Intellectual Property and the Human Right to a Healthy Environment

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ON MATTERS CONSTITUTIONAL

Léon Dijkman

Patents and the Right to a Healthy Environment

An Outline of a Response to the Critics

As recent political developments make the prospect of a global consensus on – let alone an adequate response to – climate change an ever more distant fantasy, innovation and technology are increasingly looking like the most promising option (not to say last straw) of avoiding an ecological catastrophe.[1] For instance, the International Monetary Fund (IMF) estimates that improvements in direct air capture, advanced battery, and hydrogen electrolysis technologies may achieve as much as 15% of the cumulative emissions reductions required between 2030 and 2050.[2]

To be sure, technology alone will not save us, and lifestyle change remains necessary if a limitation of global warming to 1.5°C is to be achieved.[3] At the same time, further advancement of green technologies is likewise indispensable. Direct air capture, for example, will be critical to removing sufficient carbon dioxide from the atmosphere, yet the aforementioned IMF analysis indicates that this technology "remain[s] at the earliest stages of development".[4] Furthermore, innovation and lifestyle changes often go hand in hand. Despite considerable controversy surrounding its CEO (and older allegations of hypocrisy and greenwashing[5]), Tesla undeniably contributed significantly to the net-zero transition precisely because its technology made a more sustainable way of driving appealing to a vast number of car owners.

In the context of this book, the question arises how patent law may contribute to or hinder the technologies and innovation needed to conserve a healthy environment. This brief contribution seeks to make two points in this respect. The first is that the role patent law can play on its own should not be overestimated. The second is that future studies in this direction should take an innovation systems approach. While neither

point is new, I believe connecting them and building on key publications that first expressed them serves as a useful agenda for future research in this field.

Applying patent law with a view to environmental concerns

Most contributions in this book seek to fix presumed environmentally harmful aspects of intellectual property law and its application in practice. Charlotte Vrendenbarg, for instance, argues that when issuing destruction orders for infringing goods, courts should consider less environmentally harmful alternatives such as recycling.[6] At first glance, there is little to object to in the argument. Especially in patent law, where enforcement often concerns infringing functionalities of relatively complex devices, it is firmly accepted that permanent disablement of these functionalities (if possible) is preferred over destruction of the devices in their entirety.[7] The Unified Patent Court (UPC) appears to have accepted this principle as well.

Yet the argument cuts both ways. Granted, the destruction of goods is environmentally wasteful, but the real damage to the environment comes from these goods having been manufactured in the first place, as Vrendenbarg also points out in her inaugural address.[8] It is worth recalling that Directive 2004/48/EC (the Enforcement Directive) arose from concerns over counterfeit goods, a paradigmatic example of environmentally and socially harmful products.[9] Article 3(2) of this Directive requires, among other things, that remedies for IP infringement be dissuasive, which implies at least some measure of general deterrence.[10] The Directive's deterrent effect, including the threat of a destruction order (Article 10(1)(c)), can thus be

viewed as a means to prevent the environmentally harmful production of mass market infringing goods. From this perspective, leniency in respect to destruction orders may well achieve precisely the opposite of what Vrendenbarg and others argue for.

These considerations hint at a larger problem posed by "green" application of IP laws: It is very difficult for courts to oversee the ramifications of their decisions beyond the individual case they are deciding. I address this problem elsewhere in the context of patent injunctions and argue that courts should not consider public interests when deciding on remedies in individual cases.[11] In my view, there is simply no way of knowing which approach best serves abstract policy objectives, including sustainability and a circular economy, when deciding a specific case. The example of destruction orders against infringing stock illustrates this rather well, as short-term environmental gains could just as well be counterproductive if judicial leniency invites larger-scale infringements.

Of course, administrative and/or legislative interventions in the patent system are not similarly constrained and could potentially boost innovative activity in more sustainable directions. Vrendenbarg proposes some ideas and the literature contains various other suggestions.[12] Such proposals are without a doubt worth investigating further, but here too we must keep in mind that the ultimate goal is a shift in innovation focus and consumer behavior. Neither follows directly from the specifics of intellectual property policy, as convincingly argued by Reto Hilty and Pedro Batista.[13] Their conclusion that "[t]he potential of patent law should not be overestimated when it comes to combating climate change through innovative solutions and thus technical progress" strikes me as a helpful call to

modesty when it comes to the role that IP scholarship can play in tackling climate change.[14]

Patents as impediments to the development of sustainable technologies?

The primary concern of Hilty and Batista when it comes to patents and climate change is that "holders of patents protecting older technologies have a rather sharp sword in their hands to hinder follow-on innovations". This concern is not new. Fifteen years ago, Peter Drahos evaluated the "connection between the sources of catastrophic global change and intellectual property", and concluded that "intellectual property is more about opportunistic protectionism than it is about innovation".[15] Many scholars take a skeptical view of the efficacy of the patent system, and when it comes to the environment the stakes become existential. The patent system, it would seem, must be negated or at least severely curtailed to avoid rent-seeking behaviors and the obstruction of incremental innovation.

I cannot hope to adequately respond to these critiques in this contribution. But I am inclined to agree with Caoimhe Ring that "[p]roposals to weaken patent protection [...] have the potential to negatively impact green innovation, without offering robust evidence as to the benefits".[16] Importantly, Ring observes that patents are likely key drivers in "technology commercialization and diffusion".[17] Patents may not be suitable means to incentivise the radical technological breakthroughs we need to mitigate the climate crisis, and it is plausible that in some instances they hinder incremental innovation by third

parties. At the same time, if patent protection can contribute to the diffusion of sustainable technologies, that potential should be embraced and studied further. After all, as noted in the introduction to this contribution, large-scale adoption is the only way to achieve sufficient impact and (hopefully) avert the direst consequences.

Ring advocates an "innovation system analysis" to achieve a proper understanding of what and how patents might contribute alongside other policy interventions. Modern scholarship increasingly acknowledges that patents are only part of a web of policies that drive innovation in research-intensive industries such as pharmaceuticals.[18] Consideration of patent law's role within this policy mix, and specifically its role in the diffusion of green technologies, brings to mind a classical paper by Edmund Kitch.[19] As is well known, Kitch proposed a so-called prospect theory of patents, according to which their predominant purpose is to protect investments subsequent to the invention and necessary to turn the patented invention into a commercially viable product.

The insights of Kitch's work appear germane to the problems here addressed. The European Patent Office has reported steadily increasing numbers of patent applications for low-carbon energy technologies between 2000-2019.[20] These statistics suggest that there are plenty of good ideas, but which idea will be the next Tesla, capable of causing a fundamental shift towards a more sustainable lifestyle on a global scale? I certainly do not want to suggest that patents will readily determine the answer. Yet patents allow small, R&D-focused companies to compete with large incumbents on the basis of innovation breakthroughs, as Jonathan Barnett has persuasively argued.[21] Thus, Drahos may well be right to assume the "blue

skies" research needed to avert an ecological disaster is unlikely to be performed by entrenched, rent-seeking corporations; however, that can be read as a plea for, rather than against, patent protection if one takes a more optimistic views of the role that can be played by upstart competitors. Prospect theory provides a valuable clue to understand these dynamics, because it explains how patents offer innovators protection during the critical period in which they must prove themselves, i.e. until they can introduce an actual product. That actual product is what ultimately matters and we should not risk its attainment by prematurely limiting patent protection on the basis of an incomplete understanding of the relevant innovation system.

The reader may rightfully object that this is no more than an outline of an argument, and they would be right that much more work remains to be done here. But if this contribution can serve as a modest call to caution before curtailing patents and their holders' rights, it will have achieved its purpose.

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