A Social Study of Electric Mobility Projects. Innovation, Consumption and Market

Luísa Veloso
(CIES-IUL)
luisa.veloso@iscte.pt

Frédéric Vidal
(CRIA)
frederic.vidal@iscte.pt
Electric Mobility as a Long Term Project & a Social Process

✓ Scientific Development and Entrepreneurial Innovation (SDEI) [PTDC/CS-SOC/114152/2009]

✓ The effect of the social and cultural contexts and their variations, on the organization of research projects and the production of scientific and technological knowledge (Callon, 1986)

✓ The research project trajectories: a social process of mutual dependences (Graber, 2011)

✓ A global scope with multiple ramifications and consequences in the configuration of urban space and mobility.
Method & Main Issues

- Content analysis of discourses:
  - Literature review on the history of the electric car
  - Media coverage (popular and technical publication)
  - Interviews of a set of actors involved in the research and industrial projects on electric mobility in Portugal.

- Focusing on the reception, uses and representation of the innovation process
A Portuguese Case Study: the MOBI.E Project

✓ A working group with three companies (2008): the creation of the batteries’ loading infrastructure; the creation of the software of the electric mobility loading network; the logistics management network

✓ A consortium led by a State-owned company (2009)

✓ A protocol with 26 municipalities, aiming at implementing a pilot project

✓ A network of electric mobility at the national level and an open market to operators and traders
Electric Car & Electric Mobility: a Literature Review

✓ The “Golden Age” of the electric car (1895-1905)

✓ A case study for the social study of science and technology (Callon, 1986):
  • Key issues for research & innovation: technical characteristics of the vehicle; social universe in which the vehicle would function
  • A wide and varied actor-network: local, national & transnational levels
What Killed the Electric Car at the Early 20th Century?

✓ The vested interest theory
✓ The technological theory
✓ The consumerist theory

From the Technology to the Consumption

- The object ‘per se’ & the socio-technological network in which the R&D project is conducted

- Electric car as an object of symbolic consumption (Ivory & Genus, 2010)

- The reception and use of the technology:
  - Performance (velocity)
  - Safety (the fear of electricity)
  - Autonomy (capacity of storage batteries)

- Association of the early car with specific cultural meaning
An Underexamined Issue: the Role of Public Policies

- National public policies connected to transnational context

- Laws and regulations: importance of the voluntary associations in the field of car industry and car culture

- The harmonization of automobile standards and the transfer of technical knowledge and know-how
Disparities between the Public Policy Objectives and the Social Uses (Portugal, 2011-2012)

✓ The lack of the consumers knowledge about the electric vehicle
✓ The requirements of the electrical installation at home & the fear of fire
✓ The autonomy of the electric vehicle battery
✓ The high price, in comparative terms, of the electric vehicle

Source: interviews
The Innovative Process according to the Social Actor’s Perspective (Portugal, 2011-2012)

✓ Images & representations about R&D project:
   • A network of R&D projects
   • A ‘label’: to communicate on priority action for public sector
   • A form of public action: a private network for a public use

✓ Territorial definition of the project:
   • National/transnational: issues for C&T polices and industrial policies
   • Regional: a network based on personal ties and itineraries
   • Municipal: technical and social definition of the project

Source: interviews
Where is the Innovation?

- No clear innovation for electrical mobility technology
- Innovation in the construction of socio-technical network
- Innovation in the capacity of putting the product in the market and shaping the market