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

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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
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...

- **Regime puts pressure on landscape**
- **Niches put pressure on regimes**
- **Variety of early ‘innovations’**
- **Move towards dominant design**
- **Shape of regime changed by niche innovations**
- **Evolution of Landscape**

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

- Foxon, T. (2011) A coevolutionary framework for analysing a transition to a sustainable low carbon economy, Ecological Economics, 70, 2258-2267
- Meadowcroft, J. (2011) Engaging with the politics of sustainability transitions, Environmental Innovations and Societal Transitions, 1, 70-75