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PATENT, BUT WHERE IS HOME AND GLOBAL JUSTICE?  
A RAWLSIAN AND SENIAN INQUIRY

DR. DEMING LIU\*

INTRODUCTION

The patent system is designed to grant inventors and innovators exclusivity over their inventions for a limited period in exchange for public disclosure of their inventions. The patent is thus often taken as “a way of maximizing social welfare by providing incentives for inventors to increase the stock of applied technical knowledge in society (through protection) and discouraging inefficient redundancy of inventive effort (through disclosure).”<sup>1</sup> Some believed that the idea of patents as incentive to innovate germinated in the minds of the Venetians when they put in place the patent system in the fifteenth century.<sup>2</sup> In England, it was “unusual” for the patent system to be put in the context of stimulating inventive activities before the mid-eighteenth century; “[t]he close association of letters patent with Court patronage until the end of the seventeenth century . . . defined them principally as instruments of the royal prerogative.”<sup>3</sup> It was not until the late eighteenth century that the claim had emerged that the patent system serves as an incentive to invention and the monopoly granted is the quid pro quo for disclosure of the invention to promote inventive efforts.<sup>4</sup> The system was implemented in the United States, where Thomas Jefferson approved it

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1. John S. Leibovitz, *Inventing a Nonexclusive Patent*, 111 YALE L. J. 2251, 2256 (2002).

2. Jean Tirole & Antilano Jorge Padilla, Intellectual Property and the Future of Innovation in Europe, Speaking at A Centre for the New Europe Market Insights Event (Oct. 10, 2001). For specific discussion on the Venetian system of patent, see e.g., Carlo Marco Belfanti, *Guilds, Patents and the Circulation of Technical Knowledge: Northern Italy during the Early Modern Age*, 45 TECHNOLOGY AND CULTURE 569–89 (2004). Further on the origins of the patent system, see Harold C. Wegner, PATENT HARMONIZATION (Sweet & Maxwell 1993).

3. CHRISTINE MACLEOD, *INVENTING THE INDUSTRIAL REVOLUTION: THE ENGLISH PATENT SYSTEM, 1660–1800* 182 (Cambridge U. Press 1988). In contrast, see RICHARD GODSON, *A PRACTICAL TREATISE ON THE LAW OF PATENTS FOR INVENTIONS AND OF COPYRIGHT* 6 (London Saunders & Benning, 1844) (“It was under the auspices of Queen Elizabeth that the Huguenots settled in Norwich, Sandwich, Colchester, and other places, where they carried on woollen and linen manufactories to the great benefit of the country. It was by her charter that the East India Company was established; which grant, though a very great monopoly, has contributed very largely to the splendour and influence of England in the scale of nations.”).

4. MACLEOD, *supra* note 3, at 182.

to realize his ideal to protect innovative manufacture.<sup>5</sup> Now it is embodied in the U.S. Constitution which states that the purpose of patent law is “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to . . . inventors the exclusive Right to their . . . Discoveries.”<sup>6</sup>

Many eminent economists, such as Adam Smith, supported the patent system. Adam Smith believed that patents for new machinery and copy-right over books were “the easiest and more natural way the state can recompense them for hazarding a dangerous and expensive experiment, of which the public is afterwards to reap the benefit.”<sup>7</sup> On another occasion, he praised the patent as a harmless exclusive privilege:

It was probably the fairest reward for ingenuity that could be devised, since it was unlikely that the legislature would give pecuniary rewards, so precisely proportioned to the merit as it is. For here, if the invention be good and such as is profitable to mankind, he will probably make a fortune by it; but if it be of no value, he will also reap no benefit.<sup>8</sup>

Some argue that:

IP law [whereof patent is part] is simply a machine to generate innovation through economic incentives; and that lawyers are merely engineers called on occasionally to tweak or tinker with the mechanism. Such scholars celebrate when (from their perspectives) the machine works well, and they lament when it runs poorly-but it’s all just gears and switches either way.<sup>9</sup>

So the economics theory is employed to develop this area of law as the U.S. Supreme Court stated in *Mazer v Stein* that the economic philosophy is applied to explain the U.S. Constitution clause of intellectual property law.<sup>10</sup> Lemley throws doubt on whether the Chicago School law-and-economics movement theory is applicable to intellectual property; further, he believes that “the ‘proportization’ of intellectual property is a very bad idea. . .If anything, the public nature of a good seems to suggest that proportization is a uniquely bad idea, precisely because the consumption of

5. THOMAS JEFFERSON, THE WRITINGS OF THOMAS JEFFERSON 334 (Andrew A. Lipscomb & Albert Ellery Bergh eds., 1905).

6. U.S.CONST. Art.1, § 8, cl. 8.

7. ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 754 (Oxford Univ. Press 1976).

8. ADAM SMITH, LECTURES ON JURISPRUDENCE 83 (Ronald L. Meek et. al., eds., 1978).

9. PETER JASZI, *Is There Such a Thing as Postmodern Copyright?*, in MAKING AND UNMAKING INTELLECTUAL PROPERTY CREATIVE PRODUCTION IN LEGAL AND CULTURAL PERSPECTIVE 416 (Mario Biagioli & Martha Woodmansee eds., 2011).

10. *Mazer v. Stein*, 347 U.S. 201, 219 (1954) (“The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in ‘Science and useful Arts.’ Sacrificial days devoted to such creative activities deserve rewards commensurate with the services rendered.”).

that good is ‘nonrivalrous’—it does not take away from the creator of that good.”<sup>11</sup> As Thomas Jefferson put it, “he who lights his taper at mine, receives light without darkening me.”<sup>12</sup>

Heller and Eisenberg showed the problem with patent from another perspective, i.e., the “tragedy of the anticommons” in contrast with the “tragedy of the commons.”<sup>13</sup> Garrett Hardin coined the latter to help explain the problems of overpopulation, air pollution, and species extinction.<sup>14</sup> Those problems arise because people overuse resources they have in common and they have no incentive to conserve. “By contrast, a resource is prone to underuse in a ‘tragedy of the anticommons’ when multiple owners each have a right to exclude others from a scarce resource and no one has an effective privilege of use.”<sup>15</sup> In such a case, “a user needs access to multiple patented inputs to create a single useful product. Each upstream patent allows its owner to set up another tollbooth on the road to product development, adding to the cost and slowing the pace of downstream biomedical innovation,” thereby creating more complex obstacles to the progress of “Useful Arts”—the tragedy of the anticommons.<sup>16</sup>

That poses the question of whether patent is the ideal way to incentivize and reward invention. As with Smith and others mentioned before, it has become the routine argument in supporting patent that “it seems but just that he, who informs the public of a new method of increasing their wealth, should gather for himself the first fruits of his ingenuity and labour” and that is best done through the patent.<sup>17</sup> However, this view does not consider the contribution of others in the invention,<sup>18</sup> far less the interest of others. Further, it fails to take justice into account. Just because the patent *may* also benefit society when the inventor benefits from it does not mean that it is just to allow him the exclusive ownership for twenty years, because the patent is, *inter alia*, “oppressive to inferior tradesmen”.<sup>19</sup>

11. Mark A. Lemley, Book Review, 75 *Tex. L. Rev.* 873, 902 (1997) (reviewing JAMES BOYLE, *ROMANTIC AUTHORSHIP AND THE RHETORIC OF PROPERTY SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY* (1996)).

12. JEFFERSON, *supra* note 5, at 334.

13. Michael Heller & Rebecca Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, *SCIENCE*, May 1, 1998, at 698.

14. Garrett Hardin, *The Tragedy of the Commons*, *SCIENCE*, Dec. 13, 1968, at 1243.

15. Heller & Eisenberg, *supra* note 13, at 698.

16. *Id.* at 699.

17. GODSON, *supra* note 3, at 19.

18. See generally GAR ALPEROVITZ & LEW DALY, *UNJUST DESERTS: HOW THE RICH ARE TAKING OUR COMMON INHERITANCE AND WHY WE SHOULD TAKE IT BACK* (The New Press 2010).

19. GODSON, *supra* note 3, at 20.

The patent system needs re-examining from the fresh perspective of justice. This is because justice is a necessity for civil society, being “the most fundamental of all virtues for ordering interpersonal relations and establishing and maintaining a stable political society.”<sup>20</sup> Further, as the world is becoming more and more integrated and patent goes global, it raises the question of whether patent promotes or hinders global justice. That question is important not only because patent affects developing countries’ access to technologies, but also because it impacts access to medicine for the least advantaged people. Charles Darwin once famously said, “If the misery of the poor be caused not by the laws of nature, but by our institutions, great is our sin.”<sup>21</sup> Now the question is how to design the patent institution such that society becomes more innovative and the welfare of the poor is promoted. In answering the question, the article seeks to rethink patent and, in introducing Rawls’ theory of justice (and where appropriate, Sen’s idea of justice) into the debate, we dispute the traditional justification for patent, and we further dispute the imposition of patent on the developing countries in the context of access to medicine. Whilst we recognize that it is not feasible to dismantle the patent system, we argue that global justice is promoted and can be realized when discourse is engaged with the participation of all players to rework the patent system and hammer out the ideal form of protection for inventions and technologies. After this introduction, the article next examines Rawls’ theory with particular emphasis on the difference principle. Then, Part II looks at the traditional justification for patent, and where appropriate, evaluates it in the light of Rawls’ difference principle of justice. Part III discusses whether the patent system is suitable for the developmental needs of the developing countries. Part IV focuses on the issue of global justice vis-a-vis patent. In this part, we examine health-related patents; we also expand our discussion to include patent, generally. We debate on the ideal of Rawlsian global justice and then on the realization of global justice through the Senian public discourse. We advocate public reasoning as the feasible means in addressing global injustice. Part VI concludes the article.

### I. RAWLS AND HIS THEORY OF JUSTICE

In developing a theory of justice, Rawls commences with the “original position,” whereby free and equal people negotiate behind a veil of igno-

20. Wayne P. Pomerleau, *Western Theories of Justice*, INTERNET ENCYCLOPEDIA OF PHILOSOPHY, <http://www.iep.utm.edu/justwest/>.

21. CHARLES DARWIN, *VOYAGE OF THE BEAGLE 500* (1876).

rance to agree on a set of principles to regulate the basic structure of a well-ordered, i.e., just, society.<sup>22</sup> Rawls introduces the concept of “a veil of ignorance” in the following terms:

[N]o one knows his place in society, his class position or social status, nor does anyone know his fortune in the distribution of natural assets and abilities, his intelligence, strength, and the like. I shall even assume that the parties do not know their conceptions of the good or their special psychological propensities. The principles of justice are chosen behind a veil of ignorance.<sup>23</sup>

In other words, parties to the negotiation are hypothetically ignorant of “their place in society, their class position or social status, their good or ill fortune in the distribution of natural talents and abilities”;<sup>24</sup> they are “ghosts ignorant of the machines they will haunt.”<sup>25</sup>

The principles of justice are those upon which “the interests and ends of individuals depend.”<sup>26</sup> As Rawls says, they are “the principles that rational and free persons concerned to further their own interests would accept in an initial position of equality as defining the fundamentals of the terms of their association.”<sup>27</sup> They would govern the basic structure of society, a just society into which “these disembodied souls would agree to be born.”<sup>28</sup> But those principles would only be arrived at when all are regarded as free and equal, with no one allowed greater bargaining power than others, and when they are oblivious of their talents or status acquired at birth. To induce such principles, parties are attributed a bare set of commitments which Rawls terms as the “primary goods”: rights, liberties, and opportunities; income and wealth; and the social bases of self-respect.<sup>29</sup> The goods are “things which it is supposed a rational man wants whatever else he wants”.<sup>30</sup> They are evenly and equally distributed to each party. Parties are to choose the principles on the basis of the set of commitments.

Rawls believes that parties would adopt the maximin policy, a policy that maximizes the position of the least well-off member of the society. As

22. JOHN RAWLS, *A THEORY OF JUSTICE* 118 (Harvard Univ. Press 1971) [hereinafter RAWLS, *THEORY*].

23. *Id.* at 12.

24. JOHN RAWLS, *POLITICAL LIBERALISM* 272 (Columbia Univ. Press 1993) [hereinafter RAWLS, *LIBERALISM*].

25. STEVEN PINKER, *THE BLANK SLATE: THE MODERN DENIAL OF HUMAN NATURE* 150 (Penguin 2002).

26. John Rawls, *Fairness to Goodness*, 84 *PHILOSOPHICAL REVIEW* 536, 546–47 (1975) [hereinafter RAWLS, *FAIRNESS*].

27. RAWLS, *THEORY*, *supra* note 22, at 11.

28. PINKER, *supra* note 25, at 150.

29. RAWLS, *THEORY*, *supra* note 22, at 23.

30. *Id.* at 92.

such, he proposes two principles of justice which he believes rational people would agree to govern the basic structure of the society.<sup>31</sup> The two principles are lexically ordered; the first is prior to the second. The first principle, also known as the principle of equal liberty, concerns “rights and liberties”; it provides that “each person is to have an equal right to the most extensive basic liberty compatible with a similar liberty for others.”<sup>32</sup> This principle is fundamentally important; so much so that Rawls puts in place the above lexical ordering to ensure that it cannot be traded off for the second principle, below; namely, liberty cannot be sacrificed even where that would lead to greater wealth.<sup>33</sup> Sen argues that, to Rawls, “there is something very special about the place of personal liberty in human lives,” and “Rawls puts liberty on an absolute pedestal that towers indisputably over all other considerations.”<sup>34</sup>

The second principle embodies two further principles, the principle of fair equality of opportunity and the principle of difference. The principle of fair equality of opportunity concerns opportunities and provides that social and economic inequalities are to be “attached to positions and offices open to all.” In other words, people should enjoy equal opportunities regardless of their race, color, etc. Here, an inequality of opportunity is permissible only if it “enhances the opportunities of those with the lesser opportunity.”<sup>35</sup> The difference principle concerns “income and wealth” and provides that “social and economic inequalities are to be arranged so that they are both reasonably expected to be to everyone’s advantage.”<sup>36</sup> This principle is also rephrased as indicating that the inequalities “must be to the greatest benefit of the least advantaged members of society.”<sup>37</sup> Rawls sets out the circumstances of justice as where “human cooperation is both possible and necessary”; he argues:

Although a society is a cooperative venture for mutual advantage, it is typically marked by a conflict as well as an identity of interests. There is an identity of interests since social cooperation makes possible a better life for all than any would have if each were to try to live solely by his own efforts. There is a conflict of interests since men are not indifferent as to how the greater benefits produced by their collaboration are distrib-

31. *Id.* at 11.

32. *Id.* at 302.

33. AMARTYA SEN, *THE IDEA OF JUSTICE* 59 (Penguin 2009).

34. *Id.*

35. See N.E. SIMMONDS, *CENTRAL ISSUES IN JURISPRUDENCE JUSTICE, LAW AND RIGHTS* 58 (London: Sweet & Maxwell 2008) (the second principle in essence means that “social and economic inequalities are just only in so far as they work to the advantage of the least advantaged people in society”).

36. *Id.*

37. RAWLS, *LIBERALISM*, *supra* note 24, at 291.

uted, for in order to pursue their ends they each prefer a larger to a lesser share.<sup>38</sup>

To achieve justice, inequalities and freedom of pursuit of a larger share are allowed only in so far as they maximally enhance the benefit of the least well off, i.e., the maximin dictate. One question arises here: Who are the least advantaged? Freeman explains, “since one’s share of income and wealth generally corresponds also with one’s share of the primary goods of powers, positions of authority, and bases of self-respect, we can regard the least advantaged to be the economically least advantaged people in society—i.e., the poorest people.”<sup>39</sup> To put it another way, they are the “people who earn the least and whose skills are least in demand – in effect the class of minimum-wage workers.”<sup>40</sup>

The difference principle “represents . . . an agreement to regard the distribution of natural talents as a common asset and to share in the benefits of this distribution whatever it turns out to be.”<sup>41</sup> Rawls believes that the talented should earn premiums, but the premiums are used to contribute to the welfare of the least well off. Then one may ask where the incentives for the creation of the talented come from and how it can be assured that the talented are to continue their efforts. To address those concerns, Rawls does not deny the use of incentives. In his second principle, he “accepts the use of incentives to draw out the best efforts of the more talented to the extent that they contribute to the welfare of all, starting with the least advantaged.”<sup>42</sup>

Utilitarianism regulates the relationship between persons in an “asocial” sense and holds that each has the duty to contribute the most to “the welfare of mankind”; mutual aid bonds people together.<sup>43</sup> For Rawls, justice concerns the allocation of the benefits derived in “cooperative enterprise” as people relate to each other under common institutions; “for justice, which requires that our institutions be arranged so as to maximize the expectations of the worst-off group in our society.”<sup>44</sup> In other words, Rawls is concerned about creating a perfectly just institution that can be installed in a democratic society; justice is achieved as long as a perfectly just institution is designed and put in place, the so-called “transcendental

38. RAWLS, *THEORY*, *supra* note 22, at 126.

39. SAMUEL FREEMAN, *RAWLS* 106 (2007).

40. *Id.*

41. RAWLS, *THEORY*, *supra* note 22, at 101.

42. Charles Fried, Book Review, 85 *HARV. L. REV.* 1691, 1696 (1972) (reviewing JOHN RAWLS, *A THEORY OF JUSTICE* (1971)).

43. T. M. SCANLON, *Rawls's Theory of Justice*, in *READING RAWLS, CRITICAL STUDIES OF A THEORY OF JUSTICE* 201 (Norman Daniels ed., 1975).

44. *Id.* at 202.



institutionalism.”<sup>45</sup> With fair equality of opportunity in place, development of each individual would even out the arbitrary distribution of talent and “undercut the dominance of the best off groups”; and ultimately, “the incentives to encourage development of socially valuable talents and skills would be reduced.”<sup>46</sup>

## II. EVALUATION OF PATENT JUSTIFICATION FROM RAWLS’ PERSPECTIVE

Having discussed Rawls’ theory, we now evaluate patent justification from the perspective of justice. The question arises, can Rawls be used to examine whether the patent system is justifiable? Freeman believes that “[a] primary role of the difference principle is that it is to be applied to specify appropriate forms of ownership and property rights and responsibilities, as well as permissible and impermissible transactions in the economic system.”<sup>47</sup> Rejecting the narrow view of the basic structure as “limited to a scheme of constitutional liberties plus the system of tax and transfer” or as constituting “all coercive political and legal institutions,” Kordana and Tabachnick argue for the broad view that “all aspects of social living that affect citizens’ life prospects constitute the basic structure.”<sup>48</sup> Indeed, David Resnik has no hesitation in applying Rawls to patent.

Resnik insists that under Rawls, “the patent system is fair in a national context because it respects intellectual property rights and it benefits the least advantaged members of society by providing incentives for inventors, investors, and entrepreneurs.”<sup>49</sup> It is true that Rawls allows the use of incentives even where that would lead to social and economic inequalities, so long as that works to the benefit of the least advantaged. The difference principle apparently supports the view that people would not work productively without the incentive. Hence, the use of incentive can be justified and be just, precisely because it would benefit the least advantaged, despite the inequalities that ensue; for the same reason, the resulting economic and social inequalities are just.<sup>50</sup> Cohen disagrees with Rawls on many issues,

45. SEN, *supra* note 33, at 5.

46. NORMAN DANIELS, *Rawls’s Complex Egalitarianism*, in CAMBRIDGE COMPANION TO RAWLS 252 (Samuel Freeman ed., 2003).

47. FREEMAN, *supra* note 39, at 103.

48. Kevin A. Kordana & David H. Tabachnick, *Rawls and Contract Law*, 73 GEO. WASH. L. REV. 598, 606 (2005).

49. David B. Resnik, *Fair Drug Prices and the Patent System*, 12 HEALTH CARE ANALYSIS 91, 92–93 (2004).

50. Andrew Williams, *Incentives, Inequality, and Publicity*, 27 PHILOSOPHY AND PUBLIC AFFAIRS 225 (1998).

but regarding this issue of incentive, he believes that where incentives are necessary for the sake of justice, they must be used “in a sense unconditional on the voluntary choices of talented workers: the talented must be incapable of working in ways beneficial to the least advantaged without unequal rewards.”<sup>51</sup>

To Sen, the issue of inequality generating incentives reflects the fundamental flaw in Rawls’ theory of justice. On the one hand, Sen does not deny that incentives may, in practice, be necessary to increase productivity, and they cannot be avoided in Rawls’ theory:

Productivities do . . . get indirect recognition through their role in advancing efficiency and equity, so that inequalities related to them are allowed and defended in the Rawlsian distributive theory if those inequalities help the worst-off people to be better off as a result, for example through the operation of incentives. Obviously in a world in which individual behaviour is not solely moulded by the ‘conception of justice’ in the original position, there is no way of avoiding incentive problems.”<sup>52</sup>

However, be that as it may, Sen throws doubt on whether the original position would be the one as postulated by Rawls and indeed whether the two principles which Rawls believed people would adopt behind the veil of ignorance would be the ones that people would actually adopt:

[I]f in the original position inequalities based on the demands of incentives were judged to be wrong and unjust (they can be seen as something like bribes given to people to make them diligent at their work and appropriately productive), then should not the principles adopted at the original position eliminate the need for incentives? If a just economy should not have inequality arising from incentives, should not the principles emerging in that state of impartiality take the form of people agreeing to do their respective bits without the need to be bribed? And, on the basis of Rawlsian reasoning that, in the post-contract world, each person will behave in conformity with the conception of justice emanating from the original position, should we then not expect, in that duty-oriented world, spontaneous compliance by everyone with their respective productive duties (as a part of that conception of justice), without any need for incentives?<sup>53</sup>

Leaving aside the contention over the issue of whether the allowance of incentive in Rawls’ difference principle undermines his theory of justice, we next apply Rawls in re-evaluating various justifications for patent. Whilst it is true, that under Rawls, incentive is allowed with qualification, the issue is whether incentive in the form of patent meets his theory of jus-

51. *Id.* at 226.

52. SEN, *supra* note 33, at 5.

53. *Id.* at 61.

tice and, hence, achieves justice. As will be seen, the use of patent as incentive is far from just under Rawls, because it does not benefit the least advantaged while creating social and economic inequalities.

The extensive discussion in literature of the rationales underlying the patent system mostly concentrates on the so-called “invention-inducement theory,” a theory postulating that the patent system induces inventions; some believed that “[a]lmost all empirical work” concerning the role of the patent system has been tuned to the theory.<sup>54</sup> As a matter of fact, various theories have been put forward; in this article, my discussion is conducted with particular reference to the incentive theory, the development and commercialization theory, and the disclosure theory as concisely categorized by Nelson and Mazzoleni.<sup>55</sup>

Now let us first look at the invention-inducement theory. The theory posits that patent provides the inducement to invent, assuming that there would be no invention without patent inducement or, the stronger the patent protection, the more inventions would be made.<sup>56</sup> For the adherents of the theory, the social benefit of an invention lies in its final use value and the patent inducement would result in more inventions, despite that the social cost of the patent is the exclusion of use by others of the patented invention for a limited period of time.<sup>57</sup> Invention-inducement theory adherents hold that the social benefit exceeds the social cost, thereby justifying the monopoly.<sup>58</sup>

However, the theory is fraught with fallacies. First, it makes no distinction among industries or, in the modern wave to globalize the patent conception worldwide, among countries, blindly assuming the universality of its application. A UNCTAD study covering a wide range of corporations found that the role of patents vis-à-vis invention not only differs from industry to industry, but also varies from country to country.<sup>59</sup> The latter will be addressed later on. Now, let us further examine the former, viz., the significance of patent as an incentive for inventions and innovations differs from industry to industry.

54. Richard D. Nelson & Roberto Mazzoleni, *Economic Theories About the Costs and Benefits of Patents*, in INTELLECTUAL PROPERTY RIGHTS AND RESEARCH TOOLS IN MOLECULAR BIOLOGY 25 (1997), available at <http://www.ncbi.nlm.nih.gov/books/NBK233535/>.

55. *Id.*

56. *Id.*

57. *Id.*

58. *Id.*

59. GAIA/GRAIN, *Intellectual Property Rights and Biodiversity: The Economic Myths*, GLOBAL TRADE AND BIODIVERSITY IN CONFLICT (1998) [hereinafter *Intellectual Property Rights and Biodiversity*], available at <http://www.grain.org/briefings/?id=14>.

An empirical study by Cohen revealed that patents are only significant to innovation in a small number of industries.<sup>60</sup> Another study by Mansfield showed that less than 10% of inventions in electrical equipment, office equipment, motor vehicles, and several other industries would not have been developed, absent the patent incentive.<sup>61</sup> A large study conducted in the UK came to the conclusion that “formal IP regimes are applicable only to a small proportion of business activity, such as large manufacturing companies.”<sup>62</sup> Meanwhile, the studies by Cohen and Mansfield both showed that in the pharmaceuticals and chemicals industries, where the patents are regarded as most important, sixty percent and thirty percent of inventions, respectively, are attributable to the patent incentive.

The patent system, by granting blanket monopolies, fails to accommodate the above variations. If we consider Cohen’s qualification of Rawls’ difference principle, the patent incentive is simply unnecessary in the vast majority of cases; those companies and economically advantaged parties would work to invent, patent or not. With the patent, they are allowed to create inequalities by maintaining a monopolistic price for their inventions, which are unjust and morally wrong.

Second, the incentive theory fails to acknowledge that patents may not be the best incentives for inventions. Some studies revealed that the biggest incentives for innovation are those other than patents. One found that competition for market share exerted the largest influence,<sup>63</sup> which is similar to the finding of another study that the advantages of reaping returns from inventions at a “head start” outrun those from patents.<sup>64</sup> The use of the monopolistic patent incentive for innovation, however, helps to create the

60. WESLEY M. COHEN, *Empirical Studies of Innovative Activity*, in HANDBOOK OF THE ECONOMICS OF INNOVATION AND TECHNICAL CHANGE (Paul Stoneman ed. 1995). The varying degrees of use of IPRs amongst different industrial sectors, e.g., the pharmaceuticals, consumer electronics, and aircraft jet engines industries, were revealed by the Chief Scientific Adviser to the British Cabinet Office as far back as December, 1983. See CABINET OFFICE, INTELLECTUAL PROPERTY RIGHTS AND INNOVATION, 1983, Cmnd. 9117. It was also found that it was very hard “to assess how much IPRs contribute to the well-being and technical progress of the UK”; and that IPRs are only one “not easily identifiable way” to achieve success in market place. Many other relevant factors include “the size and quality of R&D investment; the lead time of product development; marketing skills, and the reliability of products.” *Id.* at 8.

61. Edwin Mansfield, *Patents and Innovation*, 32 MGMT. SCIENCE 173, 175 n.8 (1986).

62. Conclusions of ESRC Intellectual Property Research Programme conducted by University of Manchester, Institute of Science and Technology. See R. Coleman & D. Fishlock, *Background and Overview of the Intellectual Property Initiative* (2002), available at <http://info.sm.umist.ac.uk/esrcip/background.htm>.

63. MORTON I. KAMIEN & NANCY L. SCHWARTZ, MARKET STRUCTURE AND INNOVATION (Cambridge Univ. Press 1982).

64. Richard C. Levin et. al., *Appropriating the Returns from Industrial Research and Development*, 1987 BROOKINGS PAPERS ON ECONOMIC ACTIVITY 783, 783–820 (1987).

“winner-take-all” system, resulting in an overall excessive expenditure of R&D.<sup>65</sup>

That enables the winner to charge a high monopolistic price; without patent, competition would allow many firms to practice the invention, maximizing access and leveling the price.<sup>66</sup> Under Rawls’ difference principle, any social or economic arrangement including the patent arrangement would aim to promote the welfare of the least advantaged. But, the effect of the patent scheme is clear; the least advantaged, i.e., the poorest people in society, may well be excluded from the invention for monopolistic prices.

Further, the patent system is capable of being abused and stifling innovation. As John Jewkes et al. pointed out:

Patents may be taken out, especially by corporations, not with the intention of making use of the invention but simply for the purpose of blocking competitors or being in a position to make bargains with them. It is not known how far this has increased the number of patents taken out by corporations, but it seems likely that the blocking patent is most common in the chemical and electrical fields.<sup>67</sup>

Indeed, in *Bement v. National Harrow Co.*, the U.S. Supreme Court held:

If [the patentee] see fit, he may reserve to himself the exclusive use of his invention or discovery. If he will neither use his device nor permit others to use it, he has but suppressed his own. . . . His title is exclusive, and so clearly within the constitutional provisions in respect of private property that he is neither bound to use his discovery himself nor permit others to use it.<sup>68</sup>

In another case, the same Court said, “[a] patent owner is not in the position of quasi-trustee for the public or under any obligation to see that

65. Emmanuel Combe et. al., *Pharmaceutical Patents, Developing Countries and HIV/AIDS Research*, INTERNATIONAL AIDS ECONOMICS NETWORK, May 19, 2003, at 151.

66. *Id.*

67. JOHN JEWKES ET AL., *THE SOURCES OF INVENTION* 106–07 (1959). “[T]he right to exclude others from the use of the invention . . . is not an offense against the Anti-Trust Act,” *United States v. United Shoe Mach. Co.*, 247 U.S. 32, 57 (1918), but “[t]he fact that the patentee has the power to refuse a license does not enable him to enlarge the monopoly of the patent by the expedient of attaching conditions to its use.” *Mercoird Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661, 666 (1944). The latter act may be objectionable under the so called “the patent misuse doctrine.” Its present status is that “[a] patent owner may exploit a patent in an improper manner by violating the antitrust laws or extending the patent beyond its lawful scope.” 6 DONALD S. CHISUM, *CHISUM ON PATENTS* § 19.04 (2003). But the doctrine was attacked in *USM Corp. v. SPS Technologies, Inc.*, 694 F.2d 505, 510 (7th Cir. 1982): “The doctrine of patent misuse has been described as an equitable concept designed to prevent a patent owner from using the patent in a manner contrary to public policy. This is too vague a formulation to be useful . . .” In other jurisdictions, if provided under national laws, they may be attacked under the anti-competitive practice or dealt with by compulsory licensing.

68. 186 U.S. 70, 90 (1902) (quoting *Heaton-Peninsular Co. v. Eureka Specialty Co.*, 77 F. 288, 294–95 (6th Cir. 1896)).

the public acquires the free right to use the invention. He has no obligation either to use it or to grant its use to others.”<sup>69</sup>

Liebenau showed that, during the formation of the chemical industry, patents did not serve to “reward inventors equitably for their intellectual labour.”<sup>70</sup> Rather, they “reflected the relative superiority of the German industry” and they were “used as tools themselves by a German industry which was relying on their ability to corner large sections of the fine chemicals market.”<sup>71</sup> In the decade of 1900–1910, “[o]f 862 [U.S.] patents [in organic colors], 701 were held by Germans, as opposed to only 11 held by Britons, and 19 by Americans. Swiss inventors held a further 115, making the German and Swiss holdings account for well over 90 per cent of all American organic colour patents.”<sup>72</sup> Consequently, it is argued that “[t]hose German firms which acquired a large number of American patents had begun to use the patent system as a weapon in their attempt to secure markets by blocking domestic competition from American manufacturers” and that “they used their powerful market position to compel foreign firms to join them in international control or cartel agreements in which patents played an important role.”<sup>73</sup> In Britain, German companies employed the same strategies by taking out a large number patents, and it is complained that “[a] good many of those patents have been taken out not for the purpose of working the patents in this country, but for the purpose of preventing their being worked.”<sup>74</sup>

Under Rawls’s theory of justice, no one in the original position would allow the inequalities created by patent together with such practices of its owners. Indeed, it is unjust that the interest of the poorest is hindered where the patent owner refuses to use it or where he prohibits others from using it or simply blocks others from entering into the business.

The incentive theory is inextricably connected with the development and commercialization theory which holds that “[p]atents induce the investment needed to develop and commercialize inventions.”<sup>75</sup> In support for the theory, the U.S. Bayh-Dole Act is often cited as a successful instance. The Act allows universities to hold the patent rights of their publicly funded inventions, thus allowing them to grant exclusive licenses to

69. *Hartford-Empire Co. v. United States*, 323 U.S. 386, 432 (1945).

70. Jonathan Liebenau, *Patents and the Chemical Industry: Tools of Business Strategy*, in *THE CHALLENGE OF NEW TECHNOLOGY: INNOVATION IN BRITISH BUSINESS SINCE 1850* 135, 148 (1988).

71. *Id.*

72. *Id.* at 139.

73. *Id.* at 144.

74. *Id.* at 146.

75. Nelson & Mazzoleni, *supra* note 54, at 17.

commercial entities to develop their inventions; without the propriety rights, a commercial company would be unlikely to develop a university invention.<sup>76</sup> This theory is open to attack from several perspectives.

First, the patents may baffle the purpose of public funds financing inventions. The research conducted in universities as financed by public funds is purported to promote the progress of science and technology as well as facilitate the learning needs of the society, but with the Act, universities are transformed into commercial entities:

In the past, discovery for its own sake provided academic motivation, but today's universities function more like corporate research laboratories. Rather than freely sharing techniques and results, researchers increasingly keep new findings under wraps to maintain a competitive edge. What used to be peer-reviewed is now proprietary. . . . In trying to power the innovation economy, we have turned America's universities into cut-throat business competitors, zealously guarding the very innovations we so desperately want behind a hopelessly tangled web of patents and royalty licenses.<sup>77</sup>

Further, it is science itself that suffers in the long run, as the patenting culture does not encourage basic research, which may not result in immediate patentable inventions. Basic research seldom attracts private funding; indeed, “[t]he primary function of a firm is to make profits, not to extend the range of pure knowledge.”<sup>78</sup> Because the patent regime will divert the public funding to areas other than the basic research, the basic research may be left undone.<sup>79</sup> Where basic research is conducted, it is likely to be patented if possible. But, “[p]atenting a new basic science technique, or platform technology, puts it out of the reach of graduate students who might have made tremendous progress using it.”<sup>80</sup>

Second, the patenting of inventions financed by public funding is unfair to taxpayers; the consumers (taxpayers) would be taxed twice—tax mechanisms and monopoly pricing.<sup>81</sup> Arguably, such research as financed by public funds should benefit the public and lessen its burdens, rather than

76. *Id.* at 22–23.

77. Janet Rae-Dupree, *When Academia Puts Profit Ahead of Wonder*, N.Y. TIMES (N.Y.), Sept. 7, 2008, at BU4, available at [http://www.nytimes.com/2008/09/07/technology/07unbox.html?pagewanted=all&\\_r=1&](http://www.nytimes.com/2008/09/07/technology/07unbox.html?pagewanted=all&_r=1&).

78. JEWKES ET AL., *supra* note 67, at 139.

79. Some argued that the universities in the United States have compromised their “mission to carry out and disseminate the results of basic research” with commercial considerations. Sasha Blaug, et al., *Managing Innovation: University-Industry Partnerships and the Licensing of the Harvard Mouse*, 22 NATURE BIOTECHNOLOGY 761, 761 (2004).

80. Rae-Dupree, *supra* note 77.

81. See Combe et al., *supra* note 65.

be used to exploit it by channelling its money into the hands of a handful of commercial entities.<sup>82</sup>

Third, the claimed success of such a regime as the U.S. Bayh-Dole Act was doubtful. On the one hand, it appears that the Act worked in the United States; since the passage of the Act in 1980, about 4,000 commercial entities have been created at academic and nonprofit institutions engaging in technology transfer, and it is reported that in 1999 alone, \$40 billion worth of technology transfer was generated by more than 200 U.S. university teaching hospitals and research institutions.<sup>83</sup> On the other hand, it is not clear whether the Act really worked. The cost of obtaining a patent can exceed \$15,000, and the chance for returns for most universities in effect is slim; the latest data indicate that “fewer than half of the 300 research universities actively seeking patents have managed to break even from technology transfer efforts” and that 13 universities generate almost two-thirds of trackable revenue.<sup>84</sup>

Then it is not clear whether what the Act was thought to have achieved would have been achieved without it. Professor David Mowery believed that the effects of the Act in the United States were overestimated; “[i]n the biomedical field, there is no evidence to corroborate that Bayh-Dole did what it [purportedly] did. . . . In the ‘80s and ‘90s, much would have taken place without Bayh-Dole.”<sup>85</sup> It is equally believed that “public expressions of public research, such as publications, meeting, and conferences as well as informal interactions and consulting” are more effective factors in the flow of public research results to industries.<sup>86</sup> A patent scheme, such as Bayh-Dole is simply a dispensable incentive in enabling people to work productively; but the effect is, as seen previously, not to promote the interest of the least advantaged. The justice under Rawls is hardly achieved.

In the traditional justification for patent, apart from the above theories, another theory is the disclosure theory, which posits that society is better off by exchanging monopoly for the disclosure of the invention. Obviously, the theory “presumes that secrecy is possible and sufficient to induce invention.”<sup>87</sup> As Nelson and Mazzoleni pointed out, this theory contradicted

82. *Id.*

83. Ken Howard, *Global Biotech Expansion Taking Cues from Bayh-Dole*, 22 NATURE BIOTECHNOLOGY 919, 919 (2004).

84. Rae-Dupree, *supra* note 77.

85. Howard, *supra* note 83, at 920 (quoting David Mowery).

86. *Id.*

87. Nelson & Mazzoleni, *supra* note 54 at 21.



the incentive-invention theory: it is secrecy that induces invention; the patent is only to induce the disclosure of the invention.<sup>88</sup>

If disclosure through patent incentive could be justified, then “the incremental learning from the patents [must be] sufficient to outweigh the costs to society of preventing anyone from using that learning to implement the technology for twenty years.”<sup>89</sup> However, that case cannot be made out.<sup>90</sup> The fact is that scientists and others simply do not read patents to learn the state of the art; rather, they turn to “article preprints, conferences, and conversations with colleagues.”<sup>91</sup> Where they do read patents, they would not learn much, as “the Federal Circuit has permitted a number of vague general disclosures that don’t in fact communicate very much to anyone, and patent lawyers often have incentives to write those vague disclosures.”<sup>92</sup> The bargain for disclosure of invention “would only benefit the public if the public could not independently obtain the same information . . . for less than the cost of granting a patent.”<sup>93</sup> Given the above, the scheme of disclosure for invention through patent does not benefit the public. When evaluated under Rawls, the interest of the public including the least advantaged is not promoted through the scheme and it is hardly possible to argue that the difference principle is satisfied and justice achieved.

Furthermore, another fallacy of this theory is that it presumes that disclosure is possible with patent inducement. However, the truth is that, where secrecy is possible and economically justifiable, patent would not induce disclosure if the inventors want to keep their inventions secret. Lemley argues that:

[T]he available evidence suggests that companies primarily rely on patent protection to protect self-disclosing inventions: those that the inventor could not maintain as a trade secret after putting it into commercial practice. If an invention can be kept secret, inventors are more likely to forego patent protection and keep it secret.<sup>94</sup>

88. *Id.* at 21, 26.

89. Mark A. Lemley, *The Myth of the Sole Inventor*, 110 MICH. L. REV. 709, 747 (2012).

90. *Id.* Lisa Larrimore Ouellette shows through empirical studies that actually many scientists do read patents to keep abreast of the state of the art in nanotechnology; but the studies further show that the reason why patent readers may not get much is because many patents do not meet the requirements for disclosure. Hence, that reveals the divergence of expected behaviour and actual behaviour, which we address in later discussion. Lisa Larrimore Ouellette, *Do Patents Disclose Useful Information?*, 25 HARV. J.L. & TECH. 531, 544, 552 (2012).

91. Lemley, *supra* note 89, at 746–47.

92. *Id.* at 745.

93. Ouellette, *supra* note 90, at 547.

94. Lemley, *supra* note 89, at 746–47.

Under Rawls' theory of justice, is it just that the economically and socially advantaged maintain their undeserved, unjust, privileged economic and social advantage by keeping inventions secret in disregard of the interest of the least advantaged? One may argue that doing so would allow them to maintain their position in the market and suppress their competitors. Whilst their market behavior may not be the concern of the theory of justice, what is the concern of justice, is the interest of the least advantaged and the parity of inequalities with the social arrangement. Where they keep technologies away from society, they sustain the inequalities and prevent others access to it, and encourage wasteful repetitive investment and invention which undermines the social welfare. They also increase the price of technologies by suppressing competition, but more importantly, by doing so, they make the technology less accessible to the poorest people than otherwise. The effect is twofold: first, it aggravates inequalities and strengthens the social and economic position of the most advantaged; second, it undermines the interest of the least advantaged. Clearly, under Rawls, it is unjust to keep the inventions secret. Then, where the invention could be made accessible to the least advantaged when it cannot be kept secret, patent erects a new hurdle by allowing monopolistic prices to be imposed on society and ensuring that only those people who are economically capable of affording the prices enjoy it. It is patent that deprives the poorest people of access to the invention.

The disclosure theory reveals the actual behavior of people, which they would not be supposed to exhibit in a would-be ideal society functioning under the predicates of morality and justice; henceforth, the above Rawlsian analysis would strike one as highly utopian. It is Rawls that seeks to construct a perfectly just institution, assuming that people would behave justly by sticking to the two principles of justice. Sen departs from Rawls by asking how to deal with people's actual behavior.

[E]ven if we do accept that the choice of basic social institutions through a unanimous agreement would yield some identification of "reasonable" behaviour (or "just" conduct), there is still a large question about how the chosen institutions would work in a world in which everyone's actual behaviour may or may not come fully into line with the identified reasonable behaviour. . .the pursuit of justice is partly a matter of the gradual formation of behaviour patterns – there is no immediate jump from the acceptance of some principles of justice and a total redesign of everyone's actual behaviour in line with that political conception of justice.<sup>95</sup>

As far as using patent to incentivize disclosure is concerned, some may say that without patent, people's actual behavior may well be to free

95. AMARTYA SEN, *THE IDEA OF JUSTICE*, 68–69 (2009).

ride on another's invention and reap what he has not sown; so using patent addresses people's actual behaviors by encouraging disclosure and preventing free riding. But the crucial issue is, what is wrong with free riding and would free riding hinder invention? Indeed, if we divert from Rawls for now and address people's actual behaviour, the question is, would free riding impede invention, thereby depriving society of the inventions?

It is hard to prove that free riding will impede invention. Evidence, however, seems to point the other way. The development of the computing technology industry has been largely based on a software free sharing culture; though some big companies later began to pursue patent monopolies, they now increasingly realized that such a free sharing culture is crucial to their further development.<sup>96</sup> IBM, for example, recently announced that it will put some of its patented software into public domain for free use since its development is being hampered by the patents; by such an action, it is hoping to induce others to follow suit.<sup>97</sup> Following the open source software initiative, BiOS (Biological Open Source), was established to make relevant biotechnologies unhampered by patent law.<sup>98</sup> In combating the problems such as the tragedy of the anticommons in the latest nanotechnology, some organizations offer free open source software to promote research by hundreds of universities throughout the world.<sup>99</sup> More and more are taking similar action, making freely available a whole range of software such as microscope-control programs and molecular modelling programs.<sup>100</sup>

The "free open source software" has benefited Google and Facebook, which rely on it for their survival.<sup>101</sup> Companies that make their software free for use also benefit; one case is Red Hat, which offers its own version of the Linux computer operating system for free, but brings in an annual one billion dollars from the sale of services for the software.<sup>102</sup> Furthermore, free software "reduces the barrier for small, nimble entities entering the market."<sup>103</sup> With that, it is the general public that benefits in the end.

96. See *IBM Frees 500 Software Patents*, BBC NEWS, <http://news.bbc.co.uk/1/hi/technology/4163975.stm> (last updated Jan. 11, 2005); Bob Sutor, *Open Source and IBM*, NASA, [http://www.nasa.gov/centers/johnson/pdf/478337main\\_2010-01-Sutor-NASA-OpenSource.pdf](http://www.nasa.gov/centers/johnson/pdf/478337main_2010-01-Sutor-NASA-OpenSource.pdf) (last visited Sept. 30, 2014); *Open Source and Standards*, IBM, <http://www-03.ibm.com/linux/ossstds/> (last visited Sept. 30, 2014).

97. *IBM Frees 500 Software Patents*, BBC NEWS, (last updated Jan. 11, 2005).

98. BIOS HOME, <http://www.bios.net/> (last visited Oct. 6, 2014).

99. Joshua M. Pearce, *Make Nanotechnology Research Open-Source*, 491 NATURE, 520 (2012).

100. *Id.*

101. *Id.*

102. *Id.*

103. *Id.*

As Pearce argues, “[w]ithout the shelter of an IP monopoly, innovation would be a necessity for a company to survive.”<sup>104</sup> As seen from above, factors other than patents underscore inventions; to survive in the market, firms have all the incentives to come up with better inventions.

As far as medicines are concerned, it is only just that the poorest people benefit from the R&D if one looks at the funding structure of those pharmaceutical companies. In combating the argument of those companies that they need patent to enable them to charge a premium price on their drugs to recoup their huge investment on research and development, Stiglitz argues that:

[I]n the [U.S.], it is actually the government that finances most health-related research and development—directly, through public support (National Institutes of Health and National Science Foundation), and indirectly, through public purchases of medicine, both in the Medicare and Medicaid programmes. Even the part that is not government-financed is not a conventional market; most individuals’ purchases of prescription medicines are covered by insurance.<sup>105</sup>

Now, it is useful to visit Rawls to see how he would treat the issue of reward by granting patent property, and then what that would signify for innovative efforts. In developing the difference principle, Rawls has primarily in mind “economic inequalities and distributions,” rather than “desert and allocation”.<sup>106</sup> Essentially, the principle “only requires that any inequality surplus be redistributed so as to maximize the expectations of the least advantaged.”<sup>107</sup>

Rawls regards natural talents and social and economic circumstances as one’s lot in the natural lottery. They are arbitrarily distributed and morally undeserved, and are “social, rather than personal, resources.”<sup>108</sup> He said, “The natural distribution is neither just nor unjust; nor it is unjust that persons are born into society at some particular position. These are simply natural facts. What is just and unjust is the way that institutions deal with these facts.”<sup>109</sup> To Rawls, “the question of ownership of our endowments

104. *Id.*

105. Joseph E. Stiglitz, Shift from Patents Regime to Prize-Based System Will Revolutionise Research and Healthcare, THE ECONOMIC TIMES (May 21, 2012), [http://articles.economictimes.indiatimes.com/2012-05-21/news/31801096\\_1\\_drug-prices-drug-companies-life-saving-medicines](http://articles.economictimes.indiatimes.com/2012-05-21/news/31801096_1_drug-prices-drug-companies-life-saving-medicines).

106. TOM L. BEAUCHAMP, *Distributive Justice and the Difference Principle*, in JOHN RAWLS’ THEORY OF SOCIAL JUSTICE: AN INTRODUCTION 132, 133 (H. Gene Blocker & Elizabeth H. Smith eds., 1980).

107. ROBERT PAUL WOLFF, UNDERSTANDING RAWLS: A RECONSTRUCTION AND CRITIQUE OF A THEORY OF JUSTICE 201 (1977) (emphasis omitted).

108. *Id.* at 62.

109. RAWLS, THEORY, *supra* note 22, at 102.

does not arise.”<sup>110</sup> What matters to Rawls is that “justice should seek to correct the social inequalities stemming from the arbitrary natural distribution of talents and abilities.”<sup>111112</sup> His aim is to find a principle that “eliminate[s] . . . the social injustice of rewarding individuals for the accident of their possession of economically profitable native talents” and that “makes the fruits of those talents and abilities available to the members of society generally.”<sup>113</sup> To Rawls, talents and abilities of individuals, inborn or developed, are simply “a collective asset,” which forms “a moral ideal, an ideal of justice,” to say that an individual deserves a share of his efforts is plainly wrong and unjust.<sup>114</sup>

Martin argues that Rawls would agree with Nozick that “people are entitled to their natural assets,” hence to “what flows from [them],” subject to the constraints set by justice, i.e., as long as that contributes to the benefit of the least-advantaged.<sup>115</sup> Martin must be right, as in places other than *A Theory of Justice*, Rawls says that “[w]e have a right to our natural abilities and a right to whatever we become entitled to by taking part in a fair social process.”<sup>116</sup> Thus, rather than the talented people deserving reward for their efforts, which would contravene “a first principle of distributive justice,” they are regarded as “legitimate expectations and entitlements, defined by reference to a scheme of social cooperation in order to measure corresponding rewards and acquisitions.”<sup>117</sup> Rawls is concerned with the construction of “a just scheme,” whereby each person is given his due or entitlement by the scheme itself.<sup>118</sup>

As far as property is concerned, Rawls does not recognize it. Sen believes that “a general right to property is not an entitlement that Rawls has,

110. JOHN RAWLS, *JUSTICE AS FAIRNESS: A RESTATEMENT 75* (Erin Kelly ed., 2001) [hereinafter RAWLS, RESTATEMENT].

111. Simmonds, *supra* note 35, at 97.

112. But Thomas Pogge construes Rawls to mean that the distribution of natural talents is a common asset: “We see then that the difference principle represents, in effect, an agreement to regard the distribution of natural talents as a common asset and to share in the benefits of this distribution whatever it turns out to be.” THOMAS POGGE, *REALIZING RAWLS 74* (Cornell U. Press, 1989), at 101.

113. WOLFF, *supra* note 107, at 62. See Richard Mullender, *Human Rights, Responsibilities and the Pursuit of A Realistic Utopia*, 61 N. IR. LEGAL Q. 33, 41, 44 (2010) (asserting that Rawls would be seen as a proponent of “enterprise association.”).

114. CAHTERINE AUDARD, *JOHN RAWLS 165* (McGill Queens University Press, 2007).

115. *Id.*

116. JOHN RAWLS, *A Kantian Conception of Equality*, in JOHN RAWLS: COLLECTED PAPERS 254, 263 (Samuel Freeman ed., 1999). Rawls also says that “it is persons themselves who own their endowments: the psychological and physical integrity of persons is already guaranteed by the basic rights and liberties that fall under the first principle of justice.” Rawls, *supra* note 110, at 75.

117. Audard, *supra* note 114, at 107.

118. RAWLS, *THEORY*, *supra* note 22, at 313.

in fact, defended in any of his works of which [he is] aware.”<sup>119</sup> Just because Rawls makes room for incentives where they promote the welfare of the least well off does not mean that Rawls admits property right as an entitlement, no matter how tempting an inference one may draw therefrom. Sen believed “Rawls does allow inequalities in his perfectly just arrangements for reasons of incentives when they enhance the deal the worst-off receive.”<sup>120</sup> Sen argued “whether the acceptance of inequalities on grounds of incentives should have any role in what is claimed to be a perfectly just society is certainly debatable, but it is important to see that Rawls does not support unconditional property rights as a part of a libertarian entitlement.”<sup>121</sup>

Having discussed Rawls’ view on reward and property, let us address the question asked, namely: how to reward those who invent. Rawls has a just social scheme in mind, in which system the inventor is not entitled to such property as patent. The society can and possibly should reward innovative endeavors by other means, such as direct and immediate financial or honorary reward, the benefit of which, as some observed, is that “[t]he inventor would benefit from, and be encouraged by, a reward that was independent of the hazards of commercial exploitation, and the public would gain from a swifter, more widespread diffusion of inventions.”<sup>122</sup> Historically, in England, the Society of Arts adopted the anti-patent policy that those who applied for patent could not receive premiums from the Society.<sup>123</sup> The aim of the Society of Arts was to benefit the public, and hence, disseminating inventions widely complied with its aim.<sup>124</sup>

Much of the reward was indirect, through “honor,” which was clearly a reflection of the importance of signaling and reputation in this world. Nor can we altogether rule out any role for altruism, as well as a direct utility from being able to solve hard problems—what could be termed the ‘crossword puzzle’ motive. None of this is to suggest that money was unimportant to most inventors. But the patent system, for the vast majority of them, offered a false hope, and the expected payoff of a patent was in all likelihood negative.<sup>125</sup>

119. SEN, *supra* note 33, at 325.

120. SEN, *supra* note 33, at 32

121. *Id.*

122. MacLeod, *supra* note 3 at 190.

123. MAX LOUIS KENT, *THE BRITISH ENLIGHTENMENT AND THE SPIRIT OF THE INDUSTRIAL REVOLUTION: THE SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES AND COMMERCE (1754–1815)* 222–23 (2007).

124. *Id.*

125. Joel Mokyr, *Intellectual Property Rights, the Industrial Revolution, and the Beginnings of Modern Economic Growth*, 99 *AM. ECON. REV.* 349, 353 (2009).

Similarly, Joseph Stiglitz argues that “[p]atents are not the only way of stimulating innovation.”<sup>126</sup> In the context of medicines, he advocates a prize fund, which is financed by developed countries that “would provide large prizes for cures and vaccines for diseases such as AIDS and malaria that affect hundreds of millions of people.”<sup>127</sup> To him, “[t]he alternative of awarding prizes would be more efficient and more equitable. It would provide strong incentives for research but without the inefficiencies associated with [monopolization.]”<sup>128</sup>

### III. GLOBAL JUSTICE: PATENT VIS-À-VIS DEVELOPING COUNTRIES

Having disputed the justifications for patent, we next evaluate whether the patent system is suitable for the developing countries. It is plain that the developed countries imposed such a system on them through various treaties under the auspices of economic development. But the truth is that the developed countries did not reach where they are now through the policies they are recommending to the developing countries; rather, “[m]ost of them actively used ‘bad’ trade and industrial policies, such as infant industry protection and export subsidies.”<sup>129</sup>

In discussing the Industrial Revolution of the eighteenth century in England, Lecky noted:

Scarcely a form of manufacturing industry had ever been practised in England that had not been fortified by restrictions or subsidised by bounties. . . . [T]he merchants and manufacturers of England had for generations steadily and successfully aimed at two great objects—to secure for themselves by restrictive laws an absolute monopoly of the home market, and to stimulate their foreign trade by bounties paid by the whole community.<sup>130</sup>

126. Joseph Stiglitz, *Give Prizes Not Patents*, NEWSIDENTIST, Sept. 16, 2006, at 21.

127. *Id.*

128. *Id.*

129. HA-JOON CHANG, KICKING AWAY THE LADDER: DEVELOPMENT STRATEGY IN HISTORICAL PERSPECTIVE 2 (2002).

130. WILLIAM EDWARD HARTPOLE LECKY, A HISTORY OF ENGLAND IN THE EIGHTEENTH CENTURY 229 (1890). “In 1784 Josiah Wedgwood formulated a plan to unite the activities of these local organisations to prevent the emigration of workmen or the introduction of foreign industrial pirates, who would spread England’s manufacturing secrets.” Merchants and manufacturers in Birmingham formed various organisations to deal collectively with commercial affairs. They set out to oppose the abolition of the law banning the importation of brass. Wedgwood led the effort, with bare success, to prevent the free trade Treaty between England and Ireland. Schofield 352. The Irish parliament pursued the policy of imposing high tariffs on imports from Great Britain so that its fledgling manufacturing industries would develop and prosper. “International commerce is viewed as a bargain in which the advantages are to be mainly reaped by one side, rather than as a free interchange of natural products and manufactured goods to the reciprocal advantage of both the peoples concerned, the question has to be fought out and determined fresh after every period of international war or revolutionary turmoil.” WILLIAM BURTON, JOSIAH WEDGWOOD AND HIS POTTERY 110 (1922). Likewise, Boulton

Indeed, the ladder-kicking game rings true in the interaction between the developed and the developing countries:

It is a very common clever device that when anyone has attained the summit of greatness, he kicks away the ladder by which he has climbed up, in order to deprive others of the means of climbing up after him. . . . Any nation which by means of protective duties and restrictions on navigation has raised her manufacturing power and her navigation to such a degree of development that no other nation can sustain free competition with her, can do nothing wiser than to throw away these ladders of her greatness, to preach to other nations the benefits of free trade, and to declare in penitent tones that she has hitherto wandered in the paths of error, and has now for the first time succeeded in discovering the truth.<sup>131</sup>

Insofar as the intellectual property relationship amongst nations is concerned, the above apparently finds resonance. The United States once freely pirated intellectual property from other countries in its industrialization process; frustrated by lack of protection of his novels there, Charles Dickens committed himself to a bilateral treaty but eventually failed.<sup>132</sup> As Andreas makes it clear:

[A]s a young and newly industrializing nation the U.S. aggressively engaged in the kind of intellectual-property theft it now insists other countries prohibit. . . In its adolescent years, the U.S. was a hotbed of intellectual piracy and technology smuggling, particularly in the textile industry, acquiring both machines and skilled machinists in violation of British export and emigration laws. Only after it had become a mature industrial power did the country vigorously campaign for intellectual-property protection.<sup>133</sup>

Once it turned into a developed economy and an intellectual property-exporting country, the United States immediately wielded its power in pro-

and other worthies from Birmingham vehemently pleaded the parliament for a bill prohibiting the exportation of buckle-chapes used for fastening the buckle to the strap. Boulton testified before the House of Commons Committee on April, 22 1760, arguing, "if the chape-makers continued to export, then foreign buckle-makers would benefit and his own trade would suffer" and "arguing unashamedly for his ruthless restriction on fellow manufacturers." JENNY UGLOW, *THE LUNAR MEN: THE FRIENDS WHO MADE THE FUTURE* 103 (2010). Wedgwood's view on exportation of his creamware to China; "Wedgwood did not approve of this exportation; he was of opinion that if the oriental porcelain was made in forms better suited for European tables, it would materially injure the sale of English earthenware in home as well as foreign markets." SAMUEL SMILES, *JOSIAH WEDGEWOOD, F.R.S.: HIS PERSONAL HISTORY* 57 (Harper & Brothers 1895)

131. FRIEDRICH LIST, *THE NATIONAL SYSTEM OF POLITICAL ECONOMY*, 295–296, (Sampson S. Lloyd MP. Trans., 1885) *as cited in* JOSEPH HANLON & TERESA SMART, *DO BICYCLES EQUAL DEVELOPMENT IN MOZAMBIQUE?*, at 39, (2008).

132. *See generally* JAMES BARNES, *AUTHORS PUBLISHERS AND POLITICIANS: THE QUEST FOR AN ANGLO-AMERICAN COPYRIGHT AGREEMENT, 1815–54* (1974).

133. Peter Andreas, *Piracy and Fraud Propelled the U.S. Industrial Revolution*, adapted from his book *SMUGGLER NATION: HOW ILLICIT TRADE MADE AMERICA*, (2013), available at <http://www.bloombergview.com/articles/2013-02-01/piracy-and-fraud-propelled-the-u-s-industrial-revolution>.



curing worldwide protection of its intellectual property; eventually it successfully forced the issue of intellectual property within the framework of the WTO through the TRIPS Agreement.<sup>134</sup> Effectively, it means that any country that wants to develop its economy, which would be hardly possible without international trade in an age of globalization, must join the WTO and subscribe to the Agreement to implement minimum standards to protect intellectual property. Pogge complains, where conventions and treaties about intellectual property rights and others are negotiated:

[T]he affluent societies, together controlling 82% of the global product and access to the world's most lucrative markets, enjoy great superiority in bargaining power, information, and expertise over the poor societies as a group. Able and eager to exploit this superiority, they shape the global economic order as much as possible to their own advantage and capture the lion's share of the benefits from economic interaction. The invisible hand guides things in the wrong direction, allowing the affluent societies to achieve higher rates of growth in per capita GDP, thereby further aggravating the discrepancy in bargaining power.<sup>135</sup>

The imposition of the patent system on the developing countries under the WTO-TRIPS is problematic. Several studies have unanimously shown that such patent system is unlikely to benefit the developing countries and the costs are most likely to be very high. A study by the GRAIN examined the technology transfer myth, the innovation myth, and the foreign direct investment myth surrounding the patent system for the developing countries.<sup>136</sup> It found that the developing countries' low technology capability makes them unattractive recipients for technology transfers; where technology transfers occur, especially to the subsidiaries of the transnational corporations (TNCs), they are mainly older generations of technology.<sup>137</sup> TNC R&D abroad is small and often related to low-level technology, leaving major R&D to be conducted back home on account of "economies of scale, the existing technological capabilities. . .and proximity to the point of consumption."<sup>138</sup> Concerning the IPR-innovation link, evidence shows that "much innovation and technology development occurs in the total absence, or profound uncertainty about the availability of IPRs."<sup>139</sup> The innovation by the farmers is an example; they never treat their germplasm as private property, but exchange it freely and build on their experience generation

134. See generally DANIEL GERVAIS, *THE TRIPS AGREEMENT: DRAFTING HISTORY AND ANALYSIS*, (Sweet and Maxwell Ltd., 4th ed., 2012).

135. Thomas W. Pogge, *The Incoherence Between Rawls's Theories of Justice*, 72 *FORDHAM L. REV.* 1739, at 1750 (2004).

136. See *Intellectual Property Rights and Biodiversity*, *supra* note 59.

137. *Id.*

138. *Id.*

139. *Id.*

after generation to benefit themselves and others.<sup>140</sup> In respect of the foreign direct investment myth, the study found that liberalization of financial market and investment laws,<sup>141</sup> not IPRs, spurred the quadrupling between 1982 and 1994 of global foreign direct investment (FDI). Of the \$3.2 trillion in U.S. FDI in 1996, most ended up in China, South Korea, and Singapore, with China absorbing the greater part, but “neither China nor many other FDI ‘magnets’ in the South developing countries have developed [effective or strong] IPR systems.”<sup>142</sup> The study inevitably concluded:

The costs of TRIPs could well outweigh the benefits for countries of the South. [TNCs] will gain expanded market control, but the South is not bound to attract investment, technology transfer or experience economic growth because of stronger IPRs. Prices in certain sectors such as seeds and medicines will rise; monopoly conditions will constrain national firms; and the South’s subsidy to Northern [R&D] will rise. In the long-term, the socio-economic fabric that supports innovation in the South will erode.<sup>143</sup>

Another study commissioned by the UK government to investigate the impact of the intellectual property rights under the TRIPS on the developing countries made extensive research of other separate studies and found that the main conclusion of those studies is that “for those developing countries that have acquired significant technological and innovative capabilities, there has generally been an association with ‘weak’ rather than ‘strong’ forms of IP protection in the formative period of their economic development.”<sup>144</sup> In considering whether IPRs would play a role in poverty reduction, disease fighting, health improvement, and access to education in developing countries, the UK study itself found that for most developing countries, IP protection at the TRIPS level cannot contribute significantly to growth, but weaker IP protection often can and that it will impose high costs for medicines and seeds and increase the cost of access to many prod-

140. *Id.*

141. The size of FDI may have to do with many factors, economic, political and others. However, it is unknown which factor is the most important. A recent World Bank report summarized several cross-country studies including both developed and developing countries and showed that FDI is greater in countries with sound institutions and lower in countries with high levels of official corruption, the large threat of expropriation and the weak rule of law. Khaled Fourad Sherif, *Globalization of Investment and its Impact on the Developing World*, KHALAD F. SHERIF’S HOMEPAGE, (2003), available at <http://www.ksherif.com/publications.html> (noting though that the size of FDI may defy qualitative analysis as in Western standards, China has no better institutions than some of British former colonies, but it has absorbed the largest FDI in the developing world; maybe the reason is that commercial opportunities outweigh all other factors).

142. *Id.*

143. See *Intellectual Property Rights and Biodiversity*, *supra* note 59.

144. JOHN BARTON ET. AL., *Integrating Intellectual Property Rights and Development Policy*, REPORT OF THE COMMISSION ON INTELLECTUAL PROPERTY RIGHTS, (Sept. 2002), available at [http://www.iprcommission.org/papers/pdfs/final\\_report/ciprcoverintrofinal.pdf](http://www.iprcommission.org/papers/pdfs/final_report/ciprcoverintrofinal.pdf).

ucts and technologies.<sup>145</sup> Insofar as the role of the IPRs for R&D in fighting human diseases is concerned, the study pointed out that “the IP system hardly plays any role at all in stimulating R&D on diseases prevalent in developing countries. . .except for those diseases where there is a large market in the developed world”.<sup>146</sup> As one source pointed out:

[T]he direction of pharmaceutical R&D has yielded few drugs targeting tropical diseases. Of the 1223 new chemical entities commercialized between 1975 and 1996, 379 were real therapeutic innovations, and less than 1% (13) were focused on tropical diseases. Of the 1% therapeutic innovations targeted against tropical diseases, the majority were either ‘incidental’ discoveries recovered from veterinary medicine or molecules discovered by governmental or academic institutions and only later acquired and commercialized by the Western industry.<sup>147</sup>

As for TB, said to be currently affecting eight million people in developing countries, there has been no development of any new class of anti-TB drug for more than 30 years.<sup>148</sup> While HIV/AIDS face both developing and developed countries, the development of most HIV vaccines is being concentrated on genetic profiles of subtype B rather than types A and C; the reasons being that the former is prevalent in developed countries while the latter in developing countries.<sup>149</sup>

A third study into the historical role of the patent system in developed versus developing countries by examining relevant data from 33,000 nineteenth-century inventions revealed that “what was good for America and Britain in the 19<sup>th</sup> century is not necessarily good for emerging. . .economies. . .like Denmark, the Netherlands and Switzerland.”<sup>150</sup> The modern significance of the study is that repeating the history, developing countries may be better off without strong patent laws. Switzerland did not have a patent law in the nineteenth century and was free to appropriate

145. *Id.* at 22.

146. *Id.* at 33.

147. TROUILLER P., OLLIARO P.L., *Drug Development Output from 1975 to 1996: what Proportion for Tropical Diseases?*, POPLINE BY K4HEALTH, (1999), available at <http://www.popline.org/node/532902>.

148. See BARTON ET AL., *supra* note 144, at 33.

149. *Id.*

150. See Riordan, *A Stroll Through Patent History*, N. Y. TIMES, (Sept. 29, 2003), available at <http://www.nytimes.com/2003/09/29/technology/29PATE.html>; More studies and papers exist, arguing against the patent system for the developing countries. For example, a World Bank report argued that “IPR is not an appropriate mechanism to stimulate research in many areas of health and medicine, such as AIDS or malaria, where. . .the ‘social returns’ of an innovation to all those benefiting from it far exceed the returns to investors.” Butler, *World Bank Calls For a Fairer Deal on Patents and Knowledge* (1998) 395 NATURE 529, 529. (noting my thesis only concentrates on all these studies so far discussed).

ideas patented by innovators in other countries, enabling it to become a current world leader in watchmaking.<sup>151</sup>

Recently, the multinational corporations begin to use patent to block HIV/AIDS sufferers' access to essential drugs in developing countries. Take China for example: the official statistics released by the Ministry of Health of China showed that it had 840,000 HIV carriers, including 80,000 AIDS patients, more than ten years ago.<sup>152</sup> Ten years later, in 2012 alone, there were 17,740 deaths, an increase of 8.6 percent over the previous year; and there were more than 68,000 new cases of HIV/AIDS up to August 2012.<sup>153</sup> Those figures were given by the state media which allegedly had underreported the figures as so many AIDS carriers had not had the opportunity to be tested.<sup>154</sup> China is adopting some preventive measures with an intent to keep the number of HIV/AIDS patients under the threshold of 1.2 million by 2015.<sup>155</sup>

The dilemma facing South Africa and other developing countries such as India and Brazil has largely been shared by China. Chinese companies developed no drugs for the treatment of AIDS and most of the available AIDS drugs are either protected by patents<sup>156</sup> or covered by government pledges of protection.<sup>157</sup>

In October 2002, the Chinese State Drug Administration (SDA) issued permission for the first time for a domestic company to produce and sell an AIDS drug, Zidovudine (AZT), which was no longer under patent protection in China.<sup>158</sup> Three other AIDS drugs, namely, Didanosine (ddI), Stavudine (d4T), and Nevirapine (NVP), whose patents expired in 2001, were added.<sup>159</sup> Consequently, the cost of treatment using these four drugs will be cut by up to 90%,<sup>160</sup> thereby making them more affordable to the

151. Riordan, *supra* note 150.

152. *China Faces Uphill Battle to Curb Fast Spread AIDS*, CHINA DAILY, (Nov. 13, 2003) [hereinafter *Battle to Curb AIDS*], available at <http://edition.cnn.com/2012/11/30/health/hiv-china-li/index.html>.

153. Madison Park, *The price of blood: China faces HIV/AIDS epidemic*, CNN, (Dec. 10, 2012), available at <http://edition.cnn.com/2012/11/30/health/hiv-china-li/index.html>.

154. *Id.*

155. Ron Popeski, *China to promote condoms to cap HIV/AIDS cases*, REUTERS (Beijing), Feb. 29, 2012, available at <http://www.reuters.com/article/idUSTRE81S0RN20120229>.

156. *See Battle to Curb AIDS*, *supra* note 152.

157. Peter S. Goodman, *In China, AIDS Crisis Is at the Mercy of Global Commerce*, WASH. POST, (Dec. 5, 2002), ("Only a few AIDS drugs are protected by patents that are valid in China, but dozens of others are covered by government pledges of protection."), available at <http://www.weijingsheng.org/news/sida12502.html>.

158. *Id.*

159. *Id.*

160. *See Battle to Curb AIDS*, *supra* note 152.

AIDS sufferers. However, the problem is that the effectiveness of these drugs is open to doubt,<sup>161</sup> whereas more effective drugs are still under protection in China and their prohibitive prices mean that they are not an option for most Chinese AIDS patients. In China, GlaxoSmithKline owns patent on the ARV drug 3TC for AIDS treatment. It is five times more expensive than the unpatented drugs, and consequently, is beyond the reach of most patients.<sup>162</sup>

China is lobbying some western pharmaceutical giants such as GlaxoSmithKline plc of Britain, Merck & Co. of New Jersey, and Bristol-Myers Squibb Co. of New York, for reductions in the prices of their wares.<sup>163</sup> Some multinational companies have agreed to cut their prices by at least half. Despite the cut, for example, a year's supply of a commonly used combination of drugs known as a "cocktail" still costs between \$2,500 and \$4,000—out of reach for most AIDS sufferers in China.<sup>164</sup>

For the long-term solution to AIDS, vaccines may prove to be the ultimate preventative method. However, the patent issue is the source for worry. "Few pharmaceutical companies would wait until the completion of the drug development to file patent applications. They would apply during the process at the time they consider to be most appropriate, adding to the difficulties for other researchers or developers."<sup>165</sup> Indeed, "[t]he serious situations now forced us to rethink the protection of patents or lives. The patients could not wait 15 years for the drug to be available, not even a single day."<sup>166</sup>

It is certain that patent has become an acute problem in the global combat against diseases such as HIV/AIDS. The issue is whether Rawls's theory can be used to achieve or promote global justice in the context of access to medicines. This is our discussion in the next part.

161. "ddI-d4T is on US National Institutes of Health (NIH) 'not advisable' list (as of 10 Nov 2003)

\*As a generic, ddI is only legally available in powdered form, which is even more difficult to take.

\*NVP should not be used when patient has Hepatitis-B, which is a large % (10–20%) of people in China.

\*None of the combinations available with domestically produced drugs are on the WHO list of recommended first-line treatment regimens." China-ARV[i.e. anti-retroviral] Access Fact Sheet, available at <http://www.china-aids.org/english/factsheet-ARV.htm>.

162. Eric Goemaere et. al., *Patent Status Matters*, HEALTH AFFAIRS, 23, no.5 (Sept. 2004), available at <http://content.healthaffairs.org/content/23/5/279.2.full>.

163. See Goodman, *supra* note 157.

164. Chang, "China Cautions It May Allow Companies to Violate Patents," *The Wall Street Journal*, September 9, 2002, available at <http://www.aegis.com/news/wsj/2002/WJ020903.html>.

165. *Battle to Curb AIDS*, *supra* note 152 (quoting Shao Yiming, a Chinese researcher).

166. *Id.*

## IV. REALIZING GLOBAL JUSTICE

Rawls does not have global justice in his mind; he is not concerned “to find a conception of justice suitable for all societies regardless of their particular social or historical circumstances” and “to settle a fundamental disagreement over the just form of basic institutions within a democratic society under modern conditions.”<sup>167</sup> Further, Rawls makes it clear that “[w]hether justice as fairness can be extended to a general political conception for different kinds of societies. . . are altogether separate questions.”<sup>168</sup>

The transcendental institutionalist represented by Rawls is concerned to identify a perfectly just institution to achieve justice within the democratic society.<sup>169</sup> If his theory could be extended to achieve global justice, it is believed that it would have to be done through “an impeccably just set of institutions”, but that “would certainly demand a sovereign global state, and in the absence of such a state, questions of global justice appear to the transcendentalists to be unaddressable.”<sup>170</sup>

In the debate concerning whether global justice is possible, Nagel takes a pessimistic view. He shares Hobbs’ view, that government precedes justice; therefore, as there is no global sovereign state, there cannot be global justice.<sup>171</sup> Further, if all governments were to cooperate to achieve global justice, they would inevitably act in their own self-interest, hence the impossibility of global justice.<sup>172</sup>

Pogge believes that what causes Rawls to refrain from extending his theory to all national societies is because the existence of “intercultural diversity of traditions and moral judgments” makes it imperative that a modern constitutional democracy not “impose [their] values upon the rest of the world” or “pursue a program of institutional reform that envisions the gradual supplanting of all other cultures by a globalized version of [their] own culture and values.”<sup>173</sup>

However, Pogge does not believe that intercultural diversity should prevent the extension of Rawls’s theory on the global scale. Intercultural diversity is not unique between nations; it is also existent within the West-

167. JOHN RAWLS, *Kantian Constructivism in Moral Theory*, in COLLECTED PAPERS 303, 305 (Samuel Freeman ed., 1999). (“KCMT”)

168. JOHN RAWLS, *Justice as Fairness: Political not Metaphysical*, in PHILOSOPHY AND PUBLIC AFFAIRS 223, 225 (Allen Patten ed. 1985).

169. See SEN, *supra* note 33 at 80.

170. *Id.* at 25.

171. THOMAS NAGEL, *The Problem of Global Justice*, PHILOSOPHY & PUBLIC AFFAIRS 113, 115 (Allen Patten ed. 2005).

172. *Id.*

173. POGGE, *supra* note 112, at 278 (Cornell U. Press 1989).

ern democracy.<sup>174</sup> In fact, it exists in any country.<sup>175</sup> When Rawls develops his theory, presumably he primarily has the United States in mind, but, Pogge questions, “can he claim to speak for the black, Hispanic, and [N]ative American subcultures or even for ordinary farmers, clerks, housewives, or factory workers?”<sup>176</sup> That, however, is no obstacle that precludes Rawls from putting forward his theory of justice to “initiate a discourse about justice” in the United States.<sup>177</sup> On the international front, Pogge holds that “a cross-cultural discourse about a substantive moral issue of great common concern will broaden the vision of its participants and will tend to make the moral conceptions involved less parochial as each tries to accommodate what it finds tolerable or even valuable in other cultural traditions.”<sup>178</sup> He then projects that extending Rawls globally allows “a cross-cultural discourse;” premised on “a small set of widely accepted values and ideas,” Rawls’s globalized conception of justice “can offer a good deal of flexibility for acknowledging and incorporating cultural diversity.”<sup>179</sup>

In realizing global justice, the utopian view of cosmopolitan democracy sets out to have a unifying government on the globe,<sup>180</sup> but the possibility of a unifying government for global justice looks remote.<sup>181</sup> In contrast, Sen is not concerned to extend a perfectly just institution globally, and indeed, he is not even to discuss such an institution in a democratic society.<sup>182</sup> He departs from Rawls; in his view:

[There is] the need for a theory that is not confined to the choice of institutions, nor to the identification of ideal social arrangements. The need for an accomplishment-based understanding of justice is linked with the argument that justice cannot be indifferent to the lives that people can actually live. The importance of human lives, experiences and realizations cannot be supplanted by information about institutions that exist and the rules that operate.<sup>183</sup>

Rather, he is concerned to address injustice through public reasoning. He focuses on what international reforms are to be implemented so as to make “the world a bit less unjust.”<sup>184</sup>

174. *Id.* at 270.

175. *Id.*

176. *Id.* at 271.

177. *Id.* at 271.

178. *Id.* at 271.

179. *Id.* at 271.

180. DANIELE ARCHIBUGI, *THE GLOBAL COMMONWEALTH OF CITIZENS: TOWARD COSMOPOLITAN DEMOCRACY* 86–87 (Princeton University Press ed., 2008).

181. *Id.* at 274.

182. *See SEN, supra* note 33, at 18.

183. *Id.*

184. *Id.* at 25.

Sen deplored denial of cheap drugs to the poor patients of AIDS because of the patent.<sup>185</sup> True, it is unjust that the patent system is imposed on the developing countries most forcefully through international trade agreement<sup>186</sup> while such system is doubtful from the perspective of justice even in a democratic society and is shown unsuitable for developing countries. The harsh reality under the current world trade organization arrangement is that the developing countries members to the WTO must grant patents to medicines since 2005 and the Least Developed Countries members must grant or enforce patents for medicines from 2016.<sup>187</sup> A UN Special Rapporteur on the Right to Health noted:

“The framework of the right to health makes it clear that medicines must be available, accessible, acceptable, and of good quality to reach ailing populations without discrimination throughout the world. As has been evident, TRIPS and (free trade agreements) have had an adverse impact on prices and availability of medicines, making it difficult for countries to comply with their obligations to respect, protect, and fulfill the right to health.”<sup>188</sup>

In addressing the injustice, it is imperative that international reforms be implemented following public reasoning. One such reform is the Doha Declaration as adopted at the Doha World Trade Organization Ministerial Conference (November 9–14, 2001).<sup>189</sup> The Declaration was arrived at

185. *Id.*

186. POGGE, *supra* note 112, at 276.

187. The Asia-Pacific Regional Dialogue of the Global Commission On HIV and the Law, *Regional Issues Brief: INTELLECTUAL PROPERTY, RIGHTS AND ACCESS TO MEDICINES*, (Bangkok), UNDP, HIV/AIDS Practice, (Feb. 17, 2011), available at [http://www.hivlawcommission.org/resources/aprd/IssuesBrief\\_IPR.pdf](http://www.hivlawcommission.org/resources/aprd/IssuesBrief_IPR.pdf).

188. Anand Grover, *PROMOTION AND PROTECTION OF ALL HUMAN RIGHTS, CIVIL, POLITICAL, ECONOMIC, SOCIAL AND CULTURAL RIGHTS, INCLUDING THE RIGHT TO DEVELOPMENT*, REPORT OF THE SPECIAL RAPPORTEUR, UN GENERAL ASSEMBLY, A/HRC/11/12, (March 31, 2009), at 28, available at [http://www2.ohchr.org/english/bodies/hrcouncil/docs/11session/A.HRC.11.12\\_en.pdf](http://www2.ohchr.org/english/bodies/hrcouncil/docs/11session/A.HRC.11.12_en.pdf).

189. WTO, *Declaration On the TRIPS Agreement and Public Health*, WT/MIN(01)/DEC/2 adopted on (Nov. 14, 2001), available at

[http://www.wto.org/english/thewto\\_e/minist\\_e/min01\\_e/mindecl\\_trips\\_e.htm](http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_trips_e.htm) [hereinafter the Doha Declaration]. In this Declaration, there was an outstanding issue unresolved, the so-called “paragraph 6” issue, i.e., “WTO members with insufficient or no manufacturing capacities in the pharmaceutical sector could face difficulties in making effective use of compulsory licensing under the TRIPS Agreement.” Article 31 (f) of the TRIPS Agreement provides that products made under compulsory licensing shall be “predominantly for the supply of the domestic market”, thereby limiting the amount which countries with manufacturing capacities can export when the drug is produced under compulsory licensing. Consequently, countries without manufacturing capacities would be unable to import drugs made under compulsory licensing. This issue was finally settled on August 30, 2003 with the adoption of Decision on Implementation of Paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health (Decision of the General Council of 30 August 2003), which waives the obligations under Article 31 (f) and allows any member country to export pharmaceutical products made under compulsory licensing within terms set out in the Decision. WT/L/540 September 1, 2003, the WTO, available at [http://www.wto.org/english/tratop\\_e/trips\\_e/implem\\_para6\\_e.htm](http://www.wto.org/english/tratop_e/trips_e/implem_para6_e.htm); See also *Decision Removes Final*



pursuant to the request of some members, mainly pushed by the African Group (all the African members of the WTO), for clarification between the TRIPS Agreement and public health.<sup>190</sup> It is agreed in the Declaration that the TRIPS Agreement “does not and should not prevent members from taking measures to protect public health” and that “the Agreement can and should be interpreted and implemented in a manner supportive of WTO members’ right to protect public health and, in particular, to promote access to medicines for all.”<sup>191</sup> The Declaration underscored members’ ability to use the flexibilities built into the Agreement, including compulsory licensing.<sup>192</sup> The compulsory license is “a statutory mandate that the [patent] rights must be licensed to all comers willing to pay the pre-set price.”<sup>193</sup>

The Declaration makes it clear that “[e]ach member has the right to grant compulsory [licenses] and the freedom to determine the grounds upon which such [licenses] are granted.”<sup>194</sup> Though this provision did “not add anything substantively to the understanding of TRIPS,” it used the expression “[compulsory license]” not found in the TRIPS Agreement itself, thus resulting in the creation of awareness in developing countries about the employment of such a flexibility to meet public health and other objectives.<sup>195</sup>

It is an unquestionable right of member States to “to determine what constitutes a national emergency or other circumstances of extreme urgency.”<sup>196</sup> It is presumed that public health crises can represent a national

*Patent Obstacle to Cheap Drug Imports*, WTO News: 2003 Press Releases, Press/350, August 30, 2003 (hereinafter *Decision Removes Patent Obstacle*). and “The General Council Chairperson’s Statement,” WTO News: 2003 News Items, August 30, 2003, both available at <http://www.wto.org>. The restriction under Article 31(f) is resolved by Article 31bis, para 1 which allows the exporting of medicines without the limitation. But notification must be made to the Council of TRIPS by both the eligible exporting and importing members; notification does not need to be approved by a WTO body in order to use the system. The eligible importing WTO member needs to notify the Council for TRIPS of relevant matters by specifying the names and quantities of the products to be imported, confirming that it lacks manufacturing capacities for the products, and shall grant a compulsory [license] where its patent law grants patent for the product; the exporting member also needs to notify the same Council of duration of the [license], details of the licensee and the licensed products, quantities to be produced, and the countries to supply the products. Article 31bis, para 1 of the TRIPS Agreement as detailed in GENERAL COUNCIL, WT/L/641, 8 December 2005, Amendment of the TRIPS Agreement Decision of 6 December 2005, [http://www.wto.org/english/tratop\\_e/trips\\_e/wtl641\\_e.htm](http://www.wto.org/english/tratop_e/trips_e/wtl641_e.htm).

190. Carlos Correa, *Implications of the Doha Declaration on the TRIPS Agreement and Public Health*, World Health Organization [WHO], at 1, (June 2012), available at [http://www.who.int/medicines/areas/policy/WHO\\_EDM\\_PAR\\_2002.3.pdf](http://www.who.int/medicines/areas/policy/WHO_EDM_PAR_2002.3.pdf).

191. *Id.* at 9.

192. See *Decision Removes Patent Obstacle*, *supra* note 189.

193. Robert P. Merges, *Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CALIF. L. REV. 1293, 1295 (1996).

194. Correa, *supra* note 190, at 15.

195. *Id.*

196. *DOHA Declaration*, *supra* note 194, at para. 5(c).

emergency or other circumstances, pursuant to which compulsory licenses, if provided under national law, can be granted without prior negotiation with the patent owner.<sup>197</sup>

Paragraph 5 (c) of the Declaration also illustrates public health crises as including “those relating to HIV/AIDS, tuberculosis, malaria and other epidemics.”<sup>198</sup> The exemplified cases of epidemics indicate that an emergency “may be not only a short-term problem, but a long-lasting situation,” thereby implying that “specific measures to deal with an emergency may be adopted and maintained as long as the underlying situation persists, without temporal constraints.”<sup>199</sup>

In the sense of the relationship between the TRIPS Agreement and public health, the Doha Declaration “affirms that the TRIPS Agreement should be interpreted and implemented so as to protect public health and promote access to medicines for all,” thereby “demonstrating that a rules-based trading system should be compatible with public health interests.”<sup>200</sup>

In a broad sense, the TRIPS Agreement neither establishes a uniform international law nor embodies uniform legal requirements. Rather, it gives its member States enough leeway to fine-tune to their needs specific to their respective national cultural, social, and legislative situations.

In implementing the TRIPS provisions, WTO member countries may legitimately adopt regulations that ensure a balance between the minimum standards of IPR protection and the public good. Moreover, they can adopt measures which are conducive to social and economic welfare, such as those necessary to protect public health, nutrition, and the public interest in sectors of vital importance for their socio-economic and technological development.<sup>201</sup>

#### *A. Evaluation of Compulsory Licensing*

The main objection to the compulsory licensing scheme is that it is economically difficult for the needy country with no manufacturing capacity to persuade another country with the capacity to export generic drugs manufactured under compulsory licenses to the former because it is uncertain whether the former would be able to bear the cost.<sup>202</sup> Then, the issue of compulsory license is subject to the maneuver of the pharmaceutical com-

197. *TRIPS Agreement*, *supra* note 189, at art. 31(b).

198. *DOHA Declaration*, *supra* note 194, at para. 5(c).

199. *See* Correa, *supra* note 190, at 18.

200. *Id.* at i.

201. *Id.* at 4.

202. AIDEN HOLLIS & THOMAS POGGE, *THE HEALTH IMPACT FUND: MAKING NEW MEDICINES AVAILABLE FOR ALL* 99–100 (2008).

panies and it needs considerable political will to issue such license.<sup>203</sup> Such a license is far and few in fear of political reprisals.<sup>204</sup> Take China for example: there was huge public outcry for lack of action by the Chinese government for such a license, and hence affordable AIDS drugs, as far back as 2001. Some believed that the Chinese leaders had been successfully convinced by American and European pharmaceutical giants that abrogating the promises as made by the Chinese leaders would hurt the country's reputation among investors and undermine its commitment to free trade only months after it entered the WTO.<sup>205</sup> As a result,

[The Chinese leaders were] a lot more interested in policing intellectual property than in tackling the AIDS problem. They have been dealing with IP complaints a lot longer. For the government's image abroad, it's still a better issue for them"<sup>206</sup>

Others argued that in working with the drug industry, the Chinese leaders are making a calculation based more on economic expediency than on compassion.<sup>207</sup> Indeed, the government failed to play an active role in promoting the production of affordable drugs; then, there would be low profits for generic drug manufacturers in producing generic drugs. Together, they combined to result in no Chinese drug companies having ever applied for a compulsory license so far.<sup>208</sup>

Most importantly, some believe that compulsory licensing does not promote the long-term health and well-being of developing countries in fighting diseases.<sup>209</sup> As noted before, the multinational pharmaceutical companies geared their investment and research toward diseases in developed countries. Then, resorting to the scheme of compulsory licensing by developing countries exacerbated the problem of lack of research into the diseases prevalent in and specific to developing countries and undermines the incentives for investment in those diseases by the pharmaceutical companies.<sup>210</sup>

By producing generic drugs through compulsory licensing, developing countries are accused of refusing to recognize the high cost for R&D. "The

203. *Id.* at 99.

204. *Id.*

205. *See* Goodman, *supra* note 157.

206. *Id.* (quoting Stan Abrams, a patent lawyer at the firm Lehman, Lee & Xu in Beijing).

207. *Id.*

208. *Newly Revised Measures for Compulsory Licensing of Patent Implementation to Come into Force*, CHINA INTELLECTUAL PROPERTY RIGHTS PROTECTION (Mar. 21, 2012, 8:28 AM), [http://www.chinaipr.gov.cn/newsarticle/news/government/201203/1285090\\_1.html](http://www.chinaipr.gov.cn/newsarticle/news/government/201203/1285090_1.html) [hereinafter *Revised Measures*].

209. Hollis, *supra* note 201, at 60.

210. *Id.* at 100.

total average cost of developing a new drug is more than one billion dollars over the course of 15 years of research and testing.”<sup>211</sup> No one can deny that someone needs to shoulder the bill, but as Joseph Stiglitz points out, “[i]n the current system, those unfortunate enough to have the disease are forced to pay the price, whether they are rich or poor, and that means the very poor in the developing world are condemned to death.”<sup>212</sup>

It is also argued that the issue of compulsory license may risk developing countries losing pharmaceutical companies selling future drugs there.<sup>213</sup> Utilization of compulsory licensing, however, does not necessarily totally work to the worse of the developing countries; they may lose “the potential benefits of life-changing drugs” but “pharmaceutical companies also jeopardize their public image by being seen as unethical;” a “lose-lose” scenario.<sup>214</sup>

However, evaluation of compulsory licensing should be put in context. In fact, compulsory licensing often works alongside pricing control.<sup>215</sup> Both share the aim of availability of patented drugs with affordable prices.<sup>216</sup> They are regarded as “complementary policy tools” for developing countries.<sup>217</sup> Use of price control promotes voluntary licensing where developing countries lack the technical know-how to manufacture the patented drug; the threat of compulsory licensing facilitates reduction in prices by the multinational companies.<sup>218</sup> A stricter compulsory licensing policy is recommended because it results in lower price and access.<sup>219</sup>

In January 2007, the Thai government issued a compulsory license to manufacture the generic version of Kaletra and Plavix. Kaletra is an antiretroviral drug proven effective against AIDS, lowering the death rate by 84%.<sup>220</sup> Plavix is a drug effective at lowering the risk of heart attack. But they were under patent; as a result, their exorbitant prices were beyond the reach of patients in developing countries.<sup>221</sup> The Kaletra license capped the

211. Shaira Bhanji, *Bullying the Boss? Compulsory Licensing for Antiretroviral Drugs in Brazil and Thailand*, HAR. C. GLOBAL HEALTH R., Oct. 21, 2011, available at <http://www.hcs.harvard.edu/hghr/online/bullying-the-boss-compulsory-licensing-for-antiretroviral-drugs-in-brazil-and-thailand/>.

212. Joseph Stiglitz, *Give prizes not patents*, NEW SCIENTIST, Sept. 16, 2006, at 21, 21.

213. Bhanji, *supra* note 211.

214. *Id.*

215. Eric Bondy & Kamal Saggiz, *Compulsory licensing, price controls, and access to patented foreign products*, 109 J. DEV. ECON. 217, 218–19 (2012).

216. *Id.* at 225.

217. *Id.*

218. *Id.*

219. *Id.*

220. Bhanji, *supra* note 210.

221. *Id.*

generic version to 250,000 patients per year; the generic drug manufacturer, the licensee, and the Government Pharmaceutical Organization (GPO) pay 0.5% of their total sale values as royalty to the drug's patent owner, Abbott Laboratories.<sup>222</sup> Likewise, under the Plavix license, the GPO pay the same percentage of royalty to Sanofi-Aventis and Bristol-Myers Squibb, the patent holders.<sup>223</sup> The effect of the threat of compulsory licensing and the chain reaction to the issue of such license itself by other patent holders can be identified. First, in 2006, as soon as the Thai government threatened to issue a compulsory license, Merck Sharp & Dohme "proposed to reduce the price to 550 Baht/m, [from] 1,400 previously. Our GPO can provide at 560/m."<sup>224</sup> Second, subsequent to the issue of the compulsory licenses, Abbott reduced the price of Kaletra and Aluvia to the level of the corresponding Indian generic versions.<sup>225</sup> It made the new price applicable to other countries "where Abbott's patents are respected to maximize the number of patients that can be provided Kaletra/Aluvia capsules and tablets at this new price," and to Thailand where "Kaletra capsules remain available in Thailand and will be eligible for the new price."<sup>226</sup>

The effect of the issue of compulsory licenses quickly rallies developing countries in taking similar actions to deal with their health problems. In Brazil, Merck's patented AIDS drug, Efavirenz, sold \$1.59 per tablet.<sup>227</sup> Like Kaletra, it is a drug with proven effect against AIDS, lowering death by 84%.<sup>228</sup> The exorbitant price led the Brazilian government to negotiate the price with Merck which offered 30% reduction to \$1.1 per tablet following the government's threat of compulsory license, but the reduction was not as much as desired, given that its price in Thailand was \$0.65 per tablet.<sup>229</sup> When further negotiation broke down in May 2007, the Brazilian government followed the action of Thailand and issued a compulsory license with a 1.5% royalty to Merck.<sup>230</sup> That immediately saved the government \$30 million in 2007.<sup>231</sup> In March 2012, India issued a compulsory license to the local generic pharmaceutical company Natco Pharma to

222. Jennryn Wetzler et al., *Timeline for US-Thailand Compulsory License Dispute*, PROGRAM ON INFORMATION JUSTICE AND INTELLECTUAL PROPERTY, <http://infojustice.org/wp-content/uploads/2012/11/pjip-thailand-timeline.pdf> (last updated Apr. 2, 2009) [hereinafter *Timeline*].

223. *Id.*

224. *Id.*

225. *Id.*

226. *Id.*

227. Bhanji, *supra* note 211.

228. *Id.*

229. *Id.*

230. Bondy, *supra* note 215, at 220.

231. Bhanji, *supra* note 211.

manufacture the kidney and liver cancer drug Nexavar, which was patented by Bayer AG.<sup>232</sup> The price will be reduced by about 97%, from \$5,500 to \$175 per month.<sup>233</sup> Following India, China revised its Measures for the Compulsory Licensing for Patent Implementation in 2012 to enable generic drug manufacturers to produce cheap drugs used for AIDS and others. China is said to have in mind Tenofovir, whose patent is owned by Gilead Sciences Inc. Tenofovir constitutes part of a first-line cocktail treatment for AIDS sufferers which is on the WHO's recommended list.<sup>234</sup> In September 2012, the Indonesian government issued a decree which would enable generic manufacturers to be granted compulsory license to produce life-saving drugs at low cost and make them affordable, and hence, available to patients for seven HIV and hepatitis B treatments which are under patents owned by big multinational companies of GlaxoSmithKline (GSK), Merck (MRK), Gilead Sciences (GILD), Bristol-Myers Squibb (BMY), and Abbott (ABT).<sup>235</sup>

The public discourse initiated by the issuing of compulsory license and through the participation by various players including relevant governments, civil societies, international organizations, experts, the public, and the patients, helps to regulate the behavior of the patent holders. A perusal of "Timeline for [United States]-Thailand Compulsory License Dispute," a collection of major events surrounding the granting of compulsory license in Thailand, shows that participation in the debate comes from all quarters and all corners of the world: various governments such as the United States, Switzerland, and India; international organizations such as the UN, the WHO, the WTO, and the EC; hundreds of civil societies and NGOs throughout the world; campaigners and experts such as students in the UK and James Love; politicians, patients, and consumers; not to mention media and international conferences.<sup>236</sup> The salutary public reasoning brings the issue of health vis-a-vis patent to the fore and it is no surprise that the Thai instance triggers actions by other developing countries. Moreover, it yields results of reduction of prices by patent holders. As seen above, the multinational pharmaceutical companies subsequently lower the

232. Tan Ee Lyn, *China changes patent law in fight for cheaper drugs*, THOMSON REUTERS FOUNDATION (Jun. 8, 2012, 4:56 PM), available at <http://www.trust.org/alertnet/news/china-changes-patent-law-in-fight-for-cheaper-drugs/>.

233. *Revised Measures*, *supra* note 208.

234. Lyn, *supra* note 232.

235. Ed Silverman, *Pharma's March Into Emerging Markets Hits Yet Another Rough Spot*, YCHARTS, PHARMALOT (Oct. 11, 2012), [http://ycharts.com/analysis/story/pharmas\\_march\\_into\\_emerging\\_markets\\_hits\\_yet\\_another\\_rough\\_spot](http://ycharts.com/analysis/story/pharmas_march_into_emerging_markets_hits_yet_another_rough_spot).

236. Timeline, *supra* note 222.

prices of drugs for other developing countries as well without their need to issue compulsory licenses. Prior to the Thai case, when the South African government proposed to use its Medicines Act to increase access to patented products for AIDS sufferers, 39 multinational drug companies commenced legal proceedings and attempted to overturn the Act in March 2001.<sup>237</sup> A big public backlash followed and the companies dropped their case.<sup>238</sup> After years of international pressure on drug companies, including the impetus of public debate and discourse prompted by the Thai case, some multinational pharmaceutical companies now agree not to enforce their patent for AIDS drugs to enable mass production of them for the AIDS sufferers in African countries at a marginal price.<sup>239</sup> The U.S. pharmaceutical group Johnson & Johnson recently announced in 2012 that it would abstain from enforcing its patents for Prezista to enable generic manufacturers to produce low price and high quality drugs for sub-Saharan Africa and “least developed countries” (LDCs).<sup>240</sup> Prezista is effective for treatment of AIDS patients who develop resistance to traditional antiretrovirals.<sup>241</sup>

The outcome of public discourse is clear; it helps to make affordable existing drugs which would otherwise be kept away from a vast number of patients in developing countries. In this crucial area of public health, more public reasoning with the widest participation is certainly set to realize Sen’s aim of addressing the injustice faced by the world’s poorest people.

### *B. Beyond Doha*

Doha, together with the subsequent compulsory licensing, is a particular case concerning extreme diseases such as AIDS which are prevalent in poor developing countries where the patent stands in the way to make available drugs affordable to patients. To say the least, that is a morally strong case to prompt international actions under the TRIPS Agreement. However, this particular case should not obscure the issue of global justice in a larger sense with respect to patents for other technologies. Developing

237. In parallel, following the Al Qaeda attack on New York on September 11, 2001, the US government threatened to break the patent on Bayer’s anti-anthrax drug Cipro and manufacture the drug itself unless Bayer drastically decreased its sale price. Bayer agreed. “This nervous reaction cast the pall of inconsistency over the campaign which US and other multi-national drug firms had been waging against South Africa.” See W.R. CORNISH & DAVID LLEWELYN, *INTELLECTUAL PROPERTY: PATENTS, COPYRIGHT, TRADEMARKS AND ALLIED RIGHTS* 289 (Sweet & Maxwell, London, 2003).

238. *Id.*

239. Ben Hirschler, *J&J says won’t enforce AIDS drug patent in Africa*, REUTERS (Nov. 29, 2012, 9:00 AM), <http://www.reuters.com/article/2012/11/29/aids-jj-africa-idUSL5E8MTAP820121129>.

240. *Id.*

241. *Id.*

countries need breathing space to develop, just as the current developed countries once freely used existing technologies for their own development. The issue however goes beyond whether developed countries should make technologies freely available for developing countries, and whether technologies alone would uplift the latter from their impoverished situations.

It is true that the difference principle provides that the most advantaged people work to improve the interest of the least advantaged; but Dworkin asks, “before devoting social resources to improving the position of those with the least income and wealth, should we not, at the very least, first investigate how they came to be in that position?”<sup>242</sup> Dworkin believes that the element of responsibility should be built into the difference principle and those who opt voluntarily, not to be productive and irresponsibly land in the situation they are in, have no entitlement to the work of others.<sup>243</sup> Nonetheless, Dworkin agrees that those having the unfortunate “‘brute luck’ of being born with poor endowments, or unforeseeable poor luck in other aspects of life,” are the least advantaged and they should be compensated for and the economic and social arrangement should be to promote their welfare.<sup>244</sup>

If we could extend Dworkin’s searching question to the pursuit of global justice, we should also ask the Dworkin-style question, what led the least advantaged to the position they are in before considering the sort of help we should extend? By being born into a poor African country, a person is likely born being the least advantaged. Then when ten children are likewise born into the same family, thereby propagating the number of the least advantaged, we may feel duty bound to think harder about the concept of the least advantaged and the cause, and hence avoidance, of such injustice. No one would doubt *ex post facto* that they need help and their interest needs to be improved. However, should one not, or should they, ask why that family chooses to bring ten least advantaged people into the world to suffer from diseases and poverty, and knowingly so? Would it not, or would it, be true that real justice is to ask whether it is just to bring those sufferings into the world mindlessly? Whatever views one may form, it must be borne in mind that family planning and birth control are merely one factor, and indeed, western donors to Africa often press this issue, but

242. Jonathan Wolff, *Social justice and public policy: a view from political philosophy*, in *SOCIAL JUSTICE AND PUBLIC POLICY* 17, 19 (Gary Craig et al. eds. 2008); see Jonathan Wolff, *Equality: The Recent History of an Idea*, 4 *J. OF MORAL PHILOSOPHY* 125 (2007); see also DAVID MILLER, *NATIONAL RESPONSIBILITY AND GLOBAL JUSTICE* (2007) (global justice is defined “not in terms of equality, but in terms of a minimum set of basic rights that belong to human beings everywhere”).

243. Wolff, *Equality*, *supra* note 242.

244. *Id.*



it is not the only factor; it is further down from the issues of education, good government, skills, international trade with other nations, and so on, which combine to resolve poverty, diseases, etc.<sup>245</sup>

So the aim of global justice should not be at temporary relief. Rather, we submit that global justice should involve spreading good government, family planning and birth control, good education, and economic development. We further submit that, in an interconnected world, no one should seriously argue that an evil and corrupt government should be left alone, and presenting good government is colonization. The justice here is how to work toward the benefit of the least advantaged people.<sup>246</sup> The economic development of developing countries holds the future for their own capability in fighting against diseases, as such countries as China, India, and Brazil demonstrate.<sup>247</sup> Furthermore, the future of developing countries depends more on their own efforts for good government and sound economic policy than on outside aid.<sup>248</sup> Outside aid, if only in the form of cash handout, drugs, or food, may be of rather limited help; even where it would be effective in helping reducing diseases and improving health, it would likely bring about more problems such as over birth and over population - a vicious cycle.<sup>249</sup> Plainly, a sound policy for development is imperative;<sup>250</sup> so,

245. Many African countries have now in place a population policy. In resolving African problems, different approaches are suggested, "Rosen and Conly urge Africa to avoid the needs of a rapidly growing population through reduction of birth rates. Simon urges Africans to attack poverty by creating jobs, marketable skills and products to trade on the international market that people on other continents want to buy." Dallas L. Browne, *Africa's Population Challenge: Accelerating Progress in Reproductive Health*, 3:2 AFRICAN STUDIES QUARTERLY 82 (1999) (book review).

246. Robert Calderisi argues that "Western donors [of aid] do not really fight [corruption in Africa], because they want to sit at the table with African governments and meet international aid targets, rather than asphyxiate political and administrative malpractice." ROBERT CALDERISI, *THE TROUBLE WITH AFRICA WHY FOREIGN AID ISN'T WORKING* 8 (2007). He further states, "Almost everyone in North America and Europe who shares my ideals believes that more aid, along with additional lecturing on governance, will help Africa. I want to puncture that illusion. Africans need breathing space more than they need money. Not a Marshall plan, but really backing for the few governments that are fighting poverty, plus political support for the millions of Africans who are resisting oppression and violence in the rest of the continent. Not just formal democracy, but a society where people are free to lead their own lives without fear either the government or what their neighbour will say." *Id.* at 9. Calderisi is sceptical over the claim that African "problems have deep historical or foreign roots - in the slave trade, colonialism, the cold war, high debt and behaviour of international organisations." *Id.* at 7.

247. Fredrik Erixon, *Why Aid Doesn't Work*, BBC NEWS (Sept. 11, 2005, 10:54 AM), <http://news.bbc.co.uk/1/hi/sci/tech/4209956.stm>.

248. Farah Abuzeid, *Foreign Aid and the "Big Push" Theory: Lessons from Sub-Saharan Africa*, 11:1 STAN. J. INT'L REL. 16, 16 (2009) ("the theory that holds that any aid is beneficial to any country no matter the circumstances demands further inspection. The influx of massive amounts of foreign aid can have deleterious effects on the governments of the receiving countries, and can end up doing more harm than good in several circumstances.").

249. Daron Acemoglu & James A. Robinson, *Why Foreign Aid Fails - and How to Really Help Africa*, THE SPECTATOR, (Jan. 25, 2014), <http://www.spectator.co.uk/features/9121361/why-aid-fails/>.

250. Erixon, *supra* note 247 ("It is sound economic policies, not aid, that in the last decades have lifted millions - even billions - of Asians out of extreme poverty, and provided the resources to limit the

too, is the need to “mak[e] institutions more inclusive,” to “chang[e] the politics of a society to empower the poor—the empowerment of those disenfranchised, excluded and often repressed by those monopolizing power.”<sup>251</sup>

As far as patent is concerned, it is plain that free technologies may help those countries to reduce poverty and alleviate, or possibly resolve, health and other crises, and generally to catch up. Free technologies, however, do not offer the full solution to their problems and indeed they may not help in the short-term,<sup>252</sup> but that is no reason that the matter of patent should not be resolved. At least a debate or reasoning over the matter would help to shape the developmental policy for the future of developing countries. Public reasoning matters, but the current rhetoric in the debate on the patent divide between developing and developed countries is misled. Frustrated by the practice of the multinational companies over their patents, a few developing countries argue for protection for whatever originates from within their borders; those arguing for patents covering products derived from rainforest plants almost exclusively located in developing countries put forward the strong rhetoric:

It is a question of intellectual property rights. People whose medical lore leads to a useful product should have a stake in the profits. Unless we return some of the profits to them, it is a kind of theft.<sup>253</sup>

The above arguments effectively mean that those developing countries want anything, including products of nature, to be propertized by patents, but that would only comport well with the wish of developed countries to reinforce their world interest by patents.<sup>254</sup> The argument by developing countries rich in natural resources is understandable, but it misses the point; it is talking about fighting for several possible patents whilst inadvertently

extent of (or in some countries, eradicate) starvation, diseases, and other visible signs of poverty. Inversely, it is bad economic policies that still keep millions of Africans in deadly poverty.”)

251. Acemoglu, *supra* note 249.

252. Rather, sound economic policy and government matter. *See id.*; *see also*, Erixon, *supra* note 247.

253. Mark A. Lemley, *Romantic Authorship and the Rhetoric of Property Shamans, Software, and Spleens: Law and the Construction of the Information Society*, 75 TEX. L. REV. 873, 905 (1997) (reviewing JAMES BOYLE, *SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY* (1996)).

254. Johann Hari, *The Hidden Truth Behind Drug Company Profits*, THE INDEPENDENT (Aug. 5, 2009), <http://www.independent.co.uk/voices/commentators/johann-hari/johann-hari-the-hidden-truth-behind-drug-company-profits-1767257.html>.

admitting several million patents. It would be a futile and hopeless ambition to compete with the dominance of the West.<sup>255</sup>

The way forward is to challenge and change the current intellectual property regime; “as [U.S.] military and economic dominance fades, so will TRIPS and its consequences.”<sup>256</sup> However, the task is far from easy; in fact, “[e]fforts to develop an intellectual-property model that bypasses patents, such as the one proposed by the Biological Innovation for Open Society initiative in 2004, have not progressed very far, and established models of innovation will not be overturned in a day.”<sup>257</sup> Nonetheless, those efforts will undoubtedly initiate the development of a system that “reflect[s] the interests of the public.”<sup>258</sup> Indeed, public discourse at the national and international fronts with respect to each new technology and development will lead the way and offer concrete ways to achieve a fairer world order of patent and access to new technology and medicine.<sup>259</sup>

In an interconnected world where countries could not survive without dealing with others, opportunities abound for such reasoning to take place—on the negotiation table for international trade conventions and human rights conventions, through trade and investment, through education and so on. As Pogge advocated, “we ought to use our more advantaged political and economic position to work for global institutional reforms.”<sup>260</sup> It is a daunting task but it is not impossible if we start to work toward it. Eiseley tells it well:

There lives a boy who throws starfish in hundreds back into the sea each day to save their lives with the full realisation that there are tens of thousands of starfish on the beach that would die if not helped back to the sea before the next tide and indeed that most would die as he could only throw so many back into the sea each day.

The story goes on:

255. *U.S. and Monsanto Dominate Global Market for GM Seeds*, ORGANIC CONSUMERS ASSOCIATION (Aug. 7, 2013) [http://www.organicconsumers.org/articles/article\\_28059.cfm](http://www.organicconsumers.org/articles/article_28059.cfm) (“The U.S. and Monsanto dominate the global market for genetically engineered crops. Forty percent of the world’s genetically modified (GM) crops are grown in the U.S., where Monsanto controls 80 percent of the GM corn market, and 93 percent of the GM soy market.”).

256. Colin Macilwain, *Sharing information is preferable to patenting*, NATURE, Jun. 20, 2013, available at <http://www.nature.com/news/sharing-information-is-preferable-to-patenting-1.13222>.

257. *Id.*

258. *Id.*

259. ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, FOSTERING NANOTECHNOLOGY TO ADDRESS GLOBAL CHALLENGES: WATER 5–8 (2011) available at <http://www.oecd.org/sti/nano/47601818.pdf> (civil societies from African countries express their concerns over lack of participation in new technologies such as nanotechnology and their eagerness to engage discourse over relevant issues as the way forward).

260. POGGE, *supra* note 112, at 277.

The old man objected, 'But there must be tens of thousands of starfish on this beach. I'm afraid you won't really be able to make much of a difference.' The boy bent down, picked up yet another starfish and threw it as far as he could into the ocean. Then he turned, smiled and said, 'It made a difference to that one!'<sup>261</sup>

#### CONCLUSION

In this article, we argue that the classical justification of the patent system cannot withstand scrutiny under Rawls's theory of justice insofar as it concerns justice. We also argue that such a system is not suitable for developing countries. We further argue that, though Rawls does not extend his theory globally for global justice, global justice in relation to patent is highly relevant in the case of human diseases, such as AIDS, faced by developing countries and equally so where developing countries have to grapple with patent in developing their economy and eradicating poverty. Where Rawls does not provide much useful guidance for global justice, Sen offers his theory of dealing with injustice through public reasoning, thereby avoiding the attempt to implement a perfectly just (if at all) institution with a global sovereign state; indeed, it is not his interest to pursue "transcendental institutionalism."<sup>262</sup> We argue that Senian public reasoning offers a salutary point to address the issue of patent by means of engaging various players and governments in resolving the injustice stemming from the patent system.

261. LOREN EISELEY, *THE STAR THROWER* 178 (1979).

262. SEN, *supra* note 33, at 5.