International Legal Solutions to the Global Problem of Electronic Media Region Codes

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Abstract

Global movement of technology and consumer goods is constantly increasing, and broad international legal frameworks are not comprehensive. One troubling gap in these frameworks is the question of when intellectual property rights (IPRs) should exhaust. International intellectual property law leaves this issue explicitly unaddressed and manufacturers of electronic media have relied increasingly on technological measures such as region codes to fill the gap themselves. Region codes make electronic media playable only in the geographic region of purchase, breaking the global market into segments and allowing media manufacturers significant control over the international flow of goods. In effect, the codes create a regime of narrow IPR exhaustion despite the fact that international law is silent regarding exhaustion. This system is justified by its supposed economic benefits, yet it creates significant problems as well, such as unfair prices, inefficiencies, and a lack of choice for specific consumers in the global market. Scholars have thus proposed two potential international legal approaches to this harmful practice: a TRIPS revision approach and an international trade law approach. Based on the practical feasibility of each solution, this Comment will argue that a narrow TRIPS revision is the best way to curtail the region code problem. Nevertheless, two difficulties linger. Both TRIPS-plus agreements and other IP laws that prohibit TPM circumvention may nullify a region code limit in TRIPS. To solve these problems, the TRIPS revision that handles the region code problem must both stand as a complete statement of international IP law rather than merely a minimum standard, and the international community must move towards a moderate interpretation of the anti-circumvention rules by applying them only to copy-control TPMs.

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I. INTRODUCTION

The movement of technology and information, especially via electronic media, is increasingly global, touching on broad areas of international law from intellectual property to human rights. These legal frameworks will rarely be comprehensive and technological innovations may fill their gaps, sometimes with positive effects and sometimes not. One persistent gap is the issue of when intellectual property rights (IPRs) should exhaust, and how they should be protected globally. While scholars debate this, manufacturers of electronic media have begun to use technological innovations to fill the gap themselves. Seeking to protect their IPRs in the context of this lingering international confusion and to gain control over the international flow of goods, IPR holders have employed systems of region codes.

Region codes are technological restrictions that restrict playback of electronic media based on geographic region. Manufacturers rely increasingly upon these codes in attempting to protect their IPRs, attaching access restrictions to movies and video games and fracturing international markets. This allows them significant control over the international flow of electronic goods, since the codes restrict consumers from playing purchased media in geographic regions that do not correspond to their codes, unless consumers circumvent the code. However, circumvention is not always easy and remains likely illegal in some jurisdictions. Consumers are therefore handicapped—they must acquiesce to the global restrictions that the electronic media industry imposes. While the manufacturers cite various economic benefits, this Comment will suggest that they struggle to accomplish them and harm particular consumers in the global market, thus constituting an inefficient overreach in the balance between protecting IPRs and protecting consumer interests.

I will use "electronic media" as a catchall term, encompassing media such as DVDs, video games, and Blu-ray discs, all of which are subject to their own region code schemes.


See id. ("[M]ulti-zone DVD players . . . allow users to play DVDs regardless of their region codes."); see also Phillip A. Harris, Jr., Mod Chips and Homebrew: A Recipe for Their Continued Use in the Wake of Sony v. Divineo, 9 N.C. J. L. & TECH. 113, 115–16 (2007) (explaining that "[v]ideo game modification chips, or mod chips, are enhancement devices which users place inside video game consoles to . . . [defeat] the 'region encoding' of video game systems").

This is the case, for example, under various copyright laws such as the Digital Millennium Copyright Act in the US. See generally Sun, supra note 2, at 495.
Given that the current legal framework allows this practice, scholars have begun to ask if and how it should address its problems, or if it already does. If the region code system is merely in need of reform in order to more effectively achieve its stated economic goals, then international law has little work to do. However, this Comment’s goals are first to argue that electronic media region coding creates significant problems for the global community that require more than simply reworking the region code system, and then to outline and respond to some proposed methods for international law to limit the practice. Given region coding’s close relationship to IPR exhaustion, perhaps the most intuitive way for international law to address it is through a revision of international intellectual property (IP) law, such as the Agreement on Trade Related Aspects of Intellectual Property (TRIPS). However, original TRIPS negotiations were difficult, and the problems of a renegotiation have caused commentators to seek other approaches. Accordingly, an alternative is to challenge region codes under other international trade law principles. This Comment will explore both the TRIPS approach and the trade law approach, ultimately arguing that a modified TRIPS revision approach remains the best way for international law to curtail the use of region codes.

Region codes are inextricably tied to IP law and principles of IPR exhaustion, so Section II will set some groundwork by summarizing current major international IP laws as well as the doctrine of IPR exhaustion. Section III will then examine how region codes work, explain their specific and general drawbacks, and argue that they are a problem for international trade and the global community. Section IV will review the mechanics of the two most plausible approaches that scholars have proposed for international law to limit regional lockout, summarizing both a TRIPS revision, as well as a trade law approach to the problem.

Section V will then examine the feasibility of both legal alternatives, arguing that revising TRIPS to favor a form of international IPR exhaustion remains the best option for pragmatic reasons—alternatives are simply not likely to work. Section V will contribute further to the discussion by acknowledging some obstacles for such a TRIPS revision: the breadth of the revision, issues

5 See, for example, Ryan L. Vinelli, Note, Bringing Down the Walls: How Technology Is Being Used to Thwart Parallel Importers Amid the International Confusion Concerning Exhaustion of Rights, 17 CARDOZO J. INT’L & COMP. L. 135 (2009) (arguing that international IP law should be reformed to limit regionalized electronics, including region codes); Molly Land, Region Codes and Human Rights, 30 CARDOZO ARTS & ENT. L.J. 275 (2012) (arguing that region codes violate international human rights laws).

arising from TRIPS-plus agreements, and anti-circumvention rules that are found elsewhere in international law. Accordingly, the Comment will present some recommendations for how the TRIPS revision approach might avoid these particular obstacles. The revision must be as narrow as possible, it must function as a complete statement of international IP law rather than a minimum standard, and the international community must move towards a moderate interpretation of the anti-circumvention rules by applying them to copy-control technological protection measures (TPMs) only rather than to access-restrictive TPMs.

II. INTELLECTUAL PROPERTY GROUNDWORK

A. Exhaustion of Intellectual Property Rights

Before diving into region codes specifically, it will be important to understand the broader international debate about IPR exhaustion. This debate is contentious and connected closely to the specific technological issue of region codes. Given this connection, IPR exhaustion can play an important role by providing an insight into how international law might help to resolve the region code problem.

Intellectual property law governs and protects the creation of intellectual works, such as creations of the mind and inventions. It gives the creators limited rights to control the use and the dissemination of those creations. At the most basic level, governments seek to employ and enforce intellectual property laws as means to encourage innovation and creation, which in turn leads to both “economic and social development.” The logic is that, without affording such safeguards to the creators, they will have minimal incentives to continue creating “industrial, scientific, literary or artistic” works. Individual countries develop and promote their own IP laws, but a somewhat extensive international framework also addresses intellectual property.

One of the most widely contested issues regarding international IP law is the exhaustion of IPRs. Exhaustion has been an ongoing, difficult international
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topic for many years—long enough for recent scholarship to characterize the debate as "tired." However formulated, it seeks to define the "territorial rights of IP owners after the first sale of their protected products." In other words, basic exhaustion doctrine says that after an IPR holder sells a work, his IPRs are exhausted and he is no longer able to control the "disposition of that work." Exhaustion doctrine thus attempts to balance the policies of promoting the free flow of goods to consumers and protecting IPR holders by providing them with returns sufficient to continue production. IPR exhaustion in the international context is best understood within the frameworks of its three most prominent formulations: national exhaustion, international exhaustion, and regional exhaustion.

National exhaustion is the most protective of IPRs and is thus generally favored by developed countries with many IPR holders. It maintains that a creator's IPRs are only exhausted in the specific nation of first sale; once a work is sold, the IPRs are exhausted in that particular domestic market. Parallel IPRs, or IPRs in the same work, remain enforceable in other countries until exhausted by first sale in those countries. The effects of this are various and generally favor IPR holders. For one, it allows them to "segment the international market" and prevent goods from one jurisdiction from entering another. With the international market effectively segmented, IPR holders are able to charge a different, profit-maximizing price in each distinct market, thus raising overall profits and making goods more widely available to consumers.

In the specific case of electronic and entertainment media, however, there is

13 Id. at 189.
15 See generally id. (briefly explaining the policies behind the exhaustion doctrines).
17 Id.
18 Id.
19 Id.
reason to think that price discrimination might be more harmful than beneficial.  

An international exhaustion regime falls on the opposite end of the spectrum, eschewing any such market segmentation in favor of the free flow of IPR-protected goods. International exhaustion holds that first sale in any country exhausts the holder’s IPRs worldwide;\(^2\) after the sale, the IPR holder’s rights exhaust with respect to “parallel IPRs in all . . . other jurisdictions.”\(^2\) This means that once consumers purchase IPR-protected works anywhere in the world, they are free to distribute those works internationally, without regard to the IPR holder. Where national exhaustion tilts in favor of giving more control to the producer, an international exhaustion regime favors the consumer and the unobstructed flow of goods across borders.

Community or regional exhaustion falls between the national and international regimes, applying principles of national exhaustion to an area wider than just one nation while refraining from expanding them so far as to be global.\(^4\) For example, the European Union allows IPRs to exhaust within the entire region of the EU rather than by individual country.\(^5\) This type of exhaustion regime creates a middle ground between the two others, but it nevertheless fails to solve the ultimate debate.\(^6\) In other words, regional exhaustion carries many of the advantages and drawbacks of national exhaustion; it simply does so based on an organizational principle broader than nation-by-nation. Because it thus functions as a national exhaustion regime in which the relevant borders are not nations, but regions of nations, it resembles the current structure of the DVD region code system, which organizes the globe into eight regions rather than by individual nations.\(^7\) The fact that regional

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22 See Chiappetta, supra note 16, at 341.

23 Id.


25 See Vinelli, supra note 5, at 155.

26 Id. at 151 (“Many of the complex issues created by national exhaustion remain under community exhaustion since international trade between members and non-members is the same as under a national regime.”).

27 See discussion infra Section III.B.
exhaustion carries the burdens that arise under a national exhaustion regime is thus significant for this Comment, since it suggests that the current region code system, as a regional exhaustion system for electronic media, is also susceptible to these issues.

B. International Laws that Protect Intellectual Property Rights

Currently, a number of frameworks establish an expansive international IP regime. This system includes broad multilateral treaties such as the Berne and Paris Conventions,29 the World Intellectual Property Organization Copyright Treaty (WCT),30 and TRIPS,31 as well as bilateral and multilateral free trade agreements that touch upon IPRs, such as the Australia-US Free Trade Agreement (AUSFTA).32 An overview of these laws is important to both the international legality of region codes, as well as to the ultimate argument regarding how to deal with them.

The Paris and Berne Conventions were the central international IP laws before TRIPS brought intellectual property within the realm of international trade.33 These agreements came about as IP law took an international turn due to significant increases in production and distribution during the nineteenth century.34 Growing confusion resulted in intergovernmental talks to provide international protection to “authors’ rights.”35 In 1886, twelve countries negotiated and adopted the Berne Convention for the Protection of Literary and Artistic Works (Berne Convention)—the “first truly multilateral copyright treaty in history.”36 The Paris Convention for the Protection of Industrial Property

31 TRIPS, supra note 6.
35 Id. at 336.
36 Yu, supra note 34, at 339 (quoting Barbara A. Ringer, The Role of the United States in International Copyright—Past, Present, and Future, 56 GEO. L.J. 1050, 1053 (1967–68)).
(Paris Convention), the corresponding treaty regarding patents, originated similarly, entering into force in 1884. Both Paris and Berne are important to present-day international IP law since their terms have been re-negotiated and updated throughout the years and they remain in effect. Later international agreements, such as TRIPS and the WCT, reinforce many of these terms.

Paris and Berne set the stage for TRIPS, the international agreement central to this Comment. TRIPS came into force in 1995 as the international legal successor to Paris and Berne. It is incredibly important, as it integrates international IPR protection with international trade law, creating binding minimum standards of protection for signatory countries to uphold. TRIPS development began as early as "[a]fter the Second World War," as developed countries such as the United States increasingly sought to protect their competitive advantage by bringing intellectual property rights within the realm of international trade.

The World Intellectual Property Organization (WIPO), a specialized agency of the United Nations, administered both Paris and Berne, but it lacked adequate enforcement mechanisms. For all practical purposes Paris and Berne remained "virtually unenforceable except by coercion or diplomacy, and none of them provide[d] any effective dispute resolution mechanism." Given these difficulties and the increasing development of intellectual products, IPRs entered the debate during the Uruguay Round of international trade negotiations in the early 1990s. This brought intellectual property within the realm of international

37 See WIPO Handbook, supra note 9, at 241; see also Yu, supra note 34, at 343 ("The origin of the Paris Convention was very similar to that of the Berne Convention.").
38 See Yu, supra note 34, at 349–53 (describing the amendments to both conventions since the 1800s).
39 See WTO, Overview: The TRIPS Agreement, http://www.wto.org/english/tratop_e/trips_e/ intel2_e.htm (last visited Jan. 15, 2014) ("[TRIPS] sets these standards by requiring, first, that the substantive obligations of the main conventions of the WIPO, the [Paris Convention] and the [Berne Convention] in their most recent versions, must be complied with."); WCT, supra note 30, art. 1(4) ("Contracting Parties shall comply with Articles 1 to 21 and the Appendix of the Berne Convention.").
40 WTO, Overview: The TRIPS Agreement, supra note 39.
41 See Chiapetta, supra note 16, at 334.
42 Yu, supra note 34, at 356.
44 See Yu, supra note 34, at 355.
45 Id. at 355.
46 WIPO Handbook, supra note 9, at 345.
trade and the negotiations produced both the Agreement Establishing the World Trade Organization (WTO Agreement),\(^47\) as well as TRIPS.\(^48\)

TRIPS was both successful and unsuccessful. It sought to bring international harmony to IPR protection, and succeeds in mandating that “each WTO [member] ... provide ... minimum substantive patent, copyright, [and] trademark ... rights.”\(^49\) Yet it fails to harmonize on the important issue of IPR exhaustion. Before and during negotiations, developed countries such as the US and European countries clashed with developing countries.\(^50\) Developed countries argued that the segmentation of national exhaustion would help increase the “creation and availability of intellectual products.”\(^51\) They also maintained that IPR protection was traditionally a matter of “national sovereignty” and that international exhaustion would violate this.\(^52\) Conversely, developing countries argued for international exhaustion on the grounds that market segmentation would contravene the policies and purposes of international trade law.\(^53\) The debating parties being unable to reach a consensus, the final draft of TRIPS left the matter altogether unaddressed. Article 6 of TRIPS embodies this hands-off approach: “[f]or purposes of dispute settlement ... nothing in this Agreement shall be used to address the issue of the exhaustion of intellectual property rights.”\(^54\)

C. Parallel Importation

Exhaustion doctrines give rise to the issue of parallel importation, which can function as yet another way to understand the exhaustion debate. Parallel imports, or “gray market goods,” are “branded goods that are imported into a market and sold there without the consent of the owner of the trademark in that


\(^{48}\) WIPO Handbook, supra note 9, at 345.

\(^{49}\) Chiappetta, supra note 16, at 345.


\(^{51}\) Chiappetta, supra note 16, at 346.

\(^{52}\) Id.

\(^{53}\) See Frederick M. Abbott, 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, 622–23 (1998) (stating that the different competitive environments of varying international markets does not provide “a policy reason why Members should be entitled to prohibit the importation of products lawfully produced and sold under patents”).

\(^{54}\) TRIPS, supra note 6, art. 6.
market." Importantly, they are not counterfeit goods, but rather genuine goods manufactured under license of the IPR holder. These goods are subsequently imported to a market in which the IPR holder has not authorized distribution. Parallel importation is often damaging to IPR holders because it can undermine the system of price differentiation that allows them to tailor goods and prices to different global regions in an attempt to maximize profits and consumer accessibility.

Understanding parallel imports is important to the ongoing debate over international IPRs, but this Comment will only consider them to the extent that they connect to region codes through the exhaustion debate. In serving as another way to think about the exhaustion doctrines, they can help illuminate the problems of region codes, which are discussed later in detail. In the market segmentation of a national exhaustion regime, parallel importers may engage in arbitrage by “taking advantage of the price fluctuations of an internationally available product,” seeking to purchase the product in its lowest-priced market, and then distributing it in their own market. In this case, the good would be an illegal parallel import to the latter market. Conversely, parallel importation does not exist in a regime of international exhaustion, since as soon as the good is sold, its IPRs are exhausted worldwide and consumers can move the item freely throughout the global market. Put most simply, international exhaustion makes parallel imports legal.

III. The Problem of Using Region Codes to Protect IPRs

A. Region Codes and how they Work

Electronic media producers have sought to fill the gap left by this lack of consensus about IPR exhaustion. In other words, since international IP law does not address exhaustion at all, individual countries adopt differing regimes, thus prompting electronic media producers to seek harmonization of exhaustion

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56 Id.
57 Id.
58 Vinelli, supra note 5, at 141.
59 See Conley, supra note 12, at 190.
60 See Vinelli, supra note 5, at 137 (“[T]he lack of global legal uniformity and consensus as to the ability of the rights holder to stop parallel importation has induced electronics companies to create and embed technologies that bolster the walls of market segmentation that parallel importers attempt to sidestep.”).
through their own technological measures; they protect their IPRs through various forms of digital rights management and TPMs. TPMs for electronic media can take one of several forms. Copy-control TPMs prevent a user from copying the media while other TPMs simply limit consumers' ability to access or utilize the media. Region codes are an example of the latter, or an access-restrictive TPM. They allow producers to manage consumer access to media by geographic region, even after sale.

Region codes allow producers to embed digital media with an electronic code that corresponds to a specific geographic region. The code only allows media playback on devices compatible with its code. DVDs provide a specific example. For DVDs, there are two necessary components: "the region code flag on a DVD and the region code check conducted by a licensed DVD player." The DVD player's check prevents it from showing the content of the DVD unless the DVD is embedded with the correct region flag. Video game region codes work similarly.

The region code system's roots are in the "Content Scramble System" (CSS)—a copy-control TPM that uses encryption codes to "[prevent] movies from being illegally duplicated." The CSS allows the video and audio content on DVDs to be "scrambled" during production but "descrambled during playback on a DVD player." Under the CSS's copy-protection system, DVDs are descrambled for playback but not for copying. This copy-protection system has allowed for the increased development of access-restrictive TPMs like region

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63 Id.

64 See Peter K. Yu, Region Codes and the Territorial Mess, 30 CARDOZO ARTS & ENT. L.J. 187, 191 (2012) ("[R]egion codes direct machines to allow access to the protected content only if the product was coded to be played in the authorized geographic region.").


codes. Although region codes developed from copy-protective TPMs, such as the CSS, scholars have been skeptical about the effectiveness of region codes as a copy protection themselves, arguing that they provide no additional protection than do actual copy-prevention TPMs, such as digital rights management (DRM). This is because, even without region codes, producers could still use “other anti-piracy technologies such as encryption and digital rights management” to prevent unauthorized copying. In this case, while the media still could not be illegally copied, it would be accessible for playback anywhere in the world.

B. Pros and Cons of the DVD Region Code System

The DVD region code system is arguably the most complicated and most prominent, and so most region code scholarship has focused on it over video game or Blu-ray region codes. The current DVD code system divides the world into eight regions. Before examining the general harms of a region code system, it is important to note some of the current system’s practical problems. These structural problems can serve as a springboard to discussing the more significant drawbacks. For example, DVD region codes may prevent citizens from buying DVDs that will play on their home players, even when the purchase is in a neighboring country.

Proponents of DVD region codes rely on several justifications for their use. Despite the contention that region codes themselves do little to combat unauthorized copying, DVD region codes are sometimes justified as a general anti-piracy measure. Thus, even if region codes do not provide protections

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69 Neuwirth, supra note 67, at 415.
70 Sun, supra note 2, at 322 (stating that DVD region coding “provides no additional protection against copying”); see also Vinelli, supra note 5, at 166–67.
71 Vinelli, supra note 5, at 166–67.
74 See Neuwirth, supra note 67, at 417.
75 See discussion supra Section III.A.
76 See Vinelli, supra note 5, at 166 (“Proponents of regionalization often rationalize their incorporation as a means to stop piracy.”).
against copying that go above other copy-control TPMs, such as the CSS, they
nevertheless seek to ensure that pirated DVDs do not compete with legitimate
“DVDs sold in the primary markets, which have different region codes.”\textsuperscript{77} In
other words, DVD region codes restrict the harmful effects of movie piracy by
attempting to cabin the regions in which pirated movies are playable. If a movie
is pirated in China, for example, its region code will keep it from playing in the
United States, minimizing the benefits of movie piracy to the pirates.\textsuperscript{78}

Another prominent justification is that DVD region codes allow for
sequential release—movie studios can use them to stagger movie releases
globally, thus gaining a number of benefits.\textsuperscript{79} The business benefits of using
region codes for sequential release are legitimate; doing so allows studios time to
“reposition films to fit each respective market,” and thus minimize the costs of
preparing movies for global release.\textsuperscript{80} Sequential release may no longer justify
region codes, though, due to the increasing worldwide release of certain movies
and “continued widespread illegal downloading,” which quickly distributes
movies globally.\textsuperscript{81} Further, the actual DVD regions are organized broadly
enough that any one region will tend to encompass many “distinct cultures [and]
distinct languages,” undermining the use of different edits for differing
sensibilities.\textsuperscript{82} Finally, movies tend to remain region coded long after their
release, which tends to nullify arguments based on release.\textsuperscript{83}

The fact that DVD region codes fail to serve particular industry
justifications does not automatically mean we should eliminate them; it only
means that the system may need reform. Perhaps if the regions were better
organized, or there were restrictions on the amount of time electronic media
remained locked, the present system could better serve its justifications.
However, the region coding system’s drawbacks are broader than its confusing
organization or the inability to sustain industry-specific justifications. Its
conceptual similarity to a regional exhaustion regime for electronic media
extends its international drawbacks further.

\textsuperscript{77} See Yu, supra note 64, at 214–15.
\textsuperscript{78} Id. at 215.
\textsuperscript{79} Id. at 200–3.
\textsuperscript{80} Id. at 201.
\textsuperscript{81} See Yu, supra note 64, at 205.
\textsuperscript{82} Id. at 212 (“[I]t is highly doubtful that distribution or licensing arrangements . . . are actually
arranged based on DVD codes.”).
\textsuperscript{83} Id.
C. Relationship of Region Codes to Regional IPR Exhaustion

The innovation of region coding as a widely used TPM creates problems both for international trade and for IPR exhaustion. It seems that region coding has arisen precisely because of the fact that international law fails to address the exhaustion of IPRs.84 This argument is based on the notion that without an international regime to address exhaustion, manufacturers seek to give themselves as much control over the distribution of media and the protection of their IPRs as possible; they fill the gaps, so to speak. Media manufacturers have inserted technological methods that restrict access to their protected media content.85 Thus, we may understand a functioning region code system as akin to a regional exhaustion regime that is self-enforcing. Region codes present a method for IPR holders in electronic media to enforce their own, non-international exhaustion regime ex ante. By embedding the media itself with technology that restricts its global movement, IPR producers do not have to wait for parallel importation to occur, find it, and then enforce existing laws86 against it ex post—the media itself does the job. Since the codes do not split the market up according to national borders, but rather according to geographic regions, the particular self-enforcing exhaustion regime it creates is better understood as a type of regional exhaustion, rather than "national" exhaustion.87 However, the two are functionally equivalent; the only difference is where the relevant geographic boundaries fall.88

With region codes in place, the international market for electronic media is subject to this self-enforcing regional exhaustion regime. Thus, it is susceptible to the same harms that such a regime may cause. We have already seen some of the specific ways that the DVD region code system fails to achieve its objectives, but drawing this link between region codes and regional exhaustion helps to reveal the broader harms. First, the codes may be unable to implement the type of price differentiation that attempts to justify them; and second, restricting

84 See TRIPS, supra note 6, art. 6; discussion supra Section III.A.
85 See Yu, supra note 64, at 191; Vinelli, supra note 5, at 161–62.
86 Whether from national sources, such as the DMCA, or from other bilateral copyright agreements that may go above TRIPS.
87 Similar logic would maintain that complete region code circumvention, either through the use of multi-region media devices or modifications to devices so that they play media from other regions, may be seen as the effective equivalent of an international exhaustion regime. Media that is no longer restricted by the region code system is free to move globally; its use is not confined to a specific region of the world, just as if an international exhaustion regime were in place.
88 See discussion supra Section II.A (describing that even though regional exhaustion is broader, it nevertheless fails to cure the problems of a national exhaustion regime).
parallel imports through region codes is detrimental to international trade, as it
discourages the global free flow of goods. These two reasons suggest that the
costs of region codes as an IPR protection may outweigh their benefits on the
whole. Finally, segmenting the geographic market harms particular media
consumers by limiting consumer choice.

1. Price discrimination difficulties.

One of the most prominent economic justifications for region codes is that
restricting their circumvention and keeping their exhaustion regime in place
allows producers to utilize “price differentiation” to maximize profits and
increase overall welfare. This type of price differentiation can allow producers to
set differing prices in different markets as are appropriate to make goods
affordable to all consumers.89 For example, if a firm serves both rich and poor
countries, charging lower prices in the poor countries allows “both the firm and
the consumers in the poor countries [to] be better off,” while leaving
consumers in the rich countries no worse off.90 This sort of price discrimination
would not be possible without some restriction on goods from the poor country
from entering the market in the rich country, such as region codes. One problem
for this approach, however, is that the consistent availability of ways to
circumvent region codes weakens these economic justifications. Such price
discrimination will be unable to maximize welfare if region code circumvention
occurs, and evidence suggests that it does.91 Even the United States Register of
Copyrights has acknowledged the ease with which region codes are
circumvented.92 Given this ease,93 firms are unlikely to be able to appropriate the
benefits of market segmentation—the increasing movement of goods between
markets that attempt to be discrete will tend to neutralize the positive effects of
price differentiation.

Of course, it is not the case that the consistent availability of a particular
practice means that the law should bend to condone it explicitly, but the case of
region codes is more complicated than this. Various domestic laws around the
world already seem to condone region code circumvention on some level.94

89 See Fink, supra note 20, at 176–77.
90 Id. at 177.
91 Vinelli, supra note 5, at 144 (“[A]rbitrage and parallel importation” are both “practices that are
rampant in our globalized, e-commerce, e-bay world.”).
92 Register of Copyrights, supra note 65, at 122–23.
93 See Theo Papadopolous, The First-Sale Doctrine in International Intellectual Property Law: Trade in
Copyright Related Entertainment Products, 2 ENT. L. 40, 51 (2003).
Copyright's Windmill, 34 OTTAWA L. REV. 7, 58–60 (2002–03) (describing the Australian approach,
under which “trafficking in circumvention technologies” is prohibited, but the consumer act of
undermining its economic justifications even among developed countries. This is not a case where international law should simply bless the practice of circumvention because it already occurs; it is a more complex case where legal measures available around the world will continue to undermine the potential economic benefits of region codes.

Even if circumvention techniques were not simple and widespread, there is evidence that region codes nevertheless do not effectively accomplish the welfare enhancing price discrimination described above. First, the price discrimination theory is appealing, but price discrimination through TPMs is costly and “can be accomplished only imperfectly;” thus, there is an argument that the wider access that circumvention could provide is likely to outweigh these costs. Second, as an empirical matter, producers do not tend to price their products in a manner consistent with the theory behind welfare-enhancing price discrimination. One reason for this is that region codes do a poor job of reducing fears that the “discounted products [will] flow back to their primary markets.” Further, the organization of regions, especially in the case of DVDs, does not seem to differentiate between developed and developing markets well enough “to allow the codes to function well as a price discrimination mechanism.” Finally, where price discrimination in “entertainment products” actually does occur, it may tend to perpetuate welfare-reducing income inequality. This is because “many popular entertainment products” are intended to appeal to low-income consumers, thus price discrimination that disfavors low-income consumers will tend to cause consumer surplus to fall in markets with many low-income consumers. So, even without the widespread availability of circumvention, there are likely to be economic drawbacks of market segmentation and price discrimination in many areas of the world. Region code circumvention may help to create a more equitable distribution.

95 See Rothschild, supra note 62, at 506.
96 See Yu, supra note 64, at 207–8.
97 Id. at 207.
98 Id. at 208.
99 See Meurer, supra note 21, at 93.
100 See id.; see also Rothschild, supra note 62, at 506 (describing that effective price discrimination, implemented by TPMs such as region codes, shifts more, if not all surplus to publishers, and thus has negative distributional consequences).
101 See Meurer, supra note 21, at 93.
2. Positive effects of allowing parallel imports in electronic media.

Restricting parallel imports in general can help to deter arbitrage that harms IPR holders and region codes can help to accomplish this in the specific case of electronic media. In other words, producers may use region codes to help stop the purchase of media in developed countries and the subsequent resale in developed countries, where it would undercut the producer's prices. Of course, given that region codes may not actually effectuate useful price discrimination, this may be less true in the case of electronic media. Nevertheless, allowing parallel importation has significant positive effects for international trade. Since removing region codes would be akin to allowing parallel imports in electronic media, doing so would result in similar positive effects; it would allow those goods to flow freely across international borders. Of course, outright piracy would also allow such a free flow of goods, but allowing parallel imports in electronic media by restricting region coding would not rise to this level. For one, region codes are merely an access restriction; even without them, IPR holders could still combat piracy through TPMs that prevent consumers from copying media. Indeed, as Vinelli argues, "technologies such as encryption and digital rights management could be more effective and efficient" than region codes in deterring piracy.102

Allowing the free flow of goods through parallel imports can "[promote] efficiency, competition, and an increase [in] welfare for net-importing countries."103 This is because the smaller markets created by national and regional segmentation can restrain competition and prohibit the market from dictating a fair price for goods.104 Consumers in net-importing countries could end up facing unfair prices and the producers of protected goods who benefit from restrictions on both parallel imports and circumvention thus benefit at the expense of those consumers. The Australia-US Free Trade Agreement (AUSFTA) provides an example of this. Under AUSFTA, which protects IPRs strictly, "there is overwhelming evidence to the effect that Australian consumers are worse off to the benefit of overseas copyright holders and licensees" when a narrow exhaustion regime is enforced.105 This is because these restrictions allow producers to raise prices substantially above market—by minimizing parallel imports they create a lack of competition.106 We have already seen that price

102 Vinelli, supra note 5, at 167.
103 Id. at 143.
104 See id. at 149.
106 Id. at 12.
discrimination can be beneficial by allowing producers to sell at lower prices, safe in the assumption that cheaper parallel imports will not undercut them, but the lack of parallel importation can also allow producers to charge prices that are too high. The existing empirical evidence suggests that the latter situation is more often the case. An informal 2004 survey showed that, on average, "normal" video game prices in Australia were priced around $99.95 Australian, while the same games in the US averaged prices that were "around 50 percent" lower in equivalent Australian dollars. Recent, more formal surveys have not indicated much change. A 2013 report by the Australian House of Representatives Standing Committee on Infrastructure and Communications showed, through price comparisons, that "foreign IT companies and copyright holders may charge Australian consumers over 50 percent more for products such as digitally downloaded software, computer games, music, movies, and e-books." Industry representatives stressed the flaws of strict price comparisons, suggesting that they can "fail to capture 'many aspects'" of the consumer-retailer relationship. This is important to keep in mind, as higher prices in certain regions may simply represent what the markets in those regions will bear. However, the House Committee Report goes on to outline reasons for thinking that these price differences are unfair to Australian consumers by providing examples of how they harm a wide range of consumers, including low-income consumers, universities and their students, people with disabilities, libraries and library users, and small business owners. Given these facts, Australians have unsurprisingly expressed significant reservations about the further use of region codes and other access-restrictive TPMs.

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107 Id. at 16–17.
110 House Committee Report, supra note 108, at 18–19.
111 Id. at 34–36.
112 Id. at 36–38.
113 Id. at 38–40.
114 Id. at 43–45.
115 Id. at 45–47.
116 Richardson, supra note 105, at 16.
The general failings of the region code exhaustion regime—their inability to effectuate their goal of welfare-enhancing price discrimination or to provide copy-protections above what other TPMs can provide—help illustrate why region codes may constitute an inefficient overreach in the general economic tension between protecting IPRs and protecting consumer interests. Generally speaking, IPR protection gives IPR holders certain monopoly rights over their goods, and we should only provide these rights to the point where their benefits, such as encouraging invention and creation, meet the costs they impose, such as reduction in consumer choice.\textsuperscript{117} The fact that “other anti-piracy technologies” may protect IPRs more effectively and efficiently than region codes\textsuperscript{118} diminishes their added benefits as an extension of IPR protection; and the argument that region codes, whether because of circumvention or other reasons, fail to enhance welfare via price discrimination even further diminishes those benefits. As a general matter then, the costs of adding region codes to the pool of IPR protections may outweigh the added benefits of doing so.

3. Tangible harms.

Finally, there are also particularized examples of how region coding’s exhaustion regime harms individual groups of consumers. This harm reaches consumers who seek to use electronic media for cultural or educational purposes. For example, the “immigrant [family] in the United States” who wants to watch DVDs subtitled in their own language, either for cultural fulfillment or to help children learn a native language, may be unable to find them coded for the correct region.\textsuperscript{119} Similarly, both foreign students studying abroad and domestic students seeking to learn foreign languages may be unable to obtain media in their region.\textsuperscript{120} This impedes the “very important role” that DVDs play in “language and cultural education.”\textsuperscript{121}

The fact that electronic media is coded only for specific geographic regions also means that consumers who travel, live abroad or for other reasons seek to view media from foreign regions are often out of luck. For example, consumers

\begin{footnotes}
\footnote{\textsuperscript{117} See Carsten Fink & Keith E. Maskus, \textit{Why We Study Intellectual Property Rights and What We Have Learned}, in \textit{Intellectual Property and Development: Lessons from Recent Economic Research} 1, 3 (Carsten Fink & Keith E. Maskus eds., 2005) (describing the general trade-offs in determining the “optimal length” of IPR protection, such as “incentives to inventors” and “preferences of consumers.”); see also Fink, \textit{supra} note 20, at 175 (explaining that IPRs “confer market power” to their holders, which poses a “cost to society” that is “counterbalanced by the benefits” of creation).

\footnote{\textsuperscript{118} See Vinelli \textit{supra} note 5, at 166–67.

\footnote{\textsuperscript{119} See Yu, \textit{supra} note 64, at 227.

\footnote{\textsuperscript{120} \textit{Id}.

\footnote{\textsuperscript{121} \textit{Id}. at 227–28.}

\end{footnotes}
who are “students or workers living abroad for a temporary period of time” are forced to purchase (or re-purchase) media in the relevant region.\textsuperscript{122} If they choose to purchase media abroad, however, they will likely be unable to play it again when they return home.\textsuperscript{123} Even if they acknowledge the codes and purchase media that will play in their home region, however, there may still be cultural distortions—the media may not be a genuine representation of the cultural preferences of the original region.\textsuperscript{124} This could extend further and even lead to a censorship effect, as producers have discretion to make media completely unavailable in some regions, leading to a “lack of consumer choice.”\textsuperscript{125} While these various harms may seem like mere inconveniences, since they affect what is presumably only a small part of a given population, they nevertheless illustrate the various tangible harms that a self-enforcing narrow exhaustion regime can impose on particular consumers.

\textbf{IV. THE PROPOSED INTERNATIONAL LAW SOLUTIONS}

Given these broad and narrow drawbacks, scholars have begun to search for methods of limiting or eliminating region codes. And since region codes have effects around the globe, the proposed solutions have focused on international law, asking whether it may help avoid these problems. These solutions seek to limit region codes either under some form of TRIPS revision or by relying on other international trade laws.\textsuperscript{126} Although the current literature on this point is not extensive, this section will examine and outline the contours of these two prominent potential solutions.

\section{A. International Trade Laws and the WTO Agreements}

The “trade law” approach asks whether region codes already contravene international trade law as found in WTO agreements, and if not, how these laws might be revised to allow them to limit region codes. Region codes affect the

\begin{itemize}
  \item \textsuperscript{122} Id. at 217; see also Neuwirth, \textit{supra} note 67, at 414–15 (describing the plight of a “cineaste” unable to view a particular director’s DVDs due to region code restrictions).
  \item \textsuperscript{123} See Yu, \textit{supra} note 64, at 217.
  \item \textsuperscript{124} Id. at 201.
  \item \textsuperscript{125} Id. at 222.
  \item \textsuperscript{126} A few scholars have also begun to examine a third solution, which would seek to limit region codes via international human rights law. This approach, in its simplest form, argues that international human rights law guarantees a right to access cultural materials, and since region codes restrict consumers’ ability to access and enjoy media that embodies particular cultures, it contravenes these international human rights guarantees. See Land, \textit{supra} note 5; Yu, \textit{supra} note 64, at 226–30. Legal scholarship has yet to fully examine this solution, but due to the lack of enforcement and the general aspirational nature of these human rights laws, it seems, at this point, far less likely to work as a solution than either of the others.
\end{itemize}
flow of particular goods in the global market and restrict parallel importation, so they necessarily have restrictive effects on international trade. Thus, the premise is logical—it is reasonable to suggest that international trade laws should address practices that are harmful to international trade, and that if those laws are unable to address such practices, this represents a flaw in the international trade system. However, surprisingly little research has been done to examine whether region coding actually contravenes WTO trade laws. In the only article that appears to examine the question in depth, Professor Rostam J. Neuwirth first examines region coding against general trade law principles, before examining region codes under specific terms of WTO trade agreements. This Section will examine and summarize three issues for the trade law approach before Section V discusses its feasibility. First, the threshold question is whether the WTO trade laws even address region coding at all, since the codes are private in origin. Assuming that they do, the next question is whether region codes actually contravene the terms of WTO laws. Third, supposing that they do, an issue of standing remains; who are the victims of region codes, and can they bring claims before the WTO?

There is a potential threshold issue regarding whether the trade agreements even apply to region codes at all. The general rule is that WTO trade agreements apply to “relations between states and between states and international organisations only,” and not to relations between private parties. This is problematic because, as Neuwirth points out, an examination of the origin and implementation of region codes suggests that they are private party acts. The CSS, which makes region coding possible, is licensed to manufacturers by a private, “not-for-profit corporation” called “the DVD Copy Control Association” (DVD CCA). Thus, before even asking whether region coding contravenes WTO laws, we must address the issue that the laws may not even apply. If the DVD CCA is a private actor, then its actions in implementing region codes may fall outside the WTO’s purview altogether.

One possible response to this is based on an exception to this general rule under which private actions can fall within reach of WTO rules if they are found

127 Neuwirth, supra note 67, at 431 ("It is surprising that there is no legal paper available on the issue of the DVD-RCS that casts some light on the issue from an international trade law perspective.").

128 Id. at 431–37, 441–58; It is worth mentioning here that although TRIPS is a WTO trade agreement, and could thus fall within the “trade law” approach, I will set it aside for now. Since it deals specifically with intellectual property, I will address it in the later section on revising international IP law.

129 Id. at 440.

to have a sufficient nexus with state action. The WTO has held that this determination is to be made on a “case-by-case basis.” Thus, if the particular case of a private, not-for-profit corporation’s implementation of region codes is sufficiently connected to, or endorsed by state governments, it may bypass the threshold issue and come under WTO review.

The WTO is yet to address whether region codes are sufficiently connected to state action, but there are arguments that they might satisfy this requirement. WTO case law may be read to suggest that a private action’s connection to a state does not have to be overwhelmingly strong to overcome this threshold issue and allow WTO review. For instance, the WTO was willing to address whether an Argentinean law constituted a General Agreement on Tariffs and Trade (GATT) violation when all the law did was allow private parties to act in a way that may have created a de facto ban on exports. This provides a relatively loose framework, thus paving the way for a similar argument for region codes. Perhaps just as the Argentinean law allowing a particular private action brought that action under the WTO, the laws that allow for region codes create enough state endorsement to bring them within the WTO as well. The procedure used in the WTO’s Argentina decision may thus be a basis for a general argument that once domestic laws allow some private action to restrict international trade, then they create the “sufficient connection” necessary to bring those actions within the WTO.

Despite this loose reasoning, however, other rules suggest that region codes would not be sufficiently connected to state action. The above argument seems to stretch the Argentina reasoning too far. For instance, private conduct can only trigger WTO review when it “suggest[s] some unapparent or hidden act or impetus of an organ of state,” rather than when it can merely be connected to a state. Under this rule, it would not be enough to show that region codes are connected to state action; rather region codes would have to be a “hidden act” of the state itself. Given the private nature of the DVD CCA, this seems unlikely. Additionally, other decisions have suggested a stricter rule than

132 Japan Panel Report, supra note 131, ¶ 10.56.
Argentina, requiring the private action to be “essentially dependent on Government action or intervention.” While a network of laws may condone region codes, there is no evidence that region codes are dependent on government action. Both of these rules set higher standards than the Argentina case, and the current formulation of region codes would not be likely to meet them.

Resolution of this threshold issue in favor of WTO review will not automatically mean that the WTO will restrict them. Here, the issue becomes whether region codes actually contravene specific provisions of trade agreements, and this is where the trade law argument against region codes seems to get stronger. The first potential problem for region coding arises out of the WTO Agreement itself, which states that the parties recognize that their “relations in the field of trade and economic endeavor should be conducted with a view to raising standards of living, . . . expanding the production of and trade in goods and services,” and that they will enter “mutually advantageous arrangements directed to the substantial reduction of tariffs and other barriers to trade and to the elimination of discriminatory treatment in international trade relations.” Of course, if region codes incentivize creation as an effective IPR protection, they may actually raise standards of living and expand trade in goods, but Neuwirth notes that these general principles might also cut against region codes. This is because region codes are a “nontariff barrier to trade” and we have seen that they can have discriminatory effects, either due to explicit price discrimination, when it is carried out, or discriminatory impacts on particular consumers.

Furthermore, according to Professor Neuwirth, region codes may “contradict . . . not only the letter but . . . the purpose and spirit” of agreements such as the GATT and the Agreement on Technical Barriers to Trade (TBT). He flags some particular provisions to make this point. One important provision is GATT Article XI, which “calls for a general elimination of quantitative restrictions” on importation and exportation from WTO member countries. Article XI states:

No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the

137 WTO Agreement, supra note 47.
138 See discussion supra Section III.C.1.
139 See discussion supra Section III.C.3.
140 Neuwirth, supra note 67, at 454–55.
141 Id. at 443.
importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party.\textsuperscript{142}

Neuwirth explains that this provision authorizes "\textit{as the sole form of . . . restrictions to trade}, the use of 'duties, taxes or other charges,'" by "\textit{prohibit}[ing] quotas, import, and export licenses [and] . . . 'other measures.'"\textsuperscript{143} Since region codes are a trade restriction, and are not duties, taxes, or another type of charge, they seem to fall squarely within Article XI's prohibited "other measures."

Neuwirth also discusses the Agreement on Technical Barriers to Trade (TBT), another agreement that can provide a challenge to region codes. The TBT specifies that countries will "\textit{ensure that technical regulations and standards . . . do not create unnecessary obstacles to international trade.}"\textsuperscript{144} Already, this raises eyebrows about region codes—they are undoubtedly technical and they create an obstacle to trade. The pertinent questions are whether they are "regulations," and whether the obstacle they create is "unnecessary." Neuwirth suggests that region codes may well be "unnecessary," since they fail to achieve many of their objectives.\textsuperscript{145} And the question of whether they are a "technical regulation" is similar to the question regarding private and state action. An important difference here, however, is that the TBT itself may establish "state liability of a WTO Member for private action" more easily than did the above WTO case law.\textsuperscript{146} In other words, it may be easier to establish that region codes are a "regulation" under the specific provisions of the TBT than it would be to establish that they are sufficiently connected to state action to resolve the threshold issue discussed above.

Accepting the argument that region codes contravene specific WTO agreements could be a heavy blow to them, but there remains the third issue of standing. Even if we bypass the threshold issue and also find that region codes violate trade law provisions, we must still ask who its victims are and whether they will have standing to bring their challenges in the international forum. Even with a favorable resolution of the first two issues, private consumers remain the primary victims of region coding, and here we hit another obstacle:

\textsuperscript{142} GATT, supra note 133 art. XI.1; see also Neuwirth, supra note 67, at 443–44.

\textsuperscript{143} Neuwirth, supra note 67, at 443 (emphasis added).


\textsuperscript{145} See Neuwirth, supra note 67, at 446; see also discussion supra Section III (noting the ways in which region codes fail to achieve their objectives).

\textsuperscript{146} See id. at 448–49 (describing how Art. 4.1 of the TBT mandates that WTO Members "\textit{ensure that local government and non-governmental standardizing bodies . . . accept and comply with this Code of Good Practice.}" (emphasis added)).
"[c]onsumers . . . have no direct or indirect way of accessing the WTO’s dispute settlement system."

Neuwirth gestures toward two expansions of WTO law, suggesting that there is both a “need to enhance private parties’ access to the WTO dispute settlement system,” and that the WTO’s focus must shift from government action to private actions. However, further analysis is needed on costs and benefits of broadening either or both of these aspects of the WTO, and there are reasons to think that the costs of these reforms outweigh their benefits.

In sum, the trade law approach shows that region codes may in fact violate specific WTO agreements, but this conclusion will only matter if two serious procedural issues are addressed. First, the WTO must be willing to review private actions, (or it must be the case that region coding is sufficiently connected state action). And second, private consumers must have standing to bring these claims to the WTO. In order for the trade law approach to be our best option for challenging region codes, trade laws must expand to ensure that these conditions are satisfied. If the right balance were struck between private consumers’ ability to make complaints to the WTO, and the WTO’s willingness to review the conduct of the DVD CCA, then international trade law could potentially provide a successful limit to region coding.

B. International Intellectual Property Law

Another, perhaps more intuitive solution commentators have discussed is to challenge region codes by revising principles of international IP law found in TRIPS—the TRIPS revision approach. While legal academics have debated the broad issue of IPR exhaustion extensively, the more specific issue of how IP agreements like TRIPS might address region codes is less prominent. The connection between region coding and exhaustion suggests that one way to address region codes is by resolving the exhaustion issue internationally; since region codes are an access-restrictive TPM, and the goal of TRIPS is to harmonize international IP law, it may be intuitive that TRIPS is the best instrument to handle region codes. Further, TRIPS, as it stands currently, is explicit in its intent to leave IPR exhaustion unaddressed, making a revision of its exhaustion principles seem like a relatively straightforward solution. In this section, I will examine how a TRIPS revision against region codes might look:

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147 Id. at 455.
148 Id. at 458.
149 See Section V.A, supra (discussing the costs and benefits these WTO reforms).
150 TRIPS, supra note 6, art. 6.
first, through an exhaustion rule, and second, through a more specific revision that addresses region codes directly.

1. Revisions favoring international exhaustion.

The broadest potential TRIPS revision that could handle the region code problem is a TRIPS revision that favors international exhaustion in some modified form. As shown above, region codes coincide with regional IPR exhaustion—a regime that is narrower than an international exhaustion regime. Consequently, region code circumvention coincides with international exhaustion of IPRs in electronic media, since it would allow the media to move freely in the global market in the same way that an international exhaustion regime would. Thus, a TRIPS revision that favors international exhaustion, either narrowly or broadly, could help address the problem of region codes. There are several ways in which TRIPS might accomplish this.

First, TRIPS might apply international exhaustion limited by a “rule of reason.” This approach would make international exhaustion of all IPRs the default rule, but it would also provide a limit—parties could “prove that legitimate reasons exist for their IPR to not have been exhausted by a prior sale, i.e., so that the parallel imports can be stopped.” In other words, while international exhaustion would be the default rule, a party seeking narrower exhaustion for certain goods could make its case for such a rule. Applied to region codes, this rule would allow circumvention unless a party seeking to restrict parallel imports through region codes could show that the various justifications for using region codes are “legitimate reasons,” within the meaning of the rule. Scholars have suggested that to satisfy this burden, the party seeking to limit exhaustion would have to show that “the policies underlying free trade and the IPRs at issue would be frustrated by” international exhaustion. This approach is attractive because it is a compromise—while international exhaustion would be the default rule, narrow exhaustion would still be allowed where appropriate. This revision may be limited enough to address the concerns of developed countries that seek a narrow exhaustion regime. In the case of region codes, there would be an analysis of region codes to determine whether they came within the “rule of reason,” and considering their broad harms, it seems like this rule could be effective in limiting their use.

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151 See Darren E. Donnelly, Parallel Trade and International Harmonization of the Exhaustion of Rights Doctrine, 13 SANTA CLARA COMPUTER & HIGH TECH. L.J. 445, 499 (1997); Papadopolous, supra note 93, at 56.

152 See Donnelly, supra note 151, at 499; Papadopolous, supra note 93, at 56.

153 Donnelly, supra note 151, at 500.
Electronic Media Region Codes

While the less concrete "rule of reason" model might be well suited to implementing international harmonization of IPR exhaustion rules with regard to IPRs across the board, a narrower, more bright-line rule may be better suited to accomplish the more specific goal of limiting region codes. This is because a flexible model, while it could accommodate "particular exhaustion regimes" and encourage the participation of all parties affected by exhaustion rules, could also create uncertainty. This uncertainty could leave open the possibility that some formulation of region codes manages to fall within the rule of reason, thus remaining unaffected by the rule. Once we have settled on the goal of limiting region codes, a more concrete exhaustion approach is likely to be more effective.

Accordingly, an even narrower approach would favor international exhaustion, but only in the case of specific goods. This "selective international exhaustion by product class" would be attractive as it is both narrower and provides a more concrete rule than does "rule of reason" exhaustion; under this type of exhaustion, certain classes of products would be subject to international exhaustion while others would be subject to only national exhaustion, and countries could negotiate which products were subject to the narrow regime. This approach would allow international exhaustion only in electronic media, for example, thus nullifying the narrow exhaustion of region codes. Scholars have argued for approaching region codes in this way, suggesting that "the international standard on rights exhaustion should be limited to electronics to avoid disagreements that paralyzed the TRIPS negotiations and garner the willing support of more countries." This draws on the argument that region codes enforce a narrow exhaustion regime—producers use region codes "to compensate for the lack of certainty as to when their rights exhaust and to counteract parallel importers who attempt to circumvent market segmentation." Thus, on this view, the international community should stop the regionalization of electronics by revising TRIPS to adopt an international exhaustion regime with respect to electronic media only, rather than to leave IPR exhaustion either unaddressed or to apply a flexible standard that could

154 See id. at 509.
155 Id.
156 See id. at 499; Papadopolous, supra note 93, at 56.
157 Donnelly, supra note 151, at 499.
158 Vinelli, supra note 5, at 173; see also Papadopolous, supra note 93, at 59 (stating that "selective international exhaustion, after a detailed analysis of the specific product market, seems a sensible approach").
159 Vinelli, supra note 5, at 161.
create uncertainty.\textsuperscript{160} If the international community agreed that electronic media goods were a particular product class that could benefit from international exhaustion, then the regime could apply only to them, effectively eliminating region codes.

2. A specific revision against region codes.

The narrowest approach would simply prohibit region codes explicitly. This approach is attractive because it could avoid the difficulties of the exhaustion debate; developed countries that seek national exhaustion regimes and prohibitions on parallel imports may be considerably more receptive to a revision that does not even mention international exhaustion. This revision would simply prohibit the use of region codes as an access restriction for electronics; the CSS could still be used to prohibit infringement through copy-control TPMs. Additionally, the increasingly available\textsuperscript{161} and increasingly used\textsuperscript{162} techniques for circumventing region codes may already be rendering them ineffective as an access restriction. This is exacerbated as domestic legal regimes resist anti-circumvention laws.\textsuperscript{163} Further, as mentioned above, increasing the availability of circumvention, whether legal or not, undermines the justifications for region codes.\textsuperscript{164} Given that copy protections could still be used, and that circumvention is increasingly neutralizing region codes’ effectiveness, inserting a simple yet specific region code prohibition into TRIPS could be a relatively painless solution to the problem.

\textsuperscript{160} Id. at 162.

\textsuperscript{161} At the time of writing this Comment, a simple Amazon search for “region free DVD player” in the category “Electronics” returned over 1,000 results.

\textsuperscript{162} See Vinelli, supra note 5, at 166 (“However, these [region coding] technologies have time and again been circumvented and rendered useless in combating piracy.”).

\textsuperscript{163} See Samuelson, supra note 21, at 228 n.27 (stating that “Finland proposed to allow circumvention of technical measures for private purposes”); Mike Masnick, Finnish Appeals Court Overturns Decision That Said It Was Okay To Circumvent Ineffective DRM, Tech Dirt, available at http://www.techdirt.com/articles/20080527/1606231237.shtml (May 28, 2008) (last visited April 17, 2014) (stating that a 2007 Finland court decision authorized the circumvention of CSS); Australian Government, Attorney-General’s Department, Short Guide To Copyright, 14 (Oct. 2012) available at http://www.ag.gov.au/RightsAndProtections/Documents/ShortGuidetoCopyright-October2012.pdf (last visited Nov. 2, 2013) (stating that, in Australia, region code circumvention is legal: “Devices which control geographic market segmentation are not TPMs. This means that consumers can circumvent the region coding devices on legitimate DVDs purchased overseas. It also allows for the continued availability of region free DVD players.”).

\textsuperscript{164} See discussion supra Section III.C.1 (profit maximizing market segmentation cannot work when consumers circumvent the measures that provide segmentation).
V. ANALYSIS OF THE PROPOSED SOLUTIONS: WHY A TRIPS REVISION IS BEST

As some scholars have argued, the TRIPS revision approach is the best option; this Comment will to bolster this conclusion by a sort of elimination approach—analysis of the trade law approach shows that it is not likely workable. Further, region codes are unavoidably a method of IPR protection, and are thus tied closely to the exhaustion debate—two issues that are most appropriately the subject of TRIPS.

Scholars have taken differing approaches to how exactly international exhaustion might be used to combat the regionalization of electronics. For example, while Vinelli also argues that a TRIPS revision is the appropriate solution, his approach would enforce the revision primarily through non-governmental, international standards, or domestic legislation. Donnelly, on the other hand, favors “rule of reason” exhaustion in general, under which international exhaustion remains the rule unless there are “legitimate reasons” for a narrower model. This Comment suggests a different, more bright-line approach for TRIPS to handle region codes that is in line with Vinelli’s proposal. Under this approach, a TRIPS revision favoring international exhaustion should be drafted narrowly and should be a ceiling as well as a floor in international IP law. Rather than requiring enforcement through non-governmental standards or allowing parties to get around international exhaustion by showing a “rule of reason,” the revision would seek instead to create a concrete, international rule against region codes. Once TRIPS actually contains such a revision, an international standard or domestic legislation will likely be the appropriate way to get market actors to comply; but before reaching enforcement, we must address the revision itself. Potential obstacles to successful insertion of such a revision include the breadth of the revision, the existence of TRIPS-plus agreements that might still nullify a limit on region codes, and other copyright laws that may already bless the practice of region coding through anti-circumvention rules. Thus, the TRIPS revision approach to region codes must adequately consider these obstacles.

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165 See Vinelli, supra note 5.
166 Vinelli, supra note 5, at 167. Alternatively, he proposes that simple market forces or domestic legislation could help enforce the TRIPS revision. See id. at 170–72.
167 See Donnelly, supra note 151, at 509 (“The rule of reason exhaustion model is . . . procedurally and substantively the most desirable.”).
A. International Trade Laws and the WTO Agreements

The trade law approach suggests that if threshold and standing issues are resolved, region codes could violate WTO agreements. This approach would expand the WTO's focus both to review private actions and give standing to private parties, since we could then limit region codes as a violation of trade principles. However, this approach is problematic: the costs of reforming the WTO's approach to both private actions and private parties are likely to outweigh its benefits, and even so, there are lingering reasons to think that trade law would be unable to limit region codes even with these reforms.

There is still a possibility that region codes do not actually contravene the terms of WTO agreements. In fact, the agreements may even protect the codes. For example, GATT Article XX may recognize that IPR protection is valid as long as it is not a "disguised restriction on international trade."168 Region codes may thus be protected as long as they are not such a restriction. A disguised restriction on trade must (1) appear to protect "genuine and legitimate causes," but (2) have a "concealed character" of protecting domestic production.169 It is not clear that region codes qualify here. They appear to protect a genuine cause—the IPRs of producers—but this is openly their goal. They do not seem to have the requisite "concealed character." Lacking a hidden protectionist purpose, they will not be likely to trigger this provision and the rest of Article XX may apply to preserve them as a valid IPR protection.170

The proposals to widen the WTO's scope to encompass private actions, as well as to allow private consumers to bring claims before it, implicate a long-standing debate over the costs and benefits of these reforms. Scholars have argued that the costs of increasing the WTO's scope in either of these ways are likely to outweigh the benefits. The costs of widening the WTO's view to encompass private actions include the risk that the adjudicative system would

168 GATT, supra note 133, art. XX (excepting from GATT violation measures "necessary to secure compliance with laws or regulations... including those relating to... the protection of patents, trade marks and copyrights, and the prevention of deceptive practices," as long as the measures are not a "disguised restriction on international trade.").


170 Professor Neuwirth is dismissive of this concern, suggesting that Article XX will "prove of little direct relevance," since region codes originate in a private entity and in the country of exportation rather than importation. See Neuwirth, supra note 67, at 444. Nevertheless, as suggested above, there is a good argument that region codes are within Article XX's strict terms, since they protect copyrights and do not seem to be a disguised restriction on trade. Further, dismissing this concern because region codes are private actions undercuts the argument that the WTO should address private actions. Presumably, if GATT rules were expanded to apply actions of private entities, then GATT exceptions would also apply to them; one would be unable to avoid an Article XX concern by arguing that region codes were private in origin.
become “overwhelmed,” that “traditional... business endeavors [would be] complicated or jeopardized,” and that such liberalization would also result in “so little enforcement” of WTO rules that the rules themselves become meaningless to member states.\textsuperscript{171} These are high costs, particularly when other avenues for challenging region codes exist. The costs of adding a private right of access to the WTO may be similarly high, including potential state resistance to the WTO regime and an increased international lawmaking role for private parties.\textsuperscript{172} Thus, the costs of expanding WTO procedures, by bringing private actions within WTO review, by giving private consumers standing, or by doing both, are likely to outweigh their benefits. We should have significant reservations about reforming the WTO in these ways for the narrow purpose of limiting region codes.

Further, if we assume that these procedures are expanded and a WTO Panel is willing to hear private party claims, it remains unlikely that the consumers harmed by region codes would bring claims. As much of the literature suggests, the victims of region codes tend to be immigrant families, foreign and domestic students, film buffs, and video gamers. It would remain to be seen, but seems unlikely that this class of consumers would either have the resources or be willing to spend them navigating a complicated international legal network simply to challenge region codes. Further, as circumvention techniques become increasingly available and increasingly legal, a cheaper and simpler option becomes available to consumers—just buy a region-free device. As a purely practical matter, a private right of action to the WTO may not help to solve the region code problem.

B. Making a TRIPS Revision Work

It is no surprise that scholars have searched for alternative ways to limit the global harms of region codes, especially considering the potential difficulties of re-negotiating exhaustion in TRIPS. The prominent alternatives are nevertheless problematic. Additionally, the fact that TRIPS may be able to handle the region code problem without favoring international exhaustion broadly, since a narrower revision could still feasibly limit region codes, makes renegotiation less daunting than it was previously. Thus, for practical reasons—the difficulties associated with the alternative international approaches and the opportunity for a narrower and easier TRIPS revision—revising TRIPS once again becomes the best option for handling region codes. However, there are still three obstacles

\textsuperscript{171} Zedalis, \textit{supra} note 135, at 362.

that the revision must overcome: it must be kept as narrow as possible, it must avoid the TRIPS-plus problem, and to make it effective, the international community must take a moderate interpretation of non-TRIPS anti-circumvention rules.

The first obstacle is premised on the idea that the narrower the revision, the less room there will be for negotiation-stalling disagreements. Vinelli has argued that TRIPS should be revised to handle regionalized electronics by adopting an international exhaustion model that would be "limited to electronics."\(^{173}\) His proposed product class of "electronics" would thus include a wide range of goods,\(^{174}\) and he suggests that "[n]ations that currently favor the national system could be convinced of the superiority of the international system through emphasis on benefits such as free trade, globalization, and the advantages derived there from."\(^{175}\) However, it is not clear that nations who have favored a national exhaustion regime would be so easily convinced. After all, during the Uruguay Round, developed nations strongly opposed international exhaustion despite emphasis on these very benefits. Accordingly, the broader the scope of the international exhaustion revision, the less likely developed countries will be to hop on board; thus, an international exhaustion regime covering all electronics may still be too broad. A similar revision, still favoring international exhaustion by product class, but with an even narrower product class,\(^{176}\) could alleviate this concern.

Next, to be a concrete solution, the revision would have to avoid any potential TRIPS-plus problems. TRIPS is a floor rather than a ceiling—it sets only minimum standards for IPR protection; Article 1 embodies this principle, allowing countries to contract above TRIPS provisions.\(^{177}\) This allows other international agreements to extend even higher protections than TRIPS. In the current international context, Article 1's effect is seen in bilateral free trade agreements (FTAs) called "TRIPS [p]lus" agreements.\(^{178}\) These agreements go above TRIPS in one of two ways—either by creating "more extensive

\(^{173}\) Vinelli, supra note 5, at 173.

\(^{174}\) See id. at 137–38 (discussing the technological regionalization of a wide array of goods, including DVDs, printers, video game systems, and cell phones).

\(^{175}\) Id. at 163–64.

\(^{176}\) For example, the international exhaustion regime could reach a product class of only electronic media or media subject to region codes, or even more specifically, DVDs alone, or DVDs and video games.

\(^{177}\) TRIPS, supra note 6, art. 1(1) ("[M]embers may, but shall not be obliged to, implement in their law more extensive protection than is required by this Agreement, provided that such protection does not contravene the provisions of this Agreement." (emphasis added)).

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standard[s],” or by “expanding [intellectual property] protection to new areas.” They are often criticized as demanding developing countries to agree to detrimental intellectual property terms because of bargaining power inequities. For example, in the TRIPS-plus forum, the “US agenda is transparently presented as furthering the interest of domestic industry,” and the terms of the FTAs generally protect “first-world IP assets” over those of developing countries. These types of FTAs are widely implemented: “[a]fter . . . 1992, the United States concluded FTAs with no fewer than fourteen countries,” and “[s]ince 2000, there have been more FTAs.” In these agreements, the US has consistently pushed for “harmonization at all costs,” on pro-US terms.

By definition, a national exhaustion regime for electronic media provides stricter IPR protection than does international exhaustion; narrower exhaustion regimes restrict parallel imports and allows IPR holders to control the distribution of their IPRs. A TRIPS revision favoring even a narrow level of international IPR exhaustion could be subject to the above TRIPS-plus concerns. Developed countries with considerable bargaining power could attempt to negotiate TRIPS-plus agreements providing stricter protection than the revision. Indeed, we have seen the US seek to implement its own goals internationally through this piecemeal process, so there is little doubt that the power and ability exists. Yet, if successful, TRIPS-plus agreements such as these would neutralize the effects of a revision towards eliminating region codes. One solution is simply to argue that these agreements would be invalid under TRIPS itself, since Article 1 of TRIPS also provides that TRIPS-plus agreements may not “contravene the provisions of this Agreement.”

An agreement between TRIPS countries that attempts to preserve narrow exhaustion through region codes might therefore be void if TRIPS were successfully revised against region

179 See id.
180 Id. at 1006.
182 Id. Importantly, this is not limited to FTAs with developing countries; the US has also imposed terms favorable to itself in agreements with developed countries, such as Australia. This is a testament to the strength of US bargaining power in getting other nations to agree to the IPR protections that it wants—it is not simply overpowering developing countries with few IPR holders, but also reaching favorable terms to the detriment of other developed countries. See, for example, Section III.C.1, supra (discussing the AUSFTA’s detrimental effects on Australian consumers). As of this Comment, the latest development in the TRIPS-plus sphere is the expansive Trans-Pacific Partnership (TPP), which is currently still in the negotiation stage, and has so far been criticized for its rather extensive and pro-US IPR protections. See PUBLIC KNOWLEDGE, *The Trans-Pacific Partnership Agreement: Your Guide to Copyright in the TPP*, http://tppinfo.org (last visited Feb. 8, 2014).
183 TRIPS, supra note 6, art. 1(1).
coding, as long as the TRIPS-plus agreement were found to “contravene” this revision. Nevertheless, if TRIPS adopts an international exhaustion regime that applies either to region coded goods or electronic media, its status as merely a floor leaves open the potential for other bilateral arrangements that seek to somehow favor national exhaustion. To solve this problem, the revision should not merely eliminate the possibility of region codes; it should also establish itself as a ceiling regarding exhaustion rather than simply a floor.

The final potential obstacle to a TRIPS revision favoring limited international exhaustion is contained in the anti-circumvention provisions of other international IP laws. For example, the WCT prohibits circumvention of technological IPR protection mechanisms. This provision has been the genesis for domestic anti-circumvention laws such as the Digital Millennium Copyright Act (DMCA). Since region codes are an access-restrictive TPM, and these anti-circumvention laws are enforced separately from TRIPS, circumvention may still be illegal and the WCT may continue to implicitly bless the practice of region coding internationally, notwithstanding a TRIPS revision that cuts against region codes. However, the TRIPS provision need not conflict with these anti-circumvention rules—countries may interpret and apply the anti-circumvention rules in a manner consistent with a region code limit.

Interpretations of the WCT’s anti-circumvention provision take two general forms—broad and moderate. The EU and the US adopt the broad interpretation, reading anti-circumvention provisions to prohibit circumvention of both access and copy protection TPMs. The moderate interpretation, however, taken by Japan and Australia, only allows the rules to prohibit circumvention of copy protection TPMs. Thus, the international community should move toward enforcement of the moderate interpretation, allowing for circumvention of access-restrictive TPMs such as region codes, and thus remaining consistent with a TRIPS revision that limits their use. More importantly, perhaps, moving towards a moderate interpretation sooner rather than later could help facilitate the very type of TRIPS revision for which this

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184 WCT, supra note 39, art. 11.
187 Id. at 223.
188 Id. at 234.
189 Id. at 234–35.
Comment argues. As long as the broad interpretation carries weight in the international community, making region code circumvention illegal, it may provide bargaining power to countries that would seek to fight a TRIPS revision against region codes.

VI. CONCLUSION

Based on the practical and conceptual problems of the alternatives, a TRIPS revision approach remains the international community’s best option for limiting the region code problem. However, to be successful, the revision must overcome a number of its own obstacles—it must remain as narrow as possible, it should seek to avoid potential TRIPS-plus problems by standing as a ceiling rather than a floor, and the international community must cooperate by moving toward a moderate interpretation of non-TRIPS anti-circumvention provisions found elsewhere in international IP law.

There is no doubt that TRIPS negotiations at the Uruguay Round encountered problems regarding IPR exhaustion. Developed countries fought for narrow exhaustion to protect IPR holders, while developing countries, concerned about market segmentation, argued for international exhaustion. The two sides could not reach a compromise other than to settle on Article 6’s non-committal approach. It is therefore unsurprising that commentators have sought alternatives to a TRIPS revision to halt the use of region codes. After all, if region codes represent a narrow exhaustion regime for electronic media, and TRIPS negotiations on the point of exhaustion were fraught with difficulty, then it may be prudent to avoid a renegotiation of TRIPS in dealing with region codes. However, examination of these alternatives, namely the trade law approach, reveals that they carry their own practical problems; when these broad problems are compared to the option of dealing with region codes through a re-examined, narrow revision of TRIPS, it once again becomes the case that, as others have argued, TRIPS is the best forum for curtailing the international use of region codes.

There are always complications, and even the best solution will rarely be perfect. A TRIPS revision dealing with the problem of region codes, even if well-constructed and narrow, will encounter its own complications. Both TRIPS-plus agreements, and the continued existence of non-TRIPS anti-circumvention rules could impede successful revision negotiations. Accordingly, the international community must address both obstacles: the TRIPS revision should be a complete statement of the international position rather than merely a minimum standard; and the global community as a whole should work towards adopting a moderate view of anti-circumvention rules, interpreting them only to refer to the circumvention of copy protections.
IPR exhaustion in TRIPS and international anti-circumvention rules are undoubtedly polarizing issues of international law; neither negotiating a TRIPS revision nor reaching a consensus on a moderate interpretation of non-TRIPS IP laws will be easy.190 Despite these difficulties, solving the region code problem through these mechanisms is incredibly important. It will help eliminate private manufacturers' abilities to limit the flow of goods, information, and culture through region codes, and this will have far-reaching, positive effects on consumers as well as on international free trade. Further, the positive effects of eliminating region lock will only grow as innovation and technology make electronic consumer goods increasingly important to the global economy. Reducing regionalization, even one small step at a time, will have broad global implications—it will pave the way for increased free trade in all electronic goods and eventually a better harmonization of the conflict between the restrictive goals of IP law and the expansive principles of free trade.

190 This is especially true in light of pending international agreements that seem to contain extensive pro-IPR terms, such as the TPP See supra note 182.