

The biopolitics of technological innovation: the case of GM in Europe

Bronislaw Szerszynski
IEPPP, Lancaster University
bron@lancaster.ac.uk

Gordon Brown speech to CBI

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- I propose we agree a shared agenda for long term investment in science and technology and new incentives for its application to industry:
 - first, that business and Government agree, that the long term framework for the advancement of British science - announced last year as a public-private partnership ... - will be continuously updated;
 - second, that Britain lead the world in meeting rather than ducking controversial issues that surround the application of science – genetic research, animal experimentation and GM foods - so we can value the joy and excitement of scientific discovery. And so we become a clear world leader in research for genetic and stem cell research, for pharmaceuticals, biotech and the life-sciences;
 - third, that we together agree to support universities and business leaders who ... are today developing plans for science cities.
- ... I want to propose this evening a major initiative to break down barriers holding enterprise back and to stand with you in our determination to free up the spirit of enterprise throughout our country.

the new genetics and speed

- Europe's early 1980s technology race with US and Japan (Gottweis)
- 1983 race to publish rDNA research (Reynolds)
- speed as constitutive of Human Genome Project in 80s and 90s (Fortun)

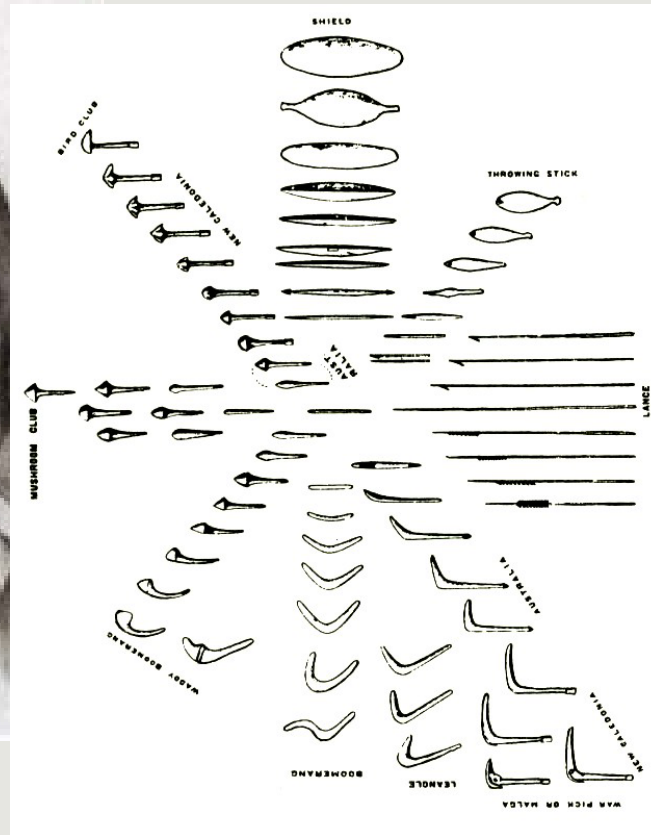
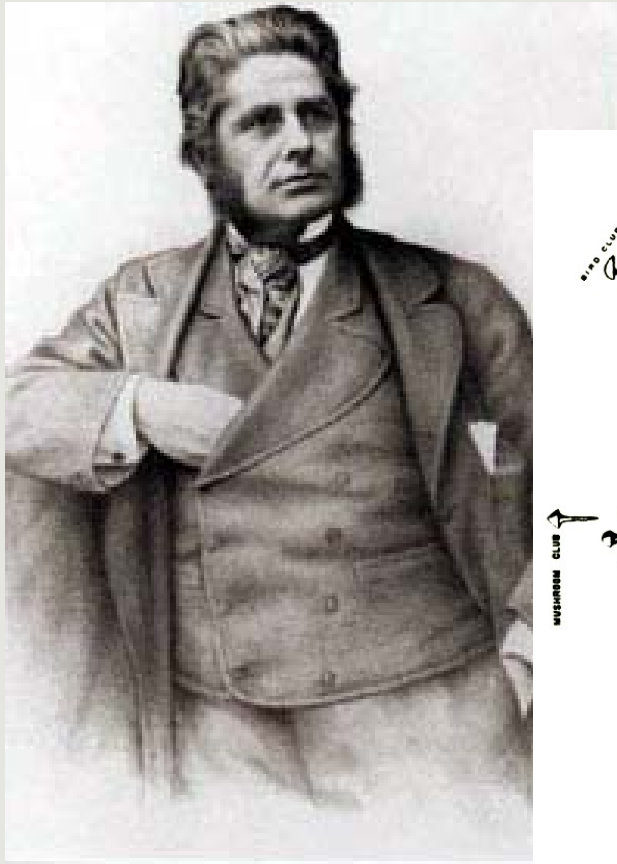
technological dynamism

- *speed* as a source of value
- intellectual drivers
- economic drivers
- political economic regime
- biopolitics of technology - the shaping and optimising of its evolutionary powers

technology as 'vital'

- technologies are extensions of human vital powers and processes
- technologies have 'milieus'
- technologies can be classified 'botanically'
- technologies 'evolve' - can be arranged in temporal sequence

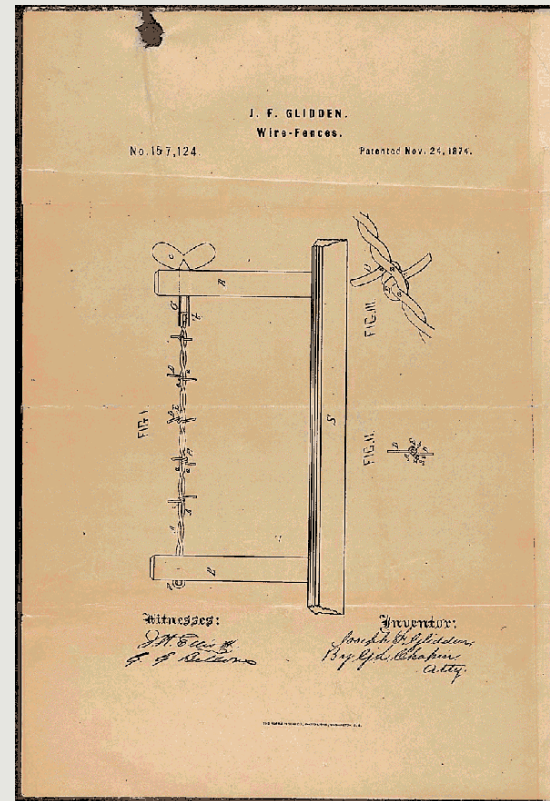
Augustus Pitt-Rivers



George Basalla, *The Evolution of Technology*

- why diversity of technological objects?
- neo-Darwinism - novelty and selection
- technological change has its own, material logic
- continuity is the basis of evolution
- e.g. stone and metal tools, engines, motor cars - and rDNA technology

Joseph Glidden's barbed wire



Gilbert Simondon, *The Mode of Existence of Technological Objects*

- technologies exhibit 'unity of becoming'
- technological objects can be divided into
 - elements
 - individuals
 - ensembles
- technological objects undergo 'concretisation'
 - elements become overdetermined
 - proportion of active elements increase

speed

- How do we understand the acceleration of technological change?
- Biopolitics
- Two meanings:
 - policy domain – politics of the life sciences
 - social theory – modern politics as the shaping of 'life'

classical biopolitics

Michel Foucault on 19th century:

- nationally organised capitalism
- from *sovereignty* - power to take life
- to *governmentality* - shaping of life
 - disciplining bodies and populations
 - operating through 'spaces of enclosure'
- equilibrium economy
- surplus value from labouring potential (Paolo Virno)

post-fordist biopolitics

Deleuze, Hardt & Negri on late C 20th

- global knowledge economy and post-fordist flexible specialisation
- crises of spaces of enclosure
- from 'discipline' to 'control'
- new forms of 'primitive accumulation'
- far-from-equilibrium economy
- surplus value from cultural labour of whole person

post-fordist biopolitics of technological innovation

- global neo-liberalism and Schumpeterian competition state
- mode-2 knowledge production and new 'transaction spaces' (Gibbons)
- networks of objects, tools, knowledge, practices, capital
- surplus value from excess biopower of technological evolution

speeding up technological becoming

Bauman, *Legislators and Interpreters* (1987)

- early modern 'gamekeeping' state
- modern 'gardening' state
- late modern return to 'gamekeeping' (Urry 2000)?
- ... or 'hothousing'

Creating Wealth from Knowledge (DTI, 2004)

“In place of the nationalised industries of the 1970s, and the poorly regulated privatised monopolies of the 1980s, the foundation of the modern knowledge economy is an unflinching commitment to competition. We want open, dynamic markets – in which newcomers can constantly challenge incumbent firms and give consumers greater choice, better quality and lower prices. They promote innovation. And they attract new investment, reinforcing the virtuous circle of competition and innovation” (9).

“In the knowledge economy, government’s role is different: neither command-and-control nor laissez-faire. Government must create and support open, competitive markets. It must do what markets cannot do – promote world-class science and technology, build strong innovation networks and regional institutions, and back British business abroad. It must know when to regulate markets, and when to let business lead” (10).

biotechnology in the UK

- UK biotechnology policy (Gottweis)
- Spinks Committee report on UK biotechnology (1980)
- Thatcher policy for innovation
 - dismantling of corporatism
 - intensive intervention
- 'failure' to create conditions for technological innovation

the politics of GM food

- innovation vs. precaution
- hothouse vs. garden
- clash of biopolitical regimes
- critiques of GMOs grounded in 'classical' biopolitics
 - threat to life and health
 - threat to equilibrium of nature
 - threat to 'normality'
 - undermining of collectivity e.g. insurance
- the need for 'mobile' critiques

the politics of GM food

- *zoē* (bare life) and *bios* (conditioned life)
- classical biopolitics' object - *zoē* (biology)
- post-fordist biopolitics - *bios* (biography)
- knowledge worker as new political subject (Hardt and Negri)
- Brown
 - technological evolution as *zoē*
- progressive technology critique
 - technological evolution as *bios*