



**HIVA**

ONDERZOEKINSTITUUT VOOR **ARBEID EN SAMENLEVING**

**K.U. LEUVEN**

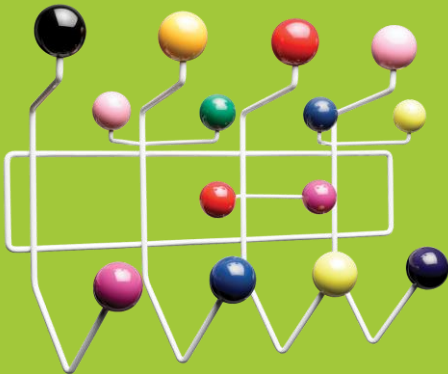
# Evaluating the potential of taxation to support sustainability transitions

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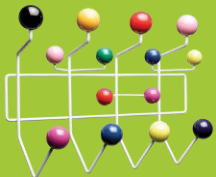
EEEN Forum

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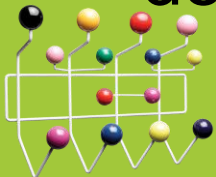


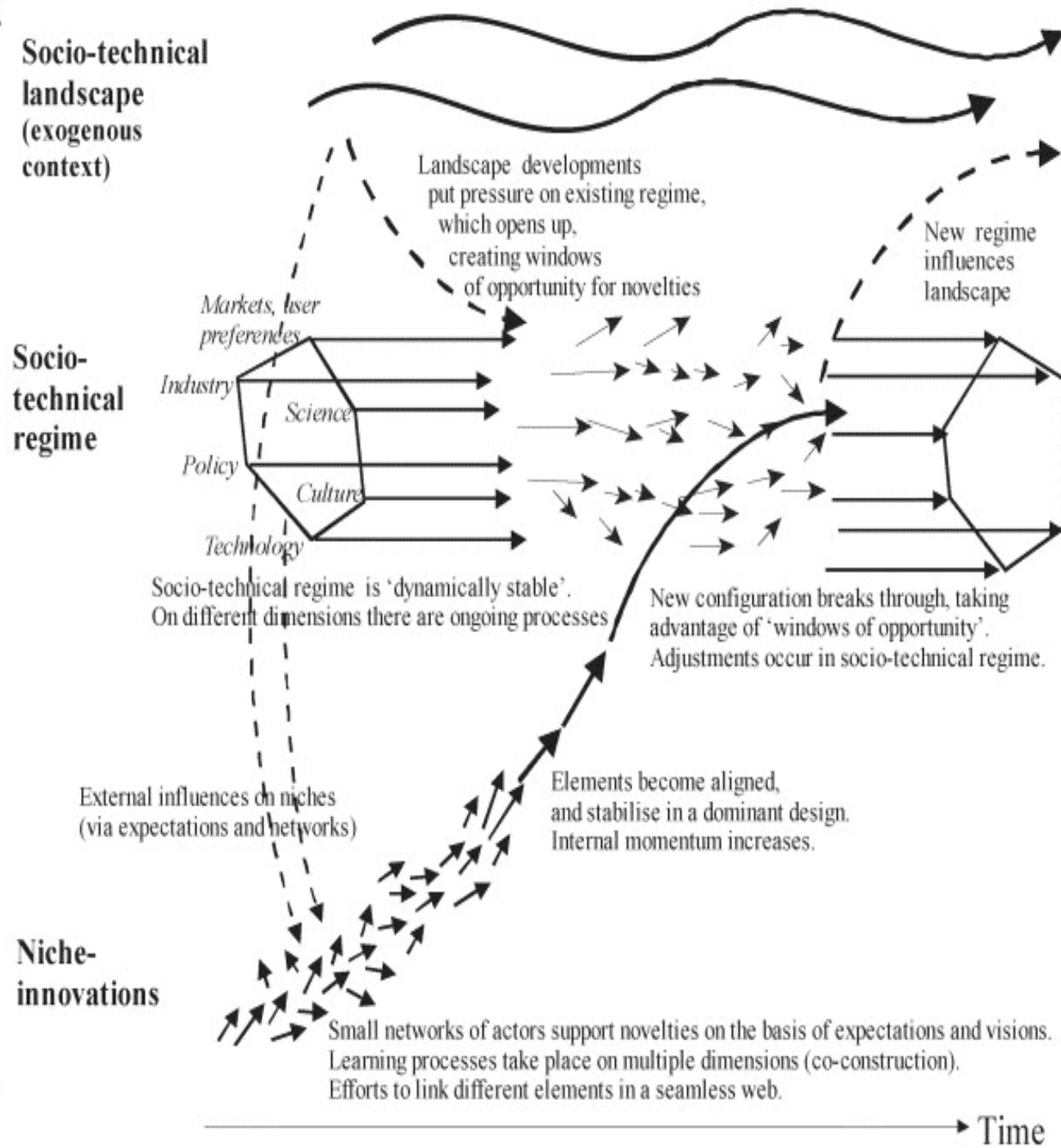
# Outline



# We all know sustainability transitions

- Changes in socio-technical systems (technology, structures, culture, practices, policy)
- Based on a long-term vision (50+ years);
- Transitions often happen uncontrolled; to steer them in a sustainable direction is the challenge;
- Government cannot steer alone; business, civil society, citizens should take part.
- Experiments with niches that exert pressure on the dominant regime may bring about the desired transition.

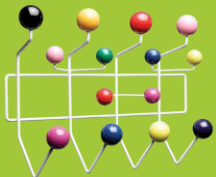




Source: Geels & Schot (2007)

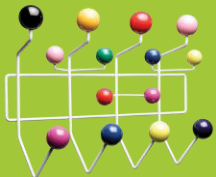
# And we know environmental taxation, too

- Pigouvian tax internalizing environmental externalities;
- High effectiveness, low acceptance and political support;
- Consensus on the desirability of green tax reform, but uptake very low.
- Current applications range from small-scale (plastic bag) to significant (Swedish carbon tax).



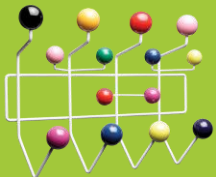
# But why don't we think about combining them?

- Transitions school: no reference to taxation;
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- But are there links, potential?

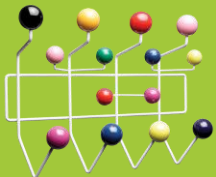


# What if we Introduce taxes in the multilevel model?

- Landscape: autonomous, macro-level developments → no opportunities
- Technology: development vs. upscaling
  - experiments: need for positive instruments
  - upscaling niche technologies by taxing regime technologies: overcoming the lock-in, steering diffusion.
  - Porter-hypothesis: taxation can drive innovation
  - dynamic efficiency of taxes: long-term effect (elasticity) higher in the long run than the short conclusion: strong match



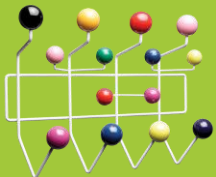
- Practices: obvious potential;  
→ long-term multiplier?
- Culture: long-term attitude? (indulgence)  
→ conclusion unclear





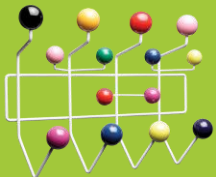
# But what are the barriers?

- Lock-in and path dependency: regime is favoured by subsidies;
- Lock-in by economic interests and lobbying;
- Impopularity of the tax instrument (financial instrument, competitiveness, regressivity);



# Application: The Belgian energy system

- Not a single regulatory tax in the system;
- LT-vision:
  - Emission-free; (close to) 100% renewable
  - Affordable;
  - Minimum dependence;
  - Energy security;
  - competitive
- High consumption/capita; high international dependence, problem of fuel poverty.



# Possible applications

	<b>emis- sions</b>	<b>Rene- wable</b>	<b>Afford- able</b>	<b>Inde- pendent</b>	<b>Se- cure</b>
<b>Carbon tax</b>	<b>++ (techn)</b>	<b>+ (techn)</b>	<b>- (ETR comp)</b>	<b>++</b>	<b>-</b>
<b>Road pricing</b>	<b>+</b>	<b>+ (LT)</b>	<b>- (comp)</b>	<b>+ (LT)</b>	<b>0</b>
<b>Diesel tax rise</b>	<b>+ (?)</b>	<b>+ (LT)</b>	<b>- SH /0 LT</b>	<b>+</b>	<b>0</b>
<b>Nuclear tax</b>	<b>-</b>	<b>+</b>	<b>-</b>	<b>-</b>	<b>+/-</b>
<b>Air pollution tax</b>	<b>++</b>	<b>+</b>	<b>-</b>	<b>++</b>	<b>-</b>

