

2000

## The Emerging Law of the Digital Domain and the Contract/IP Interface: An Antipodean Perspective

Samuel K. Murumba

Follow this and additional works at: <https://brooklynworks.brooklaw.edu/faculty>



Part of the [Intellectual Property Law Commons](#)

---

# THE EMERGING LAW OF THE DIGITAL DOMAIN AND THE CONTRACT/IP INTERFACE: AN ANTIPODEAN PERSPECTIVE

Samuel K. Murumba\*

Now, natural laws which are followed by all nations alike, deriving from divine providence, remain always constant and immutable: but those which each state establishes for itself are liable to frequent change whether by the tacit consent of the people or by subsequent legislation.<sup>1</sup>

Every law or rule . . . is a *command* . . . . Every positive law, or every law simply and strictly so called, is set . . . by a sovereign person or body, to a member or members of the independent political society wherein that person or body is sovereign or supreme.<sup>2</sup>

This program has performed an *illegal* operation and will be shut down.<sup>3</sup>

## I. INTRODUCTION

Apart from the constraints and protocols of the written word—including some necessary expansion and elaboration—this paper is a faithful record of my remarks at the Brooklyn Law School symposium memorialized in this issue of the *Journal*. Although those remarks were intended as an Anglo-Australian intervention in the essentially trans-Atlantic discourse between the two panels that made up the morning session, their substance is less geographically constrained than

---

\* Professor of Law, Brooklyn Law School; formerly Senior Lecturer in Law, Monash University, Melbourne Australia; LL.B. (Hons.) Makerere University; LL.M., Ph.D. Monash University, Melbourne, Australia.

1. THE INSTITUTES OF JUSTINIAN: TEXT, TRANSLATION AND COMMENTARY 6 (J.A.C. Thomas 1975)

2. JOHN AUSTIN, THE PROVINCE OF JURISPRUDENCE DETERMINED AND THE USES OF THE STUDY OF JURISPRUDENCE 13, 253-54 (1954).

3. Common computer program error message (emphasis added).

might appear at first blush. At one level, the theme of these remarks, like that of the symposium itself, really consists of two prongs of the nascent law of transactions involving what I have called the "digital domain:" the first prong is that of transactions involving *digital products*; the second is that of *digital transactions* which may or may not involve digital products. These two prongs are the subjects of two respective legislative initiatives in the United States—the Uniform Computer Information Transactions Act<sup>4</sup> (UCITA) for the first prong, and the Uniform Electronic Transactions Act<sup>5</sup> (UETA) for the second.

Although they effect fundamental changes, these legislative initiatives are sometimes characterized as just an effort to systematize or reconfigure transactional law into a form useable in the digital environment,<sup>6</sup> but the vigorous worldwide debate which has surrounded these initiatives—especially UCITA—indicates that there is much more at stake here than mere systematization or adaptation. This paper suggests that what is at stake is no less than the very foundations of an emerging law of the digital domain. In the context of software licensing, that law consists of three interlocking components: contract, intellectual property, and increasingly, the law-like architectural features and protocols of that domain.<sup>7</sup>

4. Formerly Article 2B of the Uniform Commercial Code.

5. Both UCITA and UETA were approved and recommended for enactment by all states at the National Conference of Commissioners on Uniform State Laws (NCCUSL) at its Annual Meeting in Denver, Colorado, July 23-30, 1999.

6. See Raymond T. Nimmer, *Images and Contract Law—What Law Applies to Transactions in Information*, 36 HOUS. L. REV. 1, 3 (1999):

We have experienced a fundamental shift from a goods-based economy to one a substantial part of which entails distribution of digital information and services. The contract law developed in the 1940's and 1950's to accommodate sales of toasters, automobiles, and other wares, while adequate for those purposes, does not correspond to the commercial premises relevant to contracts for licensed access to a digital database, for multi-location use of network or communications software, or for access to, or use of, other information assets.

*Id.* at 3.

The prize for the understatement, however, goes to the Australian Government's advisory body on copyright law issues, the Copyright Law Review Committee (CLRC) which released a ground-breaking report (dealing with some fundamental aspects of Australian copyright law) under the title: *Simplification of the Copyright Act 1968*!

7. For an excellent and readable general account of how cyberspace can be and ought to be regulated, see generally LAWRENCE LESSIG, *CODE AND OTHER*

In this regard, the amusing error message that says "this program has performed an illegal operation and will be shut down" makes an unintended ironic hint at the law-like commands emanating from computer networks. To the legal theorist, these law-like commands present another intriguing twist: they look like the ultimate rapprochement between natural law and legal positivism since they seem to be a unified embodiment of both. They are a kind of "natural law" in that they are built into the very *nature* or *architecture* of the digital domain; but they are equally the legal positivist's law *par excellence* both in their complete immunity to the beckonings of policy or morality and in their reliance on swift and impersonal retribution ("Your program will be shut down!").

I shall leave these intriguing theoretical questions to another occasion. In the rest of this paper, I explore, from an Anglo-Australian perspective, the issues relating to the licensing of digital products and the digital licensing of all products against the background of the emerging law of the digital domain. In Part II, I discuss the Anglo-Australian intervention in the American/European debate on these issues, and why it provides an instructive third perspective. Part III then discusses Australia's ambitious legislative agenda and its role in the overall regulation of the digital domain. Part IV briefly discusses the possible collusion of intellectual property contract and code in the creation of the new law of the digital domain, and Part V consists of concluding remarks on the resulting dramatic reconfiguration of the intellectual property cultures of America, Europe and Australia.

## II. AN ANGLO-AUSTRALIAN INTERVENTION IN A TRANS-ATLANTIC DEBATE

### A. *The Value of an Anglo-Australian Perspective*

As Professor Dessementet's paper and Professor Hugenholtz's comment on it in this issue vividly demonstrate,<sup>8</sup>

---

LAWS OF CYBERSPACE (1999); Graham Greenleaf, *An Endnote on Regulating Cyberspace: Architecture vs. Law?*, 21 U. NEW S. WALES L.J. (1998).

8. See François Dessementet, *The European Approach to E-Commerce and Licensing*, 26 BROOK. J. INT'L L. 59 (2000); P. Bernt Hugenholtz, *Copyright, Contract and Code: What Will Remain of the Public Domain?*, 26 BROOK. J. INT'L L. 77 (2000).

Europe and the United States provide contrasting images of intellectual property and legal culture in general. I suggest that Australia supplies a third image that is similar in some respects but different in other respects. The similarities with Europe derive, in part, from certain common assumptions about intellectual property embodied in international treaties such as the premier copyright treaty, the Berne Convention for the Protection of Artistic and Literary Works.<sup>9</sup> With the United Kingdom and the United States the affinity also comes from sharing the common law tradition. The similarities are also a distinctive feature of globalization<sup>10</sup> and the gradual shift from the previous era of an *inter-national* intellectual property culture, largely predicated upon different territorial standards and the doctrine of national treatment, to a culture that increasingly demands deep integration and the adoption by all states of universal minimum standards, procedures and remedies for the protection of intellectual property.<sup>11</sup>

On the other hand, Australia presents a contrasting image to both Europe and the United States as a smaller but highly developed country with a dynamic and responsive legal system that has pushed it to the forefront of international norm-creation and domestic incorporation of those norms in its legal system.

### B. *The Australian Legal System*

The most vivid image of Australia in the minds of most Americans is that of the spectacular view of Sydney Harbor and the Opera House. Both are beautiful and deservedly memorable but they can also disguise the fact that Australia is a whole continent with a land mass about the size of the United

---

9. Berne Convention for the Protection of Artistic and Literary Works of Sept. 9, 1886, done May 4, 1886 (Paris), revised Nov. 13, 1967 (Berlin), done Mar. 29, 1914 (Berne), revised June 2, 1948 (Brussels), July 14, 1967 (Stockholm), July 24, 1971 (Paris), 25 U.S.T. 1341, 828 U.N.T.S. 221 [hereinafter Berne Convention].

10. As a phenomenon, "globalization" is increasingly becoming a subject of several multi-disciplinary studies. See, e.g., DAVID HELD ET AL., *GLOBAL TRANSFORMATIONS* (1999); SASKIA SASSEN, *GLOBALIZATION AND ITS DISCONTENTS* (1998); *GLOBALIZATION OF INTELLECTUAL PROPERTY IN THE 21ST CENTURY* (Kraig M. Hill et al. eds., 1998).

11. See Samuel K. Murumba, *Globalizing Intellectual Property: Linkage and the Challenge of a Justice-Constituency*, 19 U. PA. J. INT'L ECON. L. 435, 438-43 (1998).

States, spanning as many time-zones, and characterized by great variety in climate and much else. Contrary to another image, that of the famous paragon of irreverence, humor and irony from the "outback"—Mick Dundee—who, to use an Australian judge's description, "romps through New York City like a friendly alien . . . leaving laughter in his wake,"<sup>12</sup> Australia is an ultra-modern country, and one of the most urbanized in the world.

The Australian legal system is a creative synthesis of American, English and local features, and has many resonances with the United States' legal system. Like the United States, Australia has a federal system of government in which powers are distributed between a federal government (called the Commonwealth) and State and Territory governments (there are six states—New South Wales, South Australia, Queensland, Tasmania, Victoria, and Western Australia—and ten territories). Prior to 1900, the present Australian states were a collection of six self-governing British colonies, the ultimate power over which rested with the British Parliament. The Australian Constitution, which is partly modeled on the United States Constitution, took effect on January 1, 1901—the first day of the 20th century—and marked the birth of the Australian nation.<sup>13</sup> Like the U.S. Constitution, the Australian Constitution divides legislative power between the Commonwealth (Federal) Parliament (which like Congress is bicameral and consists of the House of Representatives and the Senate) and State Parliaments. The Constitution lists subjects about which the Commonwealth can make laws, principally in Sections 51 and 52, and these include taxation; defense; external affairs; interstate and international trade; foreign, trading and financial corporations; marriage and divorce; immigration; bankruptcy; and interstate industrial arbitration. The list of federal legislative powers also includes, in simple and straightforward terms, an open-ended power to make laws with respect to "[c]opyrights, patents of inventions and designs, and trade

---

12. Hogan v. Pacific Dunlop, Ltd., (1988) 12 I.P.R. 225, 230 (Gummow, J.) (Austl.); Samuel Murumba, *Character Merchandising in Australia Welcome Home Wanderer*, INTEL. PROP. F., Nov. 1990, at 10, 14-15.

13. For the federal structure and the antecedent federal movement, see the excellent and lucid account in MICHAEL COPER, ENCOUNTERS WITH THE AUSTRALIAN CONSTITUTION 49-102 (1987).

marks."<sup>14</sup> Matters that, like in the United States, traditionally fall under the common law—for instance, much of the criminal law, contracts, tort, property, and unfair competition law—all fall within the legislative competence of the States though the Commonwealth Parliament has sometimes used an ingenious combination of several of its powers to encroach on state autonomy in these fields. An example of such ingenious erosion is the Trade Practices Act 1974, in which the notion of “deception and misleading conduct” has virtually led to a federal takeover of the passing-off/unfair competition field.<sup>15</sup> A state parliament, on the other hand, can make laws on any matters of relevance to that state.

The federal structure in Australia imposes upon the national parliament constraints similar to those imposed on the U.S. Congress. Those constraints, however, are attenuated by two features of the Australian system. The first feature is the absence, in the Australian Constitution, of the equivalent of the Bill of Rights found in the United States Constitution which prevents a legislature from passing laws that infringe certain basic freedoms and rights such as freedom of speech.<sup>16</sup> This feature, together with the open-ended power to legislate with respect to copyright, patents and trademarks, gives the Australian National Parliament much greater latitude to make laws relating to intellectual property. The second feature is more fundamental. Although Australia has a federal system similar to, and modeled on that of the United States, it also has elements of the British Westminster-style parliamentary system under which the Prime Minister and his or her government belong to the political party commanding a majority of seats in the House of Representatives. This means that apart from the federal constraints on its legislative powers we have just observed, the government/party in power has an unfettered ability to push through its legislative program. A major

---

14. AUSTL. CONST. ch. I, pt. V, § 51 (xviii).

15. Trade Practices Act, 1974 (Austl.).

16. The First Amendment to the U.S. Constitution reads:

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

U.S. CONST. amend. I.

part of the current government's program is Australia's digital agenda.

### III. AUSTRALIA'S DIGITAL AGENDA

Australia has embarked on one of the most ambitious legislative programs in its history; this program is aimed at creating norms for life in the digital domain. It began in earnest in the mid-1990s and has gathered increased momentum in the wake of the World Intellectual Property Organization (WIPO) Diplomatic Conference on Copyright's adoption in December 1996 of two important treaties: the WIPO Copyright Treaty,<sup>17</sup> and the WIPO Performance and Phonograms Treaty.<sup>18</sup> The momentum for law making in the digital domain was given a further boost by the advent of electronic commerce in which the Australian government sees substantial benefits for consumers—for instance, greater convenience, increased choice, lower prices, more information on products, ability to personalize products and improved after-sales services—as well as for Australian business. But the Australian legislative program to regulate the digital domain is also part of a wider public discourse involving a diverse group of organizations ranging from law reform bodies to copyright owners' organizations to academics and private individuals.

The scope of any legislative program for an area as wide and complex as the digital domain must be broad and complex, and the present Australian program is both. As well as intellectual property and transactional law, the program has also encompassed, or may soon encompass, privacy<sup>19</sup> and data protection, consumer protection, and includes a much-criticized Internet censorship regime designed to forestall the availability of certain sexually explicit materials on the Internet.<sup>20</sup> In

---

17. World Intellectual Property Organisation Copyright Treaty, Dec. 20, 1996, 36 I.L.M. 65 [hereinafter WIPO Copyright Treaty].

18. World Intellectual Property Organisation Performances and Phonograms Treaty, Dec. 20, 1996, 36 I.L.M. 76 [hereinafter WIPO Phonograms Treaty].

19. As to the adverse impact of the widespread silent collection of personal information in cyberspace on deliberative democracy and some solutions, see Paul M. Schwartz, *Privacy and Democracy in Cyberspace*, 52 VAND. L. REV. 1609 (1999).

20. See Broadcasting Services Amendment (Online Services) Act, 1999 (Austl.); Christopher Kendall, *Australia's New Internet Censorship Regime: Is This Progress?* (visited Jan. 24, 2000) <[http://www.law.murdoch.edu.au/dtjl/article/vol11\\_3/kendallDTJL1\\_3.html](http://www.law.murdoch.edu.au/dtjl/article/vol11_3/kendallDTJL1_3.html)>.



this paper, however, it is only the intellectual property and transactional aspects which will be my central focus.

A. *Amendments to the Australian Copyright Act 1968*

The intellectual property plank of Australia's recent initiatives to regulate the digital domain consists of a package of amendments to her principal copyright legislation, the *Copyright Act 1968*.<sup>21</sup> The most important of these relate to protection of computer programs, limitation of Internet service providers' liability for contributory and "authorization" infringement, prohibition of tampering with technological copyright protection measures and electronic copyright management systems, and, most saliently, the new right for copyright owners of "communication to the public."<sup>22</sup> The first two restrict the scope of the copyright owner's rights; the latter two expand them.

1. Amendment to Provisions Relating to Computer Programs and the Liability of Internet Service Providers

The Copyright Amendment (Computer Programs) Act 1999<sup>23</sup> restricts the reproduction right of the owner of a copyright in a computer program by allowing certain acts to be done by the owner of a physical copy of the program. All these acts are already privileged under U.S. copyright law, and some are privileged in Europe and the United Kingdom as well. The acts that now do not constitute copyright infringement include: reproduction made in the course of running a copy of the program for the purposes for which the program was designed, reproduction for the purpose of making back-up copies of the program, reproduction for the purpose of making interoperable products, reproduction or adaptation for the purposes of correcting errors in the program, and reproduction for the purpose of studying the unprotectable ideas behind the program and the way in which it functions. What is noteworthy about their rendition in the Australian copyright amendments, and of particular relevance to the discussion of the possibility of expanding the copyright owner's rights by contract under UCITA,

---

21. Copyright Act, 1968 (Austl.).

22. *Id.*

23. Copyright Amendment (Computer Programs) Act, 1999 (Austl.).

as discussed below,<sup>24</sup> is that many of these privileges given to owners of the physical copy embodying the program *cannot be excluded by contract*. Section 47H provides that “[a]n agreement, or a provision of an agreement, that excludes or limits, or has the effect of excluding or limiting, the operation of subsection 47B(3), or section 47C, 47D, 47E or 47F, has no effect.”<sup>25</sup> Some of the corresponding privileges in the United Kingdom and Europe—the liberty to make necessary back-up copies and to decompile a program for a permitted program—are similarly not excludable by contract.

Immunizing Internet service providers against liability for authorizing infringement and contributory liability arising out of provision of their services is another feature of the recent changes. Following a decision of Australia’s highest court, the High Court of Australia,<sup>26</sup> holding a carrier liable for copyright infringement for the playing of music-on-hold by its subscribers to their telephone clients despite the fact that the carrier had no control in determining the content of the music played, Internet service providers expressed concern about similar liability. In response, the Copyright Amendment (Digital Agenda) Bill 1999<sup>27</sup> like the U.S. Digital Millennium Copyright Act of 1998,<sup>28</sup> circumscribes the liability of Internet service providers for transmitting or making available copyrighted works on the Internet.

## 2. Technological Measures and the Right to Communicate to the Public

In response to the WIPO treaties already mentioned, Australia has enacted provisions in the Copyright Amendment (Digital Agenda) Bill 1999 designed both to dissuade tampering with technological protections of copyrighted works or with information management systems, and to provide copyright owners with a brand new right—that of communicating their

---

24. See *infra* Part III(B) & (C).

25. Copyright Amendment (Computer Programs) Act, 1999, sched. 1, § 47H (Austl.).

26. *Telstra Corp. Ltd. v. Australasian Performing Rights Ass’n, Ltd.* (1997) 38 I.P.R. 294 (Austl.).

27. Copyright Amendment (Digital Agenda) Bill, 1999 (Austl.).

28. Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998) (codified in scattered sections of 17 U.S.C.).

works to the public. The "anti-tampering" provisions protect two kinds of technological measures: measures that bar access or prevent copies from being made, and electronic rights management systems. The latter regulate, monitor, and record the use of copyrighted material and are expected to bring much efficiency to online trading of copyrighted material. These provisions originate from the WIPO treaties and have counterpart developments in the United States<sup>29</sup> and in the United Kingdom.<sup>30</sup>

But the centerpiece of proposed changes to Australian copyright legislation is the new right of communication to the public which the changes give copyright owners. The impetus for the new right was also the WIPO treaties mentioned above. To understand the full significance of the new right, however, it is helpful to know something about the range and scope of the other exclusive rights which the Australian Copyright Act 1968 gives copyright owners. The Act gives copyright owners (depending on the nature of the subject matter) the traditional basic rights of "reproduction in a material form" (the phrase is "tangible medium" in the United States), publication (distribution) adaptation (in the United States "preparation of derivative works") and public performance. The Australian Act also includes the exclusive right to "broadcast" certain works and the right to transmit them to subscribers to a diffusion service, but does not include the right of display for most works under the U.S. Copyright Act.

There was some doubt in Australia and elsewhere as to whether the traditional reproduction, publication, broadcast or diffusion rights could extend to uploading a work to the Internet where it could be viewed or browsed by others. It was thought that the reproduction right might not apply since uploading this might not be regarded as a reproduction in "a material form" (tangible medium). A similar problem might confront the publication (distribution) right. On the other hand, the broadcast and diffusion rights, though not tied to tangible embodiment, are "technology-specific" and may well be regarded as not extending to the Internet. For this reason, the Australian Copyright Amendment (Digital Agenda) Bill 1999

---

29. *See id.*

30. *See* W.R. CORNISH, *INTELLECTUAL PROPERTY: PATENTS, COPYRIGHT, TRADE MARKS AND ALLIED RIGHTS* 504-05, 538-48 (4th ed. 1999).

adopts the right of "communication to the public" contained in Article 8 of the WIPO Copyright Treaty.<sup>31</sup> The technology-neutral right of "communication to the public" not only subsumes the technology-specific non-interactive forms of transmission such as broadcasting or distribution to a diffusion service and will therefore replace and extend both the "broadcast" and "diffusion" rights above, but will also encompass the making available of copyrighted material online where others may access or download it.

Australia will thus be at the forefront of countries adopting the WIPO-inspired right of communication to the public to deal with the problem of unauthorized uploading of copyrighted material on the Internet and has been criticized for running ahead of its competitors in rushing to introduce this broad right.<sup>32</sup> It is instructive to contrast Australia's bold approach here with the measures adopted in the comparable jurisdictions of the United Kingdom and the United States. In the United Kingdom, the Copyright, Designs and Patents Act 1988<sup>33</sup> defines "copying a work" to include storing it in any medium including "the making of copies which are transient or are incidental to some other use of the work."<sup>34</sup> Uploading copyrighted material to the Internet would, therefore, be within the ambit of the copyright owner's reproduction right.<sup>35</sup> There were bills designed to deal with the problem in the U.S. Congress but they were abandoned in the face of criticisms alleging excessive copyright protection at the expense of the "benefits to be derived from Internet access."<sup>36</sup> But there is ample academic<sup>37</sup> and judicial<sup>38</sup> opinion that even in the ab-

---

31. WIPO Copyright Treaty, *supra* note 17, art. 8; *see also* WIPO Phonograms Treaty, *supra* note 18, art. 14 ("right of making phonograms available to the public").

32. *See* William A. Van Caenegem, *Copyright, Communication and New Technologies*, FED. L. REV. (visited Apr. 3, 2000) <<http://www.law.anu.edu.au/publications/flr/vol23no2/FederalLawReviewWilliamAva.html>>.

33. Copyright, Design and Patents Act, 1988, § 17(11) (Eng.).

34. CORNISH, *supra* note 30, at 510.

35. Cornish observes that the 1988 Act "thereby pushes the notion of 'reproduction' to the very boundary of passing uses and approaches those associated with performance: some forms of random access memory (RAM) involve only fleeting retention of computerised information." *Id.* at 510 n.16.

36. ROBERT A. GORMAN & JANE C. GINSBURG, COPYRIGHT 550 (5th ed. 1999).

37. *See id.* at 549-52.

38. *See* Playboy Enter., Inc. v. Frena, 839 F. Supp. 1552 (M.D. Fla. 1993);

sence of an express statutory provision to that effect, uploading copyrighted material onto the Internet constitutes distribution of it within the meaning of § 106(3) of the U.S. Copyright Act of 1976.

Neither the new right of communication to the public favored by Australia nor the enhanced reproduction right in the United Kingdom or the distribution right in the United States solves all problems pertaining to availability and transmission of copyrighted works in the digital domain. Two clusters of inadequacies—one to do with fundamental policy, the other with technical aspects of the digital domain which may put certain acts beyond these measures—have been identified. The policy problem involves the question whether browsing material on the Internet should constitute infringement as the expanded notion of reproduction in a tangible medium embracing transient fixation in the computer's random access memory (RAM) seems to make it.<sup>39</sup> While this question is still in doubt in many places, the Australian proposals for a broad right of communication to the public address this problem by including welcome exceptions for temporary copies made in the course of the technical processes of making or receiving communication. This exception is intended to include browsing of copyrighted material online.

The technical inadequacy was recently identified by Professor Pendleton, Deputy Director of the Asia Pacific Intellectual Property Law Institute.<sup>40</sup> This consists, in part, of the uncertainties surrounding the reach of the new "making available" right and especially whether it extends to the linking of sites. If one connects a file server that has a copyrighted work on it to a publicly accessible network like the Internet, he or she would clearly be infringing the "making available" right.<sup>41</sup> But linking a file server containing copyrighted material on it from one publicly accessible site on the Internet to another site on the Internet would probably not constitute infringement of

---

Playboy Enter., Inc. v. Chuckleberry Publ'g, Inc., 939 F. Supp. 1032 (S.D.N.Y. 1996).

39. See Michael D. Pendleton, *Reforming Copyright for the Digital Age—Everyone's Horse on the Wrong Course*, 4 MURDOCH U. ELECTRONIC J.L. (Dec. 1997) (visited Apr. 3, 2000) <<http://www.murdoch.edu.au/elaw/issues/v4n4/pendle44.html>>.

40. See *id.*

41. See *id.* at 2.

the new right since the material linked would already be "available to the public through an alternative route."<sup>42</sup> There may be similar problems with respect to the English and American reliance on a more expansive interpretation of "reproduction in a material form" (tangible medium) to include transient reproductions in the computer's RAM memory where "virtual documents" are involved,<sup>43</sup> or where a work is dispersed into many portions that may be reassembled at their destination,<sup>44</sup> but the precise problems there are beyond the scope of this paper.

*B. The Contract/IP Interface: The Internet and Electronic Commerce in Australia*

There are two prongs to the contract/intellectual property interface in the context of recent Australian legislative initiatives for the digital domain. The first relates to measures designed to regulate and facilitate electronic commerce; the second to the use of contractual terms to modify and, in most cases, augment or supplement traditional intellectual property rights.

Australian legislative and policy initiatives relating to electronic commerce need to be seen against the background of the role of electronic commerce in Australia. According to the Australian Bureau of Statistics, 5.5 million adults accessed the Internet in the 12 months ending in May 1999, but only 650,000 of them used the Internet to purchase products or services for their private use.<sup>45</sup> In the United States, on the other hand, 38 percent of households connected to the Internet are engaging in online shopping.<sup>46</sup> In light of these figures, one of the objectives of government initiatives in this area is to craft a policy framework designed to address the factors inhib-

---

42. *Id.* (citing Macmillan & Blakeney, *Internet and Communications Carriers Liability*, EUR. INTELL. PROP. REV. 11 (1998)).

43. *Id.*

44. See GORMAN & GINSBURG, *supra* note 36, at 417. As to when components remain dispersed, see *id.* at 417-420; *Matthew Bender & Co., Inc. v. West Publishing Co.* 158 F.3d 693 (2d Cir. 1998).

45. See Australian Government Treasury, *A Policy Framework for Consumer Protection in Electronic Commerce* § 1.1 (*The Economic and Social benefits of Electronic Commerce*) (visited Apr. 4, 2000) <<http://www.treasury.gov.au/publication/electroniccommerce/document/chapt1.asp>>.

46. See *id.*

iting the Australian consumer's reluctance to engage in electronic commerce.<sup>47</sup> The government believes that Australian consumers and businesses ought to embrace electronic commerce in order to reap its social and economic benefits.<sup>48</sup> To that end, both federal and state governments in Australia are engaged in legislative initiatives to regulate electronic commerce and give consumers and businesses greater confidence about its benefits.<sup>49</sup>

A principal initiative on this point is the recently passed Australian Electronic Transactions Act 1999.<sup>50</sup> This Act, which adopts the UNCITRAL model of electronic signatures, has been hailed as a well-drafted piece of legislation but criticized for adopting the view that, due to the kind of federal constitutional limitations familiar to U.S. scholars, could only apply to Commonwealth (Federal) laws, and only serve as a model for the State legislatures to pass similar laws if they so wished.<sup>51</sup> As already mentioned, other legislative initiatives proposed for Australia or the United States relate to, among others, privacy and data protection that are beyond the scope of the present discussion.

C. *An Australian Perspective on UCITA and its Predecessor UCC Article 2B*

The most dramatic U.S. development concerning the contract/IP interface is the Uniform Computer Information Transactions Act (UCITA) approved and recommended for enactment in all States by the National Conference of Commissioners on Uniform State Laws (NCCUSL) at its 1999 annual meeting in Denver, Colorado.<sup>52</sup> UCITA, which in its former life was pro-

---

47. See *id.*

48. See *id.*

49. These benefits are emphasized in the Report of the Information Industries Task Force, *The Global Information Economy: The Way Ahead*, in July, 1997. See Melissa de Zwart, *Electronic Commerce: Promises, Potential and Proposals*, 21 U. NEW S. WALES L.J. (visited Apr. 3, 2000) <<http://www.austlii.edu.au/au/other/uns-wlj/thematic/1998/vol21no2/dezwart.html>>.

50. The Commonwealth Electronic Transactions Bill 1999 which was passed by the Senate on November 25, 1999 received Royal Assent on December 10, 1999 to become the *Electronic Transactions Act 1999*.

51. See Leif Gamertsfelder, *The Commonwealth Electronic Transactions Bill 1999: Ailments and Antidotes*, J. INFO. L. & TECH. (visited Apr. 3, 2000) <<http://www.law.warwick.ac.uk/jilt/99-1/gamertz.html>>.

52. Annual Conference Meeting in its One-Hundred-and-Eighth Year in Den-

posed Article 2B of the Uniform Commercial Code, is the most comprehensive attempt to adapt contract principles to the digital domain. The law of contract is the vehicle through which licensing intellectual property occurs, but in the United States, as in Australia,<sup>53</sup> there is no comprehensive federal law of licensing.<sup>54</sup> Consequently, each State in the United States, as in Australia, and other countries, may come up with its own response to UCITA.<sup>55</sup> Despite this limitation, UCITA and its predecessor UCC Article 2B have attracted a massive wave of critical attention and debate not only in the United States<sup>56</sup> but also in Australia<sup>57</sup> and Europe.<sup>58</sup>

UCITA is a detailed and comprehensive legislative proposal and some of its provisions are desirable. Nor is what has drawn most fire in the United States and in Australia the fact that intellectual property rights can be expanded or eliminated altogether by a freely negotiated contract, nor that the law relating to "information products" needs to be different from that applicable to "tangible products."<sup>59</sup> As already mentioned, contract has always been the faithful vessel for the transmission—by assignment, license or security interest—of rights and interests in intellectual property in the United States, Europe

---

ver, Colorado July 23-30, 1999.

53. See the earlier discussion on the limitations of the Australian *Electronic Transactions Act* 1999, *supra* Part III(B)(1).

54. See KENNETH L. PORT ET AL., *LICENSING INTELLECTUAL PROPERTY IN THE DIGITAL AGE* 316 (1999).

55. *Id.*

56. See, e.g., Raymond T. Nimmer, *International Information Transactions: An Essay on Law in an Information Society*, 26 BROOK. J. INT'L L. 5 (2000); Rochelle Cooper Dreyfuss, *UCITA in the International Marketplace: Are we about to Export Bad Innovation Policy?*, 26 BROOK. J. INT'L L. 49 (2000). There have been other symposia on the issue. See, e.g., *Symposium: Intellectual Property and Contract Law in the Information Age: The Impact of Article 2B of the Uniform Commercial Code on the Future of Transactions in Information and Electronic Commerce*, 13 BERKELY TECH. J. 809 (1998); *Symposium: Licensing in the Digital Age*, 36 HOUS. L. REV. 1 (1999).

57. See, for instance, the recent Brisbane conferences discussed in Lionel Bently, *Copyright's Futures: To Expand or Contract?*, DIGITAL TECH. L.J. (visited Jan. 26, 2000) <[http://www.law.murdoch.edu.au/dtlj/articles/vol1\\_2/bently.html](http://www.law.murdoch.edu.au/dtlj/articles/vol1_2/bently.html)>; Gail E. Evans & Brian F. Fitzgerald, *Information Transactions Under UCC Article 2B: The Ascendancy of Freedom of Contract in the Digital Millennium*, U. NEW S. WALES L.J. (visited Apr. 3, 2000) <<http://www.law.unsw.edu.au/publications/journals/unswlj/ecommerce/evans.html>>.

58. See sources cited, *supra* note 8.

59. This is the *raison d'être* for UCITA, according to Professor Nimmer, its principal architect. Nimmer, *supra* note 6, at 1, 1-59.



and Australia. As for the fundamental distinction between norms governing tangible products and those concerned with intangible information, this, too, is uncontroversially familiar to intellectual property lawyers in all three jurisdictions,<sup>60</sup> though pressing it too far with respect to essentially functional "information" products such as computer programs risks revisiting the tough compromises surrounding the now worldwide norm<sup>61</sup> requiring that these works be granted copyright protection as literary works under the Berne Convention.<sup>62</sup> The principal bone of contention is the blessing UCITA gives to "shrinkwrap" or "mass market" licenses usually found in the plastic wrapping in which computer programs are sold. Apart from UCITA and one or two court decisions,<sup>63</sup> shrinkwrap licenses have run into serious difficulties including a cloud over their very validity as a matter of contract law.<sup>64</sup> Yet they may contain terms that purport to virtually rewrite the rules of

---

60. See, for instance, Section 202 of the U.S. Copyright Act which provides that:

Ownership of a copyright, or of any exclusive rights under a copyright, is distinct from ownership of any material object in which the work is embodied. Transfer of ownership of any material object, including the copy or phonorecord in which the work is first fixed, does not of itself convey any rights in the copyrighted work embodied in the object; nor, in the absence of any agreement, does transfer of ownership of a copyright or of any exclusive rights under a copyright convey property rights in any material object.

17 U.S.C. § 202 (1995).

61. The norm is enshrined in such important treaties as: Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, art. 10(1), Annex 1C, LEGAL INSTRUMENTS—RESULTS OF THE URUGUAY ROUND vol. 31 (1994); 33 I.L.M. 1197 (1994). ("Computer programs, whether in source or object code, shall be protected as literary works under the Berne Convention (1971)"; WIPO Copyright Treaty, *supra* note 17, art. 4 ("Computer programs are protected as literary works within the meaning of Article 2 of the Berne Convention"); North American Free Trade Agreement, Dec. 1992, Can.-Mex.-U.S., 32 I.L.M. 605 (1993); Council Directive 91/250/EEC on the legal protection of computer programs, 1991 O.J. (L 122) 42.

62. Berne Convention, *supra* note 9. For the need, in a somewhat different context, to treat computer programs and traditional literary works differently in applying the idea/expression dichotomy, see Honorable Jon O. Newman, *New Lyrics for an Old Melody: The Idea/Expression Dichotomy in the Computer Age*, 17 CARDOZO ARTS & ENT. L.J. 691 (1999).

63. See *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996) (Easterbrook, J.); *Hill v. Gateway 2000, Inc.*, 105 F.3d 1147 (7th Cir. 1997) (Easterbrook, J.), *cert. denied*, 522 U.S. 808 (1997).

64. See generally Mark A. Lemley, *Intellectual Property and Shrinkwrap Licenses*, 68 S. CAL. L. REV. 1239 (1995).

torts and intellectual property<sup>65</sup> by excluding liability on the part of the software supplier while augmenting his or her intellectual property rights or supplementing them with new rights. This is not always bad. Such terms may usefully fill in the gaps where intellectual property protection is desirable but as yet unavailable, as in the case of database protection in the United States which is the subject of legislative initiatives in Europe<sup>66</sup> and to some extent in Australia.<sup>67</sup> The principal objection is the use of terms in these licenses to prohibit conduct that is advisedly allowed by copyright norms—for instance certain forms of reverse engineering and other acts that constitute “fair use” in the United States or “fair dealing” in Australia—thus destroying the delicate balance between the private and the public domains that copyright in particular, and intellectual property in general, have maintained over the years.

Even if shrinkwrap licenses were to be generally enforced by the courts, it may still be possible to object to individual terms on grounds such as unconscionability, as UCITA itself recognizes,<sup>68</sup> or preemption. In Australia, and in Europe, however, there are also certain restrictions on the scope of the intellectual property owner's rights which cannot be excluded by contract.<sup>69</sup> In any event, the enactment of UCITA's expanded rights in Australia will encounter non-legislative opposition as well. A new coalition of copyright consumers—The Australian Digital Alliance (ADA) launched on February 26, 1999 with the former Chief Justice of Australia, Sir Anthony Mason, as its patron and with the widespread support of libraries, universities, and computer firms that favor laws hospitable to development of interoperable systems—will be on guard to protect balanced copyright protection.

---

65. See *id.*

66. See Directive 96/9/EC of the European Parliament and of the Council on the legal protection of databases, 1996 O.J. (L 77) 20. See generally CORNISH, *supra* note 30, at 352, 523-24.

67. See, for instance, the proposed legislation in the State of Victoria, Australia.

68. UCITA § 111.

69. See, for instance, the discussion of the *Copyright Amendment (Computer Programs) Act* 1999, and the similarly unexcludable U.K. and European provisions, *supra* Part III(A)(1).

## IV. ENTER CODE AND THE DEMISE OF INAPPROPRIABILITY

In his paper in this issue, Professor Nimmer makes the point that intellectual property based objections to UCITA are misplaced since many of the contractual arrangements it makes possible may be dependant less on intellectual property rights and more on access. A putative licensee may agree to unfavorable terms in the license not out of a desire to use the copyright program without infringement, but in order to gain physical *access* to the program.<sup>70</sup> At first blush, this sounds counterintuitive. One of the premises upon which the entire edifice of intellectual property law is based is that its subject matter, information, is both valuable and not "appropriable" in the sense of being physically fenced in and retained the way one might a chattel or even land. Conventional wisdom is that information is of value only in the marketplace, but once released there, it can easily be replicated and used by the whole world.<sup>71</sup> It is, to use an image Rochelle Dreyfuss used at the symposium, like toothpaste: "you can squeeze it out of the tube, but you can't squeeze it back in."<sup>72</sup> Moreover, modern digital technology not only makes it possible to make perfect copies of a work at next to no cost; it also makes it easy to disseminate the copies worldwide at the mere click of a mouse. Without a system of intellectual property protection there would be little incentive to invest in the production of information products, and every reason to wait and copy. Intellectual property law thus steps in to ensure that there is sufficient incentive for production of valuable works to the benefit of the whole society. Many of the recent changes in intellectual property law are, indeed, premised on this conventional wisdom, especially as it relates to the perceived heightened vulnerability of legitimate copyright interests to the predatory ravages of digital technology.<sup>73</sup>

But Professor Nimmer is right about control of access. The whole notion of information being inappropriable or impossible to control physically in the digital age is increasingly outmod-

---

70. See Nimmer, *supra* note 56, at 5.

71. See, e.g., PAUL GOLDSTEIN, COPYRIGHT, PATENT, TRADEMARK AND RELATED DOCTRINES: CASES AND MATERIALS ON THE LAW OF INTELLECTUAL PROPERTY 6-7 (4th ed. 1997); Murumba, *supra*, note 11, at 446, 457-58.

72. Dreyfuss, *supra* note 56, at 49-50.

73. See LESSIG, *supra* note 7, at 125.

ed. It is a relic of the short-lived, mythical era of what a leading Australian computer law scholar has dubbed "digital libertarianism"<sup>74</sup> which saw cyberspace as beyond regulation. The emerging era, however, is that of cyberspace as super-regulated space, and much of that regulation will be regulation of access largely implemented by computer code or features of the architecture of the digital domain such as cryptography<sup>75</sup> and "trusted systems."<sup>76</sup> With perfect control of access, contract can step in to prescribe the terms of access. The implications for the traditional balance between the public and the private domains are breathtaking. Here is a scenario, from Lawrence Lessig's excellent book; the scenario involves a traditional copyright work, a book, rather than software but it illustrates the point well:

Today, when you buy a book, you may do anything with it. You can read it once or one hundred times. You can lend it to a friend. You can photocopy pages in it or scan it into your computer. You can burn it, use it as a paperweight, or sell it. You can store it on your shelf and never once open it.

Some of these things you can do because the law gives you the right to do them—you can sell the book, for example, because the copyright law explicitly gives you that right. Other things you can do because there is no way to stop you. A book seller might sell you the book at one price if you promise to read it once, and at a different price if you want to read it one hundred times, but there is no way for the seller to know whether you have obeyed the contract . . .

But what if each of those rights could be controlled, and each unbundled and sold separately? What if, that is, the software itself could regulate whether you read the book once or one hundred times; whether you could cut and paste from it or simply read it without copying; whether you could send it as an attached document to a friend or simply keep it on your machine; whether you could delete it or not; whether you could use it in another work, for another purpose, or not; or whether you could simply have it on your shelf or have it and use it as well?<sup>77</sup>

---

74. See Greenleaf, *supra* note 7.

75. Lessig calls encryption technologies "the most important technological breakthrough in the last one thousand years." LESSIG, *supra* note 7, at 35.

76. *Id.* at 127-30.

77. *Id.* at 128.

However, although perfect digital control of access to copyright works can be achieved through code or architecture, it is in the final analysis amenable to regulation by law because its effectiveness is dependent on law. An example of this law-dependency is the set of provisions in recent WIPO-inspired Australian, American, and European legislative initiatives for prohibiting tampering with technological restrictions on access to copyright works or with the copyright management systems discussed above.<sup>78</sup> Another is the private lawmaking through contract discussed in the previous section, which is always parasitic on background rules<sup>79</sup> and, of course, on public legal institutions like the courts, for enforcement<sup>80</sup>—an aspect not always given its due by game-theoretic accounts of transactional conduct.<sup>81</sup> Both should be no less answerable to fundamental policy scrutiny than say intellectual property.

As for the resurgent neo-Kantian notion of autonomy which underpins UCITA's sanction of almost unrestrained private law making, it should be noted that this kind of "freedom," too, is only possible if embedded in a definite structure. I can hardly think of a more vivid illustration of this than the following image:

I will explain that liberty has a structure and this structure implies both freedom and constraint of actions. The best analogy is to a building. I used to regularly eat lunch in the Sears Tower in Chicago. Every day I would see thousands of persons, enough to populate a small town, moving in an apparently chaotic or "disorderly" fashion throughout the building. They were there for countless purposes and were headed for innumerable destinations: shops, restaurants, offices, the observation "skydeck" from which on a clear day they could view four states. Yet the freedom they exercised was structured by the tower itself, by its lobbies, its corridors, its stairways, its escalators, its elevators. Imagine that the tower was invisible and you could simply view the inhabitants, suspend-

---

78. See *supra* Part III(A).

79. See, e.g., Jeremy Waldron, *Is Coleman Hobbes or Hume (or Perhaps Locke)?*, in *ANALYZING LAW: NEW ESSAYS IN LEGAL THEORY* 117, 117 (Brian Bix ed., 1998).

80. See, e.g., *Shelley v. Kraemer*, 334 U.S. 1 (1948).

81. For a discussion of some of these issues, see DONALD P. GREEN & IAN SHAPIRO, *PATHOLOGIES OF RATIONAL CHOICE THEORY: A CRITIQUE OF APPLICATIONS IN POLITICAL SCIENCE* (1994). On the useful concept of "embedded games," see DOUGLAS BAIRD ET AL., *GAME THEORY AND THE LAW* 188-217 (1994).

ed in space. To explain their movements you would have to hypothesize the existence of a tower with floors, walls, elevators . . . .

The structure of Sears Tower surely constrains the behavior or "freedom" of its occupants. You cannot, for example, take a single elevator directly from the 20th to 60th floor. Instead you need to change elevators on the 34th floor . . . . Yet the structure also permits thousands of persons on a daily basis to pursue their disparate purposes for entering the building . . . .

Like a building, every society has a structure that, by constraining the actions of its members, permits them at the same time to act to accomplish their ends . . . .<sup>82</sup>

## V. THREE IMAGES OF INTELLECTUAL PROPERTY IN THE DIGITAL DOMAIN

This discussion began with a sketch of three images of what may be broadly described as intellectual property in the digital domain: American, European and Australian. It is instructive to return to these three images for an illustration of the macro-changes which the developments of the digital era discussed above have brought about in each and in the reconfigurations of the relationships between them.

Twenty-five years ago—back in pre-digital antiquity—Europe and the United States could be characterized as occupying opposite poles of intellectual property protection. Europe represented the strongest view of intellectual property, seeing it as some kind of sacred thing—as a kind of inalienable natural or human right. This view is still alive and reflected in Professor Dessemontet's invocation of both the Universal Declaration of Human Rights which affirms the right of everyone "to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he [or she] is the author,"<sup>83</sup> and the International Covenant on Economic, Social and Cultural Rights to the same effect.<sup>84</sup>

---

82. RANDY E. BARNETT, *THE STRUCTURE OF LIBERTY: JUSTICE AND THE RULE OF LAW* 2 (1998).

83. Universal Declaration of Human Rights, G.A. Res. 217A, art. 27(2), U.N. Doc. A/810 (1948).

84. International Covenant on Economic, Social and Cultural Rights, Dec. 16, 1966, art. 15(1)(c), 993 U.N.T.S. 3. *See also* American Declaration of the Rights

By contrast, Anglo-American law, did not hold intellectual property rights in such lofty or naturalistic regard. In the United States, intellectual property rights had always been regarded as an incontrovertibly utilitarian compromise, and always predicated upon their benefit to society. In this weaker view, intellectual property rights are seen not as an inalienable birth right but as a benefit granted by society for the benefit of society. This non-naturalistic conception of intellectual property is enshrined in the U.S. Constitution itself which gives Congress power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."<sup>85</sup> This utilitarian premise for the protection of intellectual property rights is also reiterated in numerous court opinions at the highest level as in *Sony Corporation of America v. Universal Studios*:

The monopoly privileges that Congress may authorize are neither unlimited nor primarily designed to provide a special private benefit. Rather, the limited grant is a means by which an important public purpose may be achieved. It is intended to motivate the creative activity of authors and inventors by the provision of a special reward . . . .<sup>86</sup>

Utilitarian to the core. The substantive rights created by Congress pursuant to its constitutional mandate were similarly circumscribed—for instance, grant of copyright was subjected to various formalities that kept the United States out of the Berne Convention, the premiere copyright treaty for a century, as did the much shorter copyright term under the 1909 Act. Moreover, all rights granted by copyright law were subjected to an open-ended overriding privilege of "fair use" which has its roots in uniquely American countervailing values such as freedom of expression.

Anglo-Australian intellectual property law has, on the other hand, always steered a middle course between the two polar streams above. As in the United States, the federal pow-

---

and Duties of Man, art. 13, OEA/Ser.L/V/II.23, Doc. 6 (1948); Murumba, *supra*, note 11, at 444.

85. U.S. CONST. art. 1, § 8, cl. 8.

86. *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984).

er to legislate for intellectual property matters is found in the Commonwealth (Federal) Constitution, but unlike its United States' counterpart, the Australian Constitution does not impose any teleological constraint or utilitarian calculus on the rights the legislature may create under the intellectual property power. Outside the constitution, the rationale for Anglo-Australian intellectual property rights has always been understood to be a mixture of the more flexible utilitarian calculus similar to that which underpins U.S. intellectual property rights and the more robust deontological or natural right ideology more familiar on the European continent. In Anglo-Australian law, the rights of the copyright owner are also stronger by dint of the absence of an open-ended *fair use* doctrine such as that of the United States; the equivalent concept of *fair dealing* is much narrower and applies to a carefully enumerated list of acts.

Over the last twenty years, however, intellectual property rights in the United States have been progressively strengthened by legislation to the point where they are equivalent to those of Anglo-Australian law; in the digital domain, UCITA and code may now take them well beyond this point. Moreover, these stronger rights are now taking on a naturalistic garb; UCITA itself rests less on any utilitarian conception and more on that most neo-Kantian and neo-classical of conceptions: autonomy. There is an unmistakable resistance in Australia, and it seems in Europe, to a wholesale embrace of this supernaturalistic view of intellectual property rights, whether it comes in the guise of autonomy or code or both. It remains to be seen whether it will withstand the more robust countervailing values in the United States' Constitutional culture.<sup>87</sup>

## VI. CONCLUSION

At its core, this paper has been concerned with the emerging law relating to transactions in digital products and, to a lesser extent, digital transactions involving all products. My charge was to discuss this law from an Anglo-Australian perspective, and I have tried to take the stance of an observer

---

87. UCITA is likely to run into problems especially with among others, preemption by Federal Trade Commission legislation. See PORT ET AL., *supra* note 54, at 348-49.



from the Antipodes looking at the trans-Atlantic debates. One should not assume from this stance, however, that there is a single "Australian perspective" any more than there is a single European or American one; all that the geographical designation indicates here is a chosen point of intervention in a fascinating comparative approach.

The principal theme of this paper has been the view that lawmaking in the digital domain is not just about contract and autonomy, or just about intellectual property, or just about digital technology: it lies at the busy and complex intersection of all three. The comments on UCITA and other matters above should be seen in this light. In urging a cautious approach to lawmaking at the intersection of code, contract and intellectual property, however, the paper should not be taken as a generic disposition in favor of weaker rights in information. The U.S. intellectual property rights of 20 years ago, especially in the copyright area, always struck me as inadequate; they still do in many areas including those relating to databases and aesthetic designs of utilitarian objects. Nor should the paper be taken to suggest that the issues of contention are always straightforwardly between suppliers and consumers of information products. Indeed, I agree with Professor Nimmer's view that the large majority of transactions in this area are likely to be between businesses, and consumer protection (except indirectly through freer competition) may not be the salient feature.

But it is equally true that much of the opposition to stronger rights in information has come from a significant section of the software suppliers themselves. Although this may come as a surprise at first, it ultimately reflects the dynamics of the innovation process at the heart of intellectual property law, and that law's delicate balance between the diametrically opposed goals of strong exclusive rights for innovators on the one hand, and maximum public access to their innovations on the other. In the end, however, both exclusion and access rest on the same deep principle of encouraging innovation: exclusion does it by providing incentive to innovators; access, by allowing them to copy and build on the work of others. This is particularly true in the software field where today's innovations are quickly superseded by tomorrow's new ones.

The naturalistic transformation of exclusion into some inalienable right jeopardizes the innovation potential of copy-

ing recently affirmed by the U.S. Supreme Court itself.<sup>88</sup> All authors are also copiers, and build on the work of those who have gone before: "The world goes ahead because each of us builds on the work of our predecessors. 'A dwarf standing on the shoulders of a giant can see further than the giant himself.'"<sup>89</sup> That is the balance between access and exclusion which intellectual property in general, and copyright in particular, strives to maintain. We should not discard it lightly by renaming knowledge "information," or relocating exclusivity in contract and code rather than (or in addition to) intellectual property.

9

---

88. See *Feist Publications, Inc. v. Rural Tel. Serv. Co., Inc.*, 499 U.S. 340 (1991):

It may seem unfair that much of the fruit of the compiler's labor may be used by others without compensation. As Justice Brennan has correctly observed, however, this is not "some unforeseen byproduct of a statutory scheme." *Harper & Row*, 471 U.S., at 589 (dissenting opinion). It is, rather, "the essence of copyright," *ibid.*, and a constitutional requirement. The primary objective of copyright is not to reward the labor of authors, but "[t]o promote the Progress of Science and useful Arts." Art. I, § 8, cl. 8. Accord, *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975). To this end, copyright assures authors the right to their original expression, but encourages others to build freely upon the ideas and information conveyed by a work.

*Id.* at 349-50 (alteration in original) (citations omitted).

89. Zechariah Chafee, Jr., *Reflections on the Law of Copyright* 45 COLUM. L. REV. 503, 511 (1945).

