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TRIP-ping Over Business Method Patents

Vincent Chiappetta*

ABSTRACT

Professor Chiappetta argues that the current effort to expand substantive international patent law harmonization to include business method patenting is ill-conceived and unsupported. Such patents cannot be justified on the economic incentive grounds supporting the Western regimes. They are not part of the existing TRIPS agreement, and under present circumstances they should not be added. Any future agreement, bi-lateral or multi-lateral (including an extension of TRIPS), must be based on a better calibrated form of protection (less than patent) and should occur only after the persistent normative differences and the distributional consequences of international substantive harmonization have been addressed.

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I. INTRODUCTION

Eager to build on its successes under TRIPS (the Agreement on Trade-Related Aspects of Intellectual Property Rights),¹ the United

* Professor of Law, Willamette University, College of Law. I gratefully acknowledge a Willamette University College of Law writing grant made in connection with the preparation of this Article, and thank Peter Yu and the Cardozo School of Law for the invitation to the symposium which provided the impetus for embarking on this project.

States has recently added business method patenting to the international intellectual property harmonization agenda. The appropriate response to this effort, as to the more general attempt to expand the scope of substantive patent harmonization, is to recognize that more of a bad thing will not make it better. In this case, the “bad thing” includes both business method patenting and further TRIPS-style harmonization. Regarding the former, business method patents as such are inconsistent with the market economics incentive foundation on which the U.S. argument for coverage rests.

Concerning the latter, although TRIPS is undeniably a milestone in intellectual property law harmonization, it marks “progress” along

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3. Attempts by the United States to expand patentable subject matter to incorporate its concept of “utility” fail to consider either the economic cost-benefits of patenting the less objective forms of innovation or the exacerbated effects on distributional outcomes. See WIPO Report, supra note 2 (discussing the additional issues of patenting aesthetic and more personal skills forms of innovation); Vincent Chiappetta, Defining the Proper Scope of Internet Patents: If We Don’t Know Where We Want to Go, We’re Unlikely to Get There, 7 MICH. TELECOMM. & TECH. L. REV 289, 306-18 (2000-2001) [hereinafter Chiappetta, Internet Patents]; John R. Thomas, The Post-Industrial Patent System, 10 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 3, 54 (1999).

4. A central issue in the debate is properly defining precisely what this term covers, implementations or the processes themselves. See infra notes 9-14 and accompanying text.

5. See Vincent Chiappetta, The Desirability of Agreeing to Disagree: The WTO, TRIPS, International IPR Exhaustion and a Few Other Things, 21 MICH. J. INTER. L. 333, 335-36, 368 n.180 (2000) [hereinafter Chiappetta, WTO] (explaining that TRIPS adopts and reflects the Western/Northern/U.S. market economic view of intellectual property law); infra notes 26-30 and accompanying text. But see id., at 375-81 (arguing that although this policy drives the TRIPS rights, no actual international consensus exists); Long, supra note 2, at 349 (noting that the amount of continuing debate hardly indicates agreement).

an ill-defined path prematurely taken, if not along the wrong path entirely.\textsuperscript{7} Not only is there no international consensus regarding the inherent superiority of a market economics approach to intellectual property rights, but much work remains to be done regarding the related distributional inequities it generates.\textsuperscript{8} as the developing nations made quite clear at the recent, failed WTO negotiations in Cancun, Mexico.

II. A DEFINITIONAL PREAMBLE

The inherent ambiguity (and malleability) of the basic terminology of the debate makes a brief introductory foray into lexicon imperative. The phrase "business method patents" has been used to refer to the methodological concept for doing business, the technological implementation of that process and combinations of the two.\textsuperscript{9} Appropriate resolution of the business method patenting question requires strict separation of process from tools. Applying the incentive justifications supporting traditional patenting,\textsuperscript{10} it is extremely difficult to argue against coverage of innovative

implementing technologies.\textsuperscript{11} That analysis and outcome, however, is independent of the distinct issue now raised by the United States: whether the business processes employing such tools should be separately patentable.\textsuperscript{12} Imprecise language, therefore, creates a risk of confusing the benefits arising from encouraging investments in implementation with virtues also supporting protection of the underlying processes. If the business methods do not merit stand-alone rights, careless (or intentional) over-broad terminology allows inappropriate subject matter into the patent regime, resulting in costly over-protection.\textsuperscript{13} To maintain clear focus on the actual debate (the patentability of the business processes as distinct from the

\textsuperscript{11} TRIPS reflects this position. See TRIPS, supra note 1, art. 27 (including "all fields of technology" within patentable subject matter). Although debate continues regarding software, the clear trend appears to be to recognize computing implementations (as opposed to software alone) as a field of technology. See Vincent Chiappetta, Patentability of Computer Software Instruction as an "Article of Manufacture:" Software, As Such as the Right Stuff, 17 J. MARSHALL J. COMPUTER & INFO. L. 89 (1998) [hereinafter Chiappetta, Software Patents] (arguing for patentability of software tools "as such"); infra notes 82-91 and accompanying text (discussing the issue under the "industrial application" requirement).


\textsuperscript{13} See infra note 53 and accompanying text. The same concern drove much of the U.S. debate regarding the propriety of software patenting. Having already endured the agony of straightening out the chaos arising from mingling "algorithms" (methods) with tools (software), there is little value in rehashing the issue when addressing business method patenting. See, e.g., Jerome H. Reichman, Legal Hybrids Between the Patent and Copyright Paradigms, 94 COLUM. L. REV. 2432 (1994); Pamela Samuelson, Benson Revisited: The Case Against Patent Protection for Algorithms and Other Computer Program-Related Inventions, 39 EMORY L.J. 1025 (1990); Pamela Samuelson et al., A Manifesto Concerning the Legal Protection of Computer Programs, 94 COLUM L. REV. 2308 (1994). But see Larry A. DiMatteo, The New "Problem" of Business Method Patents: The Convergence of National Patent Laws and International Transactions, 28 RUTGERS COMPUTER & TECH. L.J. 1, 44-45 (2002). Professor DiMatteo states that "recognition of business method patents is part of a natural process of recognizing the inventive nature of modern technologies" and argues against making fine distinctions between business methods and their electronic applications. The difficulty with the argument is that the cited predicate fact ("some business methods and their electronic applications are sufficiently inventive") does not support patenting of business methods "as such." Failing to make the distinction permits unjustified over-protection of the latter in the guise of protecting "their electronic applications." Nor do the associated administrative costs stand as a barrier. Drawing the necessary distinction between implementation and business method is relatively straight-forward, requiring only proper assessment of the actual patent claims. Patentability does not turn on whether computing structure or electronic implementation is recited, but whether the claims only cover the specific technological implementation not the "business method" steps standing alone (see Chiappetta, Software Patents, supra note 11, at 155-56) and the requisite "inventiveness" lies in that claimed structure or implementation, not the underlying method (see Chiappetta, Internet Patents, supra note 3, at 349-50).
implementing tools) the methods are separately identified as the "competitive arts" for purposes of the following discussion.\textsuperscript{14}

"Harmonization" also raises crucial ambiguities, encompassing uniformity in substantive requirements and rights (i.e., novelty, terms of protection, right to exclude others), and procedural implementations (i.e., application, searching, publication) or both. A lack of precision can cause confusion between the undoubted efficiency benefits of procedural uniformity and the need for a more probing inquiry into the propriety of the substantive harmonization on which it depends.\textsuperscript{15} Once parties have agreed on substantive objectives, there can be little honest debate regarding the desirability of eliminating inconsistent or duplicative patent application and examination procedures.\textsuperscript{16} However, arguing these cost savings mandate "harmonization" entirely misses (or intentionally obscures) the point that no amount of implementing efficiency can justify otherwise undesirable or unacceptable substantive results. The decision uniformly to treat particular subject matter as patentable is initially determined based only on whether that result furthers the parties' objectives and interests. Until that has been established, discussion of procedural cost savings is premature and irrelevant.

Applying this definitional framework, the more precise question raised by the U.S. expansion effort is whether, on the substantive

\textsuperscript{14} This clarification leaves open the question of whether the "competitive arts" also includes products and services delivered by application of a methodology (for example, cash management, legal or medical advice) or internal business management techniques. The use of "competitive arts" in this Article covers only the core current debate, the means used to market and deliver products to customers, leaving analysis of these remaining issues for another day.

\textsuperscript{15} As an example, Professor Duffy makes the point that presuming that uniformity's efficiency benefits make harmonization desirable can mask the costs of failing to maintain at least some diversity. See Duffy, \textit{supra} note 7, at 687-89 (noting that "the international patent community has taken as a given the value of creating uniform patent law"), 700-01 (observing that efficiencies gained by economies of scale do not "necessarily provide a reason to harmonize substantive law").

\textsuperscript{16} A party might complain that they are disproportionately paying for or doing the work or that the specific process is not the most effective means to deliver the agreed upon objective. These valid arguments, however, do not affect the ultimate desirability of appropriate procedural harmonization when there is accord on the substantive objectives. Cf. Duffy, \textit{supra} note 7, at 703-06 (pointing out that "the local preferences argument [against harmonization] is less compelling where the diversity occurs between nations having seemingly similar preferences," that is, when the parties agree on substance).

\textsuperscript{17} An argument that substantive uniformity itself reduces costs by eliminating varying outcomes even more clearly fails to advance the debate. Although a patent system will certainly be more cost efficient if everyone applies the same requirements and provides the same rights, that efficiency is merely one of many (frequently conflicting) considerations as to whether substantive uniformity is desirable and certainly does not mandate agreement to whatever proposal is put forth regardless of its other merits. See \textit{infra} notes 59-70 and accompanying text.
merits, the international community should agree that competitive arts innovation constitutes patentable subject matter. Thus, clarifying the question also clarifies the arguments dictating a negative response. First, the market economic framework driving the U.S.\textsuperscript{18} pro-harmonization position does not support traditional patent protection for the competitive arts. As the field has, at most, only a very limited need for supplemental legal incentives spurring investment in innovation, 20 years of virtually total patent exclusivity\textsuperscript{19} cannot deliver the net wealth benefits required to support the regime.\textsuperscript{20}

Second, even if patenting did produce increases in aggregate economic wealth, the current distributional imperfections in the WTO/TRIPS market "globalization" effort\textsuperscript{21} militate strongly against a general agreement to extend protection. Competitive arts patents clearly were not contemplated under TRIPS as originally negotiated,\textsuperscript{22} and adversely affected participants should resist any further substantive harmonization absent changes that will assure them appropriate participation in whatever benefits may result.

Before elaborating on these arguments, it is important to emphasize that they do not stand as a categorical rejection of all international harmonization regarding the competitive arts. Market economic considerations likely do justify some, albeit substantially less powerful, intellectual property rights (IPRs) in such innovations.\textsuperscript{23} Therefore, as particular parties resolve the related distributional issues, the efficiencies arising from substantive and procedural harmonization along these alternative lines can play an

\begin{itemize}
  \item \textsuperscript{18} See supra note 5.
  \item \textsuperscript{19} See TRIPS, supra note 1, art. 33 (setting 20 year term from date of filing), art. 28 (granting the right to prevent third parties from making, using, offering for sale, selling, or importing without authorization).
  \item \textsuperscript{20} The fundamental premise supporting the grant of a patent is that without the related legal right to exclude, competitive appropriation will distort investment decisions. See infra notes 26-30 and accompanying text.
  \item \textsuperscript{21} The TRIPS agreement is part of the broader World Trade Organization effort to create a global marketplace. See Frederick M. Abbot, First Report (Final) to the Committee on International Trade Law of the International Law Association on the Subject of Parallel Importation, 1 J. INT'L ECON. L. 607, 611, 617 (1998); Laurinda L. Hicks & James R. Holbein, Convergence of National Intellectual Property Norms in International Trading Agreements, 12 AM. U. J. INT'L L. & POL'Y 769, 782-83 (1997); Paul Katzenberger & Annette Kur, TRIPS and Intellectual Property, 18 IIC STUDIES 1 (1996); TRIPS, supra note 1.
  \item \textsuperscript{22} See infra notes 71-96 and accompanying text.
  \item \textsuperscript{23} See DiMatteo, supra note 13, at 38-39 (noting a number of such proposals); Reichman, supra note 13, at 2438-41, 2500-04 and 2510-19 (generally arguing that the cheap and quick copying permitted by new technology calls for \textit{sui generis} protection); see also Chiappetta, Internet Patents, supra note 3, at 324-31 (proposing a specific \textit{sui generis} approach for Internet patents).
\end{itemize}
extremely useful role, not only in the bi-lateral agreements, but perhaps in a future iteration of the TRIPS accord as well.

III. NET COSTS, NOT BENEFITS

Returning first to the premise that traditional patent incentives are over-protective, the fundamental nature of the competitive arts problem should be clearly understood. Much has been written about the obstacles to properly identifying meritorious advance (novel and non-obvious) in the business method field. The argument being made here, however, is that no patent protection whatsoever is justified. As even a competitive arts patent that is clearly both novel and non-obvious cannot deliver net wealth benefits, the position against competitive arts patenting is independent of the ability to resolve these important, but secondary, examination difficulties.

Patent law's market economic rationale serves as the analytic starting point. In a market economy, investment in innovation is generally driven by strong “natural” incentives. Those providing the best (as measured by consumer demand) goods and services (“products”) will prevail. However, the market's invisible hand also depends upon competitive appropriation of these new ideas by those with more efficient and effective production and distribution skills, ensuring the desired products are also provided at the lowest possible cost. Patent law intervention is employed to prevent these efficient


27. See id.

28. Id.

29. Id.
appropriators from overwhelming the innovators, avoiding the resulting sub-optimal investment in new ideas by granting a time-limited legal right to prevent competitive adoption, which would otherwise interfere with or destroy capture of appropriate returns. However, as others have eloquently explained, intellectual property intervention does not depend merely on the existence of this "free-riding" (competitive appropriation) but on sufficient levels of free-riding to actually cause sub-optimal investment relative to true market demand.

A decision to extend patent protection to competitive arts innovation, therefore, turns on the satisfaction of two conditions. First, sufficient free-riding to trigger concern will only occur when viable alternatives exist and the relative susceptibility to appropriation (and resulting net returns on investment) makes alternatives with lower actual market demand more attractive than those with greater demand. Second, traditional patent rights must provide the proper response to the specific free-riding problem. Even when distortive free-riding is present, patenting only makes market economic sense if the resulting 20-year exclusion makes an appropriate adjustment, generating wealth increases (through supplemental innovation responding to the incentive) in excess of related costs (the forgone benefits of efficient competitive adoption during the patent term). If not, patent law over-compensates, and another, less powerful solution is required.

Stating these conditions in the affirmative, extending traditional patent protection to the competitive arts requires the proponent demonstrate that: (1) viable alternatives will cause sufficient free-riding to either redirect or reduce investment relative to actual market demand, and (2) the related rights are appropriately calibrated properly to adjust for the resulting distortions in optimal investment patterns. Comparing the arguments on each point that

30. The market economic approach to IPRs explicitly limits the rights and related incentives to levels consistent with generating optimal investment. It does not consider questions of "fairness" to the innovator, using and justifying individual benefits as the means to accomplish this aggregate economic outcome. Cf. Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975); Mazer v. Stein, 347 U.S. 201, 219 (1954) (both making the point in connection with copyright law's similar incentive structure).

31. See Lunney, supra note 26, at 440-55 (developing this model in the context of his discussion and rejection of the need for trademark incentives).


33. Id.

34. Id.

35. Id.
support traditional product patenting\textsuperscript{36} with the situation facing the competitive arts investor or innovator reveals that a pro-patenting position is not justified.\textsuperscript{37}

First, it is highly unlikely that free-riding will significantly distort competitive arts investment decisions. In the case of product innovations, the variation in consumer preferences generates an extremely wide range of investment options.\textsuperscript{38} Because actual demand is based on a product's specific characteristics, viable investment options will exhibit markedly different levels of susceptibility to competitive appropriation; that is, there is normally no connection between whether a product innovation will be in high or low demand and the ability of competitors to appropriate it.\textsuperscript{39} There is good reason to believe, therefore, that product innovation investments will be drawn away from those areas that offer less insulation from competitive adoption (and lower net returns) and toward those that offer more, independent of actual market demand.\textsuperscript{40}

In contrast, the nature of the competitive arts alternatives significantly reduces the possibility of such sub-optimal investment allocations based on relative susceptibility to appropriation. Market demand in the competitive arts is generally driven by only a single consumer preference—lower transaction costs, thus drastically limiting the viable alternatives to those that are the most efficient.\textsuperscript{41} Additionally, the facts that most options must be made clearly visible

\textsuperscript{36} Although the benefits of such patenting are a generally accepted assumption, the definitive empirical case has yet to be made. See supra note 10 (offering sources disputing the need for any patent system).


\textsuperscript{38} See Chiappetta, Internet Patents, supra note 3, at 307-08.

\textsuperscript{39} Id. at 320.

\textsuperscript{40} For example, resources might disproportionately flow into developing products, features or manufacturing processes which can be most effectively protected by self-help and trade secret law. Even if true market demand is lower for those investments, the net expected return may still be greater when the alternatives' higher free-riding losses are taken into account. Id.

\textsuperscript{41} In some cases customers will find separate "utility" in the novelty of using the business methodology. Because customers may be willing to pay a premium for obtaining that experience of using a business method beyond the value generated from its efficiency in implementing another transaction, the question arises whether patent law should spur innovation in these methods as distinct products. Although the issue is beyond the scope of the current competitive arts inquiry there is good reason to suspect that traditional patenting on this basis would generate more costs than benefits as a result of the substantial adverse effects on the transactional competitive environment.
in the targeted marketplace\(^\text{42}\) and that there generally will be similar (low) costs of appropriating all methods\(^\text{43}\) eliminate any substantial differences in susceptibility to appropriation. As a result, competitive arts investment decisions are far more likely to be driven by responsiveness to actual customer demand for transactional efficiency than redirected by the relative risks of competitive adoption.\(^\text{44}\)

The argument might, however, be made that rather than distorting investment allocations among competitive arts alternatives, these same characteristics generate such high general risk of free-riding that the effect is dramatically to reduce, if not eliminate, such investments altogether. Although a competitor has no choice but to engage with the customer\(^\text{45}\) the vulnerability of all innovations to quick and cheap appropriation appears to militate against making more than de minimus investments, thus limiting competitive arts advance to, at most, insignificant incremental change.\(^\text{46}\) On closer inspection, however, the distinctive characteristics of competitive arts competition make this outcome unlikely. Even paradigm-shifting change in the competitive arts, which offers substantial savings and returns, generally requires relatively low investment compared to the levels justifying product patenting.\(^\text{47}\) This form of idea development and testing does not depend upon the significant time and capital associated with experimental laboratory research and development work.\(^\text{48}\) As a consequence, the potential returns from an innovator's practical first

\(^{42}\) The problem described by Professor Reichman as "innovation bearing know-how on its face." See Reichman, supra note 13, at 2511-18.

\(^{43}\) Recall that the competitive arts refer only to the methodology (the intangible concept), not the implementing tools. See supra notes 9-14 and accompanying text; infra notes 47-48; Chiappetta, Internet Patents, supra note 3, at 325-26 (describing the general ease with which all competitive arts innovations can be appropriated).

\(^{44}\) See Chiappetta, Internet Patents, supra note 3, at 326.

\(^{45}\) See Rochelle Cooper Dreyfuss, Expressive Genericity: Trademarks as Language in the Pepsi Generation, 66 NOTRE DAME L. REV. 397, 399 and 408-09 (1990) (speaking of trademarks, no need to encourage businesses to develop tools to communicate with customers); Jessica Litman, Breakfast with Batman: The Public Interest In the Advertising Age, 108 YALE L.J. 1717, 1730 (1999) (noting that incentives are not necessary to spur good advertising).

\(^{46}\) See Chiappetta, Internet Patents, supra note 3, at 321-23 (elaborating on the stasis concern set out in the following text above).

\(^{47}\) See Raskind, supra note 37, at 81-82, 102.

\(^{48}\) See id. The obvious example contrasts the enormous costs of pharmaceutical development and regulatory approvals with the relatively inexpensive development of a method of allocating customer calls. Cf. In re Maucorps, 609 F.2d 481 (C.C.P.A 1979). It is also important to remember that competitive arts development does not include the investment in related implementing tools. Those investments generate patentable subject matter, meaning those decisions do respond to the patent incentive. See Chiappetta, Internet Patents, supra note 3, at 320 n.159.
mover, lead-time and lock-in advantages over competitors\(^49\) will in many, if not most, cases provide sufficient returns to justify the necessary investment, even in the face of a high risk of eventual appropriation.\(^50\) Moreover, these same relatively low investment requirements mean that competitive arts appropriation does not provide the substantial cost-saving advantages over the innovator driving product free-riding. As a result, the development cost savings incentive to follow rather than to lead is replaced by pursuit of the advantages of being first to market. Therefore, any company electing to reduce or forgo investment in competitive arts innovation faces the unhappy prospect that others will consistently remain at least a step ahead by capturing sequential first-mover advantages.\(^51\)

The second condition, that patent rights make a proper adjustment for the harms caused by free-riding, fares no better. The above arguments do not mean that appropriation risks have no adverse affect on investment in competitive arts innovation. However, they do indicate that the amount of distortion will be relatively small, requiring an equally mild intellectual property law response to rectify the situation.\(^52\) Consequently, bringing the powerful exclusionary rights of traditional patent law (precluding virtually all competitive use for the term of the patent) to bear must substantially over-shoot the "incentive" mark. The resulting over-protection is not without consequence, inducing excessive investment relative to demand and, at worst, generating unjustified monopolies and the related loss and transfer of wealth.\(^53\)

49. The first adopter in the marketplace stands to reap initial premiums while competition "catches up" and can extend those premiums by taking steps to forestall eventual transfers to adopting competitors. See, e.g., Dreyfuss, supra note 25, at 270-72, 275; Lunney, supra note 26, at 452-53; Richard Schmalensee, Product Differentiation Advantages of Pioneering Brands, 72 AM. ECON. REV. 349 (1982).

50. The argument does not depend on competitive arts innovation requiring no investment. There will be employee salaries, fees to consultants and "field" testing to confirm and adjust the idea. The point is that those costs will generally be substantially lower than those required for product development (which involves those expenditures plus laboratory research and development) and is consequently more likely to be justified by the incentives of even temporary advantage. See Chiappetta, Internet Patents, supra note 3, at 321-23; Raskind, supra note 37, at 81-82, 102.

51. Although not rising to a definitive empirical case, the anecdotal evidence certainly indicates no apparent shortage of competitive arts innovation without patent protection, a fact entirely consistent with the theoretical analysis in the text. See Lerner, supra note 10, at 112; Merges, supra note 25, at 582-83; Raskind, supra note 37, at 92-93. The existence of some innovation does not, however, equate to optimal investment. Undoubtedly the ease of appropriation has some effect on levels of investment, the point here being only that it is not sufficient to justify full-blown traditional patent protection. See infra notes 52-56 and accompanying text.

52. See discussion supra notes 33-34 and accompanying text.

53. Unjustified intellectual property rights grant monopolies without offsetting wealth benefits. See generally HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY,
Finally, as discussed above, these arguments against traditional patent protection for the competitive arts cannot be overcome by pointing to the benefits accruing from patenting the related implementing technology. The net wealth generated from encouraging investments in innovative tools by extending protection is irrelevant to the distinct issue of competitive arts “methods” patenting. Not only does excluding the latter have no effect on the current protection offered to the former, but making the argument unduly complicates reaching the proper outcome in both cases.

Market economic theory’s failure to support patent protection proves fatal to any effort to add the competitive arts to the harmonized international patent regime. If such patents are inappropriate in a national market economy, it certainly will not improve matters to increase their negative effects by expanding protection to the global marketplace. Nor can the cost savings derived from international harmonization itself provide a supporting rationale. Although such uniformity may reduce implementation expense through procedural harmonization, the resulting ability more cheaply to diminish global wealth through widespread, uniform over-protection is hardly a convincing argument. In fact, as discussed immediately below, just as an argument for surplus protection should raise suspicions of rent-seeking self-interest within a national patent law debate, the international community should be equally skeptical of the motivations of any nation making a similar proposal in the global arena.

§ 1.3 (2d ed. 1999) (discussing the adverse economic effects of monopoly); Lunney, supra note 26 (making the point regarding over-protection of trademarks). This outcome does not mean that all intellectual property protection must be withheld from competitive arts innovation. It merely requires that the protection be differently calibrated to ensure it delivers net benefits. See Chiappetta, Internet Patents, supra note 3, at 324-48 (arguing for a limited form of “head-start” protection).

54. See supra notes 9-14 and accompanying text.
55. See id.
56. See id. (explaining the need and administrative feasibility of separating the issues); infra notes 87-91 and accompanying text (discussing the current confusion, particularly in Europe and to a lesser extent Japan); supra note 13 (discussing the U.S. experience with software patenting).
58. See discussion infra Part IV.
IV. THE DISTRIBUTIONAL PROBLEM

Even if aggregate wealth benefits should accrue from competitive arts patenting, for those benefits to justify international harmonization, the participants must believe that the former is the sole consideration dictating pursuit of the latter. If more is at issue in the harmonization inquiry, the parties may decide to forgo even net positive economic results in favor of other superceding objectives. As it turns out, those "other" considerations play a determinative role in IPR harmonization.

At the most fundamental level, nations have differing views regarding their individual citizens' expected contribution to and return from their economies, ranging from abnegation of virtually all personal interest, to notions of equality in participation, to explicitly fostering independently determined, self-interested action. This basic disagreement means that the desirability of net wealth maximizing Western/Northern incentive-based IPR regimes, including patenting, is hardly a given. A society that does not believe that personal return should motivate decisions, or that increasing aggregate economic output is the most important consideration, will resist such regimes as affirmatively fostering undesirable decision-making paradigms and related social outcomes. Consequently, for some societies the question of competitive arts patenting will never reach its aggregate wealth economic merits, whatever they may be, but will fail at the threshold impropriety of all patenting.


61. Id. at 230-32.

62. See id.
For the more pragmatic (or cynical), even if parties agreed on the general desirability of using the market economy approach, any actual accord must also address and resolve that model's significant distributional consequences. Before signing on, a prospective adherent must consider whether its share of the resulting net benefits is acceptable under the circumstances (a point forcefully made by the developing nations recently in Cancun). As the explicit purpose of incorporating patenting into a market model is redistributional, the effects of related substantive harmonization must be carefully assessed. Regarding the baseline decision of whether to offer protection, even when the result is a demonstrable increase in innovation and related increase in aggregate wealth, the supporting costs which produce those outcomes (transfers of consumer surplus and deadweight loss) will be borne disproportionately by societies less likely to produce the covered class of innovation. Moreover, because traditional patenting is a "race" system, these distributional effects will occur not only when a


64. See Chiappetta, WTO, supra note 5, at 347-54, 368-70 (discussing how the issue affects the debate over international IPR exhaustion).

65. The concern is not uniquely applicable to international patent harmonization. Members of any economic system, international, regional, national, local or joint business venture, should consider the distributional consequences of the proposed arrangements.

66. As discussed above, the very point of a traditional patent regime is to ensure the inventor captures "rents" by restricting competitive appropriation. See supra notes 26-30 and accompanying text.


68. A number of scholars have cast the TRIPS issue as a contest between developed and developing nations on this basis. See, e.g., Keith Aoki, Neocolonialism, Anticommons Property, and Biopiracy in the (Not-So-Brave) New World Order of International Intellectual Property Protection, 6 IND. J. GLOBAL LEGAL STUD. 11, 57 (1998); A. Samuel Oddi, TRIPS—Natural Rights and a "Polite Form of Economic Imperialism," 29 VAND. J. TRANSNAT'L L. 415, 455 (1996). Nor does the argument in the text take into account the further wealth transfers if a patent regime's rules permit capture of products or methods previously in use locally. See, e.g., Doris Estelle Long, The Impact of Foreign Investment on Indigenous Culture: An Intellectual Property Perspective, 23 N.C. J. INT'L L. & COM. REG. 229, 263-80 (1998).

69. In most patent systems the patent race goes to the first inventor to file. The United States uniquely gives priority to the first to invent, a system which somewhat
society is less innovative overall, but also when resource constraints slow the local pace of innovation.\textsuperscript{70} No rational economic actor in such a disadvantaged position should agree to coverage unless other aspects of the agreement offset these burdens.

The above analysis does not argue, however, that parties should never agree on substantive patent law harmonization, merely that acceptable distributional consequences are an essential component of reaching such an accord. Assessed in this light, the ratification of TRIPS provides powerful evidence that its signatories, in fact, must have determined that, when considered in the larger WTO context, its harmonized IPRs offered not only aggregate economic benefits but also appropriate distributional outcomes.\textsuperscript{71} Even if one believes that to be the case (despite evidence to the contrary),\textsuperscript{72} as demonstrated below, that position cannot be extrapolated into an argument that TRIPS resolved the competitive arts question in favor of patentability.

The most straightforward “existing agreement” argument is that the words and structure of Article 27 of TRIPS\textsuperscript{73} demonstrate the parties’ intention to include competitive arts patenting. That provision can be reasonably viewed as embodying an extremely far reaching accord on patentable subject matter.\textsuperscript{74} Article 27(1) calls for signatories to make patents “available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step, and are capable of industrial application.”\textsuperscript{75} The requirements of “invention,” “field of technology,” and “industrial application,” as well as the modifiers “any,” “all” and “capable,” are certainly expansive and inclusive.\textsuperscript{76} Additionally, under general cannons of construction, the provision’s list of specific exclusions\textsuperscript{77} should limit any carve-outs to the enumerated classes.\textsuperscript{78}
As competitive arts innovations ("any invention") apply knowledge to the solution of real world problems ("a field of technology") relevant to commerce ("industrial application") and do not fall within the listed exclusions, they appear to fit comfortably within the language of the treaty.  

Despite the legitimate appeal of this "plain meaning" approach, treaty language cannot be read in a vacuum but must be interpreted in light of contemporaneous usage and technical definitions. The above argument ignores the actual meaning of the key terms in international patent law given the status of competitive arts patenting at the time of the TRIPS negotiation.  

European and Japanese patent law provide direct evidence of the limited reach intended by "field of technology" and "industrial application," as used in TRIPS. The European Patent Convention (EPC) explicitly requires a patentable invention be "susceptible of industrial application." Despite the EPC's broad definition of "industrial application" regarding field of endeavor, the additional requirements that a patentable invention be of a technical nature, concerned with the solution of a technical problem and have technical features, read in conjunction with the specific exclusion of "business methods," make it apparent that the competitive arts were explicitly excluded. Although the European courts continue to

plant) or the environment and (2) "diagnostic, therapeutic and surgical methods for treatment of humans or animals" and plants and animals (other than microorganisms) and essentially biological processes for the production of plants or animals).

78. See Jose I. De Santiago, Patents of Business Methods in Mexico, 14 AUT. INT'L L. PRACTICUM 126, 127 (2001) (noting the lack of a specific exception argues for coverage); Taketa, supra note 57, at 965 (noting, but not supporting, the argument in the text).

79. See TRIPS, supra note 1.


81. See id. at 754.


84. See id. art. 57; WIPO Report, supra note 2.


86. EPC, supra note 83, art. 52(2) (c).
struggle with the confusion between process and tools\(^87\) (in a fashion disquietingly reminiscent of the U.S. "physical effects" doctrine, unsuccessfully applied in the agonized debate over patentability of computer software),\(^88\) the decisions clearly placed the competitive arts as such (independent of implementing structure) outside the scope of both "fields of technology" and "industrial application."\(^89\) Although Japanese patent law does not explicitly reject business method patenting, it similarly restricts the reading of its "industrial application" requirement to the "creation of technical ideas utilizing natural laws."\(^90\) The Japanese courts have consistently interpreted this requirement as limiting patentable business method claims to those setting out computing-based implementations rather than mere competitive arts innovation standing alone.\(^91\)

Finally, U.S. patent law at the time was consistent with these European and Japanese interpretations.\(^92\) The generally acknowledged (if criticized) U.S. "business method" exception was only disposed of by the Court of Appeals for the Federal Circuit\(^93\) four

\(^87\) See, e.g., DiMatteo, supra note 13, at 30-38; Porter, supra note 82, at 247-51; Thomas, supra note 82, at 1179; Taketa, supra note 57, at 966 (arguing that even software implementations may not be covered by TRIPS); DORIS ESTELLE LONG & ANTHONY D'AMATO, INTERNATIONAL INTELLECTUAL PROPERTY 933-35 (2000) (reviewing a variety of European Patent Office cases); WIPO Report, supra note 2 (discussing some of the differences between "industrial application" and the U.S. requirement of utility).

\(^88\) See Chiappetta, Internet Patents, supra note 3, at 303-04 (briefly summarizing the doctrine's history and its final abandonment in the State Street Bank case).

\(^89\) See DiMatteo, supra note 13, at 30; Duffy, supra note 7, at 717; Porter, supra note 82, at 247-48.

\(^90\) See Thomas, supra note 82, at 1179-80 (generally describing the basic requirements); Xiang, supra note 82, at 808.

\(^91\) See DiMatteo, supra note 13, at 28-30; Porter, supra note 82, at 251-53; Taketa, supra note 57, at 956; Xiang, supra note 82, at 808-09 (all discussing the apparent recent softening of the Japanese position regarding computing implementations, but continued resistance to the non-technical competitive arts method itself). Although both the Europeans and the Japanese are considering the possibility of extending patent protection to business methods, see, e.g., Duffy, supra note 7, at 717 n. 104 (noting the possible future relaxation of the requirement to include business method patenting), that evolution is occurring in spite of, not consistent with their historical views of the "industrial arts" language used in TRIPS. The willingness to consider change actually strongly supports the lack of pre-existing coverage. See WIPO Report, supra note 2.

\(^92\) See Xiang, supra note 82, at 806 (citing Hotel Sec. Checking Co. v. Lorraine Co., 160 F. 467 (2d Cir. 1908)).

\(^93\) The doctrine was expressly abandoned in State Street Bank & Trust v. Signature Financial Group, 149 F.3d 1368 (Fed.Cir. 1998). See generally Rinaldo Del Gallo III, Are "Methods of Doing Business" Finally Out of Business as a Statutory Rejection?, 38 IDEA: J. L. & TECH. 403 (1997) (offering a good history of the exception); Thomas, supra note 3 (offering a good analysis of the decision).
years after the 1994 finalization of the TRIPS accord. Consequently, the United States certainly could not have believed "field of technology" and "industrial application" in TRIPS covered business methods (to say nothing of the competitive arts), as that would have required anticipating their inclusion based on a judicial change of heart in a case yet to be decided even by the trial court.

A TRIPS harmonization enthusiast could argue, however, that focusing on contemporaneous legal interpretations ignores the actual objectives of the TRIPS signatories. Specifically, one could interpret the agreement as embodying a desire to eliminate the constraints of past limiting interpretations, permitting international substantive harmonization to move forward on a self-implementing, expanding basis. Consequently, the treaty language should be read broadly precisely to anticipate and incorporate the inevitable future evolution of the parties' views on patentable innovations, exactly as is presently occurring regarding business method patenting.

The history of the TRIPS negotiations, however, does not support this position. The substantive agreements and related language were all hard fought, with the losers being frequently reluctant participants faced with a choice among bad and worse options. The relevant point for this discussion, however, does not turn on whether those parties only agreed under duress or knowingly and intentionally accepted the bad with the good. It only requires recognizing that under the circumstances they intended, at most, a limited bargain. Consequently, even if TRIPS implements mutually acceptable harmonization, its scope is restricted to the precise treaty language interpreted within its contemporaneous context. On that

94. See TRIPS, supra note 1 (noting the 1994 signature date of the accord).
95. The trial court, in fact, expressly reinforced its finding of unpatentability by reference to the "business method exception." Additionally, there is an excellent argument that the State Street Bank reversal says nothing about the patentability of the competitive arts as such, the elimination of the business method exception being mere dicta in light of the holding that technical implementation sufficed to make the exclusively hardware claims actually before the court patentable subject matter. See Thomas, supra note 82, at 1158-61.
96. Cf. Takenaka, supra note 57, at 426 (arguing against narrow interpretations as giving "room to developing countries to refuse traditional intellectual property protection for new types of technology" and undermining the benefits of international harmonization by requiring additional negotiations). See supra notes 91-95 (discussing, respectively, the evolution in the European/Japanese and the U.S. positions).
97. See Chiappetta, WTO, supra note 5, at 344-46 (describing the TRIPS negotiation process).
98. Id. at 370-81 (making the point and citing sources); Long, supra note 2, at 349.
99. See supra notes 80-95 and accompanying text.
basis, it is abundantly clear the accord cannot be read as contemplating coverage of the competitive arts.100

The above discussion, of course, only argues that the competitive arts do not fall within TRIPS as actually agreed, not that the parties should not now negotiate an appropriate extension. However, when the competitive arts patenting issue is left for consideration on its own merits, a pro-patent position not only will be, but should be, rejected. Those that express concerns with substantive IPR harmonization (in TRIPS and beyond) are not merely petulantly refusing to enter a golden global economic age.101 Rather, as discussed above,102 their arguments are predicated on significant and real concerns about the appropriate role and effects of intellectual property protection in such an economy. Even assuming advocates of more communitarian forms of global socio-economic order were willing to acknowledge the practical (if perhaps only interim) need to employ Adam Smith's economic market103 and the related desirability of IPR interventions,104 those suffering disproportionate burdens will understandably find further IPR expansion problematic, unless their distributional concerns are satisfactorily addressed.

As the key factor affecting IPR distributional consequences is the party's relative ability to capture the resulting preferential returns,105 it might be argued that competitive arts patenting offers an equalizing opportunity for developing nations.106 Their economies lack the resources necessary for meaningful participation in capital intensive technological innovation, leaving them as net consumers and transferors of the wealth providing the return on investment necessary to make the patent machine work.107 In contrast,

100. Or, for that matter, innovation in any field beyond the contemporaneous limited view of the reach of the "industrial arts." See WIPO Report, supra note 2 (noting the current inquiry into using a more generous "utility" standard).
101. See supra notes 63-70 and accompanying text.
102. Id.
103. See supra notes 26-31 and accompanying text.
104. See id.
105. See id.
106. The argument is similar to that made in support of business method patenting within a specific national jurisdiction: encouraging innovation by small firms will help make them more competitive with larger and even dominant firms. See, e.g., DiMatteo, supra note 13, at 22-23; Xiang, supra note 82, at 814 (both noting but not making or supporting the argument). As both commentators point out, and as noted in the text above, that theoretical outcome is likely not to materialize in practice. There is no assurance that small companies will be first out of the blocks, particularly in a first to file system. See supra note 69. Just as such companies may face yet higher barriers to entry raised by resource-rich larger enterprises in a national regime, international business method patenting may merely further exacerbate the distributional position of less developed countries unable to divert their people and resources from more pressing basic needs.
107. See supra note 68 and accompanying text.
competitive arts innovation (as distinct from implementation) generally requires only astute and creative people observing, analyzing, and improving the processes of marketplace exchange.\textsuperscript{108} On this more level playing field, developing countries may stand a much better chance of being net innovators and, therefore, transferees of wealth. Consequently, harmonized WTO-wide patent protection for the competitive arts may offer an opportunity to partially "rebalance" the present distribution of returns on innovation.

Although alluring, the likelihood of this actually occurring is remote. The current state of play regarding competitive arts innovation in developed economies strongly suggests that without further evolution in approach, protection would apply (albeit inappropriately) only to a combination of competitive arts process and technological implementation.\textsuperscript{109} Such an outcome would continue to favor economies that have the resources to develop the implementing tools, merely exacerbating the existing distributional situation.\textsuperscript{110} Even if the major players are willing to reach a compromise\textsuperscript{111} in favor of pure competitive arts patenting, a new obstacle would undoubtedly stand in the way. The same lower investment requirements that level the field for resource-poor developing economies would then make it all the more apparent that such patent protection will generate net economic costs.\textsuperscript{112} Consequently, having successfully disconnected process and tools to regain parity, proponents of competitive arts patenting will (not without irony) face the persuasive argument that it makes no sense to use IPRs merely to redistribute wealth when the net result is to create even less to go around.

V. CONCLUSION

Competitive arts patenting currently has no place in harmonized substantive international patent law. It cannot be justified on market economic grounds, it is not part of the agreement reached under TRIPS,\textsuperscript{113} and under the present circumstances it should not be added. This is not to say that competitive arts should be permanently

\begin{itemize}
  \item \textsuperscript{108} See supra notes 47-48 and accompanying text.
  \item \textsuperscript{109} See supra notes 82-94 and accompanying text.
  \item \textsuperscript{110} See supra notes 67-70 and accompanying text.
  \item \textsuperscript{111} There is nothing "wrong" with pursuing self-interest in negotiations, however, self-interest does not provide a basis for reaching agreement with others not similarly situated. Recognizing the benefits to developed nations of the current "mixed" form of competitive arts patenting (method plus tools), means a substantive compromise will be required.
  \item \textsuperscript{112} See supra notes 52-53 and accompanying text.
  \item \textsuperscript{113} See supra notes 80-95 and accompanying text.
\end{itemize}
and entirely excluded from international intellectual property law harmonization efforts. As national experience grows and local experiments mature, the international community will undoubtedly come to a better working understanding of the important distinction between competitive arts processes and their implementing technologies. Regarding the former, a "something other than patent" approach that avoids over-protection may eventually emerge. Combined with an increased understanding of the normative and distributional consequences of IPR harmonization, the mechanisms will then be in place for reaching mutually acceptable and beneficial agreements including, perhaps, adding appropriate competitive arts coverage to a future, expanded version of TRIPS.

114. See Duffy, supra note 7, at 717 (making his point regarding the value of diversity in the context of business method patenting); supra notes 91-95 (noting the current rethinking of business method patenting in Europe, Japan, and the United States).

115. See Chiappetta, Internet Patents, supra note 3, at 331-48 (making such a proposal).

116. See Chiappetta, WTO, supra note 5, at 387-88 (arguing the propriety of agreements among concurring parties).

117. This will require new negotiations. However, that is neither a bad or senseless thing, but rather a necessary step to ensure an appropriate resolution of all aspects of the harmonization issue. But see Takenaka, supra note 57, at 426.