Appropriation Dynamics in Outlaw Innovation: A resource view

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Overview

- Innovation as a ‘vector’ quality
  - Relation to ‘outlaw’ and ‘open’ innovation
- Technological regimes and dynamics of innovation
  - Knowledge base, appropriability, cumulativeness, opportunity conditions
- Adult entertainment: case study
- Dynamics of innovation and appropriation in an outlaw space.

The past couple of days…

- Definitions of ‘innovation’ and ‘creativity’ (let alone ‘open’ innovation) – Salter, Simoes-Brown, Filippa, Savona, Altringer.
- User innovation occurs in subcultural spaces – Oakley.
- Tensions between firms and innovative users – Burger-Helmchen, Alexy.
- User activities are nothing new - Sarkar

The ‘dark side’ of innovation

- Knowledge and innovation are vector, not scalar qualities (Stirling 2008)
  - The act of innovation is not necessarily a force for the greater objective good.
    - Ditto creativity: ‘creative’ accounting, ‘innovative’ financial models
  - Scalar view reflected in policy through linear model and reliance on ‘pro-innovation strategies’ (‘We must become an innovation nation’ – Brown).
- Innovation may be conducted in locations that we may not have access to, by actors that we may not morally approve of, and for ends which may be illegal or unpalatable.
  - To which audience?
- STS addresses many of these issues (eg. Kline and Pinch 2006)
  - But tools of innovation studies can also be used to examine the phenomena and its impacts.

‘Outlaw’ innovation

- Outlaw innovation (Flowers 2008):
  - Conflict with manufacturers’ original perceived usage of product (Model T Ford).
  - Conflict with IP rights (Lego Mindstorms).
  - Occur in ‘illegitimate’ spaces (‘Hacking’, AE).
    - Dynamics of criminal innovation: CENTRIM/NESTA 2009.
    - Law and behaviour define ‘outlaw’
  - Consists of both innovation and adoption behaviours (X-Box)
- Particularly prevalent in consumer digital and electronics.
  - Nothing new but changes in scale and scope.
- Motivations of outlaw innovators towards IP is a determinant of outlaw behaviour (Schulz and Wagner 2008).

Technological regimes and the dynamics of innovation

- Technological regimes: describe the knowledge environment in which innovative activity occurs (Malerba and Orsenigo 1996, Winter 1982).
  - Opportunity: Abundance of external knowledge, and ease of innovating for any amount of resources invested in the search.
  - Cumulativeness: Degree by which generations of new knowledge build on current knowledge
  - Appropriability: Ease of protecting innovations against imitation (Teece 1986, 2000)
  - Knowledge base: Sources of (firm-based) knowledge, allowing co-ordination of internal and external resources (Freeman 1982)
- Open innovation frameworks raise questions about how the knowledge environment may change as:
  - Scan and search activities increase
  - Innovative activity occurs beyond firm boundary
  - From perspective of 'mainstream' **and** 'outlaw'

Adult entertainment: case and methods

- North American AE sector: holds reputation for high innovative activity (especially since advent of internet) (Coopersmith 1998, 2000, 2006; Lane 2001).
  - Operates in space of high moral tensions
  - Spillovers of technologies (eg. High definition streaming, billing programs, age verification systems) into 'mainstream'
  - Question: does 'outlaw'/'pariah' status shape dynamics of innovation?
- Exploratory **extreme** single case-study
  - 28 interviews, non-participant/ethnographic observation, grey literature review.
  - Contact with estimated 150 firms.
  - Units of analysis: industry and individual.

Dynamics of innovation in an outlaw space

- Shift from Schumpeter Mark II to Schumpeter Mark I since advent of internet.
  - Disruptive technology; large incumbent firms (video and publishing) threatened by incoming SMEs (webmasters and other online)
  - Widening (rather than deepening) patterns of innovation around digital tools (eg. Streaming, payment systems, age verification systems).
- 'Success' of innovation questionable.
  - Rapid turnover of small firms means resources rapidly re-distributed throughout sector.
  - 'Saturation' effect may account for apparent success observed.
  - Internal barriers raised, hindering entry of external resources.
  - Skewing of resource access occurs in part due to outlaw status, but also from business model.

Appropriation dynamics

- **Opportunities: Medium**
  - Digital technologies: low barriers to entry
  - But 'outlaw' status creates issues in accessing some mainstream resources
  - Also internal barriers to entry
- **Appropriability: Low**
  - Means of protection attempt to be enforced (eg. Secrecy), although little legal protection utilised.
  - Highly interconnected social network facilitates knowledge flow
- **Cumulativeness: High**
  - But at industry, rather than firm, level
- **Knowledge base**
  - Embodies both technological and (sub)cultural knowledge
  - Requires learning within a specific social space, and funnelling of resources through boundary actors.
- Question remains about manner in which resources are then appropriated by the 'mainstream' – through boundary actors or other means?

Conclusions

- ‘Outlaw’ nature of certain sectors has potential to skew dynamics of innovation and subsequent patterns of appropriability.
- AE: a specific extreme case-study
  - Industry rather than (solely) user community
  - But factors about: attraction of ‘outlaw’ spaces; employment of social networks, utilisation of specific appropriability strategies.
- Appropriability of outlaw innovations from industrial vs community.
  - Role of ‘mainstream’ in commercialising under their own terms.
  - Role for intermediaries to assist in appropriation, but also to distance firms from outlaw locus.

Thank-you

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