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# FROM JEANS TO GENES: THE EVOLVING NATURE OF PROPERTY OF THE ESTATE

A. Mechele Dickerson\*

## I. INTRODUCTION

When a debtor files a bankruptcy petition, all assets he owns are presumptively deemed to be held in, and controlled by, a separate legal entity—the estate.<sup>1</sup> Only property included in the estate can be used or sold to repay debts. Deciding what property should be included in the debtor's estate was not an easy task one hundred years ago because the Bankruptcy Act of 1898<sup>2</sup> (the "Act") relied on state law to define the scope of property included in the estate.<sup>3</sup> Deciding what property is included in the estate became easier about twenty years ago after Congress adopted the Bankruptcy Code.<sup>4</sup> Section 541 of the Code contains a broad and all-encompassing definition of the estate that includes the debtor's interest in virtually all prepetition property.<sup>5</sup> Notwithstanding the apparent simplicity of this broad definition, technological advances in our society make it increasingly difficult for bankruptcy courts to

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<sup>1</sup> See 11 U.S.C. § 541(a) (1994) ("[T]he commencement of a case . . . creates an estate.").

<sup>2</sup> Bankruptcy Act of 1898, Pub. L. No. 696, 30 Stat. 544 (repealed 1978).

<sup>3</sup> See *infra* notes 41-46.

<sup>4</sup> See 11 U.S.C. §§ 101-1330 [hereinafter the "Code" or "Bankruptcy Code"].

<sup>5</sup> See *id.* § 541(a)(1) (defining estate as "all legal or equitable interests of the debtor in property as of the commencement of the case" and noting that the definition includes "property, wherever located and by whomever held"); see also *infra* notes 47-61.

determine exactly what constitutes "property" and who has the right to control or sell that property.

This Article traces bankruptcy law's treatment of property of the estate over the last one hundred years and suggests challenges bankruptcy courts will face in the future when they analyze property created by (or dependent on) the Internet or biotechnology (i.e., "technoproperty"). Nonbankruptcy law has only recently started to explore the relative rights parties have in technoproperty. Because of this, the first bankruptcy court that considers whether technoproperty should be included in a debtor's estate and, if so, whether a trustee can sell this property to pay debts will be writing on a virtually clean slate.

The Article begins by discussing how property was originally conceptualized under non-bankruptcy law. This conceptualization has evolved from characterizing property as a tangible thing that only one person has the right to own, use, or control to characterizing it as a "bundle of rights" or interests that an owner (and perhaps others) can assert in something that is tangible or intangible. This Part then briefly discusses the growth in, and importance of intellectual property, a major form of intangible property.

Part III traces the bankruptcy law treatment of property of the estate. Because the Act defined property largely in reference to state laws, bankruptcy courts interpreted the Act to narrowly construe the term "property of the estate." This Part concludes by showing that, in contrast to the Act's narrow conceptualization of property of the estate, the Code adopts a broader approach that generally includes in the estate all property the debtor owns at the time of filing.

The Article concludes by examining things that did not exist one hundred years ago and exist now solely because of advances in technology (i.e., technoproperty). Technoproperty defies some prior conceptualizations of property because of its inherent intangibility and because, in some instances, it has human-like characteristics. Given this, bankruptcy courts may be unable to rely on former or current conceptualizations of "property" and may have no state or federal court guidance when they decide whether to include technoproperty in a debtor's estate or whether to allow a trustee to sell that property.

## II. DEFINING PROPERTY

## A. In General

Most lawyers would agree that modern property is best viewed as an abstract right or a legally-constructed relationship among people with respect to things.<sup>6</sup> In the past, however, "property" was viewed as a tangible thing over which one person had the absolute, indivisible<sup>7</sup> right to use, sell, give away, leave idle, or destroy.<sup>8</sup>

Traditional common law rules ultimately recognized a wider range of interest in "property" including leases, easements, and future interests. Moreover, modern property clearly is not viewed as a unitary right. Instead, it is viewed as a "multilithic" concept that includes a "bundle" of disparate rights,<sup>9</sup> including the right to use something, the right to prevent others from using it,<sup>10</sup> and the right

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<sup>6</sup> See generally JESSE DUKEMINIER & JAMES E. KRIER, *PROPERTY* (4th ed. 1998).

<sup>7</sup> See WILLIAM BLACKSTONE, *COMMENTARIES ON THE LAWS OF ENGLAND IN FOUR BOOKS*, book II, ch. 1, at 2 (describing property as the "sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe."); see also ROGER A. CUNNINGHAM ET AL., *THE LAW OF PROPERTY*, 1-4 (2d ed. 1993) (noting early characterizations of property as tangible objects).

<sup>8</sup> See Thomas C. Grey, *The Disintegration of Property*, reprinted in CURTIS J. BERGER & JOAN C. WILLIAMS, *PROPERTY LAND OWNERSHIP AND USE* 9 (4th ed. 1997) (arguing that "[m]ost people, including most specialists [lawyers and economists] in their unprofessional moments, conceive of property as *things* that are *owned by persons*. To own property is to have exclusive control of something—to be able to use it as one wishes, to sell it, give it away, leave it idle, or destroy it.") (emphasis in original); see also Kenneth Vandeveld, *The New Property of the Nineteenth Century: The Development of the Modern Concept of Property*, 29 *BUFF. L. REV.* 325 (1980) (describing property as giving an owner an exclusive right to use it).

<sup>9</sup> Wesley Newcomb Hohfeld is viewed as the primary architect of the "bundle of sticks" theory of property law. See Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 23 *YALE L. J.* 16 (1913) (characterizing property as a legal relation between and among legal subjects); Wesley Newcomb Hohfeld, *Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 26 *YALE L. J.* 710 (1917); see also Jeanne L. Schroeder, *Death and Transfiguration: The Myth that the U.C.C. Killed "Property,"* 69 *TEMP. L. REV.* 1281, 1282-83 (1996) (discussing property characterization as a bundle of sticks).

<sup>10</sup> In some circumstances, property owners can also prevent others from using a likeness of their property, which sometimes can include their identities. See, e.g., *White v. Samsung Electronics America, Inc.*, 971 F.2d 1395, 1397 (9th Cir. 1992) (reaffirming owner's property right to sue for the appropriation of one's identity, but holding that Wheel of Fortune letter-turner Vanna White's identity had not been appropriated when defendant used image of a robot in a blonde wig with metallic, mechanical features in an advertisement).

to transfer your rights to someone else.<sup>11</sup> One reason (though certainly not the only one) explaining why modern property simply cannot be viewed as a unitary right controlled by one owner is because the government has increasingly asserted an interest in private property owned by private citizens<sup>12</sup> and because of the shared interests commonly associated with intangible forms of property, including negotiable instruments (stock, bonds, notes) and intellectual property.

### *B. Increasing Importance of Intellectual Property*

The value and importance of intellectual property has increased dramatically during this century.<sup>13</sup> These intangible products—though not the tangible, fixed objects initially conceptualized at common law—are uniformly treated as property. The following sections discuss the procedures modern legislatures and courts have developed to govern how the property is created and the extent to which people can assert rights in such property.

#### *1. Trademark*

Trademark rights arise at common law and their registration is regulated by both state and federal law.<sup>14</sup> An owner may register a trademark with the United States Patent and Trademark Office (PTO).<sup>15</sup> In general, once the PTO registers an owner's trademark, the Trademark Act of 1946 (the "Lanham Act")<sup>16</sup> gives the owner

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<sup>11</sup> See *DUKEMINIER & KRIER*, *supra* note 6, at 80; see also *United States v. General Motors Corp.*, 323 U.S. 373, 377-78 (1945) (stating that property for the purpose of the takings clause was a group of rights that defined the relationship between an individual and a thing).

<sup>12</sup> See generally Thomas Ross, *Metaphor and Paradox*, 23 GA. L. REV. 1053, 1055-56 (1989) (arguing that the conceptualization of private property changed from being one of "thing ownership" to the bundle of sticks metaphor because of the redistribution of wealth that occurred beginning with the New Deal).

<sup>13</sup> See generally Weston Anson, *Valuing Trademarks, Patents and Other Intangibles in a Bankruptcy Environment*, 15-FEB AM. BANKR. INST. J. 29, 31 (1996) (commenting that "the overall value of American industry's intangible assets is increasing substantially").

<sup>14</sup> See *La Terraza De Marti, Inc. v. Key West Fragrance & Cosmetic Factory, Inc.*, 617 F. Supp. 544, 547 (S.D. Fla. 1985); *Victory Pipe Craftsmen, Inc. v. Faberge, Inc.*, 582 F. Supp. 551 (N.D. Ill. 1984); *Dave Grossman Designs, Inc. v. Bortin*, 347 F. Supp. 1150 (N.D. Ill. 1972).

<sup>15</sup> The PTO has the authority to establish procedures for obtaining federal trademark registration. See 15 U.S.C. § 1051 (1994).

<sup>16</sup> See *id.* §§ 1051-1127.

the right to prevent others from using similar marks if any confusion, mistake, or deception would result from the use.<sup>17</sup>

An owner of a trademark can assign the mark by recording a written assignment with the PTO.<sup>18</sup> While the Lanham Act explains how to assign a mark, it does not address what a creditor must do to perfect its security interest in a trademark. Because the Lanham Act does not control the perfection of a security interest, most creditors perfect under the state uniform commercial laws.<sup>19</sup> Courts consistently hold that a creditor who validly perfects its security interest in a trademark pursuant to the Uniform Commercial Code (UCC) has a validly perfected security interest and is not required to record (or otherwise perfect) its interest with the PTO. Failing to properly perfect under applicable state law leaves the creditor's security interest unperfected, an important issue in the bankruptcy context since trustees can use their strong-arm powers to avoid an unperfected security interest.<sup>20</sup>

## 2. Patents

The PTO has the sole authority to establish procedures for obtaining patent protection.<sup>21</sup> Once the PTO issues a patent, the owner has the exclusive right to prevent others from making, using,

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<sup>17</sup> See *id.* § 1114(1).

<sup>18</sup> See *id.* § 1060. A valid assignment of a trademark must be accompanied by an assignment of the goodwill of the business (or at least that part of the goodwill that is connected with the use of and symbolized by the trademark). See *id.*; see also *Roman Cleanser Co. v. Nat'l Acceptance Co. of Am.* (*In re Roman Cleanser Co.*), 43 B.R. 940, 947 (Bankr. E.D. Mich. 1984) (noting the requirement that a mark cannot be assigned in gross but must be accompanied by the goodwill of the business). Thus, if an owner sells the trademark, courts generally conclude that the sale includes the goodwill and tangible business assets which accompany the trademark. See *Marshak v. Green*, 746 F.2d 927, 929 (2d Cir. 1984); *United States Ozone Co. v. United States Ozone Co. of Am.*, 62 F.2d 881, 885-86 (7th Cir. 1933); *In re Gucci*, 202 B.R. 686 (Bankr. S.D.N.Y. 1996).

<sup>19</sup> See *In re Together Dev. Corp.*, 227 B.R. 439, 441 (Bankr. D. Mass. 1998); *In re 199Z, Inc.*, 137 B.R. 778, 782 (Bankr. C.D. Cal. 1992); *In re Chattanooga Choo-Choo Co.*, 98 B.R. 792 (Bankr. E.D. Tenn. 1989); *In re C.C. & Co., Inc.*, 86 B.R. 485, 487 (Bankr. E.D. Va. 1988); *In re Roman Cleanser Co.*, 43 B.R. 940, 944 (Bankr. E.D. Mich. 1984); see also Richard Lieb, *The Interrelationship of Trademark Law and Bankruptcy Law*, 64 AM. BANKR. L.J. 1, 10 (1990) ("As a general proposition, if a security interest has been properly created and timely perfected under the UCC, the later bankruptcy of the debtor/transferor will not impair the secured party's security interest.").

<sup>20</sup> See 11 U.S.C. § 544 (1994).

<sup>21</sup> See 35 U.S.C. § 153 (1994) ("Patents shall be issued in the name of the United States of America, under the seal of the Patent and Trademark Office.").

or selling the patented invention for a limited time throughout the United States.<sup>22</sup> An owner of a patent can assign its entire patent right (or any interest in that right) to another party, and may record the written assignment with the PTO.<sup>23</sup>

Bankruptcy courts have been asked to decide whether a creditor is required to perfect a security interest in a patent under federal law (by recording its interest with the PTO) or whether perfection under state law protects its interest. Because the patent statute (like the Lanham Act) requires only that a creditor record an assignment (not a security interest) with the PTO, most courts have concluded that federal patent law does not preempt state law perfection procedures.<sup>24</sup> Thus, a creditor who complies with state law perfection procedures to perfect a security interest in a patent has a properly perfected interest that cannot be avoided by a bankruptcy trustee.<sup>25</sup>

### 3. Copyright

Federal copyright law is governed by the Copyright Revision Act of 1976.<sup>26</sup> The Copyright Act gives an owner of "original works of authorship"<sup>27</sup> protection against the unauthorized copying or publication of copyrighted works.<sup>28</sup> Copyright protection (like trademark protection) exists in original works of authorship even if

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<sup>22</sup> See *id.* § 154.

<sup>23</sup> See *id.* § 261. An assignment that is not recorded is void against a subsequent purchaser or mortgagee who gives valuable consideration and does not have notice of the prior assignment. See *id.*

<sup>24</sup> See *City Bank & Trust Co. v. Otto Fabric, Inc.*, 83 B.R. 780, 782-84 (Bankr. D. Kan. 1988) (noting that federal law does not expressly state that creditors must file an assignment with the PTO to perfect a security interest); *In re Transp. Design & Tech., Inc.*, 48 B.R. 635 (Bankr. S.D. Cal. 1985) (holding that a creditor is not required to perfect its security interest in patents by filing under federal law but that perfection under state law protects the creditor only from competing lien creditors, not bona fide purchasers of the patent who record with the PTO).

<sup>25</sup> See sources cited *supra* note 24.

<sup>26</sup> See 17 U.S.C. §§ 101-1101 (1994), amended by Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998).

<sup>27</sup> See *id.*

<sup>28</sup> See *id.* § 412. Specifically, the Copyright Act gives owners the following rights: to prevent an unauthorized public performance or display, to make derivative works, to distribute copies to the public, to reproduce the work in copies, and to publicly perform sound recordings by means of digital audio transmission.

the owner has not registered a claim with the copyright office.<sup>29</sup> Ownership of copyrighted material can be conveyed (in whole or in part), bequeathed by will, or transferred by operation of law.<sup>30</sup> Owners may (but are not required to) record a conveyance in the Copyright Office.<sup>31</sup>

Bankruptcy courts also have considered whether a creditor is required to perfect a security interest in a copyright under federal law (by recording its interest with the Copyright Office) or whether perfection under state law protects its security interest. In a controversial decision,<sup>32</sup> the court in *In re Peregrine Entertainment, Ltd.*,<sup>33</sup> held that because the copyright statute provides for a national system of recording liens, the Copyright Act preempts state law perfection procedures.<sup>34</sup> Thus, unlike the conclusions reached in trademark and patent cases, a creditor must comply with the copyright law's national registration scheme to validly perfect its security interest in a copyright.<sup>35</sup>

#### 4. Trade Secrets

Trade secrets are governed by the Uniform Trade Secrets Act,

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<sup>29</sup> See *id.* § 408. ("Registration is not a condition of copyright protection."). Except in limited circumstances, however, an owner cannot receive statutory damages or attorney's fees under the Copyright Act if the copyright has not been registered. See *id.* § 412.

<sup>30</sup> See *id.* § 201(d)(1). While the Copyright Act generally does not recognize involuntary transfers of an author's ownership of a copyright, the Copyright Act recognizes and enforces transfers ordered in bankruptcy cases. See 17 U.S.C. § 201(e) ("When an individual author's ownership of a copyright . . . has not previously been transferred voluntarily by that individual author, no action by any governmental body or other official or organization purporting to seize, expropriate, transfer, or exercise rights of ownership . . . shall be given effect under this title, except as provided under title 11.").

<sup>31</sup> See *id.* § 205(a) ("Any transfer of copyright ownership or other document pertaining to a copyright may be recorded in the Copyright Office . . .").

<sup>32</sup> For a critique of the court's holding, see Alice Haemmerli, *Insecurity Interests: Where Intellectual Property and Commercial Law Collide*, 96 COLUM. L. REV. 1645 (1996); Elise B. May, *Where Your Priorities Should Be: Analysis of The Perfection and Priority of Security Interests in Copyrights as it Affects Bankruptcy*, 11 BANKR. DEV. J. 509, 519-32 (1994-95); Steven Weinberger, *Perfection of Security Interests in Copyrights: The Peregrine Effect on the Orion Pictures Plan of Reorganization*, 11 CARDOZO ARTS & ENT. L.J. 959 (1993).

<sup>33</sup> 116 B.R. 194 (Bankr. C.D. Cal. 1990).

<sup>34</sup> See *id.* at 204. Article 9-302(3) of the UCC provides that creditors who attempt to perfect a security interest in property subject to a federal statute that requires a national registration of the security interest (like patent law) must rely on the federal law's perfection procedures.

<sup>35</sup> See *id.*; see also *In re Avalon Software, Inc.*, 209 B.R. 517 (Bankr. D. Ariz. 1997) (filing required at PTO to perfect a security interest in a copyright).



which has been adopted by most states.<sup>36</sup> Trade secrets are defined as any formula, pattern, device or compilation of information that gives a business owner the ability to obtain an advantage over competitors who lack access to the trade secret.<sup>37</sup> Unlike patents, copyrights, and trademarks, trade secrets do not give an owner exclusive rights to use the property.<sup>38</sup> Creditors are not required to comply with any federal law to perfect a security interest in, or assign or license, a trade secret. Instead, creditors should comply with any state laws and perfection procedures.<sup>39</sup>

### III. PROPERTY OF THE BANKRUPTCY ESTATE

#### A. *Treatment Under the Act*

Under the Bankruptcy Act, courts construed property of the estate to include only those assets that the debtor owned as of the date he filed his bankruptcy petition and could be used to pay creditors' claims.<sup>40</sup> While the term "property" as used in § 70 of the Act was to be given a broad interpretation,<sup>41</sup> the Act defined property largely by incorporating substantive rules of state law. However, courts excluded from the estate any property that could not be transferred or assigned under applicable nonbankruptcy law,<sup>42</sup> property that a debtor could exempt under applicable state law,<sup>43</sup> certain property

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<sup>36</sup> See UNIF. TRADE SECRETS ACT, 14 U.L.A. 433 (1985).

<sup>37</sup> See RESTATEMENT OF TORTS § 757 (1939); cf. UNIF. TRADE SECRETS ACT § 1, at 438-39 (broadly defining "trade secret").

<sup>38</sup> See UNIF. TRADE SECRETS ACT § 1 cmt.

<sup>39</sup> See Evelyn M. Sommer, *Acquisition and Divestiture of Intellectual Property*, 458 PLI/CORP. 677 (1984).

<sup>40</sup> See The Bankruptcy Act of 1898, Pub. L. No. 696, 30 Stat. 544, § 110(a) (*repealed* 1978) ("The trustee of the estate . . . shall . . . be vested with the title of the bankrupt as of the date of the filing of the petition . . . except insofar as it is to property which is held to be exempt . . .").

<sup>41</sup> See *Segal v. Rochelle*, 382 U.S. 375, 379 (1966) (purpose of § 70a(5) is to secure for creditors everything of value that the bankrupt owns at the time the petition is filed).

<sup>42</sup> See Bankruptcy Act of 1898, Pub. L. No. 696, 30 Stat. 544, § 70a(5) (*repealed* 1978); see also *Tignor v. Parkison*, 729 F.2d 977, 979 (4th Cir. 1984); Vern Countryman, *The Use of State Law in Bankruptcy Cases (Part I)*, 47 N.Y.U. L. REV. 407, 432 (1972) (noting that non-bankruptcy law must be consulted to determine both whether "the bankruptcy had anything that might be called 'property'" and whether the property "could be reached by judicial process").

<sup>43</sup> See *Lockwood v. Exch. Bank*, 190 U.S. 294 (1903); see also *In re Buda*, 323 F.2d 748 (7th Cir. 1963) (holding that causes of action that are exempt under state law are excluded

encumbered by liens,<sup>44</sup> and certain causes of action.<sup>45</sup> Moreover, to provide the bankrupt with sufficient assets to survive and thrive in the future, courts often excluded property from the estate to ensure that bankrupts had the ability to make an “unencumbered fresh start.”<sup>46</sup>

## B. Treatment Under the Code

### 1. Property Included - In General

The Code takes a more comprehensive approach to characterizing property of the estate than the approach Congress took when it enacted the Bankruptcy Act. Section 541 provides that the commencement of a bankruptcy case creates an estate and then defines “estate” to include *all* legal or equitable interests of the debtor in property, wherever located and by whomever held at the time the bankruptcy case commences.<sup>47</sup> While the Code never defines what constitutes “property,” courts broadly construe property to include everything of value the debtor possesses even if the property, or the debtor’s interest in that property, is “novel.”<sup>48</sup> Adopting a broad,

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from the estate); *In re Lamb*, 272 F. Supp. 393 (E.D. La. 1967) (holding that cash surrender value of insurance policies on debtor’s life is exempt under state law and, thus, is not part of the estate).

<sup>44</sup> See *Sayers v. Forsyth Bldg. Corp.*, 417 F.2d 65, 72 (5th Cir. 1969) (finding that, because default judgment creates a lien on property and is subject to enforcement proceedings to satisfy the judgment debt, property encumbered by such a lien is excluded from the estate).

<sup>45</sup> See Bankruptcy Act of 1898, Pub. L. No. 696, 30 Stat. 544, § 110(a) (*repealed* 1978) (“[R]ights of action . . . for libel, slander, injuries to the person of the bankruptcy or of a relative . . . seduction, and criminal conversation shall not vest in the trustee unless by the law of the State such rights of action are subject to attachment, execution, garnishment, sequestration, or other judicial process . . .”).

<sup>46</sup> See *Segal*, 382 U.S. at 380 (refusing to construe tax refund as property under § 70a(5)); see also *Lines v. Frederick*, 400 U.S. 18, 19 (1970).

<sup>47</sup> Section 541(a)(1) specifically lists some, but not all, property that is included in the debtor’s estate. For example, estate property includes any interest the debtor has in community property if the debtor either solely or jointly manages and controls the property or if creditors could assert a claim against the property. See 11 U.S.C. § 541(a)(2) (1994). The estate also includes property the trustee recovers from certain third parties or property transferred to the estate. See 11 U.S.C. § 541(a)(3) and (a)(4). Finally, the estate includes property a debtor acquires or becomes entitled to acquire within 180 days after the bankruptcy filing. See 11 U.S.C. § 541(a)(5).

<sup>48</sup> See *In re Bakersfield Westar, Inc.*, 226 B.R. 227, 233-34 (B.A.P. 9th Cir. 1998) (including in property of the estate the right to make or revoke an election to be treated as a

comprehensive definition independent of the vagaries of state law eliminates most of the uncertainty concerning which assets can be sold to pay a debtor's debts.<sup>49</sup> Indeed, to clarify that the Code rejected the Act's reliance on state law to define estate property, § 541(c)(1) explicitly provides that the estate includes property even if applicable nonbankruptcy law restricts the debtor's ability to transfer the property, or if the property is governed by an agreement that conditions a debtor's interest in the property on the debtor's financial solvency.<sup>50</sup>

Several types of property that would have been *excluded* from an Act estate are now *included* in the Code estate. For example, the Code does not exclude property simply because the debtor could exempt it under applicable state or federal law. Instead, § 541 includes virtually all property in the estate, though debtors may be able to exempt property under § 522.<sup>51</sup> In addition, an Act estate generally excluded a bankrupt's unpaid wages<sup>52</sup> unless: (1) the debtor could assign those wages under applicable state law<sup>53</sup> and (2) the wages were sufficiently rooted in the bankrupt's prebankruptcy past.<sup>54</sup> In contrast, the modern estate includes all accrued (but yet unpaid) wages and accrued vacation pay as long as the debtor has

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subchapter S corporation for federal income tax purposes).

<sup>49</sup> See *United States v. Whiting Pools, Inc.*, 462 U.S. 198, 204-205 (1983) (noting that congressional reports indicate that § 541(a)(1)'s scope is broad); *In re Edgeworth*, 993 F.2d 51, 55 (5th Cir. 1993); *In re Geise*, 992 F.2d 651, 655 (7th Cir. 1993); *In re Prudoff*, 186 B.R. 64, 66 (Bankr. E.D. Va. 1995).

<sup>50</sup> See 11 U.S.C. § 541(c)(1). While this provision allows a debtor to transfer property to the estate that would otherwise be nonassignable, the transferred property retains all other restrictions that accompany the property. See *In re Dean*, 174 B.R. 787, 791 (Bankr. E.D. Ark. 1994) (holding that trustee succeeds to the debtor's contractual rights including any restrictions on transfer); *In re Rouse*, 48 B.R. 236, 240 (Bankr. E.D. Pa. 1985) (stating that interest that is limited in the hands of the debtor also is limited if held by the estate).

<sup>51</sup> 11 U.S.C. § 522 (b) and (d) describes how debtors can exempt property from property of the estate.

<sup>52</sup> See *Lines v. Frederick*, 400 U.S. 18 (1970) (holding that accrued but unpaid vacation pay is not property under § 70a(5)).

<sup>53</sup> See *Kolb v. Berlin*, 356 F.2d 269, 271 (5th Cir. 1966) (holding that accrued wages are included in the estate only if the wages could be transferred under applicable non-bankruptcy law).

<sup>54</sup> See *Waldschmidt v. CBS, Inc.*, 14 B.R. 309, 312 (Bankr. M.D. Tenn. 1981) (holding that royalty payments owed to debtor are property within the scope of § 70a(5) of the Act); *Hudson v. Wylie*, 242 F.2d 435, 443-44 (9th Cir. 1957) (finding that the right to share in profits as a result of a joint venture had such a "present and calculable value" as to become part of the estate).

an unconditional right to those funds.<sup>55</sup>

Similarly, property of an Act estate included only those causes of action that the debtor could transfer or assign (or a creditor could levy on) under applicable state law.<sup>56</sup> The Code eliminated this restriction by including all causes of action in the estate<sup>57</sup> unless the debtor would be precluded from bringing the lawsuit under nonbankruptcy law.<sup>58</sup> Finally, an Act estate did not include a debtor's interest in real property held as tenants by the entirety.<sup>59</sup> In contrast, the Code includes a debtor's interest in entireties property<sup>60</sup> even if the debtor's spouse has not filed a bankruptcy petition.<sup>61</sup>

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<sup>55</sup> See *In re Tully*, 202 B.R. 481, 483 (B.A.P. 9th Cir. 1996) (holding that chapter 7 debtor's real estate commission pending in escrow at filing constituted property of the estate); *In re Palmer*, 57 B.R. 332 (Bankr. W.D. Va. 1986) (finding that a year-end bonus was not property of the estate because the debtor's right to receive the bonus was conditioned on a number of events); *In re Bernstein*, 34 B.R. 611 (Bankr. Colo. 1983) (holding that accrued but unpaid annual leave was property of the estate).

<sup>56</sup> See Bankruptcy Act of 1898, Pub. L. No. 696, 30 Stat. 544, § 110(a) (*repealed* 1978); see also *Carmona v. Robinson*, 336 F.2d 518 (9th Cir. 1964) (interpreting California law); *Saper v. Delgado*, 146 F.2d 714, 715 (2d Cir. 1945) (interpreting New York law).

<sup>57</sup> See *In re RCS Engineered Prods. Co.*, 102 F.3d 223, 225 (6th Cir. 1996); *Sender v. Simon*, 84 F.3d 1299, 1304 (10th Cir. 1996); *In re Wischan*, 77 F.3d 875, 877 (5th Cir. 1996) (personal injury claims included in estate even if the claims are nontransferable or non-assignable under applicable state law); *Sierra Switchboard Co. v. Westinghouse Elec. Corp.*, 789 F.2d 705, 708-709 (9th Cir. 1986); *Tignor v. Parkinson*, 729 F.2d 977, 981 (4th Cir. 1984) (emotional distress claim included even if nontransferable under applicable state law); *Shirkey v. Leake*, 715 F.2d 859, 863 (4th Cir. 1983); *In re Schepps Food Stores, Inc.*, 160 B.R. 792 (Bankr. S.D. Tex. 1993) (derivative suit included in Code estate); see also *In re Ira Haupt & Co.*, 274 F. Supp. 1007 (S.D.N.Y. 1967) (shareholders' derivative action excluded from Act estate).

<sup>58</sup> See *In re Van Dresser Corp.*, 128 F.3d 945, 947 (6th Cir. 1997) ("[I]f the cause of action does not explicitly or implicitly allege harm to the debtor, then the cause of action could not have been asserted by the debtor as of the commencement of the case, and thus is not property of the estate."); see also *In re Educators Group Health Trust*, 25 F.3d 1281 (5th Cir. 1994).

<sup>59</sup> See *In re Pauquette*, 38 B.R. 170, 173 (Bankr. D. Vt. 1984).

<sup>60</sup> See 11 U.S.C. § 541(a)(1) (1994); see also *Pauquette*, 38 B.R. at 173; *D'Avignon v. Palmisano*, 34 B.R. 796, 798 (Bankr. D. Vt. 1982); *In re Ford*, 3 B.R. 559, 570 (Bankr. D. Md. 1980).

<sup>61</sup> See generally *In re Lashley*, 206 B.R. 950, 953 (Bankr. E.D. Mo. 1997) (allowing debtor spouse to avoid creditor's lien on entirety property); *In re Himmelstein*, 203 B.R. 1009, 1014 (Bankr. M.D. Fla. 1996) (including entirety property in estate but preventing joint creditor from selling property unless claim is reduced to judgment); *In re Dawson*, 10 B.R. 680, 684 (Bankr. E.D. Tenn. 1981) (limiting ability to sell entirety property because of the harm to nondebtor spouse); *In re Shaw*, 5 B.R. 107, 110 (Bankr. M.D. Tenn. 1980) (noting problem caused by "staggered filings of bankruptcy that are calculated to frustrate the interests of creditors of both spouses").

## 2. Intellectual Property

Interests an owner has in intellectual property<sup>62</sup> and all agreements governing intellectual property rights are included as property of the estate like other types of property and other contractual rights.<sup>63</sup> Disputes involving a debtor's ownership of intellectual property have grown substantially over the last one hundred years.<sup>64</sup> In some instances, a debtor's ownership of, or license interests in, intellectual property may be the only, or most valuable, asset of the estate.<sup>65</sup> Because of this, bankruptcy courts increasingly are required to engage in detailed analyses of a debtor's interest in intellectual property.<sup>66</sup>

Since Congress made a conscious decision to have a broad, inclusive definition of property, it is somewhat surprising that, when interpreting the respective property interests debtors, creditors, and others have in intellectual property, bankruptcy courts tend to protect the property rights of nondebtors. For example, the court in *In re Audiofidelity Enterprises, Inc.*<sup>67</sup> ordered a debtor to destroy materials that infringed the copyright rights of another party even though the estate would have received \$300,000 if the court had allowed the debtor to sell the materials.<sup>68</sup> Indeed, in virtually all cases involving a conflict between two federal statutes or conflicting state and federal policies, courts will protect the nondebtor's property

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<sup>62</sup> The Code includes within the definition of intellectual property trade secrets, patents, patent applications, and copyright protected works. See 11 U.S.C. § 101(35)(A). Surprisingly, trademarks are not included in this definition.

<sup>63</sup> See 11 U.S.C. § 541(a)(1); see also *United States v. Inslaw Inc.*, 932 F.2d 1467, 1471 (D.C. Cir. 1991); *In re McGee*, 157 B.R. 966, 975 (Bankr. E.D. Va. 1993); *Chesapeake Fiber Pkg. v. Sebro Packing Corp.*, 143 B.R. 360 (Bankr. D. Md. 1992).

<sup>64</sup> See Anson, *supra* note 13, at 29.

<sup>65</sup> See *In re Gucci*, 202 B.R. 686 (Bankr. S.D.N.Y. 1996) (noting that debtor's sole business was the licensing of his name and that his name and trademark (Paolo Gucci) was the estate's most valuable asset); see also Anson, *supra* note 13, at 29 (describing intangible assets of Macy's and Western Union as key assets of the estate).

<sup>66</sup> For example, the court in *In re C Tek Software, Inc.*, 127 B.R. 501, 503-07 (Bankr. D.N.H. 1991), considered whether a distributor who modified the source code of computer software it licensed from the debtor had a copyright interest in the source code and whether the creditor who had a security interest in the software also had an interest in the distributor's modifications. See also *In re Cambridge Biotech Corp.*, 186 B.R. 9 (Bankr. D. Mass. 1995) (analyzing whether debtor infringed patents for methods to detect the AIDS virus).

<sup>67</sup> 103 B.R. 544 (Bankr. D.N.J. 1989).

<sup>68</sup> See *id.* at 547-48. But cf. Lieb, *supra* note 19, at 5 (suggesting that trademark law "often bends to the goals of bankruptcy law in trademark-related proceedings decided in bankruptcy courts").

rights even when doing so potentially removes valuable assets from the estate or hinders the debtor's ability to reorganize.<sup>69</sup>

### 3. Property Excluded

Section 541 does, however, exclude some property from the estate.<sup>70</sup> For example, the Code excludes any power or interest the debtor holds in property that is designed to benefit another.<sup>71</sup> In addition, consistent with the Act's treatment of pension benefits, § 541(c)(2) excludes from the estate an interest the debtor has in a trust which contains a restriction on transfer that is enforceable under applicable nonbankruptcy law.<sup>72</sup>

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<sup>69</sup> See, e.g., *Midlantic Nat'l Bank v. New Jersey Dept. of Env'tl. Protection*, 474 U.S. 494 (1986) (holding that bankruptcy trustee may not abandon property in contravention of state statute or regulation that is reasonably designed to protect the public health or safety from identified hazards).

<sup>70</sup> It is unfortunate that Congress created narrow exclusions, as doing so creates the appearance that the exceptions were enacted solely to satisfy the demands of special interest groups. For example, § 541(b)(5)(A) and (B) exclude "any interest in cash or cash equivalents that constitute proceeds of a sale by the debtor of a money order . . . on or after the date that is 14 days prior to the date on which the petition is filed . . . under an agreement . . . that prohibits the commingling of such proceeds with property of the debtor." 11 U.S.C. § 541(b)(5)(A), (B). Instead of being the "money order issuer exception to property of the estate," this exclusion could have broadly excluded all property a debtor holds in a trust for others for a certain period pre-petition. Money order issuers could still benefit from this protection as long as (1) they modified their agreements to provide that all sales are held in trust and that the money order seller is prohibited from commingling the proceeds and (2) they established safeguards to ensure that money order sellers comply with these requirements.

<sup>71</sup> Section 541(b)(1) excludes any "power" the debtor exercises solely for third-party beneficiaries. Thus, if the debtor is the trustee of a spendthrift trust, the trustee could not exercise the power to determine the amount of the distribution of trust proceeds to beneficiaries under the trust. Likewise, § 541(d) excludes property in which the debtor holds only legal title, not an equitable interest. Thus, if the debtor is the trustee of a spendthrift trust, the bankruptcy trustee could not treat the trust benefits as estate property. See, e.g., *Begier v. IRS*, 496 U.S. 53, 58-59 (1990); *Sierra Steel, Inc. v. S & S Steel Fabrication (In re Sierra Steel, Inc.)*, 96 B.R. 271, 273 (B.A.P. 9th Cir. 1989).

<sup>72</sup> This provision protects a debtor's interest in a spendthrift trust. See *In re Newman*, 903 F.2d 1150, 1152 (7th Cir. 1990); *In re Moody*, 837 F.2d 719 (5th Cir. 1988). The Supreme Court in *Patterson v. Shumate*, 504 U.S. 753 (1992), clarified that this provision protects a debtor's interest in proceeds of an ERISA-qualified pension plan that contains an anti-assignment and nonalienation clause. Because individual retirement accounts do not contain the anti-assignment or anti-alienation provisions contained in ERISA-qualified plans, they are not excluded from a debtor's estate under § 541. See, e.g., *Velis v. Kardanis*, 949 F.2d 78, 82 (3d Cir. 1991); *In re Brillely*, 148 B.R. 39, 41 (Bankr. C.D. Ill. 1992); *In re Herbert*, 140 B.R. 174, 176 (Bankr. N.D. Ohio 1992).

#### IV. THE BRAVE NEW WORLD OF TECHNOPROPERTY

Because of advances in technology, people now own or control "things" that did not exist when Congress enacted either the Act or the Code. The remainder of this Article discusses two types of "things," Internet-related property and biotechnology property, which arguably should be characterized as "property" and, thus, included in the estate of a debtor who "owns" the property.

##### A. *CyberProperty*

Because of the Internet,<sup>73</sup> people and businesses now own or use things that did not exist when the Code was enacted twenty years ago. During the last decade, we have witnessed an explosion in the number of businesses that exist solely or primarily on the Internet.<sup>74</sup> In addition, many people access valuable password-protected information at Internet web sites while others are members of a "closed" subscription list that prescreens members before allowing them to join the discussion group.

Given the presence of the Internet and the World Wide Web in the lives of both modern businesses and individuals, a bankruptcy judge will eventually face the daunting task of determining how to characterize property a cybercompany owns, whether intangible technoproperty should be included in the debtor's estate, and, if so, how to value that property. Likewise, a future bankruptcy court may be asked to determine the relative interests a debtor and other parties have in the "right" to access password-protected Internet information or the right to control who can join or participate in the discussions involving a closed subscription list.

##### 1. *CyberCompanies*

Though "cybercompanies" are the current darlings of Wall Street,<sup>75</sup> few companies have actually made a profit based solely on

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<sup>73</sup> The Internet generally is described as a worldwide network connecting thousands of independent computer networks and millions (perhaps billions) of computers. See generally Deborah Howitt, *War.com: Why the Battles Over Domain Names Will Never Cease*, 19 HASTINGS COMM. & ENT. L.J. 719, 720 (1997).

<sup>74</sup> See G. Christian Hill, *Technology (A Special Report): The Battle for Control*, WALL ST. J., Nov. 18, 1996 at R4.

<sup>75</sup> Stock returns for certain cybercompanies from January-November 1998 include: Infoseek (215%), Lycos (266%), America Online (315%), Yahoo! (583%), and Amazon.com

their Internet activities. Internet companies are among the most highly-priced stocks on the market even though financial analysts generally admit that they do not know what the companies are worth.<sup>76</sup> That financial analysts cannot confidently value cybercompanies is not surprising, since most of these companies have generated little earnings and, thus, have never made a profit.<sup>77</sup> Cybercompanies seem to be highly valued because of investors' view of their projected growth, not because of current profits. Indeed, the stock price of some cybercompanies increased even as the companies posted multi-million dollar quarterly or annual losses.<sup>78</sup> Valuation is challenging even for companies with reported profits. Many cybercompanies own only intangible property, which is not always easy to value.<sup>79</sup> For example, though the proposed sale of Netscape Communications Corporation (the maker of a popular web navigator) suggests that the company has value,<sup>80</sup> its assets consist largely of software applications, copyrights in those applications, trademarks, ownership interests in other cybercompanies, and a limited number of computers and leasehold rights.<sup>81</sup>

It is inevitable that a major cybercompany will file for bankruptcy.<sup>82</sup> When this happens, the court will be forced to value both

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(660%). See Suzanne Woolley, *Internet Insanity*, MONEYMAG., Jan. 1999, at 96.

<sup>76</sup> See Woolley, *supra* note 75, at 99 ("To get a chuckle (or a groan) out of an analyst, ask for the best way to value Internet stocks.").

<sup>77</sup> See James K. Glassman, *At a Loss in Valuing Internet's Darlings*, WASH. POST, July 12, 1998, at H1.

<sup>78</sup> See *id.* (observing that the price of Lycos Inc. stock jumped \$20 a share even though the company lost \$9 million the previous year); George Anders, *Amazon.com, eBay Post Blazing Growth—Results of Both Companies Exceed Expectations For the Fourth Quarter*, WALL ST. J., Jan. 27, 1999 (noting that Amazon.com Inc. stock rose almost \$9 a share after reporting a \$46.4 million fourth quarter loss on revenue of \$252.9 million and a quarterly pro forma loss of \$22.2 million, or 14 cents a share.).

<sup>79</sup> See Jonathan Pavluk, *Computer Software and Tax Policy*, 84 COLUM. L. REV. 1992, 2011-12 (1984) (noting difficulty of characterizing computer software under common law model of intangible property).

<sup>80</sup> Netscape is being sold to another cybercompany, America Online, for \$4.2 billion. *I AOL Negotiating Netscape Purchase \$4.2 billion threat to Microsoft Dominance*, DALLAS MORNING NEWS, Nov. 24, 1998.

<sup>81</sup> See *Netscape Communications Corporation 1997 Annual Report* <<http://www.sec.gov/Archives/edgar/data/944458/0001047469-98-012170.txt>>.

<sup>82</sup> Indeed, a small cybercompany already has filed for bankruptcy relief. On November 1998, DigiCash Inc. filed for relief under chapter 11 in the Northern District of California. DigiCash owns eCash, an electronic cash product that is used by banks in Europe and Australia. This product, as well as the patents, protocols, and software systems that DigiCash owns, allows Internet users to engage in secure, private cash transactions and electronic voting on-



the company and its assets. Bankruptcy courts typically rely on nonbankruptcy procedures to value property. This reliance may not work with a cybercompany valuation because, for now, there is no generally accepted way to value cybercompanies outside of bankruptcy. Given the wide disparity between earnings and the stock price, it is unclear whether the stock market's valuation of a cybercompany is reliable. Indeed, given the inflated prices of some cybercompanies' stocks, a bankruptcy judge reasonably could question whether it should place *any* credence in the stock market's valuation of a cybercompany.

For example, stock prices in the summer of 1998 suggested that Amazon.com, Inc., an online bookseller which probably has significant receivables (but owns no stores and few tangible assets) was worth almost as much as the country's two largest booksellers (Barnes & Noble, Inc. and Borders Groups, Inc.), which together own over two thousand stores (including Waldenbooks, B. Dalton, and Doubleday).<sup>83</sup> Similarly, based solely on stock prices, Yahoo! Inc., which lost \$9 million in 1997, was worth more than the New York Times Company (which had after-tax-earnings of \$262 million that year) even though the New York Times owns undeniably valuable assets, including the third-highest circulation daily in the country, the Boston Globe, Golf Digest, and several television and radio stations.<sup>84</sup>

Because financial analysts have yet to determine the best way to value these companies, it is unclear what a bankruptcy court would rely on when placing a value on a cybercompany debtor. Since the company will have some assets (though they may all be intangible), the court may be forced to value the company based solely on the company's *assets*. Because many cybercompanies own solely or primarily intangible property, the court may need to use valuation procedures used for valuing intellectual (or other types of intangible) property when deciding how much a cybercompany is worth.<sup>85</sup>

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<sup>83</sup> See Glassman, *supra* note 77, at H1.

<sup>84</sup> See Glassman, *supra* note 77, at H1.

<sup>85</sup> The procedures used to value intellectual property are themselves fraught with uncertainty. See *infra* discussion at Part IV(A)(2)(d).

## 2. Domain Names

### a. Generally

Many companies, and virtually all major companies, have a presence on the Internet through their web pages.<sup>86</sup> Indeed, a quick glance at any major newspaper or magazine reveals that many companies now include their web address, or "domain name"<sup>87</sup> in their advertisements. While many domain names include all (or portions of) the company's trade name (i.e., microsoft.com, cbs.com) and the company may have trademark registrations that coincide with the trade name of the company,<sup>88</sup> companies do not have an automatic right to use their company's name as their domain name.

To use any name (including a trademark-protected name) as a web address, a company must register the domain name with Network Solutions, Inc. (NSI). NSI currently has the exclusive right to register certain domain names on a first come, first served basis.<sup>89</sup>

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<sup>86</sup> See Danielle Weinberg Swartz, *The Limitations of Trademark Law in Addressing Domain Name Disputes*, 45 UCLA L. REV. 1487, 1489 (1998) (referring to the Internet as the "ultimate marketing tool of the computer age."); Howitt, *supra* note 73, at 723 (discussing growth of the world wide web).

<sup>87</sup> While each computer or network linked to the Internet has a unique address (an Internet Protocol number), these numbers are converted into letter names (the "domain name"). A domain name consists of two parts: a host and a domain. The Internet is divided into several top level domains, including .com (commercial business), .net (network or communications organization), .edu (educational institution), .gov (government). See generally Swartz, *supra* note 86, at 1489-90; *Jews for Jesus v. Brodsky*, 993 F. Supp. 282, 287 n.3 (D.N.J. 1998). Network Solutions, Inc., provides a comprehensive discussion of how domain names are characterized as top level or other at its web site. See *Glossary of Registration-Related Terms and Organizations*, <<http://rs.internic.net/glossary/index.html#dns>> (last visited Feb. 10, 1999).

<sup>88</sup> The PTO will not register a domain name that consists of generic or merely descriptive items unless it is connected to, or references, specific goods or services. See Howitt, *supra* note 73, at 731. The PTO will, however, register a domain name as a trademark if the applicant meets all other trademark registration requirements. See Howitt, *supra* note 73, at 731.

<sup>89</sup> NSI currently has a contract with the National Science Foundation to register the domain names ending with .com, .org, .net, .edu, and .gov. This may soon change. A White Paper issued by the Department of Commerce recommends that this process be turned over to a nonprofit corporation. See Letter from J. Beckwith Burr, Acting Associate Administrator of National Telecommunications Information Administration for International Affairs, to Dr. Herb Schorr, Executive Director USC Information Sciences Institute, <<http://www.ntia.doc.gov/ntiahome/press/icann102098.htm>>; see also *A Proposal to Improve Technical Management of Internet Names and Addresses Discussion Draft 1/30/98*,

To simplify the registration process, NSI does not assess the motives of the registrant or attempt to determine whether using the domain name would constitute trademark infringement.<sup>90</sup> Because NSI does not determine whether a proposed domain name is trademark protected, it occasionally has been sued by trademark owners for registering domain names that contain trademark protected terms.

Courts have fairly consistently held that the mere registration of a domain name, without more, does not constitute trademark infringement.<sup>91</sup> In addition, NSI takes the position—and courts generally have agreed—that it has no duty to determine whether a domain name contains terms that, if used, would constitute trademark infringement.<sup>92</sup> Given this, most courts have held that only the domain name holder/infringer can be held liable if using a properly registered domain name infringes a trademark owner's rights. In general, courts will find that using a domain name constitutes trademark infringement if a business registers the name of a competitor and using the domain name is likely to confuse internet users.<sup>93</sup> Similarly, if the Internet site advertises services or products

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<<http://www.ntia.doc.gov/ntiahome/domainname/dnsdrft.htm>> (discussing reasons for change, including need for mechanisms to resolve disputes between domain name holders and trademark holders).

<sup>90</sup> The registration process is done via e-mail and requires the registrant to enter a proposed domain name into NSI's database. NSI automatically registers the domain name unless it has been assigned already, contains words found to be obscene, or matches words that are restricted in use by law. See *Academy of Motion Picture Arts and Sciences v. Network Solutions, Inc.*, 989 F. Supp. 1276, 1277 (1997); *Lockheed Martin Corp. v. Network Solutions, Inc.*, 985 F. Supp. 949, 953-54 (C.D. Cal. 1997); see also *Network Solutions' Domain Name Dispute Policy*, <<http://rs.internic.net/domain-info/internic-domain-6.html>> (last visited Feb. 10, 1999).

<sup>91</sup> See, e.g., *Jews for Jesus*, 993 F. Supp. at 307; *Academy of Motion Picture*, 989 F. Supp. at 1278-79; *Juno Online Servs., L.P. v. Juno Lighting, Inc.*, 979 F. Supp. 684, 691 (N.D. Ill. 1997); *Panavision Int'l, L.P. v. Toeppen*, 945 F. Supp. 1296, 1303 (C.D. Cal. 1996).

<sup>92</sup> See *Academy of Motion Picture*, 989 F. Supp. at 1279-1280 (finding that merely registering and cataloging domain names does not constitute a violation of the Trademark Anti-Dilution Act or the Lanham Act); *Lockheed Martin*, 985 F. Supp. at 957 (holding that NSI did not infringe mark or make commercial use of mark by merely accepting a domain name registration).

<sup>93</sup> See, e.g., *Jews for Jesus*, 993 F. Supp. 282 (granting preliminary injunction to enjoin use of domain name "jewsforjesus.org" by domain name holder whose web site presented the holder's opposition to the organization Jews for Jesus); *Planned Parenthood Fed'n of America, Inc. v. Bucci*, 42 U.S.P.Q.2d 1430 (S.D.N.Y. 1997) (finding that using "plannedparenthood.com" constituted commercial use of a trademark especially since the domain name holder (who opposed a woman's right to choose) admitted that he hoped the domain name would confuse people and prevent them from locating Planned Parenthood's web page).

similar to the trademark holder's services or products, courts typically will find that using the domain name infringes on the trademark owner's rights.<sup>94</sup> Finally, courts routinely find that there has been trademark infringement in cases involving "cybersquatters," "grabbers," or "hoarders" who register domain names that contain trademark protected terms, claim an ownership interest in those names, then attempt to ransom the grabbed name to the trademark holder.<sup>95</sup>

*b. Process of Transferring a Domain Name*

To transfer a domain name to another entity, NSI requires the domain name holder to complete a Registrant Name Change Agreement.<sup>96</sup> Though NSI does not "own" the domain name, it takes the position that the domain name holder does not own it either. Instead, NSI characterizes the domain name registration as a contract between NSI and the domain name holder, and, as a result, takes the position that a domain name holder cannot unilaterally transfer a domain name to a third party.<sup>97</sup> According to NSI, a domain holder cannot sell its rights under the contract to a third party "like tangible property" because NSI views itself as a contracting party that is "directly affected" by a sale or transfer of the domain

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<sup>94</sup> See Swartz, *supra* note 86, at 1495 n.29 (discussing dispute between Princeton Review (the domain name holder of kaplan.com) and Stanley Kaplan, Co., Princeton's primary competitor).

<sup>95</sup> See *Avery Dennison Corp. v. Sumpton*, 999 F. Supp. 1337, 1342 (C.D. Cal. 1998) (defining cybersquatter and finding trademark dilution and ordering registrant to transfer domain name to trademark holder for nominal amount); *Internatic Inc. v. Toeppen*, 947 F. Supp. 1227, 1239 (N.D. Ill. 1996); *Panavision Int'l, L.P. v. Toeppen*, 945 F. Supp. 1296, 1303 (C.D. Cal. 1996). In a recently filed lawsuit, Omega Protein Corp. sought class certification on behalf of anyone whose trademark or trade name has been misappropriated or diluted by a cybersquatter or domain name broker. *Omega Protein Corp. v. Flom*, No. H-98-3114 (S.D. Tex. filed Sept. 18, 1998). Similarly, Microsoft sued several domain name brokers who allegedly stockpiled domain names that contained trademark protected terms. *Microsoft Corp. v. Karr*, *Omega Protein Corp. v. Flom*, No. H-98-D425 (filed Dec. 21, 1998). Though courts routinely rule against cybersquatters, they typically will not find that using a domain name that contains a trademark-protected term constitutes trademark infringement if the registrant has a legitimate right to use the name to advertise a product or service different from the trademark owner's. See *Interstellar Starship Servs., Ltd. v. Epiz., Inc.*, 983 F. Supp. 1331 (D. Or. 1997) (permitting theatre group to use mark of company that sells circuit boards and computer programs); see also Swartz, *supra* note 86, at 1495-96.

<sup>96</sup> See *Network Solutions Registrant Name Change Agreement*, <<http://rs.internic.net/reg-change/agreement.html>> (last visited Feb. 10, 1999).

<sup>97</sup> See *id.*

name.<sup>98</sup> Under this view, what a domain name holder has or may be deemed to own is a potentially transferable right to renew the registration of a domain name.

c. *Are Domain Names "Property"?*

Given the importance of online advertising and product or service "branding" (i.e., having an easily accessible domain name that users relate to a product or service),<sup>99</sup> one of the most valuable assets a company may "own" is its domain name.<sup>100</sup> Viewing a domain name as property squarely conflicts with a narrow conceptualization of property as a fixed, tangible object. Under the common law's more expansive "bundle of rights" conceptualization of property, however, a domain name (or, at least, the right to use the domain name) would be property because a holder has the right to use it, exclude others from using it, and transfer it to another entity.<sup>101</sup> As such, the holder's rights in the domain name are substantially similar to the rights a tenant has in a lease, a business has in an advertising sign,<sup>102</sup> a business has in a telephone number,<sup>103</sup> or a li-

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<sup>98</sup> See *id.*

<sup>99</sup> See *Lockheed Martin Corp. v. Network Solutions, Inc.*, 985 F. Supp. 949, 951-52 (C.D. Cal. 1997) (discussing importance of the Web as a medium for advertising and for direct consumer access to goods and services).

<sup>100</sup> See *id.* at 957 (comparing domain name address to "vanity" telephone numbers and noting that both are valuable business assets).

<sup>101</sup> If, as the author argues, a holder's right to use a domain name is property, then the holder should also have the right to grant a creditor a security interest in this property. Though no cases were found involving the ability to grant, or the validity of, a security interest in a domain name, there is no reason to treat this type of intangible property any differently than other forms of intangible property (in which a creditor can obtain a security interest). However, somewhat like trademarks that cannot be assigned "in gross," the value of the domain name apart from the association with a particular product/company may be of negligible value to the secured party. See *infra* discussion at III(A)(2)(d).

<sup>102</sup> See *Naegele Outdoor Adver., Inc. v. City of Durham*, 803 F. Supp. 1068 (M.D. N.C. 1992) (treating outdoor advertising sign as property interest of both advertiser and sign owner).

<sup>103</sup> See *Dial-A-Mattress Franchise Corp. v. Page*, 880 F.2d 675, 677-78 (2d Cir. 1989) (finding competitor's use of a telephone number combination constituted either trademark infringement or unfair competition); *In re Metropolitan Alarm Corp.*, 528 F.2d 908, 910 (1st Cir. 1976) (recognizing debtor's property interest in telephone number); *Murrin v. Midco Communications, Inc.*, 726 F. Supp. 1195, 1199-1201 (D. Minn. 1989) (enjoining competitor's use of similar telephone number); *SODIMA v. International Yogurt Co.*, 662 F. Supp. 839, 852-54 (D. Or. 1987) (recognizing common law trademark right in telephone number); *American Airlines, Inc. v. A 1- 800-A-M-E-R-I-C-A-N Corp.*, 622 F. Supp. 673, 684-86 (N.D. Ill. 1985) (enjoining travel agency from using telephone number similar to airline). But *cf.*

censee has in intellectual property.

While nonbankruptcy law may not have determined the extent to which a domain name holder can sell or grant a security interest in a domain name, some bankruptcy trustees have argued successfully that a debtor's interest in a domain name is included in the bankruptcy estate.<sup>104</sup> Though courts have not treated the domain name itself as property of the estate, trustees have convinced courts that a debtor's interest in a domain name is an executory contract which can be assumed by the debtor just like other contracts involving tangible or intangible property.<sup>105</sup> This treatment is consistent with the Code's broad conceptualization of property.

That is, while the Act excluded from the estate any property that could not be transferred under nonbankruptcy law, the Code includes such property in the estate. Even if the Code includes generally nontransferable property in the estate and permits the trustee to sell the property, the trustee nonetheless must comply with any contractual provision that places restrictions on the manner in which the original party can transfer the property, or conditions that must be satisfied before the property can be transferred.<sup>106</sup> Thus, it is not surprising that courts have concluded that a chapter 7 trustee who seeks to assume and assign a debtor's rights in the domain name must comply with NSI's transfer procedures.<sup>107</sup>

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*Dranoff-Perlstein Associates v. Sklar*, 967 F.2d 852, 855-63 (3d Cir. 1992) (finding no property or trademark protected interest in telephone numbers with generic terms); *Southwestern Bell Yellow Pages, Inc. v. Wilkins*, 920 S.W.2d 544, 549 (Mo. Ct. App. 1996) (same); *Cytanovich Reading Center v. Reading Game*, 208 Cal. Rptr. 412, 415-16 (Cal. Ct. App. 1984) (same); see also Anthony L. Fletcher & David J. Kera, *The Forty-Third Year of Administration of the Lanham Trademark Act of 1946*, 80 TRADEMARK REP. 591, 675-76 (1990) (discussing general topic of granting trademark protection to telephone numbers that contain generic terms).

<sup>104</sup> While there do not appear to be any published court opinions on this, the author learned in a conversation with an attorney for NSI that this issue has been raised in several bankruptcy cases in the Northern District of Virginia (where NSI is located).

<sup>105</sup> See 11 U.S.C. § 365(a) (1994) ("[T]he trustee, subject to the court's approval, may assume or reject any executory contract or unexpired lease of the debtor.").

<sup>106</sup> See William M. Winter, *Preserving the Benefit of the Bargain: The Equitable Result*, 13 BANKR. DEV. J. 543 (1997).

<sup>107</sup> While the Code will not enforce any provision in an executory contract that purports to extinguish or limit the debtor's contractual rights solely because the debtor filed for bankruptcy, a debtor in possession or trustee who assumes an executory contract must comply with all contractual terms. See 11 U.S.C. § 365(e)(1) ("Notwithstanding a provision in an executory contract . . . an executory contract . . . may not be terminated or modified, and any right or obligation under such contract . . . may not be terminated or modified . . . solely because of a provision in such contract . . . that is conditioned on . . . the commencement of a case

Though courts may not characterize a domain name as "property" that a holder can sell, and the NSI contract may view a domain name holder as a temporary licensee who lacks the ability to unilaterally "sell" a domain name, some domain name holders currently have placed "their" domain names up for sale. For example, the holder of the domain name "computer.com" has offered to sell that name to the highest bidder.<sup>108</sup> Indeed, the only information contained at the web site is a sale notice that generally discusses the importance of online branding, stresses the value of this particular domain name, and offers the name for sale to either a startup or established company for the minimum cash price of \$500,000.<sup>109</sup> Likewise, the holder of "beef.com" has offered to sell that name for \$2,500,000, to rent it for a monthly fee,<sup>110</sup> or to enter into a profit-sharing arrangement with prospective developers of the web site.<sup>111</sup>

*d. Valuing Domain Names*

Even if the domain name holders of "computer.com" and "beef.com" are correct in their belief that they have the right to sell those names and that those names are worth hundreds of thousands of dollars, it is not clear what process a bankruptcy court should use to value a domain name. The debtor and trustee would most likely hire experts to testify about issues such as the income the debtor derived from sales purchased at the web site, the number of hits at the site,<sup>112</sup> advertising income the debtor received from the site, the uniqueness of the relationship of the domain name to the company and its affiliates, etc. Because of the similarity between the

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under this title.").

<sup>108</sup> See <<http://www.computer.com>> (last visited Jan. 4, 1999).

<sup>109</sup> See *id.*

<sup>110</sup> The page can be rented for \$500 per month for 1 to 2 months, \$3750 per month for 3 to 5 months, or \$2,500 per month for 6 to 12 months. See <<http://www.beef.com>> (last visited Jan. 25, 1999).

<sup>111</sup> See *id.* ("For Partnership: Profit-sharing possibilities for prospective developers of this web site. Inquire within.") Other domain names listed for sale include [pizza.com](http://www.pizza.com) (asking price \$300,000), [real-estate.com](http://www.real-estate.com) (asking price \$150,000), and [washdc.com](http://www.washdc.com) (asking price \$50,000). See <<http://www.pizza.com>> (last visited Jan. 25, 1999).

<sup>112</sup> While the easiest way to quantify the value of a cybercompany may be by measuring the number of times users visit the site (the "hits"), this quantification process still begs the question of how best to value a "hit." The author is grateful to Michael A. Condyles for this observation and to two other members of the Board of Governors of the Bankruptcy Section of the Virginia State Bar (Dale A. Davenport and Jeffrey L. Tarkenton) for sharing their views on cybercompany valuations.

“property” characteristics of domain names and intellectual property (e.g., necessary and inherent exclusivity), courts also could base their domain name valuation method on the methods courts use to value intangible property.

Valuing intellectual property is complex, and almost always will require expert testimony.<sup>113</sup> Moreover, two major difficulties are posed when experts attempt to value intellectual property. First, the value of an intellectual property asset typically is highest when it is being used, rather than when it is liquidated or shifted to a different purpose.<sup>114</sup> Second, valuing intellectual property is challenging because most intangible assets are created for a specific purpose and within a particular enterprise and, thus, may have little value outside the original enterprise.<sup>115</sup>

It is possible that these two problems also would complicate any attempt to value a domain name. Many domain names contain the trade name of the domain name holder. These domain names may have little (or at least a diminished) value if the domain name holder is being liquidated in a chapter 7 proceeding, but the trustee seeks to “sell” the domain to another entity who will put it to a different use. Indeed, it is likely that some domain names have little value unless they are used (and thus sold) with the holder’s other tangible and intangible property.<sup>116</sup> A simple example will demonstrate the potential difficulty of selling a domain name independently of the other assets associated with the domain name.

Assume Microsoft filed for bankruptcy and that it either is being liquidated in chapter 7 or that it is reorganizing in chapter 11 but needs to sell some of its assets, including its domain name, “microsoft.com.” Assume further that the likely buyers of the domain name are established computer companies (that already have an established presence on the web on their own web pages) and an upstart, relatively unknown cybercompany (with no web presence). While the domain name “microsoft.com” clearly has value, and the established companies probably could pay a higher price for the

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<sup>113</sup> See 6A WILLIAM L. NORTON, JR., NORTON BANKRUPTCY LAW AND PRACTICE 2D § 151:48 (1997).

<sup>114</sup> See *id.*

<sup>115</sup> See *id.*

<sup>116</sup> It also is possible that courts ultimately may conclude that domain names, like trademarks, cannot be sold in gross and that any sale of the domain name must be accompanied by a sale of the goodwill and other assets of the domain name holder. See *supra* note 18 and accompanying text.



name, it is unclear how valuable the domain name would be to a company that already has, and ostensibly profits from using, an existing domain name. Indeed, given the importance of branding, it probably would be counter-productive for a company with an established web presence to confuse its customers by suddenly shifting to another domain name. While the relatively unknown upstart computer company would have less money to bid for the domain name, it may actually place a higher value on the name. At least until Internet users realize that the domain name is no longer associated with Microsoft, the upstart company's web presence will increase because it will receive a relatively large number of "hits" at the microsoft.com web site even if Microsoft has been liquidated in bankruptcy.

It may actually be easier to value a domain name that is not connected with, and does not depend on, the trade name of the holder. That is, the generic nature of popular terms contained in some domain names may make them as attractive (and valuable) to a number of companies in the same industry as the original holder and, indeed, may make it easier to value the domain name because the name itself (not the goodwill associated with the holder) causes users to visit the site.<sup>117</sup> Perhaps the best illustration of this involves a domain name that advertises a product for the only industry that (at least for now) consistently makes money on the Internet: pornography.<sup>118</sup>

One domain name that undoubtedly receives a number of "hits"—because it will be the first web page that will be displayed when a user types in just the word "sex"—is "sex.com."<sup>119</sup> The domain name holder, Ocean Fund International, Ltd., (OFIL), will profit from being the holder of that domain name even though most users probably do not associate the "sex.com" with OFIL and

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<sup>117</sup> Generic or merely descriptive terms are not registrable as trademarks (without established secondary meaning for the latter). Nonetheless, those terms may be desirable and registrable as a domain name. See *supra* note 88.

<sup>118</sup> See *The Sex Industry: Giving the Customer What He Wants*, 346 *ECONOMIST* 8055, Feb. 14, 1998 ("Well-run pornographic websites are the most profitable places on the Internet"); M.L. Lyke, *Wired for Sex a Growing Cyberporn Empire in Seattle Takes a New Twist on an Old Trade*, *SEATTLE POST-INTELLIGENCER*, Apr. 27, 1998, at D1 ("Pornography, which has pushed many of the technological innovations on the Internet, is one of the few industries turning a profit in the bedeviling world of cyberspace.").

<sup>119</sup> Indeed, the author was told by an intellectual property lawyer that one of the reasons that domain names that end with ".com" are highly valued is because of this default function.

probably do not visit the site because of their knowledge of the specific products or services OFIL sells or provides at that site. Thus, this domain name is completely unrelated to the registered owner's company name, and does not depend on the owner's value or goodwill. Because of the name, however, it would be valuable to any number of companies—as long as those companies operate (or want to operate) a pornographic web site.<sup>120</sup> Other domain names that are probably valuable, and no doubt receive a number of “hits” because of the common terms in the name, include Whitehouse.com,<sup>121</sup> fat.com,<sup>122</sup> diet.com,<sup>123</sup> travel.com,<sup>124</sup> car.com,<sup>125</sup> and, Christmas.com.<sup>126</sup>

### 3. *Right to Access or Control Internet Information*

Because the Internet is open to virtually anyone who has computer access to it, some web sites restrict access by requiring users to have a password to either use the site or see certain information at the site. If a person who holds a password that gains access to valuable information at a web site files for bankruptcy, the password itself should arguably be treated as property. It is unclear, however, who actually owns the password.

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<sup>120</sup> That the domain name is valuable is demonstrated by the fact that it currently is in litigation. Plaintiffs have sued NSI, Ocean Fund International and several related entities in federal court in California asserting that they are the rightful owners of the domain name and that the name was fraudulently transferred by NSI to Ocean Fund International. See *Kremen v. Cohen*, No. 98-20718800 (Bankr. N.D. Calif.).

<sup>121</sup> A pornographic site which probably receives a number of hits from users who do not realize that the official web page for the White House ends with the second domain level “.org.”

<sup>122</sup> This “Rubenesque” pornographic site is registered to National Telephone Enterprises. The author learned about this deceptively titled domain name from one of her research assistants, who revealed the shock one of the research assistant's friends experienced when she stumbled upon this site while searching the Internet for weight loss programs. The author is especially grateful to the good humor displayed by this particular research assistant (who, at her request, will not be specifically named in this footnote) as she dutifully carried out the somewhat embarrassing task of researching sex.com and other similar web sites.

<sup>123</sup> A web site, registered to National A-1 Advertising, which advertises the weight loss product Herbalite.

<sup>124</sup> A web site, registered to Travel Online, which provides online travel services.

<sup>125</sup> A web site, registered to International Resource Network, Inc., which advertises the 1999 North American International Auto Show.

<sup>126</sup> A web site, registered to Internet Presence & Publishing, Inc., which advertises Christmas products.

If the holder “owns” the password, then it ostensibly should be included as property of the estate to be sold to the highest bidder—even if the highest bidder would be denied access to the site from the entity that issued the password to the debtor. In contrast, if the password is viewed as a trade secret that is owned by the entity that issued the password or if the password holder is treated as a temporary licensee, then the password would arguably not be included in the estate. The right to use the password, however, should be treated as an executory contract that should be included in the estate.

An equally unclear problem is who “owns” a closed subscription list for a discussion group. While some subscription lists allow any interested user to join the list, some lists pre-screen potential members. Who is allowed to join the list is determined, in most cases, by the person who controls or maintains the list.<sup>127</sup> The person who controls the list can prevent potentially hostile members from joining the list. In contrast, subscribers to the list have no control over who else joins the list or, in fact, who controls the list. From the perspective of members of a closed subscription list that addresses sensitive topics, who controls the list may be important.

For example, assume that “Dylan” maintains a closed subscription list for people who support affirmative action and that members often discuss strategies they are developing for thwarting attempts to curtail affirmative action programs. If the right to control the list is viewed as property of Dylan’s estate, the bankruptcy trustee arguably should be allowed to sell that right—even to a person who opposes affirmative action. It may be that few people outside of the members of most discussion groups actually place any value on the members’ online discussion. It is at least possible, however, that a person who is not sympathetic to the views presented or discussed by members of the list would be willing to “purchase” the right to control the list simply to gain access to the information that is disseminated by members of the list.<sup>128</sup> If the trustee tried to “sell”

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<sup>127</sup> For example, the author is a member of a discussion group that discusses HIV-related issues. To join this list, she had to submit an online “application” that explained that she is a member of the board of an AIDS Services Organization and that she conducts a seminar entitled “HIV/AIDS and Its Legal Issues” for that group. After justifying her interest in joining the list, she was allowed to join.

<sup>128</sup> One could argue, of course, that even members of a closed subscription list should heed the oft-stated admonition that one should not discuss anything on the Internet that you would not want to see published on the front page of the *New York Times*.

Dylan's right to control the list, members of the list most likely would attempt to prevent the sale<sup>129</sup> and would argue that the right to control the list is not Dylan's personal property because their ownership interest in the list at least equals any interest Dylan holds.<sup>130</sup>

#### 4. Conclusion

Though the Code has a comprehensive definition of "property" of the estate, it does not define what constitutes property. Because § 541 of the Code contains a broad, all-inclusive definition of property of the estate, there is no reason that a debtor's ownership of, or interests in, cyberproperty should not be included in the debtor's estate.<sup>131</sup> Even with a clear conceptualization of "property," however, it is likely that the court who is assigned the first major bankruptcy case involving cyberproperty will have difficulty valuing this property.

#### B. Property Created by Biotechnology

Just as advances in computer-based technology have created new industries, biotechnology has made it possible for scientists to create new "things" which largely defy being characterized as "person" or "property." Specifically, modern research involving human and animal reproduction now make it possible to create a future life by freezing ova and sperm or by engineering an embryo outside of a woman's womb. Likewise, because of advances in biotechnology, scientists are now using genetic material in ways unheard of one hundred years ago. Because technological developments are developing faster than the legal or ethical rules that

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<sup>129</sup> The business in *In re Cult Awareness*, 151 F.3d 605 (7th Cir. 1998), made a somewhat similar argument. The debtor in that case was an anti-cult organization that was liquidating in chapter 7. The court allowed the trustee to sell the debtor's trade name to an entity alleged to be a cult over the debtor's contention that there was a good possibility that the name "will be put to misleading and unscrupulous purposes." *Id.* at 609.

<sup>130</sup> Of course, if this fails and the members of the group discover that Dylan's right to control the list has been sold to a hostile third-party, they can then simply refuse to participate in any further online discussions or could start another discussion group controlled by a more sympathetic ear.

<sup>131</sup> For a general discussion of whether web sites should be construed as property, see I. Trotter Hardy, *The Ancient Doctrine of Trespass to Web Sites*, 1996 J. ONLINE L. art.7, <<http://www.wm.edu/law/publications/jol/hardy.html>> (last visited Feb. 10, 1999).

govern the things technology creates, courts are increasingly finding themselves embroiled in disputes involving legal rights in property created by biotechnology.

### 1. Frozen Embryos

Neither the medical, the legal, nor the ethics community has arrived at a consensus on the rights that people, medical clinics, or the government has in frozen ova, sperm, or human embryos.<sup>132</sup> Frozen embryos are created through the *in vitro* fertilization procedure which involves stimulating a woman's ovaries to produce multiple ova then removing the eggs to a glass dish, where sperm is then introduced.<sup>133</sup> Once the sperm cell fertilizes the egg, the fusion (pre-zygote) divides until several pre-zygotes are formed.<sup>134</sup> These pre-zygotes may then be cryopreserved (i.e., frozen) in liquid nitrogen for later use by the couple.<sup>135</sup>

Most disputes over the "ownership" of frozen embryos arise when the married couple who froze the embryos is divorcing, and one partner wants the embryos destroyed, while the other wants to either implant the embryos or donate the embryos to third parties. As is true in other aspects of divorce proceedings, courts have relied on state law to determine who owns the embryos and whether the other party has any rights in the embryos.

The first dispute over frozen embryos actually did not arise in a divorce case. In *York v. Jones*,<sup>136</sup> the federal court was required to determine whether the couple or the clinic that had possession of the embryos had the right to keep the embryos. When the couple sought to transfer one of the embryos to another facility, the clinic

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<sup>132</sup> See Kathleen R. Guzman, *Property, Progeny, Body Part: Assisted Reproduction and the Transfer of Wealth*, 31 U.C. DAVIS L. REV. 193 (1997) (discussing whether frozen embryos should be classified as persons or property); Maria R. Durant, *Cryopreservation of Human Embryos: A Scientific Advance, A Judicial Dilemma*, 24 SUFFOLK U. L. REV. 707, 725-26 (1990) ("Both research and ethics committees have been unable to arrive at a consensus on rights of ownership in human embryos" and "the judiciary is reluctant to label the embryo as personal property."); see also John A. Robertson, *Embryos, Families, and Procreative Liberty: The Legal Structure of the New Reproduction*, 59 S. CAL. L. REV. 939 (1986).

<sup>133</sup> See John A. Robertson, *Decisional Authority Over Embryos and Control of IVF Technology*, 28 JURIMETRICS J. 285, 287 (1988).

<sup>134</sup> See *id.*

<sup>135</sup> See *id.*

<sup>136</sup> 717 F. Supp. 421 (E.D. Va. 1989).

refused.<sup>137</sup> The couple then sued the clinic for breach of contract and detinue (for wrongfully retaining the embryo).<sup>138</sup> Because the litigants entered into a "Cryopreservation Agreement," the court could avoid deciding whether the embryo constituted property, a person, or something else. Instead, the court held that the agreement created a bailment relationship and that, under applicable state law, the clinic-bailee had an obligation to return the subject matter of the bailment (i.e., the frozen embryo) to the bailors once the bailment terminated.<sup>139</sup>

Perhaps the frozen embryos case that received the most publicity involved the divorce between Junior Davis and his ex-wife, Mary Sue.<sup>140</sup> During their divorce proceeding, Mary Sue asked the court to award her the couple's frozen embryos so she could donate them to a childless couple.<sup>141</sup> Junior objected to her request and sought custody of the embryos so he could prevent them from being implanted.<sup>142</sup> The Tennessee Supreme Court was asked to determine whether the frozen embryo was a person (and thus should not be destroyed as Junior requested), property, or something else.<sup>143</sup> The court concluded that frozen embryos are not "strictly speaking, either 'persons' or 'property,' but occupy an interim category that entitles them to special respect because of their potential for human life."<sup>144</sup> This court, like the *Jones* court, concluded that it would be bound to enforce any agreement the parties executed concerning the disposition of the frozen embryos.<sup>145</sup> Because the couple did not execute such an agreement, the court ultimately awarded custody of the embryos to Junior because of its interpretation of his constitu-

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<sup>137</sup> See *id.* at 425.

<sup>138</sup> See *id.* at 423.

<sup>139</sup> See *id.* at 425.

<sup>140</sup> See *Davis v. Davis*, 842 S.W.2d 588 (Tenn. 1992).

<sup>141</sup> See *id.* at 590.

<sup>142</sup> See *id.*

<sup>143</sup> See *id.* at 594.

<sup>144</sup> *Id.* at 597; see also *Kass v. Kass*, 696 N.E.2d 174, 179 (N.Y. 1998) (concluding that the frozen embryos are not recognized as persons for constitutional purposes). But see LA. REV. STAT. ANN. § 130 (West 1998) ("An in vitro fertilized human ovum is a juridical person which cannot be owned by the in vitro fertilization patients who owe it a high duty of care and prudent administration.").

<sup>145</sup> See *Davis*, 842 S.W. 2d at 598; see also *Kass v. Kass*, 696 N.E.2d at 182 (enforcing parties' agreement to donate untransferred frozen embryos to an *in vitro* fertilization program for research).

tional right to procreational autonomy.<sup>146</sup>

Courts are equally perplexed over the legal treatment that should be accorded human sperm. Though males have long had the right to sell (or donate) their sperm,<sup>147</sup> courts generally have not considered the scope of a male's property interests in human sperm. The courts in *Hall v. Fertility Institute*<sup>148</sup> and *Hecht v. Kane*<sup>149</sup> somewhat addressed the issue when they considered whether to enforce a decedent's will that provided that cryogenically preserved sperm be given to the decedent's girlfriend over the objection of the decedent's surviving children. In attempting to analyze the nature of property rights in semen, the court in *Hecht* characterized sperm as a unique type of property and recognized that the "present legal position toward property rights in the human body is unsettled and reflects no consistent philosophy or approach."<sup>150</sup> Despite the unsettled nature of the law, both courts ultimately concluded that the decedent had an ownership interest in his sperm at the time of death and that this interest constituted property that could be distributed as part of his estate.<sup>151</sup>

To date, few state statutes address the legal status, if any, to accord ova, sperm, or frozen embryos. The statutes that *do* exist appear to have been enacted as part of an ongoing dispute over abortion rights or because of legislators' fears about the potential of human cloning. Thus, the statutes that regulate ova, sperm, and human embryos state that the embryos are humans<sup>152</sup> which cannot be sold for nontherapeutic purposes<sup>153</sup> or intentionally destroyed.<sup>154</sup>

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<sup>146</sup> See *Davis*, 842 S.W. 2d at 602-04.

<sup>147</sup> The Uniform Anatomical Gift Act (UAGA) permits a willing donor to transfer semen or other replenishing tissues such as blood or plasma with or without consideration. See generally Katherine R. Guzman, *Property, Progeny, Body Part: Assisted Reproduction and the Transfer of Wealth*, 31 U.C. DAVIS L. REV. 193 (1997); Bonnie Steinbock, *Sperm as Property*, 6 STAN. L. & POL'Y. REV. 57 (1995).

<sup>148</sup> 647 So. 2d 1348 (La. Ct. App. 1994).

<sup>149</sup> 20 Cal. Rptr. 2d 275 (Cal. Ct. App. 1993).

<sup>150</sup> *Id.* at 281.

<sup>151</sup> See *id.* at 850; *Hall*, 647 So.2d at 1351.

<sup>152</sup> See LA. REV. STAT. ANN. § 121 (West 1998) (defining human embryo as "an in vitro fertilized human ovum, with certain rights granted by law, composed of one or more living human cells and human genetic material so unified and organized that it will develop in utero into an unborn child"); see also *id.* § 123 ("An in vitro fertilized human ovum exists as a juridical person until such time as the in vitro fertilized ovum is implanted in the womb. . .").

<sup>153</sup> See *id.* § 122 ("The sale of a human ovum, fertilized human ovum, or human embryo is expressly prohibited."); FL. STAT. ANN. § 873.05(1) (West 1998) (making it a felony to

It is unclear what a bankruptcy court would rely on if it had to decide whether a debtor's ova, sperm, or frozen embryos should be treated as property of the estate.<sup>155</sup> If a court treats these excised body materials as "property" and the body materials are valuable,<sup>156</sup> the bankruptcy court also would need to decide if a trustee could sell the ova, sperm, or embryo to the highest bidder. Given the lack of clarity in reported judicial decisions and the paucity of state statutory law, bankruptcy courts will have little assistance from nonbankruptcy characterizations of these materials. Bankruptcy courts could potentially rely on arguments raised by academic commentators. While commentators have not addressed this issue in detail, some have suggested that "owners" of frozen embryos should have the right to sell or otherwise dispose of their frozen embryos as they so choose.<sup>157</sup> The American Bar Association may also weigh in on this matter, as it is considering a policy on frozen embryos. Unfortunately, the policy only addresses the relative rights between the spouses in a divorce dispute.<sup>158</sup> As the policy will not address

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knowingly offer to purchase or sell a human embryo for valuable consideration); *see also* CALIF. HEALTH & SAFETY CODE § 24185 (West 1998) (prohibiting the sale of embryos for the purpose of cloning human beings); MICH. STAT. ANN. § 333.2690 (West 1998) (prohibiting the sale of embryos for use in nontherapeutic research).

<sup>154</sup> See LA. REV. STAT. ANN. § 129 ("A viable in vitro fertilized human ovum is a juridical person which shall not be intentionally destroyed by any natural or other juridical person or through the actions of any other such person.").

<sup>155</sup> The only reported bankruptcy opinion involving frozen embryos involved a dispute between creditors who claimed a priority lien in frozen bovine embryos. *See In re Stookey Holsteins*, 112 B.R. 942 (Bankr. N.D. Ind. 1990); *see also* Fairview State Bank v. Edwards, 739 P.2d 994 (Okla. 1987) (answering certified question from bankruptcy court concerning the security interest in proceeds from the sale of bovine embryos).

<sup>156</sup> See Amy Virshup, *How much would you pay for this family? For the millions of Americans who suffer from some form of infertility, the quest for children has become a matter of both high technology and high finance*, SMART MONEY, Dec. 1, 1998, at 132 (stating that ova prices in New York have risen to \$5,000 each and that a fee of \$25,000 was recently being offered to a "healthy, intelligent college student or college graduate, age 21-33, with blue eyes and blonde or light brown hair" by someone looking for Ivy League ova and observing that a 5cc vial of frozen sperm costs \$188 and donors get \$35-\$50 per "deposit" visit); Adrienne Knox, *What's a human egg worth? Debate Intensifies*, STAR-TRIBUNE (Mpls.-St. Paul), Apr. 5, 1998, at E01 (discussing advertisement in the Princeton University newspaper calling for an ova plus expenses totaling \$35,000 from an "attractive, intelligent woman with proven fertility" and reporting that ova in Minnesota were being sold for \$1,500).

<sup>157</sup> See Robertson, *supra* note 133, at 298 (arguing that purchasing embryos should be allowed just as physicians are paid to treat infertility with IVF technology); Natalie K. Young, *Frozen Embryos: New Technology Meets Family Law*, 21 GOLDEN GATE U. L. REV. 559, 584 (1991) ("[I]n the absence of state regulation and as long as the use is reasonable, the egg and sperm providers would have unlimited rights of ownership in the frozen embryo.").

<sup>158</sup> See Richard Carelli, *ABA Drafting Policy on Custody of Frozen Embryos in Divorce*,



whether frozen embryos should be treated as a person, property, or something else, it will be of little guidance to any bankruptcy court that may find itself faced with such property in a debtor's estate.

State and federal courts have been unwilling to label frozen embryos as personal property, largely because of their reluctance to make decisions based on moral or ethical considerations. Ostensibly, a bankruptcy court could take the same approach and refuse to treat these items as property on public policy grounds. Given the Code's comprehensive conceptualization of property, however, a bankruptcy court should not exclude potentially valuable property from the estate unless it is clear that either state or federal law<sup>159</sup> would not treat the item as property and would not allow the property to be sold to the highest bidder.

## 2. Genetic Material

The medical, legal, and bioethics communities are also struggling with whether it is proper to characterize human cells and genetic information as "property."<sup>160</sup> Few dispute that people have a virtually unfettered right to donate or sell disease-free blood.<sup>161</sup> In-

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PITTSBURGH POST-GAZETTE, Feb. 2, 1998, at A6; see also Michelle F. Sublett, *Frozen Embryos: What are They and How Should the Law Treat Them*, 38 CLEV. ST. L. REV. 585, 616 (1990) (arguing that a frozen embryo should not be treated as a human life and that there should be a presumption in divorce proceedings in favor of letting the embryo expire rather than bringing the embryo to life).

<sup>159</sup> The National Organ Transplant Act, which prohibits the sale of certain organs (kidney, liver, heart, lung, pancreas, bone marrow, cornea, eye, bone and skin), suggests that a legislature could restrict the transfer or sale of ova, sperm, or frozen embryos if they chose to do so. See The National Organ Transplant Act of 1984, Pub. L. No. 98-507, 98 Stat. 2339, 2346 (1984) (codified as amended at 42 U.S.C. § 274e (1994)). Organ sales are banned primarily because of the fear that allowing organs to be sold would harm the voluntary organ donation system or would encourage the poor to sell their body parts. Arguably, that fear would not apply to the sale of genetic material since cells regenerate, are replaceable, and removing them does not detrimentally affect the donor's health. See Rhonda G. Hartman, *Beyond Moore: Issues of Law and Policy Impacting Human Cell and Genetic Research in the Age of Biotechnology*, 14 J. LEGAL MED. 463 (1993).

<sup>160</sup> See *Moore v. Regents*, 793 P.2d 479 (Cal. 1990) (Arabian, J., concurring) ("The ramifications of recognizing and enforcing a property interest in body tissues are not known, but are greatly feared—the effect on human dignity of a marketplace in human body parts, the impact on research and development of competitive bidding for such materials, and the exposure of researchers to potentially limitless and uncharted tort liability.") see also Hartman, *supra* note 159, at 471-72; Catherine M. Valerio Barrad, *Genetic Information and Property Theory*, 87 NW. U. L. REV. 1037 (1993) (arguing that genetic information has many of the recognized characteristics of property.).

<sup>161</sup> See 18 U.S.C. § 1122(a) (West 1998) (penalizing the knowing donation or sale (or

deed, because, except in limited circumstances, people generally cannot be forced to give their blood to a third party,<sup>162</sup> the law generally recognizes a person's unitary property interest in controlling the use or sale of his or her own blood. Although blood contains genetic information, only a few states have explicitly protected a person's property interest in his or her genetic information.<sup>163</sup>

The case that initially triggered the debate was *Moore v. Regents of University of California*.<sup>164</sup> The physician in the case obtained his patient's (Moore's) consent to remove portions of Moore's spleen to treat leukemia without disclosing to Moore that (1) he was using Moore's genetic material in research, (2) he had entered into a commercial contract to develop a cell line using Moore's cells, and (3) he had a patented cell line from the cells he took from Moore's body.<sup>165</sup> Moore sued the physician for breaching his fiduciary duty to disclose facts material to Moore's consent and for converting Moore's property.

In a long, complicated multi-opinion decision, the court ultimately concluded that, while the physician had a duty to disclose his financial interests to Moore before he obtained Moore's consent to surgery, Moore did not have the right to prevent the physician from using Moore's genetic material in commercial research.<sup>166</sup> While the court stated that it was not holding that excised cells "can never be property for any purpose whatsoever,"<sup>167</sup> it nonetheless rejected Moore's conversion claim. In refusing to recognize a property in-

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attempt to donate or sell) of blood, semen, tissues, organs, or other bodily fluids by a person who has tested positive for the HIV virus); IND. CODE ANN. § 35-42-1-7 (West 1998) (making the sale of infected blood a Class C felony (if not used) and a Class A felony (if used)); ILL. COMP. STAT. § 5/12-16.2 (West 1998) (making the transmission of HIV a Class 2 felony); S.C. CODE ANN. § 44-29-145 (West 1998) (making the exposure of HIV to others a felony with a \$5,000 fine and up to 10 years in jail); TENN. CODE ANN. § 39-13-109 (West 1998) (making the exposure to HIV a Class C felony).

<sup>162</sup> See MINN. STAT. § 611A.19 (West 1998) (making HIV testing of sex offender mandatory upon request of the victim); N.Y. CRIM. PRO. § 390.15 (West 1998) (requiring testing for HIV in sex crime cases); MISS. CODE ANN. § 99-19-203 (West 1998) (making HIV testing mandatory upon conviction of sex crime); N.J. STAT. ANN. § 43-2.2 (West 1998) (requiring HIV testing if accused is indicted, charged or convicted of sex crime).

<sup>163</sup> See COLO. REV. STAT. § 10-3-1104.7(1)(a) (1998) ("Genetic information is the unique property of the individual to whom the information pertains . . ."); GA. CODE ANN. § 33-54-1(1) (1998) ("Genetic information is the unique property of the individual tested . . .").

<sup>164</sup> 793 P.2d 497 (Cal. 1990).

<sup>165</sup> See *id.* at 149.

<sup>166</sup> See *id.* at 164.

<sup>167</sup> *Id.* at 146.

terest in genetic materials, the court contended that the patented cell line was both "factually and legally distinct" from the cells the physicians took from Moore's body.<sup>168</sup> In addition to this factual distinction, the court admitted that it was unwilling to characterize genetic materials as property owned exclusively by the human from whom the material is extracted because of its concern that giving patients an exclusive property interest in their cells would unduly impede medical research.<sup>169</sup>

If a person with valuable genetic information filed for bankruptcy, the court would need to decide whether—notwithstanding a state court's characterization of (or refusal to characterize) the property interests in genetic information or human tissues—the genetic information should be included as property of the estate. Though this may seem somewhat far-fetched, it is not unreasonable to imagine that a future bankruptcy court will be faced with making such a determination since there currently are no prohibitions on a person's ability to use or to sell her genetic information.<sup>170</sup> Likewise, this issue could face the bankruptcy court if a patient and a medical professional were involved in litigation over the use of genetic material and one of the litigants then filed for bankruptcy. Recognizing and enforcing a property interest in body tissues would move a bankruptcy court into virtually uncharted waters and may, in fact, require the bankruptcy court to rule on an issue the states have avoided.<sup>171</sup> Nonetheless, the court could not avoid this determination because it would need to decide whether genetic material is personal property (which should be included in the estate) and whether the trustee should be given the right to sell the property for the benefit of the creditors.

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<sup>168</sup> See *id.*

<sup>169</sup> See *id.* at 147.

<sup>170</sup> There does not appear to be any prohibition against the sale of human cells and genetic materials. See *supra* note 159.

<sup>171</sup> The doctrine of primary jurisdiction provides that, in some instances, a federal court can refrain from deciding an issue that is under review by an agency that has expertise with the issue. See, e.g., *In re Buckeye Countrymark, Inc.*, 227 B.R. 498, 499-500 (Bankr. S.D. Ohio 1998) (deferring to Commodity Futures Trading Commission's expertise on hedge-to-arrive contracts); *In re Drexel Burnham Lambert Group, Inc.*, 120 B.R. 724, 743 (Bankr. S.D.N.Y. 1990) (deferring to Chicago Board of Trade's expertise on the transferability of a member's seat on that board). A bankruptcy court could not rely on this doctrine to avoid deciding whether a human embryo is a person, property, or something else. Because state courts have elected to dodge this politically volatile issue does not then give federal courts the license to dodge it as well.

## V. CONCLUSION

Recent discussions involving the potential cloning of humans suggest that whatever can be done or created eventually *will be* done or created. Thus, looking forward to the next one hundred years, bankruptcy judges should prepare themselves to face increasingly complex issues involving property of the estate. As debtors who own cyberproperty or property created by various forms of biotechnology file for bankruptcy, courts will have to consider whether certain “things” should be treated as property and, if so, whether a trustee should be allowed to sell those things.