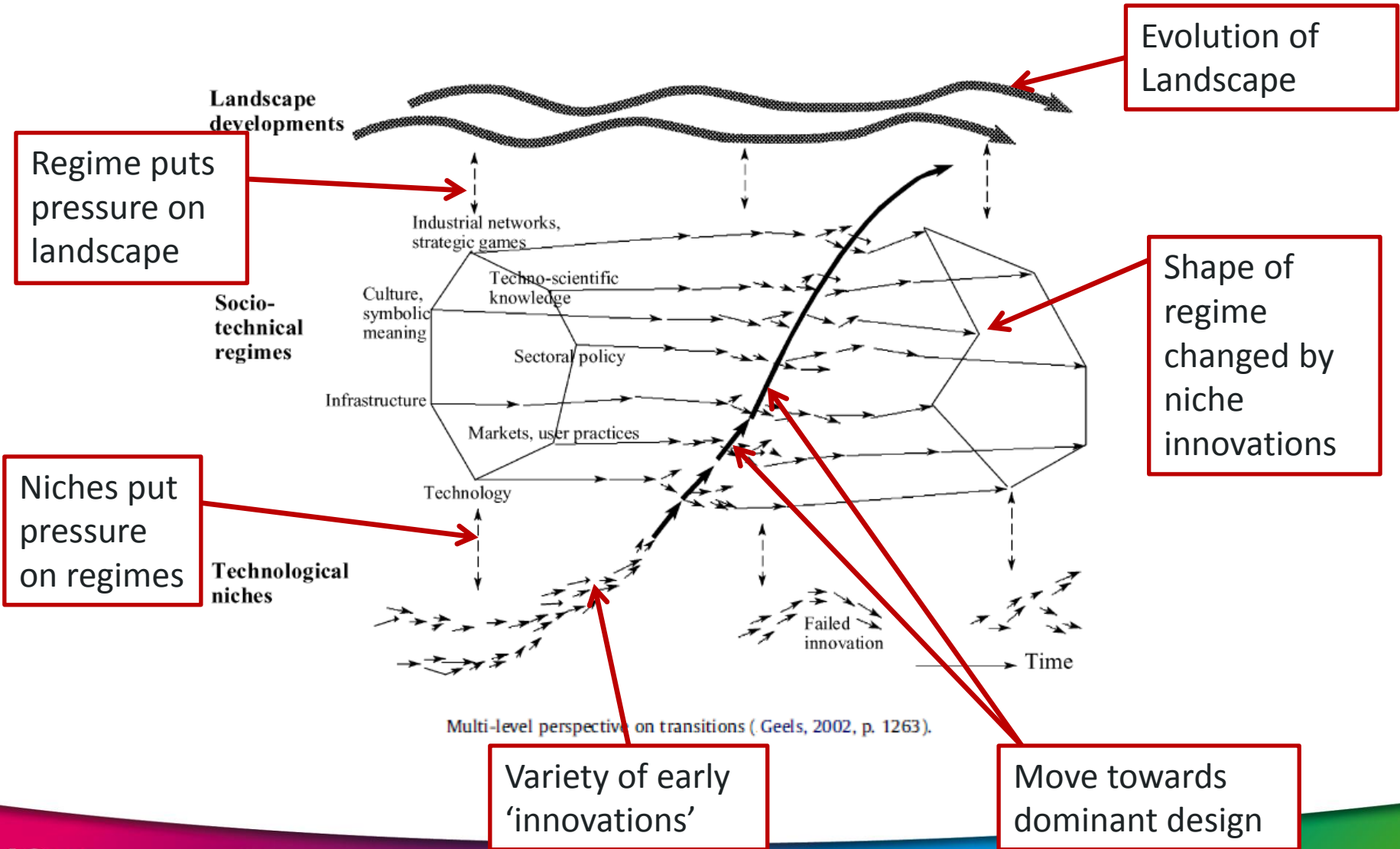
- Evolution as ‘variation and selection’ – niches provide vast array of possible innovations, and regimes act as the selection environment
- If tensions emerge between parts of the regime, these can be filled by niche innovations
- Technical breakthrough with hybridisation – new technologies can physically link with old to provide a stepping stone, and avoid competing head-to-head.

# Macro Level - Landscape

- Forms the 'external structure or context for interactions of actors'
- Factors such as oil prices, economic growth, wars, immigration, broad political coalitions, cultural norms, environmental problems and paradigms
- Slow to change



# A more nuanced approach...





# Some Critiques and Responses

- Can neglect economic variables  
(Foxon, 2011)
- Lack of analysis of agency\*,\*\*  
(Smith *et al.*, 2005)
- Unclear how the conceptual model should be applied\*\*  
(Berkhout *et al.*, 2004)
- Bias towards 'bottom-up' innovations\*  
(Berkhout *et al.*, 2004)
- Possible omission of institutions and ideologies  
(From work of: Meadowcroft, 2011)
- May benefit from greater emphasis of politics  
(From work of: Kern, 2011; Meadowcroft, 2011)

\*Responses can be found in Geels (2011)  
\*\* Responses can be found in Geels and Schot (2007)

# References

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