

Patenting Lives, Patenting Alternatives

Commercialising Agricultural Biotechnologies in the Developing World

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Abstract

While many have lauded the potential role of agricultural biotechnology in achieving food and agricultural security in the developing world, this enthusiasm has been tempered by concerns over access to that technology being limited by intellectual property monopolies. This paper presents some of the initial work of the AHRC research project, Patenting Lives, which is examining the impact on cultural and economic development, of patent protection of life forms. The Patenting Lives project is analysing whether further limitations are warranted on the intellectual property monopolies that may be created in living organisms, including plants/plant varieties and animals, in the context of genetic engineering, and this paper will present upon some of the work of the project. In doing so, and as an alternative to patent protection, other potential means of effective commercial return for these technologies will be outlined.

Introduction

The impact of international intellectual property standards and their harmonisation, and the obligations upon developing and least developed countries to implement those standards, are key concerns of many significant groups, including indigenous and traditional communities, intellectual property researchers, policy advisors, and non-governmental organisations (NGOs). The Doha Ministerial Declaration (Doha) and the review of TRIPS Article 27(3)(b) (the Article dealing with the patentability of animal and plant life) indicate the importance of these concerns to the agenda of harmonisation of international intellectual property. These issues are closely linked to international concerns with biological and cultural diversity, and the principles of the Convention on Biological Diversity (CBD).

This paper will present some of the initial work of the AHRC Patenting Lives Project, an inter-disciplinary group of international experts brought together to consider the cultural and social implications of patents on life forms, in the context of alternative strategies for commercialisation and dissemination. The Project will publish an initial resource book towards the end of the year, which will be available on-line as well as hard copies on request. There will also be an international conference staged in London, 1-2 December 2005. The work of the Patenting Lives Project will also be considered in a Roundtable at this conference, where several participants will discuss some of the alternative strategies and socio-legal aspects of patents on life forms. A web-site for the Patenting Lives Project has also been created, www.patentinglives.org, upon

which developments in this research will be posted, with plans underway to provide translations of key documents into Spanish, Italian, and French.

The Patenting Lives Project is timed to coincide with the significant international discussions currently taking place on this topic, both within the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO), as well as other key international intergovernmental bodies, including the Food and Agriculture Organization (FAO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO). The Project also aims to complement the critical input NGOs into these discussions, particularly in the context of the WIPO Development Agenda and the current discussions in civil society towards a Treaty in Access to Knowledge Treaty.

The present discussion in this paper will introduce the relevance of patents on life forms to other international frameworks, including biodiversity, the environment, and human rights, and will go on to consider whether intellectual property protection is compatible with the facilitation of social, cultural, and economic development of non-industrialised countries in the context of principles of international trade.

Of particular interest to this paper is the relationship between patents and the protection of and access to genetic resources and agricultural biotechnologies. The question of access raises the issue of the particular impact on developing and least-developed countries, as well as traditional and indigenous groups, in imposing intellectual property limitations and regulations upon access and the dissemination of this knowledge. Indeed, approaching the quality of this

regulation from the perspective of traditional agricultural communities, indigenous communities, and developing economies, in many ways it is necessary to understand the ethical dimension of the commercial development of agricultural biotechnologies and genetic resources. In the context of the present paper, the patenting of living material raises not only the question of patentability criteria and the commercialisation of agricultural biotechnologies, but also the sustainable development of these agricultural systems, environmental concerns, food security, and cultural and social aspects of agricultural communities.

The Current International Debate

In September 2004, the Geneva Declaration on the Future of WIPO was launched, with over 600 signatures, and the Brazil/Argentina proposal on the WIPO Development Agenda was tabled at that meeting, and subsequently adopted at the WIPO General Assembly. In the context of the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, WIPO has assumed an emphasis on patent law as the key mechanism towards the recognition and protection of genetic resources. At the recent Seventh Session, staged in November 2004, mandatory disclosure of origin (of genetic resources and traditional knowledge) and prior informed consent (of indigenous and traditional communities and knowledge-holders) were considered in detail in the context of patent law and industry access and commercialisation, and the preference for contractual mechanisms

for managing that access was strenuously debated, a debate that continues in the Eighth Session, underway at the time of writing.

Research context

The urgency of these discussions for developing countries should not be understated. It is essential to understand and address the impact of these anticipated reforms for developing countries and to appreciate the impact of international harmonisation upon local resources. This includes related international instruments, such as the Convention on Biological Diversity (CBD) and the International Union for the Protection of New Varieties of Plants (UPOV). Finally, in the context of developing countries and increased international awareness and regard for traditional knowledge, there is a distinct need to consider the context for protection more holistically, addressing cultural and social development and community capacity, rather than conceptualising and recognising these technologies merely in the context of commercial development and trade.

Dissemination of these issues at this time is crucial, because many are being reshaped and reformed in the context of significant mobilisation of the public interest through NGO activity in particular. Expert legal opinion is required at this very important historical juncture. Therefore, the widest possible dissemination of the results of the Patenting Lives Project will be sought, because there is a distinct need at this moment, in the history and development of international intellectual property and of WIPO itself, to provide coherent, cogent, and relevant

considerations of and solutions to these questions. This Project is engaging with issues of critical international legal and political significance, and is timed to make the most meaningful contribution to the key developments and academic debate in this very volatile and often controversial legal area.

NGOs and the International Legal Environment

The characterisation of the public interest through NGO participation in both sides of the debate, and their emergence as key influences upon international policy, will be of significant interest in this context. The role of NGOs in developing international policy and regulation of GMOs, engaging public trust, and enforcing corporate responsibility, has emerged as one of critical significance to the development of international policy and legal responses.

The role of NGOs in representing and motivating consumer acceptance or rejection of GMOs, and in the success of organic and fair trade branding, is particularly relevant to this discussion. Further on this point, the role of NGOs in international law-making must be considered alongside intergovernmental considerations and deliberations upon international standards of intellectual property protection. Of critical interest, in this context, is the way in which international NGOs reflect and motivate the public interest, and how such groups interact with the regional and local identities they claim to represent.

Patents and Life Forms – the Patentability of Life?

The application of patent protection to life forms (although this presentation will deal specifically with agricultural biotechnologies) raises several critical legal, ethical, and cultural questions. In fact, one of the concerns of the Patenting Lives Project is the potentially inappropriate nature of intellectual property protection, in the form of patents, for these technologies, indicating the need to examine alternative strategies for encouraging investment and research.

At the same time, research and development in agricultural biotechnologies must not only be commercially viable but also must occur with the objective of adequate transfer of technology to developing countries and access to that technology by indigenous and traditional communities. Before moving onto an introduction to such alternatives, as suggested by the Patenting Lives Project Working Group, it is useful to consider the key inconsistencies between conventional patent protection and the commercialisation of biotechnologies.

Patent protection of life forms, including agricultural biotechnologies, creates discrete objects of property out of the “hybrids” of genetic engineering. In doing so, patents define that technology and confer a kind of certainty with respect to it through the categorisation and commodification of that technology as pure information. The granting of a patent defines a “product,” as it were, despite the nature of the organism (or its genes) in its ongoing interaction with the environment. This certainty is obviously useful not only to the commercialisation

of such technologies, but also to the social conceptualisation of biotechnologies. In other words, the creation of a sense of certainty and indeed “safety” (in the construction of a “product”) through the conceptualisation of biotechnologies within intellectual property frameworks (namely patents), is of particular interest to the Patenting Lives Project. The granting of a “patent,” as it were, suggests a known and finite dimension to the technology in question.

In other words, a patent identifies and registers an apparently discrete form of information out technology involving processes of genetic hybridisation, and a process of living interaction in the context of GMOs and the pre-existing environment. Importantly, this environment includes not only naturally occurring ecosystems, but also the pre-existing agricultural communities and markets. Therefore, the welfare of farmers and populations in least-developed, developing, and developed countries is relevant, together with the commercial value of other competing technologies, including organic agriculture and local traditional knowledge. Thus, registration as a patent artificially separates and fixes as a discrete object of invention something which is actually in constant interaction with and modified by its environment.

Despite the potential certainty conferred by patent definition of these technologies, an attending risk of the unknown continues to be perceived by the general public. In other words, despite the registration of the technology by its identification within a patent, that identification is perceived as an artificial separation of the technology from its environment and the ongoing interaction informs much of the discourse on risk. Indeed, much of the public debate

concerning biotechnologies – including the impact on the environment, the “common heritage” of natural products, and the impact on communities in the context of access to food and agricultural livelihoods – is that the products of genetic engineering are seemingly incomparable to conventional notions or concepts of inventions, despite the over-regulation of patents. In other words, the public response to biotechnologies often draws upon an attending risk of the “unknown,” and of the potential for interaction and “infection,” not only of farms and organic agriculture, but also of communities and traditional knowledge in agriculture and the environment.

Unlike other types of technology, living material is arguably unsuitable for patentability, not only for ethical and moral reasons, but also for practical reasons of this continuous interaction with the environment. Whether patentability is in fact an effective and ethical reward and incentive for this process is currently the subject of vigorous and spirited public debate. This has led the Patenting Lives Project to examine the current limitations and exceptions provided by the TRIPS Agreement (including exceptions based on *ordre public* and morality, as well as public health, considered more broadly to include the cultural and social health of communities). Further, the Project is considering alternatives strategies for commercialisation and protection, which will be outlined in the presentation accompanying this paper, including “open source” approaches to research and development, and ongoing commercialisation of technologies. These flexibilities and alternatives include:

- Article 27.3(b) of the TRIPS Agreement – possible strengthening of the exception relating to life forms;
- Other current limitations and exceptions – including *ordre public* exception in Article 27.2 of the TRIPS Agreement;
- Doha Declaration on TRIPS and Public Health and the possibility for an expanded understanding of “public health” to include community integrity and cultural practice;
- Exclusions in the European Biotechnology Directive (Article 6);
- An instructive case study of Canada, which rejects patents on higher life forms; and
- Open source models for licensing and commercialising.

Conclusion

Modern agricultural innovation, including contemporary processes of agricultural biotechnology, has developed through generations of collaborative and community-based methods of knowledge-development and agricultural production. The patent system arguably simplifies the context in which that innovation takes place, and limits the understanding of the technology disseminated. It is the contention of the Patenting Lives Project, and of this presentation, that the patent system, as it is currently working, is not necessarily the most efficient, productive, or rewarding framework in which to understand, commercialise, and disseminate agricultural biotechnologies.

