

POSTED: Notice and the Right to Exclude

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ABSTRACT

While much of Europe grants recreational users a right to access private land, American landowners enjoy a robust right to exclude. To fully exercise this right, landowners must provide notice by posting their property. In most states, the public has an implied license to use unposted land for recreation, and other states sharply increase the sanction for trespass if the land is posted. Today, posting means physically marking property with signs or paint, but this article suggests that states should soon allow landowners to post their property by making a notation in existing property records. If current technology becomes more available, centralized posting would both reduce the landowners' costs and provide better notice to the public. Centralized posting would also enhance the government's ability to serve as an intermediary between landowners and recreational users, furthering the efficient use of land regardless of whether the law begins with a right of access or a right to exclude.

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INTRODUCTION

The law often requires that property owners provide public notice to protect their rights. Owners of real property,¹ titled goods (*e.g.*, automobiles),² and intellectual property³ must record their interests in a central registry, and lenders who take a mortgage or security interest in personal property must generally do the same.⁴ Owners of some intellectual property must provide more direct notice if they want to maximize their remedies. Sellers of patented goods and owners of registered trademarks should mark their products or other materials to indicate their intellectual property.⁵ Those who fail to do so can still sue for an injunction against future infringement, but they can recover damages only if the defendant had actual notice of the plaintiff's rights.⁶ If a copyright holder fails to mark her work to show that she wishes to enforce her rights,⁷ a court may limit the statutory damages of the "innocent infringer" to just \$200.⁸ If she does provide notice, and the court finds the infringement to be willful, the court can set statutory damages up to \$150,000.⁹

This article looks at an application of the notice principle that should be familiar to anyone who has seen a "no trespassing" sign: the posting of real property to exclude recreationists such as hikers, hunters or horseback riders. The consequences of posting real property resemble the consequences of the intellectual property notices discussed above. A landowner who fails to post her property can still obtain injunctive relief, but her property won't receive the full protection of the law. In about half of

1. 11 JOHN L. MCCORMACK, THOMPSON ON REAL PROPERTY § 92.04 (David A. Thomas ed., 2d ed. 2002).

2. *See, e.g.*, VA. CODE ANN. § 46.2-600 (2011).

3. *See, e.g.*, 17 U.S.C. § 408 (2012) (registration of copyrights).

4. The law governing security interests in personal property usually requires some act designed to give notice to third parties (filing, possession, etc.). It does, however, grant automatic perfection for certain security interests. *See* U.C.C. § 9-309; THOMAS W. MERRILL & HENRY E. SMITH, PROPERTY: PRINCIPLES AND POLICIES 917-18 (2007) ("Nearly all localities in the United States use recordation. . . . [R]ecording acts create a powerful incentive for . . . mortgagees [to file] their mortgages . . . in order to block possible good faith purchaser claims by subsequent transferees.").

5. 15 U.S.C. § 1111 (2012) (allowing the owner of a registered trademark to indicate the registered status of a trademark with the symbol ® or some other manner); *see* 35 U.S.C. § 287 (2012) (allowing the patent holder to mark her goods or its packaging with a notice of the relevant patents).

6. *See* 15 U.S.C. § 1111; 35 U.S.C. § 287(a).

7. Authors usually mark their work with the symbol ©.

8. 17 U.S.C. § 504(c)(2) (2012).

9. *Id.*

the states, recreationists enjoy an implied license to use unposted land,¹⁰ and many of the remaining states reserve their most severe penalties for trespassing on posted land. For example, the penalty for hunting without permission on unposted Virginia land is a fine of not more than \$500.¹¹ If the land is posted, the hunter faces a fine of not more than \$2,500 in addition to up to twelve months in jail.¹²

Although legal academics have largely ignored posting laws,¹³ the topic has enormous practical significance and is the subject of an active policy debate. Each year tens of millions of Americans engage in outdoor recreation,¹⁴ and they spend over a hundred billion dollars in the process.¹⁵ Disputes between landowners and recreationists can arouse strong passions, occasionally leading to violence,¹⁶ and these conflicts may become more

10. See Mark R. Sigmon, Note, *Hunting and Posting on Private Land in America*, 54 DUKE L.J. 549, 584 (2004) (“Twenty-nine states currently require private landowners to post their land to exclude hunters.”). Five states have changed their laws since the publication of Sigmon’s comment, and today only twenty-six states require posting. Missouri now requires posting, while Louisiana, North Carolina, Oklahoma, and Washington no longer require it. See LA. REV. STAT. ANN. § 14:63 (2012); MO. REV. STAT. § 569.145, 569.150 (2012); OKLA. STAT. tit. 29, § 5-202 (2012); WASH. REV. CODE § 9A.52.010(5), 9A.52.080 (2012). A few of the states with posting requirements do not require posting on land that is enclosed, cultivated, or below certain size thresholds. FLA. STAT. § 810.011(5)(b) (2012) (“It shall not be necessary to give notice by posting on any enclosed land or place not exceeding 5 acres in area on which there is a dwelling house in order to obtain the benefits . . . pertaining to trespass on enclosed lands.”). Most posting statutes impose criminal liability or fines for trespassing. Trespassers may also face civil liability to the landowner, but this risk may be slight because most forms of outdoor recreation will create few provable damages. Moreover, if landowners fail to post their land, a court may find that “[a] license [to enter] may be implied from the habits of the country” because “it is customary to wander, shoot and fish at will [over unenclosed and uncultivated land] until the owner sees fit to prohibit it.” *McKee v. Gratz*, 260 U.S. 127, 136 (1922).

11. VA. CODE ANN. § 18.2-132 (2012) (“Any person who goes on the lands . . . of another to hunt, fish or trap without the consent of the landowner [shall be] guilty of a Class 3 misdemeanor.”).

12. *Id.* § 18.2-134 (“Any person who goes on . . . lands . . . which have been posted . . . to hunt, fish or trap . . . shall be guilty of a Class 1 misdemeanor.”).

13. An excellent student comment provides a notable exception. See Sigmon, *supra* note 10, at 551 (surveying state posting requirements and calling for the elimination of the need to post to exclude hunters).

14. According to the U.S. Fish and Wildlife Service, 87.5 million Americans engaged in some form of wildlife recreation in 2006: 12.5 million hunters, 30 million anglers, and 71.1 million wildlife watchers. *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*, U.S. FISH & WILDLIFE SERV. 4 (2008), www.census.gov/prod/2008pubs/fhw06-nat.pdf. Note that this figure is limited to wildlife related activities and does not include all forms of outdoor recreation.

15. *Id.* (stating that Americans spent \$122.3 billion on wildlife-related recreation in 2006).

16. See, e.g., Emily Bazar, *Off-road vehicle use fuels tension, violence across U.S.*, USA TODAY (Dec. 30, 2008, 11:30 PM), http://www.usatoday.com/news/nation/2008-12-30-off-road-clashes_N.htm (following a trespassing confrontation, ATV rider assaults and attempts to

common as rural land is divided into smaller parcels and technological change allows recreationists to travel more widely (e.g., all-terrain vehicles, radio collars for dogs) and landowners to better police their borders (e.g., trail cameras that record anything that moves).¹⁷

Although the requirements for posting are complicated and vary from state to state, every state insists that landowners physically mark their property.¹⁸ Traditionally, this meant that landowners had to place signs on their property, often at prescribed intervals.¹⁹ Signs can be torn down by weather or by recreationists who know that they face little or no penalty for accessing unposted land. To address this issue, many states changed their laws over the last two decades to allow landowners to post their property by painting fences or trees a particular color that varies from state to state.²⁰

Recent years have also witnessed changes to the mechanism by which owners of other types of property give notice to the public. Motivated in part by a belief that the growing use of computers and electronic commerce change the nature of search and of business practices,²¹ in 1999 the drafters of the Uniform Commercial Code made major changes to the chapter governing security interests in personal property.²² Technological change also led Congress to include a provision in the Leahy-Smith America

run down landowner); *Breezy Point man convicted of manslaughter in hunter's deer-stand death*, GRAND FORKS HERALD (Mar. 12, 2012, 12:01 AM), http://www.twincities.com/localnews/ci_20157631/breezy-poin-man-convicted-hunters-deer-stand-death (hunter dies from injuries suffered during physical confrontation with purported landowner, who was later convicted of second-degree manslaughter); *Hunter won't be charged with killing property owner*, PITTSBURGH POST-GAZETTE (Dec. 10, 2009, 3:26 PM), <http://www.post-gazette.com/stories/local/breaking/hunter-wont-be-charged-with-killing-property-owner-370780/?print=1> (landowner killed by hunters after confronting them on his property and shooting at them); John McCormick, *Hunter gets life in prison*, CHI. TRIB. (Nov. 9, 2005), http://articles.chicagotribune.com/2005-11-09/news/0511090194_1_deer-hunters-hmong-immigrant-deer-season (hunter sentenced to life imprisonment after killing six other hunters in a trespassing dispute).

17. European privacy advocates recently began a campaign against these cameras after an Austrian politician was photographed having sex on posted land. See Sonia Van Gilder Cooke, *Wildlife Cameras Capture Austrian Politician Having Forest Sex*, TIME (June 17, 2012), <http://newsfeed.time.com/2012/06/17/wildlife-cameras-capture-austrian-politician-having-forest-sex>.

18. See Sigmon, *supra* note 10, at 561–64 (describing these requirements).

19. *Id.*

20. See *infra* note 44 and accompanying text (surveying these laws).

21. See generally Lynn M. LoPucki, *Computerization of the Article 9 Filing System: Thoughts on Building the Electronic Highway*, 55 LAW & CONTEMP. PROBS. 5 (1992) (discussing the use of changes in technology to advocate for many of the revisions adopted by Article 9).

22. For an overview of these changes, see generally Steven L. Harris & Charles W. Mooney, Jr., *How Successful Was the Revision of UCC Article 9? Reflections of the Reporters*, 74 CHI.-KENT L. REV. 1357 (1999).

Invents Act in 2011 that allows patent holders to mark their goods with a link to a web page containing the relevant patent information rather than listing all of this information on the goods themselves.²³

This article suggests that technological changes could soon render the physical posting of land (by sign or by paint) obsolete. More specifically, this article proposes a change in law that would allow landowners to “post” their land by checking a box (or series of boxes) when they pay their property taxes.²⁴ The government would use this information to supplement existing property databases that are accessible over the internet. Companies already market maps that include data from property records and can be used with handheld devices capable of accessing the global positioning system (GPS).²⁵ If the government adopted centralized posting, recreationists with GPS devices or even cellular telephones could easily determine whether they are welcome to enter a parcel of land. Handheld GPS devices can cost hundreds of dollars,²⁶ and physical posting can provide this information at a lower cost to recreationists when they are physically at the parcel in question. Yet physical posting has its own costs. Landowners incur substantial costs monitoring their property and replacing signs that have fallen down or been vandalized.²⁷ Anyone with a hammer or a paintbrush can physically mark property owned by or accessible to the

23. Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 328 (2011). The relevant section is codified as 15 U.S.C. § 1111 (2012). For a comment setting forth some of the arguments in favor of virtual posting in patent law, see generally Corey McCaffrey, *The Virtues of Virtual Marking in Patent Reform*, 105 NW. U. L. REV. 367 (2011).

24. There is some historical precedent for centralized posting. North Carolina required posting at the county courthouse in the eighteenth and nineteenth centuries. See Sigmon, *supra* note 10, at 582. A student commentator notes this fact and suggests centralized posting as an alternative to his primary proposal to eliminate posting requirements entirely. *Id.* (“States could also make posting easier, for example, by allowing landowners to post a single notice at the county courthouse, online, or in some other database.”) However, the comment does not develop the idea, devoting just two sentences to the proposal. Today only one state, Vermont, requires centralized posting; landowners must record their desire to post their land with the town clerk. VT. STAT. ANN. tit. 10, § 5201 (2012). However, Vermont also requires physical posting of the land, and none of Vermont’s towns makes these records available over the internet.

25. See, e.g., *California Maps*, MONT. MAPPING & GPS, http://www.huntinggpsmaps.com/store/gps-maps/?hgm_map_states=431 (last visited Feb. 12, 2013) (offering maps that include private property records and landowner names for about \$100).

26. See *Handhelds*, GARMIN, <https://buy.garmin.com/shop/shop.do?cID=145> (last visited Feb. 12, 2013) (showing prices ranging from \$110 to \$700 for handheld GPS devices).

27. These costs may have once enhanced efficiency by discouraging landowners from posting their land unless they had a strong desire to exclude others. As noted below, however, it would be more efficient to discourage landowners from posting through fees or subsidies. See *infra* Section I.A.i.

public; centralized posting makes it much harder to deceive the public into believing that they cannot access land. Recreationists face significant search costs as they cannot learn the posted status of land without actually travelling to the land. Centralized posting would allow recreationists to search a database for land open to the public from the comfort of their own homes. On balance, physical posting may still be a more efficient means of providing notice than centralized posting—a call for centralized posting may be premature. Given the pace of technological change, however, this should not remain true for long.

The advent of centralized and electronic posting may have implications for an even more fundamental question in property law: the proper scope of the landowners' right to exclude. The Supreme Court has said that “[t]he hallmark of a protected property interest is the right to exclude others,”²⁸ and the right to exclude serves as the cornerstone for leading theories of property law.²⁹ Yet the scope of this right varies across time and across jurisdictions.³⁰ Many European nations give hunters,³¹ hikers, or other

28. *Coll. Sav. Bank v. Fla. Prepaid Postsecondary Educ. Expense Bd.*, 527 U.S. 666, 673 (1999). Similar language can be found in a number of Supreme Court opinions. *See, e.g.*, *Kaiser Aetna v. United States*, 444 U.S. 164, 176 (1979) (the right to exclude is “one of the most essential sticks in the bundle of rights that are commonly characterized as property”); *Lingle v. Chevron U.S.A. Inc.*, 544 U.S. 528, 539 (2005) (the right to exclude is “perhaps the most fundamental of all property interests.”).

29. *See, e.g.*, Thomas W. Merrill, *Property and the Right to Exclude*, 77 NEB. L. REV. 730, 754 (1998) (“I have argued in this essay that property means the right to exclude others from valued resources, no more and no less. This is not a novel idea. It can be found in Blackstone and Bentham”); Thomas W. Merrill, *The Landscape of Constitutional Property*, 86 VA. L. REV. 885, 970–71 (2000) (“Most thinkers [sic] who have devoted themselves to a sustained analysis of the concept of property have reached the conclusion that the right to exclude, or something like it, is an invariant characteristic of private property.”); J.E. Penner, *The “Bundle of Rights” Picture of Property*, 43 UCLA L. REV. 711, 743 (1996) (“The right to property is a right of exclusion which is grounded by the interest we have in the use of things The right to property itself is the right that correlates to a general duty that all others have to *exclude themselves* from the property of others.”) (emphasis added).

30. Property theorists who stress the centrality of the right to exclude recognize that it is not absolute. *See, e.g.*, Merrill, *supra* note 29, at 753 (“First, in arguing that the right to exclude others is essential to the institution of property, I am not suggesting anything about how extensive or unqualified this right must or should be.”).

31. *See Herrmann v. Germany*, (No. 9300/07), HUDOC, (26 June 2012), at 10(35) [http://hudoc.echr.coe.int/sites/eng/Pages/search.aspx#{\"fulltext\":\[\"herrmann\"\],\"documentcollectionid2\":\[\"GRANDCHAMBER\", \"CHAMBER\"\],\"itemid\":\[\"001-111690\"\]}](http://hudoc.echr.coe.int/sites/eng/Pages/search.aspx#{\) (“Of the thirty-nine member States in which hunting is practiced, eighteen (Albania, Azerbaijan, Belgium, Estonia, Finland, Georgia, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Malta, Moldova, the Netherlands, Portugal, ‘the former Yugoslav Republic of Macedonia’, the United Kingdom and Ukraine) do not oblige landowners to tolerate hunting, while eighteen others (Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Greece, Italy, Montenegro, Poland, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden and Turkey) do.”).

recreationists³² the right to access private property even if the landowner objects, and recreationists and landowners have used both legislative and judicial action to fight over the scope of this right. During the past fifteen years both England and Scotland enacted legislation that substantially increased the public's right to access private land,³³ and the European Court of Human Rights decided cases brought by landowners in France, Germany and Luxembourg that challenged laws giving hunters access to their land.³⁴ Today, landowners in the United States enjoy a fairly robust right to exclude,³⁵ but some states once recognized public access rights similar to those enjoyed by modern Europeans,³⁶ and a few states continue to recognize access rights for particular recreationists. For example, Virginia recognizes a right of "[f]ox hunters and coon hunters" to continue the chase onto private property.³⁷

The law's choice between the right to exclude and the right of access takes on less importance if landowners and recreationists can reach Coaseian bargains in which the right is transferred to the party who values it the most. While the costs of direct negotiation between landowners and recreationists can prevent some mutually beneficial exchanges, centralized posting can enhance the government's ability to serve the role of intermediary—either lowering a property's taxes to purchase a public right of access, or raising a property's taxes to sell a landowner the right to exclude the public. The federal and many state governments already have

32. See, e.g., Brian Sawers, *The Right to Exclude from Unimproved Land*, 83 TEMP. L. REV. 665, 684–88 (2011) (discussing the right to roam in the British Isles, Scandinavia, and continental Europe).

33. See Countryside and Rights of Way Act, 2000, c. 37, §1(1) (Eng. & Wales) (expanding the right to roam to include downland, moorland, heathland, and coastal land in England and Wales); Land Reform (Scotland) Act, 2003, (A.S.P. 2), § 7(7)(a)-(b) (expanding Scotland's right to roam to include all open countryside, provided that roamers not interfere with landowners' activities). For a review of these laws and their implementation, see John A. Lovett, *Progressive Property in Action*, 89 NEB. L. REV. 739, 777-790 (2011).

34. See *Chassagnou and Others v. France* (Nos. 25088/94, 28331/95 and 28443/95), 1999-III Eur. Ct. H.R. 21; *Schneider v. Luxembourg* (No. 2113/04) 2007 Eur. Ct. H.R.; *Herrmann*, (No. 9300/07, 26 June 2012).

35. See Sigmon, *supra* note 10, at 584–85 (surveying state posting requirements and calling for the elimination of the need to post to exclude hunters).

36. This right of access was generally restricted to uncultivated and unenclosed land. *M'Conico v. Singleton*, 9 S.C.L. (2 Mill) 244, 244 (1818) ("The hunting of wild animals in the forests, and unenclosed lands of this country, is as ancient as its settlement, [and] the right to do so coeval therewith; [and] the owner of the soil, while his lands are unenclosed, can not prohibit the exercise of it to others.").

37. See VA. CODE ANN. 18.2-136 (2012). For other examples, see *infra* notes 97–98 and accompanying text.

programs that pay private landowners to grant the public access to hunt.³⁸ By lowering the transactions costs of playing this intermediary role, centralized posting may expand these programs and encourage the government to bargain on behalf of other recreationists as well. This article argues that a price mechanism can more effectively reveal the efficient use of the land than can legislative and judicial deliberation alone.

Section I argues that technological change will soon make centralized and electronic posting more efficient than physical posting. Section II argues that centralized posting will facilitate the government's role as intermediary between landowners and recreationists and make the choice between a right of access and a right to exclude less important. Section III addresses two difficult issues for the design of centralized posting: the federalism of posting and the transition from physical posting to electronic posting.

I. CENTRALIZED POSTING IN THE DIGITAL AGE

If you walk down your new neighbor's driveway to introduce yourself, you have not trespassed unless you had reason to know that you were not welcome. The law presumes that landowners grant the public a license to enter their property for limited purposes; in some states, these purposes include various forms of outdoor recreation.³⁹ When landowners post their property they overcome this presumption by notifying the public that they should not enter without express permission. Physical posting serves this function reasonably well, but Part A argues that this system has significant costs. Part B suggests that technological change has made or will soon make centralized posting a better alternative. Part C expands on the arguments made in Part B to suggest that centralized posting facilitates tailored posting—posting that allows some but not all public uses of the land.

38. See *Issues Related to Hunting Access in the United States: Final Report*, NAT'L SHOOTING SPORTS FOUND. 1, 22–32 (2010), http://www.responsivemanagement.com/download/reports/Hunting_Access_Final_Report.pdf (describing federal and state programs).

39. This article focuses on the use of posting to exclude recreationists, but centralized posting may offer advantages for more urban settings if some residents wish to prohibit entry onto their property by those soliciting business. See *infra* note 81 and accompanying text.

requirements. New Mexico insists that the landowner publish a notice in a newspaper for three consecutive weeks.⁴⁵ Of more relevance to this article is Vermont's requirement that landowners record their posting with the town clerk and pay an annual fee of five dollars.⁴⁶ No other state currently has a centralized recording requirement, though North Carolina allowed posting at the county courthouse in the nineteenth century.⁴⁷ Vermont's system differs from the system proposed by this article in two important respects. First, listing property in the clerk's office has no effect unless landowners physically post their land as well.⁴⁸ Second, the public must visit the town clerk's office to review the records; Vermont's system does not take advantage of technological advances.

1. Landowners' Costs

Landowners must incur substantial costs to physically post their property. Physical signs deteriorate or disappear, particularly when recreationists know that they face little or no penalty for accessing unposted land.⁴⁹ Landowners must therefore continually monitor their property and repost their signs if they wish to claim the protection afforded to posted property. Posted signs must be highly visible to inform recreationists that they are not welcome.⁵⁰ They therefore impose an aesthetic cost on landowners and their neighbors.⁵¹

2012) ("fluorescent or bright yellow" enacted 1977; "bright orange" added in 1999); ARK. CODE ANN. §§ 18-11-404 to 18-11-405 (2012) (enacted 1989); 720 ILL. COMP. STAT. 5/21-3 (2012) (enacted 2011); KAN. STAT. ANN. § 32-1013 (2012) (enacted 2000); MO. REV. STAT. § 569.145 (2012) (enacted 1993); N.C. GEN. STAT. § 14-159.7 (2012) (enacted 2011); TEX. PENAL CODE ANN. § 30.05(1)(D) (West 2012) (enacted 1997); NEB. REV. STAT. § 37-724 (2012) (enacted 2002); WIS. STAT. § 943.13 (2011) (enacted 1987).

45. N.M. STAT. ANN. § 17-4-6 (West 2011).

46. VT. STAT. ANN. tit. 10, § 5201 (2013).

47. See *supra* note 24 (discussing the history of North Carolina's law).

48. VT. STAT. ANN. tit. 10, § 5201 (2013).

49. In fact, some recreationists have escaped criminal liability for trespass on inadequately posted land even though the landowner expressly told them to stay out. See *State v. Corbin*, 343 N.W.2d 874, 874 (Minn. Ct. App. 1984).

50. See *Sigmon*, *supra* note 10, at 561–62 (describing requirements for adequate posting that include minimum sizes for signs and lettering and spacing requirements).

51. See, e.g., *Posting Information for Landowners, Boaters, Fishermen and Hunters*, N.Y. STATE DEP'T OF ENVTL. CONSERVATION, <http://www.dec.ny.gov/outdoor/8371.html> (last visited Feb. 12, 2013) (requesting of landowners, "[p]lease don't turn your property into an eyesore by using more signs than are necessary"); *Dealing with Trespassers*, CORNELL UNIV. SCHUYLER CNTY. LAND USE TEAM, <https://sites.google.com/site/landusetteamschuylercounty/dealing-with-trespassers> (last visited Feb. 12, 2013) ("You have a duty to make the signs visible and conspicuous, without being an eyesore."); Jenn Zimmerman, *Manor Woods To Be Cleared of Safety Hazards*, CHI. TRIB., Nov. 3, 2010, <http://articles.chicagotribune.com/2010-11->

Recently, landowners have successfully lobbied state legislatures for a change in law that lowers the cost of posting. Eighteen states allow landowners to post their property by painting trees or fence posts a particular color that varies by jurisdiction.⁵² Paint is more durable than signs, and there are no nails that can reduce the value of the landowners' trees as lumber.⁵³ However, painting the boundary is still a chore, and the aesthetic cost remains as trees must be prominently marked to make them stand out.

One could argue that the cost of posting is a feature, not a bug. Posting reduces social welfare if the value the public places on access is greater than the value the landowner places on the right to exclude.⁵⁴ By making posting costly, the law can at least identify those landowners who place a small value on the right to exclude. However, centralized posting can serve this role much more effectively than physical posting. First, the costs of physical posting are pure transactions, costs that benefit no one except perhaps the sellers of nails and paint; it would be better to discourage the landowner from posting by charging a fee that can enrich the public fisc. Second, the state can calibrate the fee to more closely approximate the value that the public places on access.⁵⁵

03/news/ct-x-w-community-briefing-1103-20101103_1_manor-woods-limbs-student-newspaper (“[A] group of neighbors complained to the Village Board that the 17-acre forest has become a relative eyesore, with no-trespassing signs warning visitors to stay away . . .”).

52. See *supra* note 44.

53. *Purple Paint Law Can Save Valuable Lumber*, 5 GREEN HORIZONS 1 (2000), available at <http://agebb.missouri.edu/agforest/archives/v5n1/gh15.htm> (paint posting preserves valuable butt logs from nail damage); see also Deanne Hackman, *Missouri's Purple Paint Statute: A New Way To Protect Your Property From Trespassers*, AG. ELEC. BULL. BD. (Nov. 8, 1995), available at <http://agebb.missouri.edu/aglaw/aglaw9.htm> (paint cannot be taken down, destroyed, or stolen, and is an economical alternative to both signs and enclosure); Ted Gregory, *Long Arm of Lavender: Purple Paint Law Gives Trespassing a Color All Its Own*, CHI. TRIB., Oct. 17, 2011, http://articles.chicagotribune.com/2011-10-17/news/ct-met-purple-paint-law-20111017_1_tree-farmer-hunters-long-arm/2 (“For those who are colorblind, purple [paint] offers another possible advantage. The colorblind see purple, red, blue and violet as darker than normal.”).

54. This article assumes that the law should try to maximize social welfare by assigning property rights to those who value them most highly. I do not address non-economic property theories. For a favorable review of some of these theories, see Lovett, *supra* note 33, at 743–50. For a more skeptical review, see Henry E. Smith, *Mind the Gap: The Indirect Relation Between Ends and Means in American Property Law*, 94 CORNELL L. REV. 959, 965–66 (2009).

55. See *infra* notes 118–24 and accompanying text.

2. Cost to the Public – Limited and Imperfect Notice

From the perspective of the recreationist, physical posting suffers from two significant limitations. First, although physical signs or painted trees provide low-cost notice when recreationists are at the border of the property (assuming that they understand the meaning of the marking),⁵⁶ recreationists have no way of learning the posted status of land before they travel to the land. This problem may be getting worse as more people live in urban areas far from the unimproved land most suitable for many forms of outdoor recreation. Studies suggest that the number of hunters has declined over time,⁵⁷ and hunters claim that a significant reason for this decline is a lack of access to land.⁵⁸ Yet unposted land remains abundant in at least some states: a 2004 study found that just twenty-nine percent of privately owned woodlands in Massachusetts was posted to prohibit hunting.⁵⁹ The problem is likely that unposted land is far from recreationists' homes, and they may be unable to find it.⁶⁰ The inability to provide notice from afar is also a problem for the landowner because the government has no easy way to learn which lands are posted and so does not know how to allocate its enforcement resources.

Second, physical signs may discourage recreationists from accessing land they can lawfully use. Old signs can remain in the woods after title passes to an owner who is willing to grant the public access but who has not bothered to remove the signs; this problem may become even more severe in states that allow paint to serve as notice, as paint is harder to remove. One could combat this problem by insisting that landowners post their property with dated signs that expire, but this would further raise the cost of

56. Many states have only recently begun allowing the posting of property with paint, and the paint color varies across states. *See supra* note 44. As a result, some recreationists may be unaware of the meaning of the color. Hopefully this will change over time.

57. *See* U.S. Fish & Wildlife Serv., *supra* note 14, at 32 (estimating that in 1996 there were 14 million hunters and in 2006 there were 12.5 million hunters).

58. *See* Nat'l Shooting Sports Found., *supra* note 38, at 4 ("One reason that hunters increasingly report as a cause of dissatisfaction and that affects hunting participation is poor hunting access."); Tom O'Shea, *Hunting Access in Massachusetts*, 4 MASS. WILDLIFE (2009), available at <http://www.eregulations.com/massachusetts/huntingandfishing2011/hunting-access-in-massachusetts/> ("According to a nationwide survey conducted in 2008, the top three reasons why people discontinue hunting are: 1) aging and associated physical limitations, 2) time constraints because of work and family obligations, and, 3) lack of access for hunting.").

59. *See* O'Shea, *supra* note 58 and accompanying text.

60. *See, e.g.,* NAT'L SHOOTING SPORTS FOUND., *supra* note 38, at 13–14 ("To further complicate access issues, there is sometimes a disconnect between the amount of land actually available and a hunter's awareness of this land . . . Many states lack a reliable, centralized location for the distribution of up-to-date information on the availability of and access to public and private hunting lands.").

posting for those landowners who do want to exclude the public. More seriously, anyone with a hammer and some nails can post a sign on land owned by or accessible to the public. Reports abound of hunters posting public land to discourage other hunters and hikers,⁶¹ and many states have found it necessary to criminalize this behavior.⁶² This is not a problem confined to hunting and rural areas. Public advocacy groups allege that wealthy California landowners post signs along public easements and even hire security guards to discourage the use of public beaches near their property.⁶³

B. *The Basic Case for Centralized Posting*

This section argues that the development of computer mapping and the global positioning system will soon allow for a better alternative to physical

61. See, e.g., Dave Vickery, *The Law is on Your Side*, MONT. SPORTING J. (May/June 2008), available at <http://www.montanawildlife.com/projectsissues/knowyourrights.htm> (hunter accosted on public land by ranch hand and told the land was posted against trespassing); *Bowhunter Charged with Posting Signs on Public Land*, BISMARCK TRIB., Dec. 25, 2007, http://bismarcktribune.com/news/state-and-regional/article_8a49dd36-4e6c-5ce9-ac05-59a2792120e7.html (bowhunter prosecuted, suspended from city bowhunt for illegally posting public lands in Duluth); Fenton Roskelley, *Trespassing Laws Tough To Enforce*, SPOKANE CHRON., Dec. 2, 1987, available at <http://news.google.com/newspapers?nid=1345&dat=19871202&id=CuoTAAAAIABJ&sjid=3voDAAAABAJ&pg=6713,469330> (illegal posting by property owners and sportsmen spurred enactment of criminal provisions against the posting of public land in Idaho, Montana, and Washington in the 1980s); NATIONAL SHOOTING SPORTS FOUND., *supra* note 38, at 151 (“Many hunters report problems with landowners *intentionally* blocking access to public land.”).

62. See ARIZ. REV. STAT. ANN. § 17-304 (2012) (“State or federal lands including those under lease may not be posted except by consent of the commission”); ARK. CODE ANN. § 18-11-406 (2012) (“It shall be unlawful for any person to post any lands which the person does not own.”); CAL. FISH & GAME CODE § 2018 (West 2012) (“It is unlawful to post any sign indicating an area is a state or federal refuge unless it is established by state or federal law, or to post any sign prohibiting trespass or hunting on any land unless authorized by the owner . . . of such lands.”); COLO. REV. STAT. § 33-6-116 (2011) (“It is unlawful for any person to post, sign, or indicate that any public lands within this state . . . are privately owned lands.”); IDAHO CODE ANN. § 36-1603 (2012) (“No person shall post, sign, or indicate that any public lands within this state . . . are privately owned lands.”); MONT. CODE ANN. § 45-8-115 (2011) (misdemeanor penalty for posting public lands); N.M. STAT. ANN. § 30-14-6(C) (2012) (misdemeanor penalty for posting public lands); N.Y. ENVTL. CONSERV. LAW § 11-2113 (Consol. 2012) (unauthorized posting prohibited); S.D. CODIFIED LAWS § 41-9-4 (2012) (misdemeanor penalty for posting public lands or lands of another); TENN. CODE ANN. § 70-4-106(b)(1)(C) (2012) (misdemeanor penalty for unauthorized posting); VA. CODE ANN. § 18.2-119.1 (2012) (misdemeanor penalty for posting lands of another).

63. See Robert García et al., *Free the Beach! Public Access, Equal Justice, and the California Coast*, CTR. FOR L. IN THE PUB. INTEREST 27 (2005), available at http://surfrider.org/images/uploads/publications/Free_the_Beach.pdf.

posting. Many counties now maintain computerized maps that link to databases of detailed property information.⁶⁴ Governments could include additional fields in these databases and allow landowners to choose the extent to which the public can access their land each year when they pay their property taxes.⁶⁵ Governments will incur some costs collecting and maintaining this information, but these transactions costs are likely to be much lower than the cost of physically posting land.⁶⁶ If one believes that landowners should pay these costs, governments could charge landowners fees that would be added to their property taxes.

Nearly all cellular telephones in use today have the ability to access the global positioning system (though customers must often pay an additional fee to use this service),⁶⁷ and many recreationists have purchased dedicated GPS devices. If recreationists loaded the county mapping data onto phones or GPS devices, they could determine whether they have permission to use a piece of land. The necessary technology already exists. Private firms offer maps for handheld GPS devices that include existing property records,⁶⁸ and California fishermen use GPS devices to determine whether they are located in a protected fishery.⁶⁹

Centralized posting is less effective than physical posting at warning recreationists when they are at the border of the property. Recreationists need devices capable of determining their location and need to download

64. See, e.g., *GIS-Web*, ALBEMARLE CNTY., <http://gisweb.albemarle.org/GISWeb/Welcome.aspx> (last updated June 17, 2012) (Albemarle County, VA); *GIS-Web*, L.A. CNTY. DEPT OF REG'L PLANNING, <http://planning.lacounty.gov/gis/interactive> (last visited Feb. 12, 2013) (Los Angeles County, CA).

65. This article proposes a system in which landowners post their property when they pay their property taxes, meaning that they would have the option to change the posted status of their land every year or six months. However, the choice of this duration is somewhat arbitrary, and there are good arguments for both shorter and longer periods. Landowners may want to be able to change the posted status of their land more frequently, either because they change their mind or because they want to sell the property to someone with different preferences. On the other hand, frequent changes would impose significant costs on recreationists as they would need to continually check and update their maps. One could imagine a number of possible compromises that balance these concerns.

66. At least the transactions costs would be low if the government set an appropriate default rule so that few landowners would need to take any action.

67. Dan Charles, *GPS Is Smartening Up Your Cell Phone*, NPR (Sept. 25, 2006), <http://www.npr.org/templates/story/story.php?storyId=6097216> (noting that federal law requires all cell phones to have GPS receivers, but most cell-phone companies do not allow non-emergency access to this functionality).

68. See *California Maps*, *supra* note 25.

69. See *California Marine Protected Areas Map*, CAL. DEP'T OF FISH & WILDLIFE, <http://www.dfg.ca.gov/m/MPA/Map> (last visited Feb. 12, 2013) (mobile-accessible maps of all protected areas, including location services for mobile users).

the necessary software and data. Unfortunately, these devices may currently be too expensive for many Americans.⁷⁰ On the other hand, if the government makes this data available over the Internet, recreationists can search for property that allows their recreation before they ever leave their homes. Centralized posting also makes it much harder for someone to discourage the public from using land they are legally allowed to access. Only the record owner (or at least the party who pays the property taxes) would be able to post land, and public easements could be noted on the government maps.⁷¹

Not everyone would benefit from better public notice of the posted status of land. In particular, centralized posting could work to the disadvantage of individuals who live near unposted land and already know its status. If centralized posting allows those who live a great distance from land to learn that it is available for outdoor recreation, hiking trails and hunting grounds could become more crowded; land available for outdoor recreation may be a scarce resource.⁷² The greater access to information could also cause more landowners to post their land. The government can partially address this problem by giving landowners an incentive to keep their land unposted,⁷³ but the increased access to information could change the very nature of posting. In a world of physical posting, landowners who do not post their land are effectively inviting their neighbors and other locals to use their land. In a world of centralized posting, failure to post land acts as an invitation to the world. This could increase transactions costs if more landowners post their property and then provide express permission to their neighbors.

C. Tailored Posting

Part B treats posting as binary: either the landowner posts her land or she does not. However, centralized posting can facilitate tailored posting, posting that permits some activities but not others and access at some times but not others. If there were no bargaining costs, one would expect at least

70. See *infra* Section III.B.

71. Some state agencies already provide physical maps showing the location of public easements. See, e.g., *Coastal Access Program: California Coastal Access Guide*, CAL. COASTAL COMM'N, <http://www.coastal.ca.gov/access/accessguide.html> (last visited Feb. 12, 2013).

72. This is at least true for hunters. See, e.g., NAT'L SHOOTING SPORTS FOUND., *supra* note 38, at 57–58 (listing crowding as one of the most important considerations for hunters when choosing where to hunt).

73. See discussion *infra* Section II.G.

some landowners to grant the public limited permission to use their land.⁷⁴ A farmer or an owner of a northern golf course should place a low value on the right to exclude the public during the winter when there are no crops in the field or golf courses are covered in snow.⁷⁵ Some landowners may be willing to allow hikers on their land but would demand a very high price before allowing recreational vehicles or hunting.⁷⁶ Other landowners will place a low value on the right to exclude some types of hunting (e.g. archery) but would very much like to exclude other types of hunting (e.g. hunting with firearms or hunting on Sundays) because of safety or ethical concerns.⁷⁷

Centralized posting could encourage tailored posting. One approach would be to adopt a notice filing system like that used in Article 9 of the Uniform Commercial Code.⁷⁸ Under this system, the government's database would note the existence of some limitation on the public's license to enter the property and then provide a link to a description of this limitation provided by the landowner. This approach offers landowners a great deal of flexibility and would allow the public to easily ascertain the permitted use of a particular piece of land. However, the lack of standardization would make it relatively costly for the public to search for locations that allow their form of outdoor recreation and for the government to serve as an intermediary that negotiates for access on behalf of the public.⁷⁹ An alternative approach would present the landowner with a menu of options. For example, the landowner could choose between boxes that would prohibit all recreational use without express permission, recreational use during certain months, hunting, or the use of firearms.⁸⁰ Centralized posting

74. Alternatively, one could say that at least some landowners would purchase a limited right to exclude from the public.

75. See, e.g., Sawers, *supra* note 32, at 695 (arguing that golf courses should not be allowed to exclude cross-country skiers when the land is covered by snow).

76. The recent European decisions on the right to exclude stress the landowner's ethical objections to hunting. See, e.g., Herrmann v. Germany, App. No. 9300/07 Eur. Ct. H.R. (2012).

77. Eleven states continue to ban at least some forms of hunting on Sundays. *State Sunday Hunting Ban Statutes*, NAT'L CONF. OF STATE LEGISLATURES, <http://www.ncsl.org/issues-research/env-res/state-sunday-hunting-ban-statutes.aspx> (last updated Feb. 2012).

78. The U.C.C. filing system is designed to allow interested parties to search the records by the name of the debtor to find financing statements. The standard form of a financing statement simply provides a box in which the secured creditor must reasonably describe the collateral or indicate that the collateral includes all of the debtor's assets or all of the debtor's personal property. See U.C.C. §§ 9-504, 9-521. For an overview of filing system in Article 9, see WILLIAM D. WARREN & STEVEN D. WALT, *SECURED TRANSACTIONS IN PERSONAL PROPERTY* 47-70 (8th ed. 2011).

79. See *infra* Section II.A.

80. The contents of this menu could vary by location to accommodate different preferences. Below I suggest that the menu should also vary over time as the state or county

can also be used to limit access of individuals other than recreationists. For example, landowners could post their property to prohibit various forms of solicitation just as the national do not-call registry prohibits telephone solicitations.⁸¹

Increasing the number of options imposes additional costs on the government and the public. The government must expand its database to include more options, and the general public must interpret and understand this information.⁸² However, these costs are likely to be small as long as the options remain relatively few. This information could be presented on a map and should be no more complex than the variety of hunting and fishing seasons and other regulations already in place.⁸³ Other recreationists may be less used to reading regulations than are hunters, but there is little reason to believe that they are less capable of doing so.

Some landowners may even want to use centralized posting to disable their own use of their land (exposing themselves to potential civil or criminal penalties), as this could improve both law enforcement and zoning regulation. A landowner who does not hunt can more effectively deter poachers by banning all hunting and firearms use. The game warden would then know that any shots fired on a property were those of a poacher. Some uses of land can impose significant costs on neighboring property. For example, many southern states allow the use of dogs to hunt game such as deer and bear.⁸⁴ Conflicts arise when these dogs enter neighboring property

learns of the preferences of the local population. *See infra* notes 114–118 and accompanying text.

81. *Nat'l Do Not Call Registry*, F.T.C. (Sept. 2009), <http://www.ftc.gov/bcp/edu/pubs/consumer/alerts/alt107.shtm>.

82. *See* Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 *YALE L.J.* 1, 24–40 (2000) (arguing why there are a limited number of property forms).

83. For example, Virginia's hunting seasons vary by species and by county; they even vary within some counties. *See Hunting & Trapping in Virginia July 2013 – June 2014*, VA. DEP'T OF GAME AND INLAND FISHERIES, <http://www.dgif.virginia.gov/hunting/regulations/2012-2013-virginia-hunting-and-trapping-regulations.pdf> at 28 (last visited Feb. 12, 2013) (access no longer available for 2012–13 regulations. 2013–14 regulations available at <http://www.dgif.virginia.gov/hunting/regulations/2013-2014-virginia-hunting-and-trapping-regulations-digest.pdf>).

84. *See, e.g.*, VA. CODE ANN. § 29.1-516 (2007) (permitting dog hunting of deer in counties east of the Blue Ridge Mountains); ALA. DEP'T OF CONSERVATION & NAT. RESOURCES, REGULATIONS RELATING TO GAME, FISH AND FUR-BEARING ANIMALS, 17–19 (2012), available at http://www.outdooralabama.com/images/file/2011-12_WFF/2011-12_Complete_Reg_Book_-3_Proof_final.pdf (permitting in-season dog hunting of deer in most counties); *General Information*, FLA. FISH & WILDLIFE CONSERVATION COMM'N, <http://myfwc.com/hunting/regulations/general-information/> (last visited Feb. 12, 2013) (permitting dog hunting of all mammals and game birds except for turkeys); *Hunting Regulations and Information*, N.C. WILDLIFE RESOURCES COMM'N, 42–43 (2012), available at

or when their owners follow to chase the prey or to retrieve their dogs.⁸⁵ If most landowners in an area oppose this hunting or other land uses that are likely to impose serious costs on neighbors, they could disable their own right to engage in them. They could then argue for zoning regulations by using the maps to demonstrate that only a few parcels allow this land use.⁸⁶ There is some precedent for the use of posting to disable a landowner's use of her land. New Brunswick, Canada, allows landowners to post signs to disable their right to hunt or trap on their land.⁸⁷

Landowners can use physical posting to grant the public limited access.⁸⁸ For example, a landowner could post a sign that prohibits hunting but expressly allows hiking.⁸⁹ A state could also adopt a more complicated statutory scheme that recognizes one color of paint as banning a narrow category of activities and another color banning a broader category of activities.⁹⁰ Unfortunately, this approach suffers from the general problems with physical posting, including failure to provide notice to recreationists

http://www.ncwildlife.org/Portals/0/Regs/Documents/2011-12/2011-12_Hunting.pdf
(permitting dog hunting of deer in some counties, and dog hunting of all other animals (except turkeys) in all counties).

85. See John W. Bowers & H. Todd Holbrook, *Deer Hunting with Dogs: Conflicts, Negative Public Perception, and A Georgia Solution?*, GA. DEP'T OF NAT. RESOURCES (Feb. 21–23, 2005), <http://www.georgiawildlife.com/node/565> (escalating hunter-landowner conflicts spurred Georgia to implement new regulations requiring tract-specific permits for all dog-deer hunting); Bill Cochran, *Confrontation Between Hound Hunters, Landowners Goes High Profile*, ROANOKE TIMES (Apr. 2, 2009), <http://www.roanoke.com/outdoors/billcochran/wb/199713> (Virginia landowner sues local hunt club members for retrieving dogs on his land, “disrupting his own outdoor activities, scaring his girls and causing tense confrontations”); David Samuel, *Dog Hunting For Deer: An Old Tradition*, WHITETAIL J. (Nov. 2005), available at <http://www.knowhunting.com/article.html?id=201> (citing sources of conflict including dog hunters blocking public roads and the general trend toward division of land into smaller tracts).

86. One could also accomplish this goal by surveying landowners. My argument is that centralized posting would reduce the cost of gathering this information.

87. See *Posting of Signs on Land*, N.B. Reg. 89–106 (Can.).

88. As discussed below, the law could tailor the use of the land without giving the landowner any say in its use. However, this section assumes that the landowner can exclude the public if she provides notice.

89. These signs are commercially available. See *Wildlife Safety Zone—No Hunting, but Hiking and Study Permitted*, TRADITION CREEK, <http://www.traditioncreek.com/storefront/wildlife-safety-zone-no-hunting-but-hiking-and-study-permitted-p-12.html> (last visited Feb. 12, 2013). However, such signs do not satisfy the current posting requirements of some states. See, e.g., ARK. CODE ANN. § 18-11-404(1)(B) (1999) (requiring signs posting land to bear either the words “posted” or “no trespassing” in letters at least four inches high); FLA. STAT. § 810.011(5)(a) (2007) (requiring signs posting land to bear the words “no trespassing”).

90. Ontario, Canada, has adopted a variant of this color-coded scheme, but with signs. Red markings signify that entry on the premises is forbidden. Yellow markings signify that entry is permitted for limited purposes that are listed on the markings. See *Trespass to Property Act*, 7. R.S.O. 1990, c. T.21, §§ 5–7 (Can.).

far from the land. More seriously, once landowners decide to incur the fixed cost of posting, they have little incentive to permit any public use of their land; they will ban uses that impose even a negligible cost on them. As explained below, centralized posting overcomes this problem by making it easier for the government to compensate landowners for granting access or to charge landowners for the right to exclude.

II. CENTRALIZED POSTING AND THE GOVERNMENT AS INTERMEDIARY

Section I assumed that landowners who provide some sort of public notice have the right to exclude the public from using their land, but this is not true in many jurisdictions around the world. Many European nations allow the public to hike across private property without the landowners' consent,⁹¹ and some allow the public to camp,⁹² fish,⁹³ and hunt⁹⁴ as well. Some countries even prohibit landowners from enclosing their land or erecting other barriers to inhibit public access.⁹⁵ Many American states once recognized similar public access rights, at least for unenclosed and uncultivated land.⁹⁶ One can still find some public access rights today such as the right of fox and raccoon (but not bear or deer) hunters in Virginia to continue the chase onto private property,⁹⁷ the right of anglers in some states to fish non-navigable waters on private property,⁹⁸ and the right of

91. See, e.g., Countryside and Rights of Way Act 2000, ch. 37 (Eng.) (expanding the right to cross to include downland, moorland, heathland, and coastal land in England and Wales); Land Reform (Scotland) Act, 2003, (A.S.P. 2) (establishing a general right to cross unimproved land in Scotland); Sawers, *supra* note 32, at 686–88 (detailing the varying degrees of rights to cross in Sweden, Norway, Finland, Denmark, Switzerland, Austria, and Germany).

92. See, e.g., Sawers, *supra* note 32, at 686–88 (describing the right to camp in Scotland, Sweden, and Finland).

93. See, e.g., Heidi Gorovitz Robertson, *Public Access to Private Land for Walking: Environmental and Individual Responsibility as Rationale for Limiting the Right to Exclude*, 23 GEO. INT'L ENVTL. L. REV. 211, 226, 253 (2011) (describing the limited right to fish in Sweden and Denmark); *id.* at 237 (describing the general right to fish in Finland).

94. See *supra* note 31 (discussing the right to hunt on private land in Europe).

95. See, e.g., Lovett, *supra* note 33, at 808–815 (describing Scottish law that limits the ability of landowners to erect barriers on their land).

96. See Sawers, *supra* note 32, at 674 (“Until the late nineteenth century, open access was the norm in the United States.”); *id.* at 675–79 (surveying open access rights and noting rights for hunting and open range livestock).

97. VA. CODE ANN. § 18.2-136 (2011) (“Fox hunters and coon hunters, when the chase begins on other lands, may follow their dogs on prohibited lands.”).

98. MONT. CODE ANN. § 23-2-301(10) (2011) (“Recreational use’ means with respect to surface waters: fishing, hunting”); *id.* § 23-2-302(1) (“[A]ll surface waters that are capable of recreational use may be so used by the public without regard to the ownership of the land underlying the waters.”); see also ALASKA CONST. art. VIII, §§ 3, 14 (“Wherever occurring in their natural state, fish, wildlife, and waters are reserved to the people for common use. . . . Free

native Hawaiians to forage on unimproved land.⁹⁹ But these are exceptions to the general rule in the United States that recognizes the landowner's right to exclude the recreationist, at least if she provides the requisite notice.

Part A of this section argues that centralized posting would facilitate the government's role as intermediary between landowners and recreationists and thereby render the choice between a right of access and a right to exclude largely irrelevant. In a world in which the public had a right of access, the government could allow the landowner to purchase a right to exclude by agreeing to higher property taxes. In a world in which the landowner had a right to exclude, the government could purchase a public right of access by lowering the landowner's property taxes. The choice of default rule could have an effect on the landowner's wealth and the public fisc, but the government can offset these wealth effects by simply changing the initial level of property taxes. Part B acknowledges that society must incur substantial fixed costs to maintain a system of centralized posting. These costs are not justified if nearly all landowners make the same choice—to either exercise the right to exclude or to allow the public access to engage in a particular activity. Centralized posting may still serve a useful role in testing the government's assumptions about landowners' preferences and in regulating activities about which choices are more disparate. This article presumes that the government should maintain the posting registry and serve as an intermediary between landowners and recreationists, but some may argue that private institutions can play these roles. Part C addresses this libertarian critique. Part D addresses a possible critique from elsewhere on the political spectrum—that the provision of extrinsic incentives may crowd out the voluntary provision of public access.

access to the navigable or public waters of the State . . . shall not be denied any citizen”); UTAH CODE ANN. § 73-1-1(1) (LexisNexis 2011) (“All waters in this state, whether above or under the ground, are hereby declared to be the property of the public, subject to all existing rights to the use thereof.”); *id.* § 73-29-202 (“There is a public right to float on public water . . . [which] includes the right to . . . fish while floating.”).

99. See *Kalipi v. Hawaiian Trust Co.*, 656 P.2d 745, 748–49, 752 (Haw. 1982) (recognizing customary rights of residents of ahupua'a); *Pub. Access Shoreline Haw. v. Haw. Cnty. Planning Comm'n*, 903 P.2d 1246, 1259–61, 1267–68 (Haw. 1995) (recognizing the customary rights of those who do not reside in ahupua'a). To qualify as a native Hawaiian, one must have at least one ancestor who lived in Hawaii before Cook's arrival in 1778. HAW. CONST. art. XII, § 7. For a longer discussion of these rights and a few more examples of open access laws in the modern United States, see Sawers, *supra* note 32, at 671–74.

A. Coase and the Right to Exclude

The right to exclude gives landowners regulatory power that allows them to control inconsistent uses of their land. If politicians or judges were omniscient (and benevolent), there would be no need to grant landowners this right. The government could regulate land use to ensure that all parcels are always put to their best use. Unfortunately, real politicians and judges are not omniscient, and history suggests that relying on central planning alone can lead to the poor use of resources. An alternative strategy is to give the market at least some role by assigning property rights and letting private parties search for gains from trade.¹⁰⁰ However, this does not necessarily mean that the law should give the landowner the right to exclude.

The Coase Theorem implies that if there were no bargaining costs landowners and recreationists would bargain for an efficient use of the land regardless of whether the law gave recreationists a right of access or landowners a right to exclude.¹⁰¹ If recreationists were given a right of access but landowners valued a right to exclude more highly, landowners would pay recreationists to stay away. Similarly, if landowners were given a right to exclude but recreationists valued a right of access more highly, recreationists would pay landowners for the right to enter. Unfortunately, bargaining is costly. Standard economic analysis of property law therefore suggests that the law assign the property rights either to make bargaining less costly or unnecessary by giving the right to the party that values it most highly.¹⁰² Recently, Merrill and Smith have extended this analysis, arguing that there should be a strong presumption to keep the bundle of sticks together to reduce administrative and information costs.¹⁰³ Their analysis may imply that there should be a thumb on the scale in favor of exclusion because this reduces the information burden on courts and society.

In the Coaseian framework the argument for granting the public the right to access rests on two claims. First, the public values access more highly than the landowner values the right to exclude, and when this is not true the problem can be mitigated by restricting the land that can be entered and the activities that can be pursued by generally applicable laws. Second, when the right is assigned to the landowner the cost of renegotiation is substantial.

100. This does not mean that there is no role for the government in regulating land use.

101. See Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 15 (1960).

102. See ROBERT D. COOTER & THOMAS S. ULEN, *LAW AND ECONOMICS* 81–82 (4th ed. 2003).

103. Thomas W. Merrill & Henry E. Smith, *Making Coaseian Property More Coaseian*, 54 J.L. & ECON. S77 (2011). See also Henry E. Smith, *Property as the Law of Things*, 125 HARV. L. REV. 1691 (2012) (further expanding the argument that assigning a single owner control over an entire thing generally minimizes information costs).

Many will find these arguments convincing, at least when applied to justify access for their own preferred form of recreation. However, they become less plausible in a world where centralized posting is possible.

Consider the first claim. The value that a recreationist will place on the right to access a particular parcel of land should be no greater than the cost of finding alternative land that serves the recreational purposes reasonably well.¹⁰⁴ If centralized posting lowers the cost of searching for alternative land, it should reduce the value that recreationists place on the right to access a particular parcel of land. Note that the value the public places on the right of access may remain high, and it may often exceed the value that a particular landowner places on the right to exclude. A system that requires landowners to post their property to exclude recreationists presumes that this is true. If nearly all landowners valued the right to exclude more than recreationists valued the right of unauthorized access, then the law should dispense with the posting requirement. In that case, recreationists would be barred from entering private property unless they received express permission or the landowner posted that public access is allowed.¹⁰⁵

The justification for posting also assumes that some landowners will place a high value on the right to exclude some activities on their land so that it is inefficient for the recreationist to enter. Some landowners may have religious or ethical objections to some uses of their land. They may object to the killing of animals, hunting on the Sabbath, or they may believe that recreational vehicles harm the environment. Individuals with these beliefs will often seek to use the political process to ban these activities outright,¹⁰⁶ but they may place a particularly high value on preventing these activities from occurring near their homes or on their own land. Other landowners will place a high value on their privacy.¹⁰⁷ Still other

104. Some property is so unique that it does not have adequate substitutes. However, many of these parcels are already part of state or national parks—Mount Rushmore, The Grand Canyon, etc. Section II.B examines the possibility that some have an ideological commitment to the right to access *all* land.

105. See *infra* Section II.B.

106. For a description of current struggles over Sunday hunting bans, see, e.g., Albert Pollard, *Environmentalists Should Help Repeal Sunday Hunting Ban*, RICH. TIMES-DISPATCH (Dec. 29, 2011), <http://www2.timesdispatch.com/news/rtd-opinion/2011/dec/29/tdopin02-environmentalists-should-help-repeal-sund-ar-1573467/>; Laura Vozzella, *Sunday Hunting Ban Lifted by Va. Senate*, WASH. POST (Jan. 26, 2012, 4:58 PM), http://www.washingtonpost.com/blogs/virginia-politics/post/sunday-hunting-ban-lifted-by-vasenate/2012/01/26/gIQAx26hTQ_blog.html.

107. See, e.g., Stuart Jeffries, *Ramblers' Revenge*, GUARDIAN, July 24, 2002, <http://www.guardian.co.uk/uk/2002/jul/25/ruralaffairs.stuartjeffries> (describing the reopening of a footpath which millionaire Nicholas van Hoogstraten had previously blocked with a barn and barbed wire fence); Matthew Norman, *The Cliff-Top Conversion of Jeremy Clarkson*, TELEGRAPH (Apr. 1, 2011, 6:04 PM),

landowners will wish to exclude the public because they believe that the right to engage in outdoor recreation on their land is a scarce resource—as more people engage in various forms of recreation on a particular piece of land, this may impose costs on others. This is due in part to safety concerns. For example, hunters prefer to know who else is in an area to minimize the risk of an accident.¹⁰⁸ Newspaper articles suggest that Italy has a high rate of hunting accidents and that this is due to its law granting hunters access to private property even when the landowner objects.¹⁰⁹ The scarcity is also due to strong demand for outdoor recreation on some properties. Some hunters pay thousands of dollars each year for the exclusive right to hunt particular pieces of property,¹¹⁰ and they may wish to exclude non-hunters as well as other hunters because they believe that the presence of humans will affect the behavior of the game animals. Finally, granting landowners the right to exclude encourages them to make investments in their land by allowing them to capture the returns to these investments. This argument received little weight historically because the dispute was over the right to exclude the public from unimproved land and it was thought that the owner

<http://www.telegraph.co.uk/comment/columnists/matthew-norman/8422051/The-cliff-top-conversion-of-Jeremy-Clarkson.html> (describing the attempts of British celebrity Jeremy Clarkson to divert footpaths near his home in order to prevent walkers from taking pictures of his dwelling).

108. Hunting groups argue that hunting is a relatively safe activity, and they offer statistics to support their claim. *See, e.g.*, Press Release, NAT'L SHOOTING SPORTS FOUND., INC., *Hunting is Safer than Golf and Most Other Activities* (Dec. 5, 2011), <http://www.nssf.org/newsroom/releases/show.cfm?PR=120511.cfm&path=2011> (claiming that hunting with firearms has an injury rate of one per every two thousand participants while golf has an injury rate of one per every 622 participants). However, these same groups will argue that the relative safety of hunting is due to the precautions that hunters take, and the rate of hunting accidents has fallen significantly since the introduction of mandatory hunter safety classes. *See, e.g.*, NAT'L SHOOTING SPORTS FOUND., FIREARMS-RELATED INJURY STATISTICS 1 (2012), available at http://familiesafield.org/pdf/IIR_12_page_4_Hunting.pdf (claiming that unintentional firearms deaths fell by sixty percent between 1989 and 2009).

109. *See* Henry Chu, *Human Deaths Raise Calls for More Hunting Regulations in Italy*, L.A. TIMES, Feb. 15, 2011 available at <http://articles.latimes.com/2011/feb/15/world/la-fg-italy-hunting-20110215>; John Hooper, *Italian Hunting in the Dock after 35 People Killed in Four Months*, GUARDIAN (Feb. 1, 2010, 11:06 AM), <http://www.guardian.co.uk/world/2011/feb/01/italy-hunting-crisis-35-deaths>. Of course this may also be due to an Italian form of alternative dispute resolution.

110. *See* ROBERT A. PIERCE II ET AL., LANDOWNERS' GUIDE TO LEASE HUNTING IN MISSOURI 3 (2008), available at <http://extension.missouri.edu/p/G9420> (“Higher quality leases . . . may go as high as \$25 to \$30 per acre in some locations”); *Deer Lease Management*, JAMES HOUSER CONSULTING FORESTERS, http://www.jameshouser.org/Deer_Lease_Management.html (last visited Nov. 10, 2013) (“[P]rices may range from a few dollars per day to thousands of dollars per season.”).

had made no real investment in this land.¹¹¹ However, this is not necessarily the case. Many landowners are in fact investing in undeveloped land by at least temporarily foregoing development opportunities. As noted above, some hunters are willing to pay significant amounts to hunt on this land.¹¹² If we deny landowners the right to exclude the public and obtain fees for access, they may decide to develop their land even though it is more efficient to leave it in its natural state.

Next consider the transactions costs of renegotiation. If a right of access is given to recreationists directly, it would be nearly impossible for landowners to purchase the right to exclude. Landowners would need to find and negotiate with every potential user of their land. It is much easier for recreationists to purchase the right of access from landowners, and hunters frequently do.¹¹³ However, it is possible that transaction costs prevent this market from growing even larger, and the costs may be too high for a market to develop for other types of access such as hiking.

Centralized posting can substantially lower the cost of negotiation between recreationists and landowners by making it easier for the government to serve as an intermediary, negotiating for access on behalf of the public. It doesn't really matter whether we assume that as an initial matter the public should have the right of access or landowners should have the right to exclude. If we assume that the public should have the right of access, the government could sell this right to particular landowners on behalf of the public by charging landowners a fee to post their property.¹¹⁴ If we assume that the landowners should have the right to exclude, the government could, with the consent of the landowner, purchase a right of access on behalf of the public by paying landowners to leave their land unposted.¹¹⁵ There is ample precedent for the government serving as an

111. See Sawers, *supra* note 32, at 677–79 (outlining early state court decisions protecting the right to hunt over unenclosed and unimproved land).

112. See *supra* note 110, and the accompanying text.

113. See, e.g., Ian Munn et al., *Hunter Preferences and Willingness to Pay for Hunting Leases*, 57 *FOREST SCI.* 189, 194 (2011), available at <http://www.foa.org/PDF/CI1107b.pdf> (table showing more than three hundred club and individual hunting leases purchased in Mississippi in 2006); *Hunting and Fishing Listings*, HUNTING LEASE NETWORK, <http://nationalhuntingleases.com/hflListings/ViewTerritoriesOnly.asp> (last visited Feb. 12, 2013) (table showing a variety of hunting leases available for purchase in twenty-one different states).

114. If we believe that this money rightly belongs to recreationists instead of the public more generally, the money can be used to acquire land for additional state parks.

115. The state could offer other incentives as well, such as a reduction in liability for torts. See NAT'L SHOOTING SPORTS FOUND., *supra* note 38, at 17 (claiming that many landowners post their land because of a fear of liability). A proposal to adjust property taxes based on posting is likely to generate opposition from both the right and the left. The right will argue that this will just give the government another opportunity to raise taxes. The left will make arguments based

intermediary between recreationists and landowners; several states currently pay large landowners to grant public hunting rights.¹¹⁶ Centralized posting would just lower the cost of the government serving this role by allowing the government to make offers to a large number of landowners simultaneously and to easily verify that they do allow access to recreationists. This would be especially true if landowners posted their property when they pay their property taxes. The transaction cost of collecting or distributing these fees would be low; the government would simply adjust the property tax bill. Moreover, the choice of a default rule (access or exclusion) need not even affect the actual taxes that landowners must pay because the government can also choose the initial level of property taxes. The government can either start with a higher tax and grant reductions to landowners who allow public access or start with a lower tax and raise the taxes of those landowners who wish to exclude recreationists. This does not mean that the choice of default rules is entirely irrelevant. There could be a framing effect;¹¹⁷ landowners may choose differently depending on whether they think that they are purchasing a right to exclude or selling a right of access.

The government should vary the price depending on the amount of access granted by the landowner, and the price should reflect the value that the public places on that type of access. This raises the difficult question of how to value this access. The government could gain some guidance in its estimation by testing the public's willingness to pay by forcing recreationists to buy a license to access unposted land. Again, there is ample precedent for this practice as several states now charge an additional license fee to hunters who want to access state-owned land.¹¹⁸ Note, however, that the amount raised need not serve as a ceiling if the government believes that

on commensurability. For example, one could argue that the payment of money may actually reduce the amount of publicly available land by reducing the social compensation that landowners receive for granting access. See *infra* Part II.D.

116. See NAT'L SHOOTING SPORTS FOUND., *supra* note 38, at 21.

117. See Amos Tversky & Daniel Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 SCIENCE 453, 456 (1981).

118. See, e.g., *2013 Available Hunting Licenses & Permits*, MONT. FISH, WILDLIFE & PARKS, <http://fwp.mt.gov/hunting/licenses/availableLicenses.html> (last visited Nov. 10, 2013) (showing an additional license, the State Lands Recreation license, is required for hunting on state school trust lands); *Hunting License Information and Application Packets*, ALA. DEP'T OF CONSERVATION & NAT. RESOURCES, <http://www.outdooralabama.com/licenses/huntlicinfo/> (last visited Nov. 10, 2013) (showing an additional fee requirement for hunting on state Wildlife Management Areas); *Licenses, Permits & Passes*, GA. DEP'T OF NAT. RESOURCES, http://www.georgiawildlife.com/licenses-permits-passes#Recreational_Licenses_and_Passes (last visited Nov. 10, 2013) (showing an additional fee requirement for hunting on state Wildlife Management Areas).

this understates the true societal value of access. The government may, for example, believe that the particular form of outdoor activity confers external benefits on other members of society or that many recreationists will evade the fee.¹¹⁹

A centralized planning system can accommodate differences in landowner preferences through adjudication, and some countries that have a broad right of access have adopted procedures that provide at least the prospect of landowner relief. However, these procedures must verify that the landowner really does place a high value on the right to exclude, and they typically do so by limiting the grounds on which the landowner can seek an exception. In the wake of a European Court of Human Rights decision that ruled that these laws violated the rights of landowners who oppose hunting on ethical grounds, France adopted a new procedure that allowed landowners to apply for an exemption based on their status as a conscientious objector to hunting.¹²⁰ Landowners who don't want the hunters on their land for other reasons, such as a desire for privacy, are left without a remedy. Recent litigation in Scotland provides a second example. While the Countryside and Right of Way Act of England and Wales protects the privacy of homeowners with a rule that exempts land within twenty meters of a dwelling as well as land used for a park or garden,¹²¹ Scotland's Land Reform Act adopted a standard that allows the landowners to exclude "sufficient adjacent land to enable persons living there to have reasonable measures of privacy in that house or place and to ensure that their enjoyment of that house or place is not unreasonably disturbed."¹²² Scottish courts have read this standard to require an objective analysis that focuses on "what a reasonable person living in a property of the type under consideration would require."¹²³ They have still required a highly contextual (and therefore costly) analysis, including consideration of the location of the property, the quality and size of the house, and how the landowner used the property.¹²⁴ This may be enough to protect those with stately homes, but other landowners cannot argue that they have some peculiar preference for excluding the public. A system that relied on a price mechanism would allow the landowner to assert her peculiar preferences by her willingness to

119. *See infra* Part II.C.

120. *See Herrmann v. Germany*, (No. 9300/07), HUDOC, (26 June 2012) at 24(96) <http://hudoc.echr.coe.int/sites/eng/pages/search.aspx?i=001-111690>.

121. Countryside and Rights of Way Act, 2000, c. 37, sch. 1(3)–(4) (Eng. & Wales).

122. Land Reform (Scotland) Act, 2003, c. 2, (A.S.P. 2), § 6(b)(iv).

123. *See Gloag v. Perth & Kinross Council*, (2007) S.C.L.R. 530, 544 (Scot. Sheriff Ct.).

124. *Id.* at 546–48. For a much more thorough review of this litigation, see Lovett, *supra* note 33, at 790–814.

pay. Because such a price mechanism would not rely on litigation, it may operate at a much lower cost.

B. Would Landowners Make Uniform Choices?

A system of centralized posting would impose substantial fixed costs on the government and the public. Governments must design and maintain additional fields in their property databases, and the public must learn how to use these databases. These costs are unjustified if nearly all landowners value the right to exclude a particular activity by an amount greater than the public values access. To take an extreme example, even if the government offered some incentive to open their land to some public uses, nearly all landowners in a subdivision with small lots would post their property to exclude the public from riding recreational vehicles through their yards. Nearly all landowners in some areas would exclude the general public from hunting as well. This does not necessarily mean that the landowners would prohibit all hunting (though they might). Landowners may prefer to negotiate directly with hunters who will use their land rather than the government on behalf of the general public. Negotiating directly with the hunters allows both the landowner and the hunters to know who will be on the land. Given the use of weapons, all parties may want to restrict access to people that they know and trust. There is no sense in adopting a system of posting if nearly all landowners will post their property; the law should simply ban the activity on private property without express landowner permission. Note that the government could still serve an intermediary role, paying a few landowners to grant the public access to their land and disclosing the location of these lands to the public. This would be a system of “posting in” rather than “posting out.”¹²⁵

It also does not make sense for the government to maintain a posting registry if very few landowners place a higher value on the right to exclude the public from engaging in an activity on their land than the public places on the right of access. Some argue that this is true of hiking because hiking imposes little cost on landowners.¹²⁶ In such a world it may make sense to simply grant the public the right to roam.

125. This is, in fact, the law in some jurisdictions. See, e.g., *Private Lands Hunting Access*, WASH. DEP’T OF FISH & WILDLIFE, http://wdfw.wa.gov/hunting/hunting_access/private_lands/ (describing a system in which the state grants incentives to landowners to post their property to make it available to the public).

126. See Sawers, *supra* note 32, at 691 (citing evidence that the public values access rights up to ten times as much as landowners value their right to exclude).

States may wish to adopt centralized posting even if the system will ultimately reach a corner solution for many activities because this system allows the government to test its beliefs. For example, policymakers may believe that very few landowners would post their land to exclude hikers if the landowners were offered fair compensation or charged a fair price. By implementing a system of centralized posting, the government would learn whether this is indeed the case. If the government is right, it could adjust its laws accordingly and remove the option to post to exclude hikers from the menu offered to landowners. In addition, centralized posting may still play a role for activities like hunting that not all landowners welcome.

C. Could Private Organizations Replace the Government?

Libertarians may object that centralized posting assigns the government roles that private organizations could conceivably fill. More specifically, private organizations could create a posting registry, and private organizations can (and do) serve as intermediaries between recreationists and landowners. It is much easier to argue that the government should maintain the posting registry. If a private firm controlled the registry, the government may want to heavily regulate it as a natural monopoly; it makes little sense to ask landowners to post and recreationists to search in multiple registries. Moreover, county governments may have a natural advantage in maintaining a posting registry because they already maintain property records.

It is harder to dismiss the complaint that private organizations can (and do) play the role of intermediary. For example, hunters form clubs that lease hunting land,¹²⁷ and hikers form organizations that create trails.¹²⁸ If the government does its job poorly, the presence of these private alternatives may create an adverse selection problem in which only those with land that is ill-suited for outdoor recreation will accept the government's offer to exchange lower property taxes for public access. The government could try to mitigate this problem by independently assessing the value of land or varying the payment with the amount of use. One South Dakota program

127. See Munn et al., *supra* note 113, at 189 (describing the hunting lease purchasing habits of individuals and clubs).

128. See, e.g., *Our Strategic Plan*, RIVANNA TRAILS FOUND., <http://www.rivannatrails.org/Default.aspx?pageId=952616> (last visited Nov. 10, 2013) (describing the history and goals of an organization which established a trail network including a twenty-mile loop encircling the city of Charlottesville, VA).

already bases landowners' compensation on the amount of use by hunters,¹²⁹ and technological advances could make it much easier to track land usage by recreationists. A state could demand that recreationists use a telephone application that would broadcast their location and chosen activity. As with centralized posting more generally, the cost of this technology could pose a serious concern, at least in the short run.¹³⁰ A tracking system could raise privacy concerns as well, but individuals could avoid broadcasting their location to the government by entering only with the express permission of the landowner.

The government need not be perfect; it just has to be better than the market, and there are several possible market failures that could justify public action. In some cases, an anti-commons problem may prevent effective private sector action. For example, a hiking trail may need to cross several parcels, and each parcel may hold out and demand a payment equal to the entire value of the trail. The government can solve this impasse by exercising its takings power. However, this anti-commons problem serves as a precarious justification for the government's intermediary role because if we push it too far there is little reason to use a posting system at all. Assume that the government believes that there are some activities for which all of the landowners in an area must give permission if the activity is to be practiced at all, and that this activity increases net social value. If the government is to use its takings power to compel permission from all landowners, there is little point in using a pretext of landowner choice. It may be simpler to grant recreationists permission to engage in this activity over the landowner's objection. It is, however, hard to come up with examples of such an activity. A hiking trail may require a number of connected parcels, but there will almost certainly be alternative routes.¹³¹ One possibility would be the use of dogs to hunt game such as foxes, as hunters may have no effective means of preventing the fox or their dogs

129. See NAT'L SHOOTING SPORTS FOUND., *supra* note 38, at 29 ("Another difference between the CHAP and the Walk-In Area Program is that payments to landowners are based on hunter use rather than acres enrolled.").

130. See *infra* Part III.I.

131. Carol Rose has argued that this holdup problem makes some property inherently public. Perhaps the best example of this is navigation on a river. Because all owners along the river would need to consent, each could holdup for an excessive payment. See Carol Rose, *The Comedy of the Commons: Custom, Commerce and Inherently Public Property*, 53 U. CHI. L. REV. 711, 753–55 (1986). However, she is also skeptical of extending this argument to fishing and other forms of outdoor recreation. *Id.* at 754.

from straying onto posted land. However, many will reject the notion that this activity raises net social welfare.¹³²

Some forms of outdoor recreation may create positive externalities. Hunting helps control animal populations and thereby reduces damage to agriculture and vehicles,¹³³ and some argue that other forms of outdoor recreation provide important social values as well.¹³⁴ A system of direct government involvement may allow for more targeted subsidies to account for the size of the externality for a particular activity in a particular location. This article assumes that outdoor recreation is not a public good (landowners or the government can exclude the public), but some forms may be quasi-public goods because they are non-rivalrous. Unless a trail becomes extremely crowded, an additional hiker imposes no additional cost. Charging any price for a quasi-public good has efficiency costs because this price may discourage the public from using the good even though their use imposes no cost.

Whether there are sufficient market failures to justify government action is a contestable question, and one must also consider the problems that government action creates.¹³⁵ This article does not thoroughly engage this debate and instead assumes that there is a role for government. After all, most people accept the government's role in providing public parks and other forms of outdoor recreation despite the fact that these same libertarian critiques would apply.

132. Fox hunting continues to be controversial in England. *Farmers Call for Fox Hunting Law Rethink*, BBC NEWS (Oct. 19, 2013), <http://www.bbc.co.uk/news/uk-england-devon-24593806>.

133. For an early articulation of similar principles in South Carolina, see *M'Conico v. Singleton*, 9 S.C.L. (2 Mill) 244, 244 (1818) (“[O]ur forest is the great field in which, in the pursuit of game, [the militia] learn the dexterous use and consequent certainty of firearms”); see also *Pierson v. Post*, 3 Cai. 175, 180 (N.Y. Sup. Ct. 1805) (Livingston, J., dissenting) (describing foxes as “pirates” and urging their extermination by hunters as a public good).

134. See Gregory S. Alexander, *The Social-Obligation Norm in American Property Law*, 94 CORNELL L. REV. 745, 801–10 (2009) (arguing that recreation is important to human flourishing). Human flourishing is not necessarily an external benefit, but one could extend the argument by suggesting that the happiness of the general public depends at least in part on the welfare of the least disadvantaged and that subsidizing the recreation of the poor does more to improve their welfare than other forms of assistance.

135. Some may argue that governments will use outdoor recreation as an excuse to effectively raise taxes on landowners. Others will argue that governments will use outdoor recreation to unjustly cut property taxes on wealthy landowners.

D. *Would Incentives Crowd Out Altruism?*

This article suggests an increase in the use of financial incentives to induce landowners to grant the public access to their land.¹³⁶ Both federal and state governments have limited programs that provide financial incentives to landowners,¹³⁷ but many landowners grant the public access without receiving any compensation. Some might object to a proposal that would increase the use of extrinsic incentives on the grounds that they may actually reduce public access by “crowding out” altruism. To understand the logic and limits of this argument, consider the context in which it is usually invoked—blood and organ donation.

The national blood donation program initially relied on a mixture of paid and unpaid donations,¹³⁸ but in 1974, the federal government promulgated a new National Blood Policy that supported an end to paid donations.¹³⁹ The move to ban the use of incentives in organ donations followed soon thereafter. The federal National Organ Transplant Act of 1984 (“NOTA”) makes it unlawful to “knowingly . . . transfer any human organ for valuable consideration for use in human transplantation if the transfer affects interstate commerce.”¹⁴⁰ In 1987, the National Conference of Commissioners on Uniform State Laws adopted a new version of the Uniform Anatomical Gift Act that extended NOTA’s ban to intrastate commerce; this revision was quickly adopted by every state.¹⁴¹

The movement to ban or at least discourage the use of incentives in blood and organ donations was motivated by a concern that these incentives actually reduce both the quality and quantity of donations. Richard Titmuss, the leading proponent of the motivation crowding effect, provides a clear statement of this view, arguing that the commercialization of blood or organ donation “represses the expression of altruism, erodes the sense of community . . . subjects critical areas of medicine to the laws of the marketplace, [and] places immense social costs on those least able to bear

136. Recall that these incentives could be positive (rewarding landowners who grant access) or negative (penalizing those who don’t grant access). See *GIS-Web*, *supra* note 64, and the accompanying text.

137. See NAT’L SHOOTING SPORTS FOUND., *supra* note 38, and the accompanying text.

138. See *History of Blood Transfusion*, AMERICAN RED CROSS, <http://www.redcrossblood.org/learn-about-blood/history-blood-transfusion> (last visited Nov. 10, 2013).

139. See National Blood Policy, 39 Fed. Reg. 32702, 32706 (Sept. 10, 1974).

140. National Organ Transplant Act, 42 U.S.C. § 274e(a) (2007). For a history of the regulation of the organ donation market, see Sean Arthurs, *No More Circumventing The Dead: The Least-Cost Model Congress Should Adopt to Address the Abject Failure of Our National Organ Donation Regime*, 73 U. CIN. L. REV. 1101, 1106–10 (2005).

141. *Id.* at 1110.

them.”¹⁴² More recent scholars argue that the motivation crowding effect may be due at least in part to the possibility that the presence of the incentive lessens the willingness of observers to infer that the donation signals generosity on the part of the donor.¹⁴³ The precise mechanism by which this effect would operate is beyond the scope of this article. The important point is that a number of scholars predicted that “[i]n a country where most of the blood is supplied *gratis*, paying for blood is likely to reduce total supply.”¹⁴⁴ This argument is not restricted to financial incentives; scholars claimed that “any extrinsic incentive can potentially crowd out intrinsic motivation, regardless of whether they come in the form of cash or otherwise.”¹⁴⁵

One can easily extend the motivation crowding hypothesis to public access to private land. The use of incentives to encourage landowners to grant the public access to their land could, in theory, have the opposite effect if it represses altruism by either generating an expectation among landowners that access should come at a price or by reducing the ability of landowners to signal their generosity. Whether financial incentives would significantly repress altruism is an empirical question, and we can gain some insight by examining the studies that actually test the effects of extrinsic incentives on blood donation.

Given the popular appeal of the motivation crowding hypothesis, there are surprisingly few studies testing its validity. In 2008, Mellstrom & Johannesson published the first empirical test of the hypothesis in the context it was originally raised—blood donations.¹⁴⁶ They did find that a

142. Nicholas Wade, *The Editorial Notebook; The Crisis in Human Spare Parts*, N.Y. TIMES, Oct. 4, 1983, at A26 (quoting Richard Titmuss, author of an “influential study of the blood supply system”).

143. See, e.g., Dan Ariely, Anat Bracha & Stephan Meier, *Doing Good or Doing Well? Image Motivation and Monetary Incentives in Behaving Prosocially*, 99 AM. ECON. REV. 544, 554 (2009).

144. Bruno S. Frey, *Motivation as a Limit to Pricing*, 14 J. ECON. PSYCHOL. 635, 654 (1993); see also Courtney S. Campbell, *The Selling of Organs, the Sharing of Self*, 19 SECOND OPINION 69, 70 (Oct. 1993), available at <http://connection.ebscohost.com/c/articles/9405170263/selling-organs-sharing-self>. (“Over time . . . the financial inducements of an organ market could completely subsume the gift approach, as economically strapped ‘vendors’ [elect to] ‘sell now’ rather than ‘donate later.’”); Marvin Brams, *Transplantable Human Organs: Should Their Sale Be Authorized by State Statutes?*, 3 AM. J.L. & MED. 183, 191 (1977) (“It reasonably can be argued that . . . upon the introduction of a combined altruistic-market system of organ transfer . . . many persons who formerly would have relinquished organs altruistically would no longer do so . . .”).

145. Nicola Lacetera et al., *Will There Be Blood? Incentives and Displacement Effects in Pro-Social Behavior*, 4 AM. ECON. J.: ECON. POL’Y 186, 220 (2012).

146. Carl Mellström & Magnus Johannesson, *Crowding Out in Blood Donation: Was Titmuss Right?*, 6 J. EUR. ECON. ASS’N 845, 846 (2008) (“Despite the increased interest in the

roughly seven dollar payment reduced the willingness of Swedish women to take a test necessary to become a blood donor, but they did not find a statistically significant effect for men, or for the population as a whole.¹⁴⁷ Moreover, subsequent studies by Goette & Stutzer,¹⁴⁸ Lacetera & Macis,¹⁴⁹ and two by Lacetera, Macis & Slonim,¹⁵⁰ examine the rate at which individuals actually donate blood and uniformly find that incentives have a positive effect on donations.¹⁵¹ The failure to find that incentives reduce blood donations does not completely refute the motivation crowding hypothesis. Studies find that incentives may have negative effects on prosocial behavior in other contexts,¹⁵² and any reduction in altruism may simply be offset by the positive effect of the incentives. In addition, the motivation crowding effect may be context specific, and the effect could, for some unknown reason, be more pronounced in the land use context than in the blood donation context. However, the results do mean that we should be careful not to overestimate the importance of the motivation crowding effect. Moreover, there may be easy ways to mitigate a negative effect on altruism. For example, although Mellstrom & Johannesson found evidence of a motivation crowding effect among women, they found that simply allowing subjects to donate their financial incentive to charity fully counteracted this effect.¹⁵³ To the extent that motivation crowding is a concern in the land use context, the government could design the program so that landowners could donate the incentive to charity and record the donation in the database.

crowding out hypothesis, the original claim by Titmuss (1970) about blood donations has never been tested empirically.”).

147. *Id.* at 847.

148. Lorenz Goette & Alois Stutzer, *Blood Donations and Incentives: Evidence from a Field Experiment* (Inst. for the Study of Labor, Working Paper No. 3580, 2008).

149. Nicola Lacetera & Mario Macis, *Time for Blood: The Effect of Paid Leave Legislation on Altruistic Behavior*, J. L. ECON. & ORG. (forthcoming), available at <http://theirf.org/direct/user/site/0/files/TFB-04232012-final.pdf>.

150. Lacetera et al., *supra* note 145, at 213; Nicola Lacetera, Mario Macis & Robert Slonim, *Rewarding Altruism? A Natural Field Experiment* (Nat'l Bureau of Econ. Research, Working Paper No. 17636, 2011).

151. A recent paper on organ donations also finds that incentives can increase the rate at which individuals become organ donors. See Judd B. Kessler & Alvin E. Roth, *Organ Allocation Policy and the Decision to Donate*, 102 AM. ECON. REV. 2018, 2042 (2012).

152. See, e.g., Ariely et al., *supra* note 143, at 554.

153. See Mellström & Johannesson, *supra* note 146, at 845 (“There is also a significant effect of allowing individuals to donate the payment to charity, and this effect fully counteracts the crowding-out effect.”).

III. IMPLEMENTING CENTRALIZED POSTING

Sections I and II set forth the general case for centralized posting; this section addresses two important issues relating to its implementation. Part A discusses the federalism of posting. Part B asks whether centralized posting should complement or replace physical posting.

A. *Federalism and Centralized Posting*

Different filing systems require property owners to file in different offices. Real property owners generally record their interests in city or county records¹⁵⁴ while automobile owners record their title with the state¹⁵⁵ and inventors record their patents in the federal U.S. Patent and Trademark Office.¹⁵⁶ Creditors who take a security interest in personal property once filed at the local level but today generally file with a state office.¹⁵⁷ This Part argues that centralized posting should occur at the local level but with substantial state and perhaps federal oversight.

Because local governments already maintain real property records and interact with the property owner, they could maintain an electronic posting system at a much lower cost than a state or federal government. In fact, it may be logistically impossible to create a posting system without their involvement. However, a state can exert control over how their localities implement a posting system.

The most compelling argument for local control is that it could better address intra-state diversity. The posting rules appropriate for rural counties such as Lassen County, California (population 34,895)¹⁵⁸ or Marion County, Illinois (population 39,437)¹⁵⁹ are likely to be very different than those appropriate for more urban settings such as Los Angeles or Chicago.¹⁶⁰

154. See 11 JOHN L. MCCORMACK, THOMPSON ON REAL PROPERTY § 92.04(a) (David A. Thomas ed., 2d ed. 2002) (“American recording systems are administered mainly at the county level of government; thus, records are maintained on a county-by-county basis.”).

155. See, e.g., VA. CODE ANN. § 46.2-600 (2010).

156. 35 U.S.C. § 261 (2012).

157. See, e.g., Harris & Mooney, *supra* note 22, at 1382.

158. U.S. CENSUS BUREAU, POPULATION ESTIMATES, *Annual Estimates of the Resident Population for Counties: April 1, 2010 to July 1, 2011* (2012), <http://www.census.gov/popest/data/counties/totals/2011/CO-EST2011-01.html> (follow “California XLS” hyperlink, then look to Lassen County).

159. U.S. CENSUS BUREAU, POPULATION ESTIMATES, *Annual Estimates of the Resident Population for Counties: April 1, 2010 to July 1, 2011* (2012), <http://www.census.gov/popest/data/counties/totals/2011/CO-EST2011-01.html> (follow “Illinois XLS” hyperlink, then look to Marion County).

160. As noted above, a centralized posting system could still play a role in urban settings as it would allow landowners to exclude solicitations. See *supra* note 81 and accompanying text.

Even rural areas within a state can vary significantly due to geographic or cultural diversity. Charles City County, Virginia (located in the relatively flat Tidewater region) is a very different place than Lee County, Virginia (located along the border of Kentucky and Tennessee and home of the Cumberland Gap in the Appalachian Mountains).¹⁶¹ Local officials may best understand the desires of their constituents.

The need for local diversity must be balanced against the possibility that local officials may not adequately consider the interests of those who live outside the boundaries of their jurisdiction. For example, a beach town might succumb to pressure from wealthy landowners to repress the location of public beach access if many beach-goers are non-residents. If a locality were to use adjustments to its property taxes to purchase public access or sell a right to exclude, it may not set a price that reflected the interests of non-residents except to the extent that the non-residents would spend money during their visits. A locality may also be too willing to adopt a customized system (thus foregoing the reduced search costs that come from standardization) if many of the recreationists who use the system live outside its borders.

Some degree of state or even federal control could help ameliorate these concerns, but this does not mean that the state must control the databases directly. It can instead subsidize public access and place limits on the choices that its localities can make. State control need not force all localities into a procrustean bed; states can remain cognizant of the need for geographic diversity. After all, states routinely vary their hunting regulations by county and even within counties,¹⁶² and they could do the same for their posting requirements.

161. In addition to the topographical differences, the counties have very different demographics. For example, the 2010 Census reported that roughly 49% of the population of Charles City County was Black or African American. The corresponding number for Lee County was just 4%. See U.S. CENSUS BUREAU, POPULATION ESTIMATES, *Annual Estimates of the Resident Population of Age, Sex, Race, and Hispanic Origin for Counties: April 1, 2010 to July 1, 2011*, <http://www.census.gov/popest/data/counties/asrh/2011/CC-EST2011-alldata.html> (follow “Virginia CSV” hyperlink, then look to the appropriate counties).

162. See, e.g., CAL. DEP’T OF FISH & WILDLIFE, *Approved 2013 Deer Seasons and Tag Quotas for Area-Specific Archery Hunts* 1, 1 (2013), available at <http://www.dfg.ca.gov/wildlife/hunting/deer/tags/docs/2013WEB-APPROVEDDeerAreaSpecificArcheryHuntSeasons.pdf> (setting forth hunting seasons that vary by region in California); *Deer*, VA. DEP’T OF GAME & INLAND FISHERIES, <http://www.dgif.virginia.gov/hunting/regulations/deer.asp> (setting forth hunting seasons that vary by region in Virginia).

B. *Should Centralized Posting Complement Physical Posting?*

This article offers centralized posting as a replacement for our current system of physical posting. Unfortunately, the technology may not be ready in some or all of the United States. The first problem is inaccuracy that could cause some recreationists to trespass by mistake. The second problem is cost.

One source of inaccuracy arises from errors in electronic maps as the government translates property records to GPS coordinates. Of course, the government faces a similar problem today when it creates printed maps that show the recreationist land that they can publicly access, and errors in these maps have led to disputes between recreationists and landowners.¹⁶³ However, centralized posting could sharply increase the use of these government maps (that is the intent) and thereby lead to more conflicts. A reasonable approach would be to exonerate recreationists from criminal liability if they reasonably relied on a government map and force the landowner to pursue trespassers in a civil action in which there are unlikely to be significant damages unless the recreationist repeatedly used the property after personal notification.¹⁶⁴ This would give landowners an incentive to approach the county to correct these maps. Just as trespass actions served as a means of settling property disputes for centuries,¹⁶⁵ centralized posting could make archaic property records amenable to the global positioning system.

A second source of error comes from the GPS devices. When supplemented with one of a number of augmentation systems, GPS devices can determine a location with a few millimeters.¹⁶⁶ However, many recreationists do not use these augmentation systems at this time, and standard GPS devices can provide a recreationist's location within about

163. See, e.g., Mark Taylor, *Murky Waters on the Jackson River*, ROANOKE TIMES (July 31, 2011), <http://www.roanoke.com/news/roanoke/wb/294660> (describing a trespassing case in which a landowner is suing fishermen who accessed land denoted by a government map to be open to the public).

164. This is effectively what happened in the dispute between the landowner and the fishermen. Although the fishermen were originally charged with criminal trespass, this charge was dropped. The landowner continues to pursue a civil action. *Id.*

165. See 1 WILLIAM WAIT, A TREATISE UPON SOME OF THE GENERAL PRINCIPLES OF THE LAW, WHETHER OF A LEGAL, OR OF AN EQUITABLE NATURE, INCLUDING THEIR RELATIONS AND APPLICATION TO ACTIONS AND DEFENSES IN GENERAL 720 (1885) (“But in the great majority of cases, disputes respecting boundary lines between adjoining owners of lands are settled in the action of ejectment or the action for the recovery of real property. So, the action for trespass upon lands not unfrequently turns upon the question of boundary.”).

166. See NAT’L COORDINATION OFFICE FOR SPACE-BASED POSITIONING, NAVIGATION, & TIMING, *GPS Accuracy*, GPS.GOV, <http://www.gps.gov/systems/gps/performance/accuracy/> (last modified Sept. 18, 2013).

eight meters.¹⁶⁷ As a result, a recreationist using a GPS device may stray onto a neighboring property. Recreationists can compensate for the inaccuracy of their devices by using other cues (the location of roads, etc.) to determine property boundaries or simply staying several meters away from the edge of property where they are forbidden to travel. Alternatively, the government could redraft its criminal trespass statutes so that recreationists are only liable if they venture more than a few meters onto the posted property or if there were physical cues (a fence or a physical posted sign) that warned them of the boundary. In other words, physical posting may still play some role in a world of electronic posting.

A temporary role for physical posting can also mitigate concerns that arise from the cost of the new technology. Many rural areas have few cellular towers, and so recreationists can only learn of their precise location with handheld GPS devices or cellular telephone services that utilize the global positioning system and store the necessary maps in their memory. These devices can be expensive,¹⁶⁸ and it may be several years before electronic posting can cheaply warn recreationists when they are at the border of property that has been posted. This lack of notice at the property would be tolerable if individuals could access the maps from home, but many rural communities lack adequate access to the internet,¹⁶⁹ and a significant amount of outdoor recreation occurs in these communities. As a result, states may wish to wait before replacing physical posting with centralized posting, but Moore's law suggests that the wait should not be long.¹⁷⁰

Some states make hunting while trespassing a felony.¹⁷¹ Given these harsh sanctions, states that adopt centralized posting must be sure that the public is aware of the change. One approach would be to use a transition

167. *Id.*

168. *See supra* note 26 and accompanying text.

169. Kim Severson, *Digital Age Is Slow to Arrive in Rural America*, N.Y. TIMES (Feb. 17, 2011), http://www.nytimes.com/2011/02/18/us/18broadband.html?pagewanted=all&_r=0

170. Moore's law is shorthand for the proposition that technology improves at a rapid rate. *See* Eric J. Lerner, *Moore's Law and Its Limits*, IBM RES., http://domino.research.ibm.com/comm/wwwr_thinkresearch.nsf/pages/cmos398.html#two (last visited Feb. 12, 2013) ("In 1965 . . . Gordon Moore . . . noted that the number of transistors on a chip had doubled every year and predicted that this trend would continue for the next decade."); *see also* Eric J. Lerner, *Can Anything Stop the Transistor?*, 6 INDUS. PHYSICIST 18, 18 (2000) ("In 1964 . . . Gordon Moore . . . noted that the number of transistors on a chip had doubled every year and predicted, accurately, that this trend would continue for the next decade.").

171. *See, e.g.*, TEX. PARKS & WILD. CODE ANN. § 61.022 (West 2005) (hunting without landowner permission is a misdemeanor; big-game hunting without permission and repeat infractions are both felony offenses); IND. CODE § 35-43-2-2 (2012) (repeated trespass against the same property is a felony).

period in which centralized posting supplemented physical posting.¹⁷² More specifically, recreationists who enter land that has been centrally posted but not physically posted would be guilty of a lesser crime. This is analogous to the law in some states that requires express permission to engage in outdoor recreation on any private property but makes trespassing on unposted land a lesser offense.¹⁷³ By contrast, recreationists who enter land that is physically posted but not centrally posted would not be subject to any criminal liability. This would encourage landowners and recreationists to utilize the centralized posting database. Once the technology develops and the public begins to learn of the central posting process, the requirement of duplicative posting could be removed.

Assigning a temporary role for physical posting would diminish some of the advantages of centralized posting. A dual system could impose significantly higher transactions costs if landowners choose to post under both systems. However, some landowners may find centralized posting to be sufficient; they may not desire the extra sanctions that come with physical posting. Because physical signs would still play a role, false posting (signs posted to dissuade the public from entering land they have the right to access)¹⁷⁴ would remain a concern. Some landowners may even try to exploit the system, physically posting their property to discourage access but refusing to centrally post their property so that they can take the tax break. This behavior should be prohibited, and a centralized database would make it much easier for recreationists to spot false posting and report it to the government.

Other advantages of centralized posting would survive in a dual-system. Recreationists and the government would still be able to determine the posted status of land without having to travel to the land. Finally, the government could still play the role of intermediary between landowners and the public, buying access for the public or selling the right to exclude. However, given the cost of a dual-system, it may be best to wait and implement the system when the technology is better developed and deployed so that the temporary role for physical posting can be brief.

172. The recent adoption of the use of paint to post property creates this same issue.

173. See, e.g., VA. CODE ANN. §§ 18.2-132, 18.2-134 (2012).

174. See *supra* notes 61–63 and accompanying text.

CONCLUSION

Owners of real property must record their interests in a central registry to protect against good faith purchasers.¹⁷⁵ If they want the law's full protection of their right to exclude, owners must physically mark their property with signs or paint.¹⁷⁶ This article suggests that technological change will soon make it more efficient to dispense with physical posting and use existing property databases to provide notice to recreationists. In this system landowners would "post" their property by checking a box (or series of boxes) when they pay their property taxes.¹⁷⁷ Centralized posting should substantially lower the costs of landowners and may even improve the notice given to the public. From the perspective of recreationists, physical posting provides cheap and effective notice when they are at the border of the property. However, they have no means of searching for unposted property from afar.¹⁷⁸ By contrast, centralized posting would allow recreationists to conduct searches over the internet, and if they loaded the data onto their telephones or handheld GPS devices, they could easily learn whether they have permission to use the land where they are standing. Unfortunately, these devices are currently expensive,¹⁷⁹ and the time for centralized posting may have yet to arrive. Given the pace of technological change, however, the wait may not be long.

The arrival of centralized posting may have important implications for the debate over the proper scope of the landowner's right to exclude. While modern American landowners enjoy a fairly robust right to exclude,¹⁸⁰ this was not always true in some states,¹⁸¹ and many European countries now grant the public the right to hike across or hunt upon private land without the owner's permission.¹⁸² Centralized posting will enhance the government's ability to serve as an intermediary between landowners and recreationists. If landowners are given a right to exclude, the government can offer reductions in property taxes to purchase a public right of access. If

175. See MERRILL & SMITH, *supra* note 4, at 917–18 (“Nearly all localities in the United States use recordation. . . . [R]ecording acts create a powerful incentive for . . . mortgagees [to file] their mortgages . . . in order to block possible good faith purchaser claims by subsequent transferees.”).

176. See *supra* notes 10–12 and accompanying text.

177. Note that property tax records are usually distinct from deeds records. This article suggests the use of tax records because the owner interacts with the tax authority each year.

178. For other limitations of physical posting, see *supra* Part I.A.

179. See *supra* note 26.

180. See *supra* notes 10, 35. For limitations on this right, see *supra* notes 97–99 and accompanying text.

181. See *supra* note 36 and accompanying text.

182. See *supra* notes 31–34 and accompanying text.

the public is given a right of access, the government can sell a right to exclude in exchange for higher property taxes. By adjusting the initial property tax level, the government can negate any wealth effect created by the choice of default rule. More significantly, the use of this price mechanism can more effectively ensure the efficient use of land than a reliance on legislative and judicial deliberation alone.