cyberspace, but it is very difficult to say what happens to it once it is there. If the webpage is located at Stanford, how does it 'travel' to Bolivia? Is the Bolivian coming to Stanford? Talk about asking the wrong questions!

Second, constituent parts of a webpage are often called from other servers, with the source code for the page consisting mostly of images called up from other places. We do not know what the future will bring, but we can only suppose that 'sites' consisting of data pulled from around the world at the downloader's request will become more common. Complexity will likely increase, not decrease.

Third, a webpage consists in large part of links to other pages which may be 'located' in other countries. Even if the data is not called up by the webpage itself, links to other data are presented to the downloader for him to (in today's mouse technology) click on. It becomes irrational to say that a webpage with links to gambling and pornography 'located' in 20 different countries is subject to the law of any and all of those countries. A government could criminalise the creation of links to certain sites, but this would create jurisdictional bedlam.[42] Of course as computer technology develops, the future will only create more interactivity and more absurdities. I would like to believe that this analysis of cyberspace would fail the Restatement test of reasonableness.[43]

Fourth, such interactivity is also supplemented by randomness and anonymity. This is often overlooked. In his article, 'Jurisdiction of Cyberspace: Applying Real World Precedent to the Virtual Community', William Byassee argues persuasively that territoriality should refer only to the 'physical components of the cyberspace community', who are the 'sender and recipient'.[44] The terms 'sender' and 'recipient', are terms implying intent of two (and only two) parties to communicate with each other. This is not the same as the 'uploader and downloader'. The downloader and the uploader do not know who the other is, or where the other is. For the downloader, the files are on his computer.

The substantive results of this analysis would lead to a considerable amount of seemingly random criminal liability, without really adding anything to a state's ability to control the content of cyberspace under the theory of international spaces. Persons travelling around cyberspace need to know what set of laws applies to their actions. If we reject the territorialisation of cyberspace, and accept the theory of the uploader and the downloader, we must reject the broad form of the 'law of the server'.

By contrast, under the theory of international spaces developed below, the rules are clear. The state where a server is located retains jurisdiction over the acts performed on that state's territory: the creation of the internet account for the foreign *persona non grata*, and the tolerance of that account (and the offensive

42 Picture a computer screen full of links, each one subject to the laws of at least one other jurisdiction, and the webpage itself subject to the law of its server on top of all that. Among other things, one shudders to consider the first amendment analysis of a law criminalising the HTML command, <a href = 'www.university.edu/~homepage'>. Or the random link.

43 1987 Restatement SS 403(1) 'Even when one of the bases for jurisdiction … is present, a state may not exercise jurisdiction to prescribe law with respect to a person or activity having connections with another state when the exercise of such jurisdiction is unreasonable'.

44 William Byassee, 'Jurisdiction of Cyberspace: Applying Real World Precedent to the Virtual Community' (1995) 30 *Wake Forest L Rev* 197.

content) by whatever powers-that-be (typically a sysop)[45] who can exercise some control over the server. The rule of nationality in cyberspace means that American nationals and US corporations[46] cannot circumvent US law by uploading from foreign jurisdictions, assuring the American government a distinct slice of control over content in cyberspace.[47]

The theory of international spaces, then, converts the 'law of the server' into the law of the sysop. It may be a law of vicarious liability, of dubious wisdom, but it would be a law concerning only a sovereign and its territorial jurisdiction over a sysop, which presents no problems at international law. A sysop could be criminally liable for the content over which he has some measure of control, regardless of the nationality or location of the uploader, but an uploader would only be criminally liable if he was located within the territory of the forum state, or was a national of that forum state.

Fortunately for the future of sysops, this result has two drawbacks. First, it may prove impossible to determine where the material was uploaded from, or the nationality of the uploader. Second, this would create a two-class system of servers in cyberspace, those 'located' within the territory of the forum state and those without, while all are equally accessible. National governments are likely to make very little use of the 'law of the sysop', and instead concentrate on regulating downloaders and uploaders.

V The theory of international spaces

A Overview

The theory of international spaces begins with one proposition: nationality, not territoriality, is the basis for the jurisdiction to prescribe in outer space, Antarctica, and the high seas. This general proposition must be assembled through observations. In outer space, the nationality of the registry of the vessel, manned or unmanned, is the relevant category. In Antarctica, the nationality of the base governs.[48] Other informal arrangements (USA provides all air traffic control in Antarctica, for instance)[49] weigh heavily in decisions about jurisdiction.

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45 Sysop means 'system operator,' but is often referred to as a system administrator, with no apparent thought to the inconsistency. System administrators often have very little control over the system, and indeed can often barely keep it running. They are the Dutch boys with their fingers in the dykes; they do not control the weather.

46 The ascribed nationality of corporations is a study in itself. The US government is particularly willing to ascribe nationality liberally to its corporations acting abroad. For an example, see the case of *Dresser France and the Soviet Pipeline* 'Judge Backs US Bid to Penalize Company on Soviet Pipeline Sale', *NY Times*, 25 August 1982 at A1.

47 As a relic of cyberspace's beginnings in the worldwide scientific community, the primary language in cyberspace is English – which helps to explain why Americans are so interested in regulating all of cyberspace. This is changing as cyberspace becomes 'inhabited' by ordinary people around the world. As this happens, the ability of a government to regulate its nationals, and thereby most of what appears in cyberspace in the national language, will surely seem much more valuable than territorial jurisdiction. The history of the printing press is perhaps illustrative. Ordinary publishing began as a trans-European Latin-language venture in the 16th century. By the end of the 17th century, international book commerce had given way to broad national vernacular markets. Benedict Anderson, 1983, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, London: Verso at p 25.

48 There is a special provision in the Antarctic Treaty for exchanges of scientists and observers. These individuals are subject only to their own national law. Antarctic Treaty, Art VIII (1).

49 See, eg *Beattie v United States* (1984) 756 F 2d 91. The court permitted a lawsuit claiming negligence of US Air Traffic controllers at McMurdo Station, Antarctica.

On the high seas, the nationality of the vessel is the primary rule, the 'law of the flag'. There is an emerging, competing view that at sea there is really 'floating island' jurisdiction, a subspecies of territorial jurisdiction, or even a full sixth principle – not nationality at all.[50] This theory posits that vessels at sea are really 'floating islands', and that the jurisdiction predicated upon them is territorial in nature.[51] The Supreme Court has weighed in against this interpretation, pointing out that stepping on a US vessel is not entering the United States.[52] The 'floating island' theory appears to derive from the obsolete notion that vessels must somehow possess territoriality because 'the right of protection and jurisdiction ... can be exercised only upon the territory'.[53]

One approach is to treat these three areas as *sui generis* treaty regimes. Some scholars see international law as no more than the sum of various international agreements – a purely positivist approach. This approach has the veneer of theoretical consistency, but only if we are unwilling to recognise an evolving organic international system.

Such a thin conception of international law is, at any rate, out of touch with the real treatment of the respective international regimes in American courts. It is usual for American courts to treat these regimes as analogs. *Smith v United States* is typical in this regard:

> ... Antarctica is just one of three vast sovereignless places where the negligence of federal agents may cause death or physical injury. The negligence that is alleged in this case will surely have its parallels in outer space ... Moreover, our jurisprudence relating to negligence of federal agents on the sovereignless high seas points unerringly to the correct disposition in this case. *Smith v United States* (J Stevens, dissent) 507 US 197, 122 L Ed 2d, 548, 556–57 (1993).[54]

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50 Christopher Blakesley, 'Criminal Law: United States Jurisdiction Over Extraterritorial Crime' (1982) 73 *J Crim L* 1109, 1110, n 6.

51 There actually was a floating island. Fletcher Ice Island (T-3) is 99% ice, seven miles wide, four miles across, and 100 feet thick. No mere iceberg. It was sighted by an American in 1947, and has been occupied by the US since 1952. Fletcher Ice Island meanders around the Arctic Ocean. In 1961, for example, it was grounded on the Alaskan coastline near Point Barrrow. In 1970, it was in the Baffin Sea, 305 miles from Greenland (Denmark) and 200 miles from Ellesmere Island (Canada). That year, Mario Jaime Escamilla was convicted of involuntary manslaughter in a US Federal Court for the shooting death of Bennie Lightsey while both were on Fletcher Ice Island. Bizarrely, the Court of Appeals reversed and remanded the case on procedural grounds, after first noting that it was 'unable to decide' the jurisdictional issue. *United States v Escamilla* 467 F 2d 341, 344 (4th Cir 1972). That is to say: in the only recorded case of a floating island, the court was unable to endorse the 'floating island' theory as a basis for jurisdiction.

52 *United States ex rel Claussen v Day*, 279 US 398 (1929).

53 Henry Glass, *Marine International Law* (1885) at pp 526–27.

54 Justice Stevens went on to claim that a theory of 'personal sovereignty' held in Antarctica. 'As was well settled at English common law before our Republic was founded, a nation's personal sovereignty over its own citizens may support the exercise of civil jurisdiction in transitory actions arising in places not subject to any sovereign.' He cited *Mostyn v Fabrigas*, 98 ER 1021, 1032 (KB 1774). The reader will soon note that it is the physicality of these 'sovereignless regions', above any relevant legal characteristic, which makes the assertion of a similar regime for cyberspace somewhat intrepid. It is precisely this *Pennoyer v Neff* view of sovereignty, presence, and power which we must learn to move beyond.

In *Hughes Aircraft*,[55] the US Court of Federal Claims held that US patent law did not apply to foreign spacecraft in outer space relying 'perhaps most dispositively' on the decision in *Smith v United States* that barred the application of the Federal Tort Claims Act to claims arising in Antarctica.[56] The governing treaties are also similar in their conception and design.[57]

The next theoretical and conceptual hurdle is physicality. These three physical spaces are nothing at all like cyberspace, a nonphysical space. The physical/nonphysical distinction, however, is only one of so many distinctions which could be made between these spaces. After all, one could hardly posit three more dissimilar physicalities – the ocean, a continent, and the sky. What makes them analogs is not any physical similarity at all, but their international, sovereignless quality. These three, like cyberspace, are international spaces. Lest it be forgotten, Antarctica, the high seas, and outer space are only habitable under special circumstances, and the respective regimes resemble each other most where these 'places' are truly uninhabitable.[58]

As a fourth international space, the default rules for cyberspace should resemble the rules governing the other three international spaces, even in the absence of a regime-specific organising treaty, which the other three international spaces have.

B Evolution of international law

International law is neither a code nor an international common law. Its sources are many and varied, relying heavily on tradition and custom. The statute of the International Court of Justice is illustrative:

> 1 The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply:
>
> (a) international conventions, whether general or particular, establishing rules expressly recognised by the contesting states;
>
> (b) international custom, as evidence of a general practice accepted as law;
>
> (c) the general principles of law recognised by civilised nations;
>
> (d) ... [J]udicial decisions and the teachings of the most highly qualified publicists of the various nations, as a subsidiary means for the determination of rules of law.
>
> Article 38, Stat ICJ

Under this scheme, treaties are only one, albeit the primary, source of law. Customary international law, the grounds for the decision in *The Paquete Habana*, is often the most important part of international law. Treaties generally codify customary law, rather than create new law. This contrasts greatly with civil law systems, in which the code is paramount, and with common law systems, in which statutes and judicial decisions together form the core of the law.

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55 *Hughes Aircraft v United States* (1993) 29 Fed Cl 197, 231.

56 *Smith v United States* (1993) 507 US 197, 122 L Ed 2d 548.

57 The Outer Space Treaty was based directly on the Antarctic Treaty. See section C, *infra*.

58 Aristotle would be pleased with the symmetry. We have international regimes for uninhabitable earth, uninhabitable air, and uninhabitable water. Cyberspace completes the four elements as fire, which except for Hell is by its nature uninhabitable.

International law, then, is not a model of positive law. Elements of natural law, including notably *jus cogens*, are mixed into positive law and custom without a grand conceptual framework or metanarrative.[59]

Two concepts of particular importance in the disputes over international spaces demonstrate the point: *res nullius* and *res communis*. The debate over the seabed in international waters, Antarctica, and the moon revolved around the possibility of a nation asserting territorial jurisdiction. Under the theory that these things were *res nullius* (a thing of no one), a theory grounded in Roman law and also Lockean concepts of natural law, any state could assert sovereignty, if the traditional tests of the validity of a territorial claim were met.[60] Other nations, especially third world nations, asserted that these areas were *res communis* (a common thing). This argument is echoed in lofty provisions in treaties such as the Seabed Treaty, Outer Space Treaty, and the Antarctic Treaty calling these places the 'common heritage of mankind'. *Res communis* owes its origin to Roman law, natural law theories, and arguments of customary international law – not to mention general principles of equal sovereignty embodied in the League of Nations and United Nations charters.[61]

Given the nature of international law, it is entirely appropriate for a paper to urge the recognition of a general principle of law derived from custom, treaty, and existing general principles of international law.

C The case for international spaces

1 History

The history of international space begins at sea. Admiralty law and the law of the high seas owe their modern incarnation to Grotius[62] in the 17th century.[63] The Law of the Sea remains the dominating voice in this discussion of international spaces, and the oceans have long been by far the most important of the international spaces.

While postulated by the ancient Greeks as an opposite for the northern ocean, the southern continent, Antarctica, was not discovered until about 1820. Antarctica did not become the subject of serious international attention until the 1950s, especially during the International Geophysical Year (1957–58).

Outer space has even a stranger history. Visible since time immemorial, outer space remained a mystery until roughly the time of Grotius, when Copernicus, Galileo, and Newton began to understand what it was. It was not until 1957, however, that Sputnik introduced man to the third international space.

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59 For an excellent and delightful analysis of what it means for international law to lack a metanarrative, see Barbara Stark, 'What We Talk About When We Talk About War' (1996) 32 *Stan J Int L*.

60 Claiming 'undiscovered' islands (with or without natives) requires a mix of history and presence. The Falkland Islands have been disputed by Britain and Spain (and Spain's successor in interest, Argentina) on largely these grounds. One could summarise the theory as follows: Anything not nailed down is mine. Anything I can pry up is not nailed down.

61 As we can see, *res communis* won the day.

62 Hugo Grotius, *De Iure Belli Ac Pacis* [On the Law of War and Peace], 1853, Cambridge: Cambridge University Press.

63 The Roman *mare nostrum* 'our sea' for the Mediterranean was the result of two centuries of no real conflicts-of-law, the *Pax Romana*. Modern international law really begins with the Peace of Westphalia (1648) which endorsed one theory that the sovereign state is the sole building block of the political world. Today this is so ingrained that every individual 'has' a nationality just as he or she has a gender. Benedict Anderson, 1983, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, London: Verso at p 14.

Cyberspace emerged during the 1970s and 1980s as the apparatus of the internet took root, but it was not until the early 1990s that an explosion in users and uses, including commercial uses, introduced a worldwide virtual community to a new, fourth, international space.

In each international space, international conflict has been a prime mover in forming treaty regimes. For example, it is cynically suggested by some that Grotius was interested in international law at sea only as Dutch naval power was waning. Certainly naval warfare has a long history of increasing importance in international law.

Concerns over the Antarctic pie during the Cold War led to the treaty regime which, in effect, froze[64] the national claims to polar wedges. These competing national claims will be discussed in greater detail below. Some regard the 1982 Falklands war as a war over Antarctic resources.

Humanity's entrance into outer space was attended at its outset by international conflict, primarily surrounding the Cold War, though also encompassing the ambitions of lesser powers such as France.

Similar pressures will soon come to bear in cyberspace. Computer viruses and the 'munitions' status of cryptography[65] ensure that international confrontation will enter cyberspace even if human beings cannot. Cyberspace is as much a space for traditional public international law as for private international law.

2 Jurisdiction in Antarctica

The Antarctic Treaty does not itself prescribe a complete system of jurisdiction. Instead, questions relating to the exercise of jurisdiction in Antarctica were included in the illustrative list of matters which may be taken up by Antarctic Treaty consultative meetings.[66] So far no measures dealing specifically with jurisdictional questions have been adopted.[67] The treaty does make some minor provisions, however. The treaty provides for open observation of all bases and the exchange of scientific personnel between these bases. Article VIII SS 1 provides that such observers and scientific personnel be subject to jurisdiction based solely on their nationality, and not on either strict territorial jurisdiction or 'floating island' jurisdiction (ie the notion that the nationality of the base would grant jurisdiction to that state over all persons thereon).

Subsequent treaties have addressed nationality more directly. The Convention for the Conservation of Antarctic Seals (1972) provides expressly in Article 2 that, 'each Contracting Party shall adopt for its nationals and for vessels under its flag such laws, regulations and other measures, including a permit system as appropriate, as may be necessary to implement this convention'. It does not endorse a territorial or universalist approach.

One reason for avoiding questions of territorial jurisdiction in Antarctica is that seven nations have made overlapping claims to various polar wedges of Antarctic territory (Argentina, Chile, the United Kingdom, France, Norway, Australia, and New Zealand). All of these claims are suspended while the treaty

64 'Suspended' rather than 'froze' is more accurate, but 'froze' seems to be the universal formulation, apparently because, as with this author, the pun never fails to satisfy.

65 See Stephen Levy, Cyberpunks, *Wired Magazine* 1.2 May/June 1993.

66 Antarctic Treaty Article IX SS 1(e).

67 Sir Arthur Watts, *International Law and the Antarctic Treaty System* (1992) Cambridge: Grotius at p 169.

is operational.[68] Several nations, including the United States and the Soviet Union, deny all claims and, during the Cold War, both superpowers made a point of maintaining bases in all seven claimed areas. The United States accomplished this the easy way, by maintaining a base at the South Pole.

It is essential that we recognise that Antarctica is not just governed by a set of treaties, but by a regime or system. This is acknowledged in several treaties themselves. For example, the Convention on the Regulation of Antarctic Mineral Resource Activities (1988) Article 2.11 reads: 'This Convention is an integral part of the Antarctic Treaty system, comprising the Antarctic Treaty, the measures in effect under that Treaty, and its associated separate legal instruments ...' It is the established practice of the parties to the various treaties to consider them as part of a single whole.[69]

To date there are 40 signatories to the Antarctic Treaty, and all those involved in Antarctica are signatories. For this reason, it is somewhat academic whether the regime applies to non-treaty parties. However, commentators make the argument that the Antarctic Treaty system constitutes an 'objective regime, such that it is valid for, and confers rights and imposes obligations upon third states'.[70] Although the Treaty does not by its own terms apply *erga omnes*, general acquiesce can establish a regime. In addition, the Vienna Convention (which makes clear that a single treaty does not create obligations on third state without its consent – Article 34) does not strictly apply because it was adopted in 1969. It is reasonable to conclude that the Antarctic Treaty Regime has, like the law of the sea, ripened into full international customary law.

There are several American cases dealing with Antarctica, which illustrate the texture of international law in action, lessons clearly lost on the Minnesota Attorney General.

Beattie v United States is a fascinating case about international law, comity, and international spaces. The facts are tragic: an Air New Zealand jet crashed into Mount Erebus, Antarctica, on 28 December 1979, killing all 257 passengers and the crew. Families of the passengers sued the United States government, claiming negligence by the US air traffic controllers at McMurdo Station, Antarctica. The question before the court was whether, under the Federal Tort Claims Act (FTCA), Antarctica fell under the 'foreign country' exception to the waiver of sovereign immunity under the FTCA. The court held that, for these narrow purposes, Antarctica was not a foreign country, and allowed the lawsuit to proceed.[71] In allowing the suit, it cannot have escaped the American court's notice that this accident 'in terms of loss of human life and family bereavement was the worst disaster to strike New Zealand since the end of the 1939–45 war.'[72]

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68 The treaty was originally to run for 30 years, from 1961 to 1991. It was renewed in 1991, and will likely be renewed indefinitely.

69 Watts, *supra* n 67 at 292.

70 *Ibid*, at 295.

71 The holding that Antarctica was not a 'foreign country' is really limited to the FTCA in this instance, and is not at all a statement about Antarctica's legal status. *Smith v United States* held that Antarctica was a foreign country, and did not allow the suit to go forward. Her husband was a carpenter who fell into a crevasse on a recreational hike from McMurdo station to Scott Base, a New Zealand outpost. *Beattie* was not overruled.

72 *Mahon v Air New Zealand Ltd*, Privy Council, 1 AC 808; [1984] 3 All ER 201 (opinion by Lord Diplock). The Mount Erebus disaster was the subject of parallel case in New Zealand, and was appealed out of Wellington to the Privy Council in London for a hearing on a matter unrelated to international jurisdiction.

Environmental Defense Fund v Massey[73] contains an exposition on the domestic presumption against extraterritorial application of US law. Again, it deals with the McMurdo base, which is an American base near the Ross Ice Shelf. As is typical, the court notes that 'Antarctica is generally considered to be a "global common" and frequently analogised to outer space'.

In declining to apply the presumption, the court holds that 'where there is no potential for conflict between our laws and those of other nations, the purpose behind the presumption [against extraterritoriality] is eviscerated, and the presumption against extraterritoriality applies with significantly less force'. The court would also likely endorse the corollary, that where, as in cyberspace, the potential for conflicts of law is tremendous, the presumption against extraterritoriality is very forceful.

These cases show that domestic law has absorbed the notion of an international regime in Antarctica, analogised to outer space.

3 Jurisdiction in outer space

In outer space, the fundamental document is the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (1967). The treaty was adopted pursuant to a United Nations General Resolution which contains verbatim much of the text of the Treaty.[74] The Resolution and the Treaty are explicit that states have jurisdiction over objects bearing their registry. Remarkably, this was a unanimous Resolution of the General Assembly.[75]

There is also no doubt that the Treaty for Outer Space was based on the Antarctic Treaty. The Hearings before the Committee on Foreign Relations (US Senate) 1967 actually includes a copy of the Antarctic Treaty. In the hearings, the committee noted that the Outer Space Treaty was specifically based on the Antarctic Treaty.[76]

Article II of the Treaty states that outer space, including the moon, is not subject to claims of sovereignty. Therefore, no territorial jurisdiction is possible. Article III provides that all activities shall be in accordance with international law. This article assures us that international law is not merely a terrestrial phenomenon, but includes all non-sovereign spaces, whether on this earth or beyond it.

The treaty skirts many jurisdictional problems through Article VI which declares that all activities are to be authorised by a state. States are to assure 'national activities' are carried out in conformity with the Treaty. Article VII makes states responsible for damage caused by objects they launch or cause to be launched – the state of registry and the state of the launcher (nationality of the item, and territoriality of the launcher/uploader). Jurisdiction as set forth in Article VIII is then an easy matter: the national registry of an object gives jurisdiction over that object and over any personnel thereof. This national status functions like the 'temporary presence' doctrine announced in *The Schooner Exchange* and *Brown v*

73 *Environmental Defense Fund v Massey* (1993) 986 F 2d 528.

74 UN General Resolution 1962 (XVIII) 13 December 1963.

75 Aside from being extremely rare, this unanimous Resolution represents a new multinational approach to new worlds. It is a significant improvement over the Treaty of Tordesillas 1494, in which the Pope divided the whole unclaimed world between the Spanish and the Portuguese.

76 Hearings before Committee on Foreign Relations (US Senate) 1967 p 80.

Duchesne.[77] When the objects return to earth, their special national status for jurisdictional purposes is not affected.[78]

Therefore we can observe that jurisdiction in outer space, as in Antarctica, is predicated on the nationality principle.

4 Jurisdiction in cyberspace: the vessel of nationality

Making nationality work as a principle in cyberspace requires an analysis appropriate to cyberspace. It is too easy to fall into the trap of asking how nationality would play out on the high seas, or in Antarctica, and then trying to make direct analogies to cyberspace. As we have seen, the nationality principle is firmly entrenched in these areas, but it plays out differently in each.

For example: if we are applying the 'law of the flag' from maritime law, we can get bogged down in the analysis of how the nationality of a ship is determined. There is, of course, an international regime in place which determines the registry of a ship, and there are such things as 'flags of convenience', under which US nationals may fly a Panamanian flag and be then subject only to Panamanian law at sea.[79] The obvious question might be: 'So, what is the nationality of a vessel in cyberspace?' But then we are at a loss to find a ship or plane in cyberspace. This, again, is asking the wrong question. We must ask first, what is the vessel of nationality in cyberspace, ie, what carries nationality into cyberspace?

Registry will not suffice; it does not exist. International treaties may at a later date specify that all files be 'registered' with a nationality.[80] Until such time, however, we must discover the default rules. Before there was registry at sea, there was still nationality. It was what Justice Stevens recently referred to as the 'personal sovereignty' of the nation over its citizens.[81] In cyberspace, persons bring nationality into cyberspace through their actions. An uploader marks a file or a webpage with his nationality. We may not know 'where' a webpage is, but we know who is responsible for it. The nationality of items in cyberspace is determined by the nationality of the person or entity who put them there, or perhaps by the one who controls them.

This analysis is relatively painless with webpages. The webpage is my paradigm, because the world wide web will surely prefigure the future of cyberspace in being a place where complicated 'sites' are maintained by individuals and organisations. Generally determining the nationality of a page will be no problem. The creator of a webpage is usually listed on the web page, and is typically and individual or an organisation. Webpages are now created by

77 *Brown v Duchesne* 60 US 183 (1857).

78 *Hughes Aircraft v United States* 29 Fed Cl 197 (1993). In this case, an invention under US patent was on board a foreign spacecraft in the United States preparing for launch. It was held to be not subject to US law because of the 'temporary presence' doctrine. The court made the usual analogies to Antarctica as well.

79 This is not entirely true. For American tort law, for example, courts insist that passengers be aware of the nationality of the ship. Trying to squeeze this analogy into cyberspace will produce headaches.

80 Will there be a cyberspace convention? George Trudeau has the best answer. In one Doonesbury cartoon strip from the early 1980s, a white, elderly, wealthy New Yorker is talking to her maid about the glories of Harlem in the 1930s. This young black woman is, needless to say, somewhat incredulous. 'Take heart,' says the elderly woman, 'Harlem will rise again.' 'Yes, Ma'am' the maid replies, 'So will Jesus. But I ain't waitin' up nights.'

81 *Smith v United States*, 507 US 197, 122 L Ed 548, 556–57 (J Stevens, dissent).

individuals and companies for others, which makes us ask who 'owns' the page – the creator or the person on whose behalf it is maintained? International law is not displeased with either answer. If a nation wants to, it can ascribe nationality to all webpages maintained 'on behalf of' its citizens, as well as any webpages created (ie, uploaded) by its citizens. Either solution essentially solves the conflict-of-laws problem, by reducing the conflict to two states at the most. Courts will have to make their own judgments about what level of connection between a cyberspace item and an individual is reasonable for the nationality of that person to dictate the jurisdiction to prescribe law. The theory of international spaces turns cyberspace from a place of infinitely competing jurisdictions or Elysian fields of anarchy into a place where normal jurisdictional analysis can continue.

Here is how it might work: a webpage uploaded from Moldova by a Moldovan citizen, but commissioned by a US citizen, which contains pornography violating the 'Internet Decency Act' could subject that US citizen to prosecution (whether American due process is satisfied is another inquiry altogether). Or the Moldovan could be subject to his own uploading laws. Also, a US citizen in Moldova is not immune from US law because he uploads from Moldova (into cyberspace) rather than from the United States. What the United States cannot do is to prescribe a law for a webpage created and uploaded by a Moldovan without any reasonable (ie, recognisable at international law as a basis for the jurisdiction to prescribe) connection to an American national, merely because, in the Minnesota Attorney General's words, it is 'downloadable' in the United States.

Of course, cyberspace is more than the world wide web. There are bulletin boards, USENET groups, and electronic mail (e-mail). These items contain messages sent by individuals. These persons may be anonymous, but anonymity is as much a practical problem for any municipal law as for international law. Once a person is identified, his nationality will provide the basis for the jurisdiction to prescribe rules for his actions in cyberspace. So, for example, the American government may make it illegal to post to alt.sex.bestiality (a USENET group), but this cannot provide the basis for holding a Korean citizen in Korea (without connection to a United States national) criminally liable for posting to alt.sex.bestiality.

A problem arises when cyberspace fades into normal telecommunications. Not all e-mail is in cyberspace. Cyberspace is a virtual community, and international law applies because it is world-readable. We have a different situation when private e-mail is sent from one individual to another across jurisdictional lines. An e-mail from an Arizonan to an Italian is always subject to Arizona law, but could also be subject to Italian law. After all, a telephone call would be. In this case, the Arizonan, in the language of American jurisprudence, 'purposely availed himself' of the benefits of the Italian jurisdiction. This private one-time e-mail definitely falls short of an item in cyberspace, to mere international communication.

Naturally, we need a clearer definition of when we enter cyberspace. Is a message sent 'cc:otherfolks' to several jurisdictions subject to all of those jurisdictions? Can a message intended to defame a Mexican citizen, as in the 1887 *Cutting* case, and actually e-mailed to that citizen, be saved from liability by also sending it to a hundred other individuals? When is it international enough to be cyberspace? What is the line between a postcard and a 'message in a bottle'? This will resolve itself, ultimately, to the intent to cause an effect in a given country. The burden, however, will be on the prosecuting state to prove that an item in cyberspace was targeted to that state, giving that state a special interest above

that of other states. We cannot forget either the test of reasonableness of the jurisdiction to prescribe, which (as with all of these issues) will be litigated in the courts of the prosecuting state. Because of the nature of cyberspace, the great potential for conflicts of law, a fairly strong connection between the e-mailer and the target state will be necessary to assert the jurisdiction to prescribe for the target state based on the principle of objective territoriality.

VI Jurisdiction in cyberspace: a preview

In this final section of the paper, I believe it would be useful to discuss how the theory of international spaces affects two up-and-coming topics in cyberspace law. This is necessarily brief and general, but should describe the outlines of future litigation.

A Copyright law

Copyright is currently a 'hot topic' in cyberspace law. As the world wide web is full of written information, it will be the source of considerable copyright litigation. Unlike courts hearing criminal cases, courts of general jurisdiction may hear civil cases in which a foreign state has the jurisdiction to prescribe law, and will apply that foreign law. Two American cases, *Religious Technology Center v Netcom*, No C95-20091 RMW (ND Cal, 3 March 1995) and *Playboy Enterprises Inc v Frena*, 839 F Supp 1552 (Md Fla 1993), avoided international jurisdictional problems. Both were cases brought by American nationals against American nationals, all of whom were clearly subject to American territorial jurisdiction. As the adage goes, there can be no conflict of laws unless there is an actual conflict. Either case would be much more interesting if one of the parties had not been subject to US territorial and national jurisdiction. Fair Use doctrine is not a question of international law.

We can, of course, propose a hypothetical situation. What if Scientology's religious books were copyrighted in the United States, but not in Latvia.[82] Now there is a web site uploaded by a Latvian on which is posted a link to a file containing the religious work. All the downloader need do is click on the link, and the copyrighted work will appear on his computer.

At its greatest extent, American copyright law could reach a webpage created by an American, and uploaded in Latvia. It could also reach a webpage created for an American, by a Latvian citizen, and uploaded in Latvia. As a matter of international law, however, the United States would not have jurisdiction to prescribe copyright law for a webpage uploaded by a Latvian in Latvia whose only connection with the United States was a wish that Americans should download this material. In this situation, there is no American nationality on which to predicate such jurisdiction, nor is there territorial jurisdiction. Objective territoriality, or 'effects' jurisdiction is *per se* unreasonable without considerably more.[83] An American court should throw out this suit for want of jurisdiction or

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82 We are lucky to have law in Latvia, incidentally. There are plenty of places of uncertain national jurisdiction, including: The Transdniester Republic (Transdnistrovia), Chechnya, Nagorno-Karabakh, Western Sahara, the Spratly Islands, the Palestinian 'occupied territories,' Svalbard, Abkhazia, North Cyprus, the Kashmir, the Republika Srbska (in Bosnia-Herzegovina), parts of the Rub'al Khali (Empty Quarter), and territory within the city of Rome belonging to Knights of Malta and enjoying certain extraterritorial rights.

83 How much more? Probably quite a bit, given how hostile Latvian courts would be to such a proposition. Comity would play a huge role here. Because the harm is a private harm, one could argue that there is never a substantial enough copyright violation to cause the state to invoke this extraordinary jurisdiction. Certainly, the harm would have to far exceed a 'normal' copyright violation.