

Can Intellectual Property Help Feed the World? Patents, Food Insecurity and a Sociological Imagination

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Intellectual Property and Food Insecurity

- Globally, food insecurity is a significant issues
- Statistics
 - Almost 1 billion people did not have enough to eat in 2010
 - Over 9 million deaths per year (5 million of which are children)
- Increasingly intellectual property is seen to play a role in addressing food insecurity
 - Can it? Does it?
 - **NOT**: Should it? How can it?

A Sociological Imagination

- Informed by CW Mills' *The Sociological Imagination* (1959)
 - My aim is to relate and link the lives of those affected by food insecurity with intellectual property law (or, patent law more specifically)
- Our analysis of both the technical and legal worlds need to be involved in the social world; not be aloof from it
- Can IP enhance food security?
 - What are the objectives of patent law?
 - How has patent law been used in practice?

Patent Law: Embodying Food as Technology

- Technology in agriculture is not new
- Intellectual property and agricultural research
 - Technological development, and
 - Technology transfer

TRIPs, art. 7 – ‘promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare’

Scarcity

- ...of food, and of high yielding, tolerant and resistant crops
- We are commonly told that technology will fill this gap
- Is scarcity a cause of food insecurity?
 - Lappé and Collins (1978)
 - Colonisation, and Ownership (multinationals)
 - Scarcity of access, not of food
 - Cribb (2010)
 - Large and profoundly hard to control
 - ‘cannot be remedied easily by “silver bullets” in the form of technology, subsidies or single country policy changes’ (p9)

The Problem of Proof: Technology Advances and Food Security

- Intellectual property as incentive

Estimating costs and benefits, model[ing] them over time, projecting what would happen under counterfactuals (such as how many novels or pop songs really would be written in the absence of copyright protection, and who would benefit from such a situation)—these are all overwhelmingly complicated tasks. As this problem poses a major problem for utilitarian theory. The sheer practical difficulty of measuring or approximating all the variables involved means that the utilitarian program will always be at best aspirational.’
(Merges, 2-3)

- What is the impact of technology on food insecurity (not agricultural production)?
- The Green Revolution (1940s-1970s)
 - a suite of technology developments and practices that led to increased agricultural production
 - plant breeding, irrigation, fertilisers, extension services, credit
 - Significant impact on agriculture

‘history records no increase in food production that was remotely comparable in scale, speed and duration’ (Lipton, 1989)

- 60% increase in wheat production from 1967-1969 (Pakistan)
- Cereal self-sufficiency in India in the mid-1970s
- Rice Yields doubled in Indonesia between 1965-1989

BUT, what was the impact of the Green Revolution on food security?

- The impact of the Green Revolution on food security is less clear
 - Freebairn (1995): reviewed over 300 peer-reviewed papers published between 1970 – 1989. Around 80% of the papers concluded that the Green Revolution increased inequality

- More specifically,
 - Uptake of technology is dependent on policy
 - There was a lack of supporting infrastructure
 - One-size fits all
 - The technology required considerable inputs (e.g. water, fertilisers, pesticides)
 - Trade liberalisation

- It appears, then, that food insecurity is a problem of access (rather than an absence of technology or even food)
- ‘[o]ne of the greatest flaws of current food systems is that, despite significant progress in development and food production, hundreds of millions of people are hungry because they lack the means to produce or purchase the food they need for a healthy and productive life’ (FAO, 2012)

The Mexico Tortilla Crisis

- NAFTA
 - tied local corn production to the North American Market
- Competition for land
 - Climate change
 - Divert food away from food production
 - Agrofuel production
 - Corn, but also wheat and sugar

‘direct competition for grain between the 800 million people who own automobiles, and the world’s two billion poorest people’
(Golay, 2008)

Plumpy'Field Supply Network

- In the 1990s, scientists found an alternative to powdered milk - ready-to-use therapeutic foods ('RUTF')
- Plumpy'nut
 - Oil-based paste of peanuts, sugar, milk powder, vitamins and minerals
- The Plumpy'nut patents (Nutraset)
 - Product
 - process

- Opponents
 - Exclusivity
 - Monopolisation, avoid competition and increase profits
 - Invent around
 - US Patent Dispute

- Nutriset
 - Using the patent to ensure quality and effective capacity building...long term and sustainable change

Plumpy'Field



- In 2005, Nutriset established a franchise and licensing scheme
- Mission: 'improve access to innovative nutritional solutions...through local production, close to the populations that require them'
- 12 members: Haiti, Sudan, Ethiopia, India, Uganda, Mozambique, France, USA
- 10 200 metric tonnes (out of 30 000)

Meds & Food for Kids

- MFK is a non-profit and NGO in Haiti
- In 2010, became a member of the Plumpy'Field Network
 - Medika Mamba
 - Local peanuts
 - Local labour, local resources
 - New Factory

Observations

- Difference between technology and food security
 - Treatment versus underlying causes
 - Foreign technologies
- The importance of integrating and empowering local communities
 - Currently, this is left up to the ‘rights’ owner
 - Food sovereignty
 - Farmers’ Rights

Concluding Thoughts

- Patents and the short term – increase weight, vitamin deficiency
- If patent law (or IP more broadly) is going to play a meaningful role in reducing food insecurity then it needs to integrate and empower local communities
- BUT:
 - Politicised
 - Perhaps we are asking too much
 - How can this be achieved