BOOK REVIEW

PATENTS, HUMAN RIGHTS AND ACCESS TO SCIENCE

Aurora Plomer

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Is today's global patent system failing to adhere to the human rights ideal of universal access to science? That is the question that Professor Aurora Plomer (University of Bristol Law School) answers in the affirmative in her superb and timely book, *Patents, Human Rights and Access to Science*. In it, she addresses the challenges posed by the modern patent system to the human right of everyone to access the benefits of science. The book, which provides a systematic historiography and analysis of the genesis and normative content of this human right and its implications for emerging areas of science, is timely because there have been a number of recent intellectual property cases in the US, Europe and other countries that have direct impact on millions of individuals in terms of access to life-saving treatments. The book is superb because in seven well-written chapters, Plomer offers unique insights into human rights and tangible recommendations for reforming the global patent system.

In Chapter 1 ("Patents, Profits and the Public"), Plomer observes that some of the most significant legal cases in recent years (e.g. *Myriad*,[1] *WARF*[2] and *Brustle*[3]) have centred on controversial patents granted to individual scientists, university spin-offs and for-profit organisations over scientific discoveries that could lead to ground-breaking diagnoses and treatments of diseases. As Plomer writes: "Scientific progress has been marred with disputes over ownership of the science by academic institutions and private companies and the obstructing impact of patents on scientists' access to essential data and research tools" (p. 2). From the perspective of researchers, patients and the general public, concerns centre primarily on the adverse impact of the patents on access to science and its benefits, which is a universal and fundamental human right enshrined in Article 17 of the 1948 Universal Declaration of Human Rights (UDHR) and Article 15 of the 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR) – the latter of which is a legally binding document (to date, the Covenant has 164 parties). Plomer is particularly concerned that:

> […] the 'real' unspoken principle which patents on 'basic research tools' contravene is the 'land grab' on scientific knowledge and basic research tools which are necessary to facilitate scientific progress and ultimately to ensure that the benefits of science can be enjoyed by all. These principles are precisely the principles captured in Articles 27 UDHR and 15 ICESCR. (p. 13)

[1] *Association for Molecular Pathology v Myriad Genetics, Inc.* (2013) 133 S.Ct. 2107.
[2] *Consumer Watchdog v Wisconsin Alumni Research Foundation*, No. 2013-1377 (Fed. Cir. 2014).
[3] *Oliver Brüstle v Greenpeace eV.*, [2011] C-34/10 (ECJ).

Plomer argues that while the principle captured in this fundamental human right is *prima facie* relevant to the determination of the nature and scope of legal intellectual property rights and patents in emerging fields of science such as genomics, the right has not been directly invoked or weighed in the reasoning of patent offices and courts.

In Chapter 2 ("The Moral Architecture of Human Rights and Rights of Access to Science"), taking inspiration from the works of Martha Nussbaum and Amartya Sen, Plomer draws on capabilities theory to argue that the normative foundation of human rights lies in a substantive conception of human freedom, flourishing and well-being, which is understood as reflecting the individual's choice of who they choose to be and could be. For her, "the right to access the benefits of science and the rights of authors and inventors have their normative basis in an overarching moral ideal of human self-development and substantive freedoms which should not be conflated with positive legal rights and intellectual property rights" (p. 33). Plomer thus rejects the classical libertarian theories of human rights that set public goods in opposition to the pursuit of individual interests. Rather, she suggests that, in line with capabilities theory, there are three main anchors in the moral architecture of fundamental human rights. These anchors lend normative coherence to the rights embodied in international human rights texts and provide a basis from which to analyse and evaluate the normative content of discrete human rights, and specifically, the right of access to the benefits of scientific progress. They are: equal human dignity of persons; self-realisation; and substantive freedoms and democracy, which together encompass the claim that the right to enjoy the benefits of scientific progress "is a multidimensional right, which encompasses both individual self-development and enabling institutions that facilitate the advancement of science for the public good and benefit of all through free individual participation" (p. 34). Indeed, Plomer emphasises the importance of enabling democratic institutions in promoting an individual's ability and freedom to live the kind of life she values and in facilitating the articulation of public social and economic policies that can assist individuals in the realisation of their choices, particularly through transparent and open communication of knowledge.

Plomer begins to undertake the historiography and analysis of the genesis of the human right in Chapter 3 ("The Human Rights Paradox: Intellectual Property Rights and Rights of Access to Science"), which retraces the drafting history of Article 27 UDHR. Plomer explores why the drafters juxtaposed the public rights of access to science and the private rights of ownership of science in the same article.[4] As she shows, this was the result of complex political comprise between different blocs and ideologies. Somewhat surprisingly, opposition to the inclusion of private rights came from the US, UK and former Anglo-Saxon colonies, as well as countries from the former Eastern Bloc, whereas South American socialist countries and France pushed for the protection of the individual rights of authors and inventors. This reflected ideological constructs underpinning intellectual property rights as either natural

[4] Article 27 UDHR reads:
(1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.
(2) Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.

rights (a Lockean view that took hold foremost in France) or positivist rights (a Benthamite view sustained foremost in England and the US). Thus, "the superficially paradoxical opposition of Anglo-Saxon countries, liberal economies and market economies to the inclusion of a right protecting the moral and material interests of individuals is rooted in a deeper historical opposition to the idea of natural rights and patent rights in Anglo-Saxon legal cultures" (p. 76). Be this as it may, Plomer argues that the drafters were *not* envisioning the private rights in Article 27(2) to serve as legal intellectual property rights: "The individual interests and rights of inventors contemplated by the drafters were essentially directed at the human rights ideal of self-realization and were thought of as subordinate to the core ideal of public access to knowledge and science. The individual rights of inventors were certainly not to be confused with legal IP rights" (p. 27).

The systematic historiography continues in Chapter 4 ("From Moral Ideals to Legal Obligations: The Genesis of Article 15 ICESCR"), which retraces the evolution of Article 27 UDHR into Article 15 ICESCR. As Plomer notes, the process to make the UDHR a legally binding covenant took almost 20 years to complete, and the outcome was not one covenant, but rather two: one dealing with civic and political rights (which uses categorical and prescriptive language declaring that the existence of rights creates a reciprocal binding obligation on signatory states to take measures to protect these rights), and the other dealing with economic, social and cultural rights (which in contrast, uses language whereby states "recognise" or "acknowledge" the existence of certain rights). Plomer shows how the inclusion of Article 15 in ICESCR[5] underscored the deep divide in the political visions of the drafters. By the 1950s, the Cold War was in full swing; unlike what happened during the development of the UDHR, delegates from the US, UK and former UK colonies that had consistently opposed the inclusion of rights of authors voted in favour of the clause, whereas the Soviet bloc countries opposed it. The final wording of Article 15 incorporated elements from UNESCO's submitted texts in 1951, which made clear that the clause on the rights of artists, scientists and authors to the protection of their moral and material interests did *not* cover copyright and patents. Unfortunately, the debates failed to anticipate the threats posed to human rights through the future hardening of trade rights and intellectual property rights, as seen most vividly in WTO TRIPS agreement, as well the extension of copyrights and patents to basic theoretical science and the blurring of the *human* right of authors and inventors over the "moral and material interests" in their creations with *legal intellectual property* rights.

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[5] Article 15 ICESCR reads:
1. The States Parties to the present Covenant recognize the right of everyone:
(a) To take part in cultural life;
(b) To enjoy the benefits of scientific progress and its applications;
(c) To benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.
2. The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for the conservation, the development and the diffusion of science and culture.
3. The States Parties to the present Covenant undertake to respect the freedom indispensable for scientific research and creative activity.
4. The States Parties to the present Covenant recognize the benefits to be derived from the encouragement and development of international contacts and co-operation in the scientific and cultural fields.

Plomer takes up these concerns in Chapter 5 ("The UN's Official Thinking on Article 15(1)(c)"), which retraces the development of the emerging "official" thinking on the normative content of Article 15 ICESCR by the UN and its agencies. Plomer points out that there has been a revival and reinterpretation of Article 15 ICESCR by UN organisations in response to concerns regarding the aggressive assertion by transitional pharmaceutical companies of their intellectual property rights over medicines in the developing world. Unfortunately, Plomer finds that the core aim of Article 15 to secure the right of everyone to the benefits of science has been diluted due to the emergence of international agencies (e.g. the UN's World Intellectual Property Organization, formed in 1967) dedicated to the protection of legal intellectual property rights, which raised tensions with other agencies dedicated to the promotion of human rights such as the United Nations Economic and Social Council (ECOSOC). Plomer criticises the ECOSOC for only beginning to exercise its extensive powers in relation to Article 15 at the turn of the millennium, and while there has been a general effort by the UN to elide human rights and intellectual property rights, it remains unclear whether there is adequate deference given to human rights, which should always be primary.

In Chapter 6 ("UNESCO: Biotechnology, Bioethics and the Rights to Share in the Benefits of Science"), Plomer situates UNESCO's initiatives on the elaboration of the normative content of Article 15 ICESCR in the context of the organisation's history and mission to protect and promote science, education and culture. She shows that UNESCO's history is full of tensions when it comes to the promotion of science. While early in its history, its leaders undertook initiatives specifically directed at the protection of scientists and the diffusion of science, its more recent activities have been focused on standard-setting. This is in no small part due to the difficult political balances UNESCO has had to make: "From the beginning, the elaboration and implementation of UNESCO's mission had to straddle the vision of economically developed, liberal, laissez-faire states which envisaged UNESCO to play a minimalist role in facilitating scientists free exchange of ideas and the more proactive role favoured by others who envisaged that UNESCO would facilitate science and technology transfer from industrialized to less technologically advanced countries" (p. 135). Plomer criticises aspects of UNESCO's recent "normative turn", reflected particularly in instruments such as the 2005 Universal Declaration on Bioethics and Human Rights and the 2009 Venice Statement on the Right to Enjoy the Benefits of Scientific Progress and its Applications. She criticises UNESCO for limiting rather than advancing access to and uses of science (often under the questionable guise of "human dignity"), and for not addressing conflicts of interest or potential threats to the integrity of science posed by public or private funding of scientific research or commercialisation of genetic data. She also criticises the lack of linkage or input into UNESCO's instruments on science from international organisations such as the International Council for Science. As she writes (p. 161):

> Overall, when seen against the wider UN context and its long history, UNESCO's more recent standard-setting activities in bioethics and initiatives on Article 15 ICESCR look somewhat detached from UNESCO's own

> programs to support the advancement and diffusion of science, overly focused on health/biomedical concerns which fall more squarely within WHO's mandate and overly preoccupied with limitations on modern biotechnologies on which there is no clear global consensus.

In the final Chapter 7, ("Conclusion"), Plomer calls for a more detailed engagement with the architecture of the patent system through a human rights framework, "ideally at national and regional levels by patent offices, legislatures and courts" (p. 167), which would make explicit "the unspoken connection between legal policies which limit the (utilitarian) goal of legal IP rights/patents and the fundamental human rights ideal of universal access to science in Article 15" (pp. 169-170). This detailed engagement would provide a normative language for achieving a just balance between the protection of individual rights and public rights of access to science, and could "play a critical role in exposing the legal trivialization and distortion of the concept of an invention in patent law(s) and its disconnect with human capabilities and human rights" (p. 173). Plomer writes that UNESCO could have a positive role to play in promoting access to science – which it has not done sufficiently well to date, and that human rights organisations can refine the focus of their monitoring and standard-setting activities on Article 15 ICESCR.

In sum, *Patents, Human Rights and Access to Science* is an excellent book that scholars interested in the interplay of intellectual property, science and human rights should add to their reading list. Plomer is manifestly passionate about instituting significant reform in the global patent system to facilitate democratic oversight of patent policies and their compliance with human rights, and to ensure meaningful realisation of the right of everyone to access the benefits of science. Her argument is compelling. Let us hope that the international agencies created to defend universal human rights, as well committed individuals, patent offices, courts, non-governmental organisations and companies across the globe, work together to heed the sage advice offered in this book.

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