Case note: What's the Buzz? Common Law for the Commons in *Anderson v. State Department of Natural Resources*

by

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Ray Kirsch[1]

"The Pedigree of Honey
Does not concern the Bee –
A Clover, any time, to him,
Is Aristocracy –"[2]

I. INTRODUCTION

The common honey bee, *Apis mellifera* L., is an uncommonly hard worker. This hard work results in the valuable pollination of crops and the production of delicious honeys.[3] Organized, industrious, and as the saying goes, busy, bees are rarely in a state of repose.

Thus, it was with alarm that Steven Ellis, a beekeeper in central Minnesota, examined his hives in July 1999.[4] His bees and those of neighboring beekeepers were dead or dying.[5] While bees are not without their enemies, this was not the work of a recently stung human or a bear intent on honey for dinner. This was something different and more insidious. Ellis's bees were dying from pesticides that had been applied to poplar trees.[6] The bees, foraging in nearby poplar stands, had collected and carried the pesticide back to their hives.[7]

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[1] Candidate for Juris Doctor, Hamline University School of Law, December 2006.

[2] EMILY DICKINSON, FINAL HARVEST: EMILY DICKINSON'S POEMS 306 (Little, Brown, & Co. 1961) (1890).

[3] In 2004, the United States produced approximately 183 million pounds of honey. NAT'L AGRICAL. STATISTICS SERVICES, HONEY 1 (Feb. 28, 2004) *available at* http://usda.mannlib.cornell.edu/reports/nassr/other/zho-bb/hony0205.pdf (reporting honey statistics for the United States as compiled by the National Agricultural Statistics Services). In 2004, Minnesota had approximately 135,000 honey bee colonies that produced 10.1 million pounds of honey with an estimated value of 10.5 million dollars. *Id.* at 3.

Honey bees are used to pollinate a wide variety of crops, including almonds, avocados, cherries, pears, melons, blueberries, sunflowers, and kiwis. ROGER A. MORSE & NICHOLAS W. CALDERONE, THE VALUE OF HONEY BEES AS POLLINATORS OF U.S. CROPS IN 2000, at 3 (Mar. 2000) *available at* http://www.masterbeekeeper.org/pdf/pollination.pdf. Bees are used as pollinators for over two million acres of agricultural production in the United States. *Id.* at 4. In 2000, the estimated marginal increase in the value of crops attributable to honey bee pollination was approximately 14.6 billion dollars. *Id.* at 2.

[4] Anderson v. State Dep't of Natural Res., 674 N.W.2d 748, 752 (Minn. Ct. App. 2004).

[5] *Id.*

[6] Anderson v. State Dep't of Natural Res., 693 N.W.2d 181, 185 (Minn. 2005).

[7] *Id.*

This story in its particulars is unique; in its theme it is not. Pesticides are double-edged swords – they can secure great bounties; they can cause deadly harm. Society's uneasy relationship with pesticides is demonstrated by the tremendous number of regulations, statutes, and lawsuits surrounding their use. This casenote explores this relationship through the lens of the common law. Specifically, it will examine the duties owed fellow citizens in a world increasingly understood as ecologically interdependent. The guide for this examination is the unique character at the center of this story, the honey bee.

Part II of this casenote describes the lawsuit that Ellis and allied Minnesota beekeepers pursued, culminating in the Minnesota Supreme Court's decision in *Anderson v. State Department of Natural Resources*.[8] In *Anderson*, the court was challenged with defining the duty owed to beekeepers by a landowner who knows that honeybees are present.[9] Part III discusses the role of the common law in regulating environmental actors and harms.[10] It examines the "space" afforded the common law in light of increasing federal environmental, statutory regulation.[11] It then turns to the idea of duty – how duties are defined, when they exist, and how they evolve.[12] Finally, it examines the necessity of an ecologically informed evolution of common law duties and expectations, particularly those associated with property.[13]

Part IV argues that the Minnesota Supreme Court was correct in finding a common law duty owed to beekeepers.[14] It argues that the court was correct in defining a space for the common law to act that is capable of evolving over time.[15] By holding to a duty of reasonable care, the court affords an opportunity for society to explore the tension between property rights and ecological interdependence.[16] Finally, it argues that this dialogue is a necessary and important step in the evolution of all environmental law.[17]

II. STATEMENT OF THE CASE

A. Facts

Steven Ellis, Jeffrey Anderson, and James Whitlock are commercial beekeepers who maintain hives in several central Minnesota counties.[18] The

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8 *Id.* at 181; *see infra* notes 18-76 and accompanying text.
9 *Anderson*, 693 N.W.2d at 188.
10 *See infra* notes 80-185 and accompanying text.
11 *See infra* notes 80-127 and accompanying text.
12 *See infra* notes 128-164 and accompanying text.
13 *See infra* notes 165-185 and accompanying text.
14 *See infra* notes 186-292 and accompanying text.
15 *See infra* notes 186-214 and accompanying text.
16 *See infra* notes 216-258 and accompanying text.
17 *See infra* notes 259-290 and accompanying text.
18 Anderson v. State Dep't of Natural Res., 693 N.W.2d 181, 185 (Minn. 2005).

beekeepers do not own the land on which their hives reside.[19] Instead they pay a nominal rent, providing "a 'thank-you gesture' of honey or a small amount of money to the landowners."[20] The bees forage in a wide area, including nearby poplar groves.[21] Poplar groves occur naturally; however, the groves at issue here are "cultivated groves," that is, groves bred, planted, and maintained with the intent of harvesting them for biomass.[22] These groves are owned or managed by the International Paper Company (IP) or the Minnesota Department of Natural Resources (DNR).[23]

In 1997 and 1998, IP and the DNR noticed that their poplar groves were suffering from an infestation of cottonwood leaf beetles.[24] To control the beetles, they hired commercial spray companies to apply a pesticide that was known to be toxic to beetles and bees.[25] The spray applications resulted

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[19] *Id.*

[20] *Id.*

[21] *Id.* The bees forage in a radius of three to five miles and obtain pollen and nectar from a variety of native and cultivated plants. Anderson v. State Dep't of Natural Res., 674 N.W.2d 748 (Minn. Ct. App. 2004). In the winter, the beekeepers transport their hives to California where they pollinate fruit crops. *Id.* at 751. See MARK L. WINSTON, THE BIOLOGY OF THE HONEY BEE 169-76 (Harvard Univ. Press 1987), for an overview of honey bee foraging and nutrition.

[22] *Anderson*, 693 N.W.2d at 185. In 1993, the Minnesota Department of Natural Resources, in cooperation with a regional development council, initiated a project to determine whether hybrid poplars could be an economically feasible cash crop when grown for biomass and used in electrical power generation. *Anderson*, 674 N.W.2d at 752. Beyond feasibility, the project was also designed to examine possible positive effects on the local economy. *Id.* Concurrent with this project, the International Paper Company began developing hybrid poplar groves to supply pulp for its paper operations. *Id.*

[23] *Anderson*, 693 N.W.2d at 185.

[24] *Id.* Cottonwood leaf beetles injure poplar trees through defoliation. *Cottonwood Leaf Beetle Fact Sheet*, http://www.plantpath.wisc.edu/poplar/clbfctsht.htm (last visited Apr. 6, 2006). Adult beetles overwinter in the soil, emerge in the spring, and lay eggs on poplar leaves. *Id.* Larvae create damage ranging from small "shot holes" to the complete consumption of leaves. *Id.* Defoliation can cause a significant loss of poplar biomass. *Id.*

[25] *Anderson*, 693 N.W.2d at 185. The DNR made the decision to use a pesticide to control the beetles. *Anderson*, 674 N.W.2d at 752. The DNR considered two pesticides to control beetles:

> Ron Stoffel, a DNR employee who was responsible for the project, determined that it was necessary and appropriate to use pesticides to stop this infestation. Stoffel knew of two types of insecticides that might be effective against the [cottonwood leaf beetles] CLB, Bacillus Thuringiensis (BT) and carbaryl, more specially the commercial product Sevin XLR Plus (Sevin). Sevin is toxic to bees even if they are not directly sprayed with the insecticide, because, after spraying has taken place, and before the insecticide dries, foraging bees pick up pollen poisoned with Sevin and carry it back to the hive. The poison can stay active in the hive for up to a year. The DNR . . . knew that BT was less toxic than Sevin to bees; but BT would only control young CLB larvae and the older CLB larvae would continue to infest the poplars. Thus, Stoffel recommended that the DNR use Sevin.
>
> Accordingly, whenever the DNR found a CLB infestation in a project grove, it contacted the grove owner and asked permission to spray

in "dead bees and infected hives."[26] On one particular occasion in 1999 (known as the "Swanson incident" as it occurred on Dale Swanson's land), pesticide applications were made within "perhaps a hundred feet" of Ellis's hives.[27] The DNR's analysis confirmed that Ellis's bees died from pesticide poisoning.[28]

B. Minnesota District Court

In 2002, the beekeepers filed suit alleging that:

> (1) the DNR and IP negligently created an unreasonable risk of harm to the[ir] beekeeping operations; (2) that the DNR and IP were negligent per se, in violation of the Minnesota Pesticide Control Act, which prohibits the use of pesticides in a manner that is inconsistent with label directions; and (3) that the DNR and IP created a private nuisance.[29]

All parties moved for summary judgment.[30] The Minnesota district court granted summary judgment for the DNR and IP and dismissed all claims except the claim against the DNR resulting from the Swanson incident.[31]

> the poplars with Sevin. After the DNR secured permission, the DNR contracted with a local chemical supplier and had the poplar grove sprayed . . . Similarly, in the summer of 1998, IP [International Paper] contracted with commercial pesticide applicators to implement IP's insecticide program using both Sevin and BT.

Id. at 752.

[26] *Anderson*, 693 N.W.2d at 185.

[27] *Id.*

[28] *Id.* The beekeepers, through sleuthing of their own, learned and/or suspected that pesticides were being applied to nearby poplar groves in 1998. *Anderson*, 674 N.W.2d at 752. The beekeepers and the DNR were not incommunicado. In January 2000, beekeepers informed the DNR and IP that foraging honey bees were present in the poplar groves. *Anderson*, 693 N.W.2d at 189. In 2001, the DNR adopted a policy of not applying pesticides to poplar groves "without first notifying persons owning bee yards registered with the Minnesota Department of Agriculture." *Anderson*, 674 N.W.2d at 752.

[29] *Anderson*, 693 N.W.2d at 185.

[30] *Id.* at 185-86.

[31] *Id.* at 186. The beekeepers also asserted a claim of trespass. *Anderson*, 674 N.W.2d at 752-53. The DNR and IP were granted summary judgment on this claim and it was not appealed or addressed by the appellate courts. *Id.* at 753. Consequently this casenote does not address this claim.

The district court noted that Minnesota had not addressed the question of the duty owed beekeepers and foraging (trespassing) bees. Appellants' Appendix – Part One at A-23, Anderson v. State Dep't of Natural Res., 693 N.W.2d 181 (Minn. 2005) (No. A03-679). The court observed that Wisconsin had addressed this question, and, without discussion, the court adopted the Wisconsin standard of the duty owed, which states that landowners cannot intentionally or wantonly destroy bees known to be foraging on their land. *Id.* The court held that, except for the Swanson incident, the DNR and IP had not intentionally destroyed bees. *Id.* at A-23 to -24. The court also held that the beekeepers' claim for nuisance failed as a matter of law. *Id.* at A-27. By claiming a nuisance when it was in fact the beekeepers' bees

C. Minnesota Court of Appeals

The Minnesota Court of Appeals affirmed the grants of summary judgment to the DNR and IP and reversed the district court's denial of summary judgment regarding the Swanson incident.[32] Thus, all claims against IP and the DNR were dismissed.[33]

1. Negligence

The court of appeals started its negligence analysis by recognizing that "[w]hether a duty exists is a question of law, which appellate courts review de novo."[34] The challenge for the court was the lack of a Minnesota case addressing the duty that landowners owe to foraging bees.[35] As a result, the court looked to cases from California and Wisconsin.[36]

In *Lenk v. Spezia*, the California Court of Appeals held that a landowner owed a duty not to wantonly, maliciously, or otherwise deliberately injure foraging bees.[37] Kept bees, the court held, were domesticated and thus the situation was analogous to one of trespassing animals.[38] Additionally, the court found that beekeepers, who have notice of pesticide applications, are contributorily negligent if they do not take ordinary precautions to protect their bees.[39] As a result, the beekeeper was denied damages.[40]

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that were responsible for bringing pesticides back to the beekeepers' hives, the beekeepers were "attempting to turn nuisance law on its head." *Id.*

[32] *Anderson*, 674 N.W.2d at 760. The court held that the DNR was not liable for the actions of the independent contractor in the Swanson incident. *Id.*

[33] *Id.*

[34] *Id.* at 757; *see infra* notes 128-150 and accompanying text (discussing the elements of negligence and the factors that courts consider when formulating a duty).

[35] *Anderson*, 674 N.W.2d at 757.

[36] *Id.*

[37] Lenk v. Spezia, 213 P.2d 47, 51 (Cal. Ct. App. 1949). Beekeeper Fred Lenk claimed that his bees were killed by multiple aerial applications of an arsenic compound on surrounding tomato fields. *Id.* at 48-49. The situation was quite contentious. In reply to a notice of intent to spray, and an offer to help move his hives to a safer place, Lenk threatened a lawsuit. *Id.* at 52-53.

[38] *Id.* at 51-52. "[A] landowner is not . . . liable . . . where [trespassing] animals partake of poison which the landowner intended for another purpose, in the absence of gross or wanton negligence." 3B C.J.S. *Animals* § 426 (2004).

[39] *Lenk*, 213 P.2d at 53. There are at least three precautions that beekeepers can take to minimize harm from pesticides: covering their hives, moving their hives away from areas where pesticides are being applied, and feeding bees at their hives to minimize bee foraging. Bennett v. Larsen, 348 N.W.2d 540, 552 (Wis. 1984).

[40] *Lenk*, 213 P.2d at 53. In addition to perplexing problems of the duty owed and contributory negligence, the court also wrestled with the question of whether it was the defendant's pesticide applications that caused Lenk's bee deaths. *Id.* at 50.

In *Bennett v. Larsen*, the Supreme Court of Wisconsin was also tempted to consider foraging bees as trespassers.[41] However the court rejected this analogy:

> Bees are by nature foragers that fly to and from fields wherever there is nectar and pollen. There are no means to keep them from foraging, except for short periods of time, and there is no way for land possessors to prevent bees from entering their property. Traditional trespass theory must include the notion that the trespasser can be kept off the property. It is the uninvited entry onto the property which make the activity a trespass. If there is no way for the land possessor to prevent the entry or to eject the trespasser, that status becomes meaningless insofar as it relates to the rights and duties of the land possessor toward the putative trespasser. We conclude that bees fall into this category and, therefore, should not be considered trespassers as such.[42]

Nonetheless, the court held that the duty owed by landowners to protect bees was a limited duty – landowners cannot intentionally or wantonly destroy foraging bees.[43]

The Minnesota Court of Appeals adopted the reasoning of the *Bennett* court.[44] Though bees were not properly trespassers, the court deemed it "a matter of policy" that the duty of a landowner toward bees was limited.[45] Thus "a landowner is prohibited from intentionally or wantonly harming bees on his or her property."[46] The court noted that the beekeepers had never claimed that the DNR or IP intentionally harmed the bees.[47] In fact, the sole purpose of the pesticide applications was to control leaf beetles,

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[41] *Bennett*, 348 N.W.2d at 547. Both the *Bennett* and *Lenk* courts referenced trespassing in their attempts to describe the duty owed to beekeepers and foraging bees. To aid in duty analysis, courts often rely on categorical distinctions to describe the relationships and duties between property owners and persons (and animals) that enter their land. DAN. B. DOBBS, THE LAW OF TORTS §§ 232-37 (2000). The inference is that some entrants are known or foreseeable and thus owed a duty of reasonable care, whereas others cannot be anticipated and are thus owed a lesser duty. *Id.*; *see infra* notes 141-149 and accompanying text (discussing duties and categorical distinctions).

[42] *Bennett*, 348 N.W.2d at 547(citations omitted).

[43] *Id.*

[44] Anderson v. State Dep't of Natural Res., 674 N.W.2d 748, 757-58 (Minn. Ct. App. 2004).

[45] *Id.* at 758. The appellant-beekeepers agreed that bees were not properly characterized as trespassers. Appellants' Brief and Appendix at 33, Anderson v. State Dep't of Natural Res., 674 N.W.2d 748 (Minn. Ct. App. 2004) (No. A03-679). They argued that nonetheless a duty of reasonable care was appropriate when using a powerful, non-selective pesticide such as Sevin. *Id.*

[46] *Anderson*, 674 N.W.2d at 758.

[47] *Id.*

not to harm bees.[48] Therefore, neither the DNR nor IP acted intentionally or wantonly.[49]

2. *Negligence per se*

The court of appeals examined the Minnesota Pesticide Control Act to determine if its strictures had been violated, thus providing evidence of negligence per se by the defendants.[50] The court proceeded along two paths. First, based on expert testimony at the district court, it affirmed a narrow interpretation of the label warning that appeared on the pesticide.[51] Second,

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[48] *Id.*

[49] *Id.* The court also considered the possibility of the DNR's vicarious liability and negligence for the Swanson incident. *Id.* at 758-59. The DNR argued that it could not be liable for negligence because it hired an independent contractor for the pesticide applications. *Id.* at 758. The court noted that in Minnesota the general rule is that an employer is not liable for a harm caused by a contractor. *Anderson*, 674 N.W.2d at 758. However, for reasons of policy, employers can be vicariously liable if the activity undertaken by the contractor is hazardous. *Id.* at 759. The court found that Minnesota had not determined if pesticide applications were considered hazardous. *Id.* Additionally, no evidence was received on this question at the district court. *Id.* Thus, the court found that the general rule applied. *Id.* Therefore, pesticide applications were not "hazardous," and the DNR was not liable for pesticide applications performed by an independent contractor. *Id.*

[50] *Anderson*, 674 N.W.2d at 753. Minnesota courts have held that "[n]egligence per se is a form of ordinary negligence that results from violation of a statute." Seim v. Garavalia, 306 N.W.2d 806, 810 (Minn. 1981). "A per se negligence rule substitutes a statutory standard of care for the ordinary prudent person standard of care, such that a violation of the statute . . . is conclusive evidence of duty and breach." Gradjelick v. Hance, 646 N.W.2d 225, 231 n.3 (Minn. 2002). *See generally* DOBBS, *supra* note 41, §§ 134-39 (describing the use of statutes as they impact negligence claims).

The Minnesota Pesticide Control Act provides in part:

> 18B.07 Pesticide use, application and equipment cleaning.
>
> Subdivision 1. Pesticide use. Pesticides must be applied in accordance with the product label or labeling and in a manner that will not cause unreasonable adverse effects on the environment within limits prescribed by this chapter and FIFRA [Federal Insecticide, Fungicide, Rodenticide Act].
>
> Subd. 2. Prohibited pesticide use. (a) A person may not use, store, handle, distribute, or dispose of a pesticide, rinsate, pesticide container, or pesticide application equipment in a manner:
>
> (1) that is inconsistent with a label or labeling as defined by FIFRA;
>
> (2) that endangers humans, damages agricultural products, food, livestock, fish, or wildlife; or
>
> (3) that will cause unreasonable adverse effects on the environment.

MINN. STAT. § 18B.07 (2004). As indicated previously, a state may regulate pesticide use as long as the regulation does not permit uses prohibited by federal law. 7 U.S.C. § 136v(a) (2004).

[51] *Anderson*, 674 N.W.2d at 755. The label for Sevin states:

> For maximum honey bee hazard reduction, apply from late evening to early morning or when bees are not foraging. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging in the

it found that the beekeepers failed to provide the necessary evidence to defeat a summary judgment motion.[52] Therefore the DNR and IP were not negligent per se.[53]

3. Nuisance

The court of appeals noted that a claim of nuisance by the beekeepers must "show an injury stemming from an interest in land."[54] The beekeepers are not the landowners.[55] Rather, they provide only a modest share of honey for use of the land.[56] The court held that this interest was insufficient to support a nuisance claim.[57]

> treatment area. However, applications may be made during foraging periods if the beekeeper takes one of the following precautionary measures prior to bee flight activity on the day of treatment: (1) confine the honey bees to the hive by covering the colony or screening the entrance or; (2) locate hives beyond bee flight range from the treated area. Precautionary measures may be discontinued after spray residues have dried.

Id. at 753. The court affirmed that the binding language of the label was limited to the following phrase: "[D]o not apply this product or allow it to drift to blooming crops or weeds if bees are foraging in the treatment area." *Id.* at 754.

[52] *Id.* at 756. The beekeepers failed to show that "a significant number of bees were actively foraging in an area with a significant number of blooming flowers or weeds . . . ." *Id.* at 755.

[53] *Id.*

[54] *Anderson*, 674 N.W.2d at 760; *see infra* notes 150-164 and accompanying text (discussing the elements of nuisance).

[55] *Anderson*, 674 N.W.2d at 751.

[56] *Id.*

[57] *Id.* at 760. The court's exposition and reasoning were neither extensive nor entirely clear. *Id.* Perhaps because of the uniqueness of the case, the court made one tenuous comparison (analogizing bee deaths to the deactivation of computer software) and summarily concluded that "bees are not land." *Id.*

The appellant-beekeepers argued that an interest in land accrued to possessors of land, owners of easements and profits, and owners of "nonpossessory estates in the land." Appellants' Brief and Appendix at 35-36, Anderson v. State Dep't of Natural Res., 674 N.W.2d 748 (Minn. Ct. App. 2004) (No. A03-679) (citing the RESTATEMENT (SECOND) OF TORTS § 821E (1979)). The beekeepers contended that they met this bar because they have a profit in the land on which their hives are located, they have provided money and honey to lease the land, and they have a nonpossessory estate in the land. *Id.*

Respondents argued that the beekeepers were, at most, licensees, a status insufficient as an interest in land. Respondent DNR's Brief and Appendix at 36-37, Anderson v. State Dep't of Natural Res., 674 N.W.2d 748 (Minn. Ct. App. 2004) (No. A03-679). The respondents contended that a profit was a right intimately tied to the land, e.g., oil, timber, gas, and minerals. *Id.* at 36 (citing Earth Protector, Inc. v. City of Hopkins, 474 N.W.2d 454 (Minn. Ct. App. 1991)). Beekeeping was not substantial or permanent enough to warrant this status. *Id.* at 37. Furthermore, the beekeepers could not be considered lessees as a "lease gives an exclusive right to possess property, even against the landlord . . . ." *Id.* at 37. *See generally* RESTATEMENT (THIRD) OF PROPERTY § 1.2 (2000) (discussing easements and profits as nonpossesory rights).

D. Minnesota Supreme Court

The Minnesota Supreme Court affirmed the court of appeals on the claim of nuisance, but on all other matters reversed and remanded to the district court.[58]

1. Majority

a. Negligence

The Minnesota Supreme Court, in contrast to the court of appeals, started its analysis with an emphasis on the duty of landowners to use their land "so as not to injure that of others."[59] The court agreed with *Bennett* that bees-as-trespassers was a puzzling framework, but noted that the status of the bees was not important if a landowner knew the bees were present.[60] If the DNR and IP had knowledge of the foraging bees, they would come under a duty of reasonable care.[61]

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[58] Anderson v. State Dep't of Natural Res., 693 N.W.2d 181, 192 (Minn. 2005). The court's analysis of the nuisance claim was as unavailing as that of the lower courts. The court concluded, without discussion, that "the beekeepers lacked the requisite property interest for a private nuisance claim." *Id.*

[59] *Id.* at 186; *see* Wilson v. Ramacher, 352 N.W.2d 389, 393-94 (Minn. 1984) (recognizing that landowners who divert surface waters must do so reasonably, balancing "whether the benefit to the diverter's land outweighs the harm to the land receiving the surface waters"); Sime v. Jensen, 7 N.W.2d 325, 327 (Minn. 1942) (noting that a landowner who elevates his land must act reasonably by means of retaining wall to prevent soil movement toward his neighbor).

[60] *Anderson*, 693 N.W.2d at 187. The court appeared to focus on foreseeability as the key factor in determining the scope of risk created by the DNR and IP and the extent of their duties. *Id.* Thus, if the bees were trespassers and the respondents knew this, they would owe a duty of reasonable care. DOBBS, *supra* note 41, § 232. If the bees were not trespassers, but the respondents knew of their presence, a duty of reasonable care would still be owed. *Anderson*, 693 N.W.2d at 187. Thus, whether the bees were trespassers, grades, or letters of the alphabet did not matter – their categorization was not important relative to the knowledge of the parties and the forseeability of the risks. *Id.*; *see infra* notes 128-135 and accompanying text (discussing foreseeability as a key factor in determining duties).

Though not explicitly expressed by the court, it apparently also adopted a "fairness in business enterprise" approach. *Anderson*, 693 N.W.2d at 187. Thus, if ranchers can husband cattle and are owed a duty of reasonable care when their charges wander onto a neighbor's property, why would duties be any different for beekeepers who husband bees? *Id.* at n.3. (noting that beekeepers in Minnesota must register their apiaries with the Minnesota Department of Agriculture and that this information, coupled with beekeeper initiative to notify nearby landowners, could foster less litigious relationships). In this sense, the court was suggesting that not every bee that dies from pesticides will lead to a lawsuit as there must be a plaintiff. *Id.* at 188. The plaintiff would likely be a beekeeper. *Id.* The beekeeper has a business enterprise that should be treated as any other business enterprise registered in the state. *Id.*

[61] *Id.* at 187.

The court then noted the extensive statutory scheme of regulation for pesticides, including the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Minnesota Pesticide Control Act.[62] The court observed that the common law paralleled this scheme – that common law claims were not necessarily preempted, and remained, in fact, complementary means of recourse.[63] In this light, the court held that a landowner with knowledge of foraging honey bees has a duty of reasonable care.[64] In doing so the court recognized a broader duty than that applied by the district court.[65] The court held that the beekeepers had provided evidence of a breach of this duty so as to avoid summary judgment.[66]

b. Negligence per se

The court reviewed the expert testimony on the question of whether the Minnesota Pesticide Control Act had been violated by the DNR and IP, indicating negligence per se.[67] The court held that the lower courts had inappropriately granted deference to expert testimony provided by Minnesota Department of Agriculture personnel.[68] The court noted that testimony prepared for litigation and offered a year and a half after initiation of a lawsuit was not agency decision-making entitled to deference.[69] Thus, with conflicting expert testimony about violations of the statute, the DNR and IP were inappropriately granted summary judgment.[70]

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[62] *Anderson*, 693 N.W.2d at 188; 7 U.S.C. § 136 et seq. (2000); MINN. STAT. § 18B.07 (2004).

[63] *Anderson*, 693 N.W.2d at 188. The court is brief and somewhat cryptic on this point. The majority, after discussing statutory regulations and noting cases where the common law was preempted and where it was not, concluded that "[g]iven this background . . . it seems to us that the beekeepers' common-law action . . . is a viable one." *Id.* The minority looked at the same list of cases and concluded that "[i]t makes no sense to say that a newfound common law duty springs from a duty arising from state or federal regulation . . . ." *Id.* at 193.

[64] *Id.* at 192.

[65] *Id.*

[66] *Id.* at 189. The court side-stepped the question of whether pesticides implied "hazardous" when reversing the DNR's grant of summary judgment for the Swanson incident. *Anderson*, 693 N.W.2d at 189. The court held that an employer of an independent contractor, regardless of the nature of the work, "may be found negligent when it retains detailed control over a project and then fails to exercise reasonably careful supervision over that project." *Id.* Thus, summary judgement was inappropriate when evidence presented by the beekeepers pointed to extensive control by the DNR over the pesticide application. *Id.*

[67] *Id.* at 190-91; *see* MINN. STAT. § 18B.07 (2004).

[68] *Anderson*, 693 N.W.2d at 190-91.

[69] *Id.*

[70] *Id.*

2. *Dissent*

The dissent disagreed with the majority's interpretation of the duty owed by a landowner with knowledge of foraging bees.[71] The dissent argued that a duty of reasonable care was too broad, and that the proper duty was a limited duty to refrain from wanton or intentional injury.[72] The dissent found the breadth of reasonable care to be "plowing new ground in tort law."[73] Additionally, the dissent was perplexed by the majority's discussion of the statutory regulation of pesticides in deciding upon the extent of a common law duty.[74] The dissent found the beekeepers' ability to proceed with a negligence per se action sufficient.[75] Concluding, the dissent found it difficult "to imagine how a jury could determine that spraying was conducted in a manner that creates an unreasonable risk of harm without reference to the [pesticide] label's requirements."[76]

III. BACKGROUND

To better understand the considerations of the Minnesota Supreme Court in formulating the duty of care owed to the beekeepers, it is appropriate to consider the history, breadth, and adaptability of the common law. Part A of this section examines the role of the common law and its relative effectiveness in addressing environmental harms.[77] Part B, through the torts of negligence and nuisance, explores how courts define the duties owed fellow citizens and addresses the expectations of landowners.[78] Part C discusses the ability of the common law to evolve in response to ecological tenets and to enable an ecologically interdependent society.[79]

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71 *Id.* at 192.

72 *Id.* at 192-93.

73 *Id.* at 193.

74 *Anderson*, 693 N.W.2d at 193.

75 *Id.*

76 *Id.* The respondents concurred, noting that:

> If the [c]ourt were to allow juries to determine whether spraying was conducted in a manner which creates an unreasonable risk of harm other than by reference to the label's requirements, spray applicators who follow the mandatory requirements of the bee caution will still face liability of an undefined and unknowable duty to beekeepers. The result will surely be chaos in the agricultural spraying industry in Minnesota.

Respondent DNR's Brief and Appendix at 32-33, Anderson v. State Dep't of Natural Res., 693 N.W.2d 181 (Minn. 2005) (No. A03-679).

77 *See infra* notes 80-127 and accompanying text.

78 *See infra* notes 128-164 and accompanying text.

79 *See infra* notes 165-185 and accompanying text.

A. The Role of the Common Law in Environmental Law

1. History

Modern environmental law is a complex amalgam of statutory law, common law, market forces and related institutions.[80] The common law is the historical root of environmental law, and prior to World War II, was the primary means of addressing environmental harms.[81] During this period, state and local governments were forefront in addressing issues of public health and nuisance and did so by balancing community interests and imposing (or not) liability for harms.[82]

The revolution in United States environmental law occurred in the 1970s and 1980s.[83] During this time, the United States Congress created substantial federal statutory regulation of pollution and environmental harms.[84] The forces driving this revolution were multiple and synergistic,

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[80] ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 59-161 (4th ed. 2003). Reflecting its origins and evolving scope:

> Environmental law is structurally complex. Its complexity stems from its diverse roots: centuries of evolving common law doctrine, a welter of federal and state statutes with a vast array of implementing regulations, and even agreements between sovereign states. Most environmental statutes respond to particularly visible manifestations of broader problems. When considered together, it is apparent that they provide regulatory authority that is at once piecemeal and overlapping.

Id. at 59; *see also* David A. Westbrook, *Liberal Environmental Jurisprudence*, 27 U.C. DAVIS L. REV. 619, 621-32 (1994).

[81] PERCIVAL ET AL., *supra* note 80, at 60-85. Although the common law was an appropriate means to address relatively simple questions of environmental risk in a developing and sparsely populated United States, there were also legal reasons for its application, including perceived limits on the commerce power of Congress. *Id.* at 86 (noting that when Congress wanted to prevent the use of phosphorous in match manufacturing it turned to a federal excise tax rather than a regulatory ban). *See generally* ERWIN CHEMERINSKY, CONSTITUTIONAL LAW: PRINCIPLES AND POLICIES 242-59 (2nd ed. 2002) (noting that the Supreme Court, pre-1937, was committed to laissez-faire economics and opposed to government regulation, and thus limited Congress' commerce power).

[82] PERCIVAL ET AL., *supra* note 80, at 86; *see, e.g.*, Georgia v. Tenn. Copper Co., 206 U.S. 230, 238 (1907) (holding that the defendant copper smelters could be enjoined by the state of Georgia from emitting sulfurous fumes that caused widespread damage in the state); *see also* Todd Zywicki, *A Unanimity-Reinforcing Model of Efficiency in the Common Law: An Institutional Comparison of Common Law and Legislative Solution to Large-Number Externality Problems*, 46 CASE W. RES. L. REV. 961, 1016-29 (1996) (discussing the balancing tests employed by courts to determine liability for environmental harms).

[83] PERCIVAL ET AL., *supra* note 80, at 85-90.

[84] *Id.* at 88-90. Statutes created or substantially modified by Congress during this time period included the National Environmental Policy Act of 1969 (NEPA); Clean Air Act (CAA); Federal Water Pollution Control Act (Clean Water Act, CWA); Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); Endangered Species Act (ESA); Toxic Substances Control Act (TSCA); and the Resource Conservation and Recovery Act (RCRA). *Id.* at 88-89.

reflecting the exasperation of many environmental stakeholders. [85] As a result, the common law is now one of several environmental law actors.[86]

[85] *See* Jeffrey J. Rachlinski, *On Being Regulated in Foresight Versus Being Judged in Hindsight*, *in* THE COMMON LAW AND THE ENVIRONMENT: RETHINKING THE STATUTORY BASIS FOR MODERN ENVIRONMENTAL LAW 242, 243 (Roger Meiners & Andrew Morriss eds., 2000) [hereinafter THE COMMON LAW] (observing that industry favored a regulatory approach rather than a liability approach due to the hindsight bias of juries which made polluting industries particularly vulnerable to environmental suits); Roger Meiners & Bruce Yandle, *Common Law and the Conceit of Modern Environmental Policy*, 7 GEO. MASON L. REV. 923, 924 (1999) (noting the impact of Rachel Carson's *Silent Spring*, the burning of the Cuyahoga River, the first Earth Day, and Love Canal as important social drives of an environmental revolution); Zywicki, *supra* note 82, at 961-62 (noting that the conventional wisdom was that a legislative response to environmental harms was the most efficient means of dealing with activities that created large numbers of externalities); *see also* Boomer v. Atl. Cement Co., 257 N.E.2d 870, 871 (N.Y. 1970) (discussing the court's challenges in dealing with air pollution through the common law). The *Boomer* court's exasperation is palpable:

> Effective control of air pollution is a problem presently far from solution even with the full public and financial powers of the government. In large measure adequate technical procedures are yet to be developed and some that appear possible may be economically impracticable.
>
> It seems apparent that the amelioration of air pollution . . . is likely to require massive public expenditure and to demand more than any local community can accomplish and to depend on regional and interstate controls.
>
> A court should not try to do this on its own as a by-product of private litigation and it seems manifest that the judicial establishment is neither equipped in the limited nature of any judgment it can pronounce nor prepared to lay down and implement an effective policy for the elimination of air pollution. This is an area beyond the circumference of one private lawsuit. It is a direct responsibility for government and should not thus be undertaken as an incident to solving a dispute between property owners and a single cement plant – one of many – in the Hudson River valley.

Id. at 871.

[86] PERCIVAL ET AL., *supra* note 80, at 112-16.

The post-revolution challenge has been to blend these actors, drawing on their respective strengths and employing them in a complementary manner.[87]

2. *Preemption*

One of the first and most important questions about this extensive and new body of statutory regulation was whether these regulations preempted the common law.[88] Or, put another way, was there space left for

[87] *Id.* at 113. The following chart categorizes the environmental actors in play:

Actors and Mechanisms for Controlling Environmental Risks

Actors	Advantages	Disadvantages
Market Forces, e.g., eco-labeling and "green" marketing	Rapid and efficient response when consumers are well informed.	Inadequate incentives; many risks are not tradeable.
Common Law Liability	Can provide compensation to victims; efficient when private parties have best information about risks.	Inadequate incentives to control risk due to difficulties in proving causation and/or recovering for harm that is widely dispersed.
Government Regulation	Can efficiently prevent harm by internalizing the costs of risky activities; can balance risks and benefits; can be used to gather improved information about risks.	No compensation to victims of environmental damage; difficult to tailor statutes to all regulatory targets.
Insurance	Ensures that compensation will be available for victims.	Can reduce incentives to prevent environmental damage.

Id. (adapted from W. Kip Viscusi, *Toward a Diminished Role for Liability: Social Insurance, Government Regulation, and Contemporary Risks to Health and Safety*, 6 YALE J. ON REG., 65, 106 (1989)).

[88] PERCIVAL ET AL., *supra* note 80, at 95-100 (discussing the question of preemption due to new environmental statutory regulation). Federal preemption is the animation of the Supremacy Clause of the U.S. Constitution and directs courts to decide, as a matter of federal law, whether Congress intended to displace state law with federal statutory regulation. U.S. CONST. art. VI, § 2; *see* Mary J. Davis, *On Preemption, Congressional Intent, and Conflict of Laws*, 66 U. PITT. L. REV. 181, 181-86 (2004); Mason A. Barney, *Not As Bad As We Thought: The Legacy of* Geier v. American Honda Motor Company *in Product Liability Preemption*, 70 BROOK. L. REV. 949, 949 (2005). In deciphering the intent of Congress, the Supreme Court has recognized two basic forms of preemption – express and implied. *Id.* at 956-57. It has further divided implied preemption into two categories – "field preemption," when Congress has completely dominated a particular field of legislation; and "conflict preemption," when it is impossible or nearly impossible to comply concurrently with both federal and state demands. *Id.* at 957-58.

In interpreting congressional intent, the Supreme Court has used textual analysis informed by the federal structure of the Constitution. *Id.* at 959-62. If preemption analysis was not difficult enough, Congress has muddied the waters by putting preemption clauses and "savings clauses" (saving common law remedies despite federal regulation) in the same legislation. *See, e.g.*, Geier v. Am. Honda Motor Co. 529 U.S. 861, 867-74 (2000) (holding

the common law to operate? The answer has been that there is space for the common law, but this space has been substantially reduced.[89] In an attempt to retain the common law as a complementary actor, most federal environmental regulations adopted what were known as "savings clauses" that preserved a plaintiff's right to bring a common law claim.[90]

Preemption questions concerning pesticides and FIFRA have turned on specific facts and on the interpretation of FIFRA's savings clause.[91] FIFRA's savings clause provides that a "[s]tate shall not impose or continue in effect any requirements for labeling or packaging in addition to or different from those required under this Act."[92] The Supreme Court has interpreted "requirements" to include common law rules.[93] Thus, state common law decisions cannot require pesticide labeling different from that imposed under federal law (FIFRA).[94] In *Bates v. Dow Agrosciences LLC*, the Supreme Court interpreted "requirements" to mean "a rule of law that

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that in such situations ordinary preemption principles still apply and the court must strive to give meaning to both clauses). Preemption analysis is fact intensive, and different fact patterns may yield different preemption results. *Compare* City of Milwaukee v. Illinois, 451 U.S. 304, 332 (1981) (holding that the Clean Water Act preempted federal common law remedies), *with* Int'l Paper Co. v. Oullette, 479 U.S. 481, 500 (1987) (holding that a state common law claim of nuisance was not preempted by the Clean Water Act).

[89] PERCIVAL ET AL., *supra* note 80, at 96 (clearly illustrating the idea of preemption and the relative space afforded the common law through the use of a Venn diagram); Meiners & Yandle, *supra* note 85, at 952-54 (noting that beyond preemption, regulatory standards make it difficult for common law plaintiffs to prove damages, i.e., if federal agencies have "blessed" a particular discharge with a permit, it is often more difficult to show damages).

[90] As an example, the savings clause of the Clean Water Act reads: "Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief (including relief against the Administrator or a state agency)." 33 U.S.C. § 1365(e) (1994).

[91] *See* Beverly L. Jacklin, Annotation, *Federal Pre-Emption of State Common-Law Products Liability Claims Pertaining to Pesticides*, 101 A.L.R. FED. 887 (2005). *Compare* Ferebee v. Chevron, 736 F.2d 1529, 1539-43 (D.C. Cir. 1984) (holding that a state-law tort claim for the inadequacy of a pesticide warning label was not preempted), *with* Fisher v. Chevron Chemical Co., 716 F. Supp. 1283, 1286-89 (W.D. Mo. 1989) (holding that a state common law claim for failure to adequately warn of dangers associated with a pesticide was preempted).

[92] 7 U.S.C. § 136v(b) (2000).

[93] Bates v. Dow Agrosciences LLC, 125 S. Ct. 1788, 1798 (2005). The Court held that "the 'requirements' in § 136v(b) reaches beyond positive enactments, such as statutes and regulations, to embrace common-law duties." *Id.*

[94] *Id.* The Court noted:

> That § 136v(b) may pre-empt judge-made rules, as well as statutes and regulations, says nothing about the *scope* of that pre-emption. For a particular state rule to be pre-empted, it must satisfy two conditions. First, it must be a requirement "*for labeling or packaging*"; rules governing the design of a product, for example, are not pre-empted. Second, it must impose a labeling or packaging requirement that is "*in addition to or different from* those required under this subchapter."

Id.

must be obeyed," not "an event, such as a jury verdict, that merely motivates an optional decision" by a pesticide manufacturer to consider label alterations.[95] In doing so, the Court provided the common law with substantial room and ability to redress pesticide harms.[96]

3. Effectiveness

The effectiveness of the common law in improving environmental protection and addressing environmental harms is contested.[97] The debate is one of comparison – whether the common law is or can be effective at environmental protection when compared with statutory approaches.[98] Professor Andrew Morriss compares this debate to the civil procedure codification debate of the 1800s.[99] In doing so, he elicits characteristics of the common law that illuminate its possible role in environmental protection. First, Morriss contends that the common law is not a "series of unconstrained

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[95] *Id.* at 1799. The Court reasoned that an "inducement test" would call for unreasonable speculation as to how a manufacturer might respond to a jury verdict. *Id.*

[96] *Bates*, 125 S. Ct. at 1799-802. The Court held that "although FIFRA does not provide a federal remedy to farmers and others who are injured as a result of a manufacturer's violation of FIFRA's labeling requirements, nothing in § 136v(b) precludes States from providing such remedy." *Id.* at 1801. The Court relied on four factors in its determination of "parallel requirements" for FIFRA and the common law: textual analysis; a presumption against preemption; previous advocacy of this position by the United States; and the nation's history of tort litigation for harms caused by manufactured poisons. *Id.* at 1800-04.

[97] *See* David Schoenbrod, *Protecting the Environment in the Spirit of the Common Law*, *in* THE COMMON LAW, *supra* note 85, at 3-23 (advocating a system of pollution control more like the common law and less like the current federal administrative state); Zywicki, *supra* note 82, at 1029-30 (noting that the common law can be as effective as regulatory approaches in mediating harms from activities that create a large number of externalities). *Compare* Meiners & Yandle, *supra* note 85, at 959-63 (advocating the resurgence of an adaptive common law to protect the property rights of ordinary people through rule of law), *with* Frank B. Cross, *Common Law Conceits: A Comment on Meiners & Yandle*, 7 GEO. MASON L. REV. 965, 965-73 (1999) (noting that the common law is just as vulnerable as legislation to special interests and that equating the common law with "rule of law" is naïve).

[98] *See, e.g.*, Keith N. Hylton, *When Should We Prefer Tort Law to Environmental Regulation?*, 41 WASHBURN L.J. 515, 520-29 (2001) (noting that agency costs and the importance of private information argue for use of the common law); Andrew McFee Thompson, Comment, *Free Market Environmentalism and the Common Law: Confusion, Nostalgia, and Inconsistency*, 45 EMORY L.J. 1329, 1350-64 (1996) (concluding that deference to an informed, democratic political process is the best approach for dealing with environmental risks and uncertainties).

[99] Andrew P. Morriss, *Lessons for Environmental Law from the American Codification Debate*, *in* THE COMMON LAW, *supra* note 85, at 130-37 (recounting the development of the "Field Codes" in New York, the Dakota Territory, California, and Montana in the mid-1800s). The Field brothers (David and Stephen) were instrumental in developing and adopting (in some states) codes of law that would replace the common law. *Id.* David Field suggested four arguments for codification: to prevent judicial lawmaking; to ensure that all citizens knew what the laws said; to make discovering the law easier; and because once a written law is adopted, the unwritten law fades away and does not return. *Id.* at 139.

choices" by judges.[100] Instead common law decisions are constrained by their specific facts and jurisdictions.[101] With different facts and other jurisdictions, they are persuasive, not binding.[102] This limited scope minimizes the influence of coalitions and interest groups.[103] There is not a "larger political bargain" to be struck.[104] Lobbyists cannot bring the same forces to bear on a court case that they might at the legislature.[105]

Second, Morriss notes that common law decisions are constrained by the law itself.[106] Judges' decisions must fit within the framework of existing, applicable decisions.[107] Additionally, there is strong bias against overturning previous decisions.[108] The common law works by evolution, not revolution.[109] Persuasive reasoning will be adopted; poorly reasoned decisions will fall by the wayside.[110] Compared with the deliberateness of environmental statutory law and its lack of conceptual coherency, the ability of the common law to move over and around "mistakes" appears efficiently agile.[111] Consequently, Morriss concludes that the common law has an important role as a decentralized, evolutionary process that is responsive to environmental harms and relatively more resistant to political pressures.[112]

Professor Todd Zywicki notes that a judge is a community insider, "the living embodiment of the texture of customs and expectations that define the community from which he draws his authority."[113] Thus, while the legislative process is episodic, the common law provides a constant path toward environmental unanimity.[114] Zywicki suggests that this "slow and steady" approach, compared to regulation, better serves the expectations of citizens within the community.[115]

Using an economic analysis, Professor Steven Shavell suggests that environmental risks are best addressed through the joint use of liability and

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100 *Id.* at 142.
101 *Id.* at 142-43.
102 *Id.* at 143.
103 Morriss, *supra* note 99, at 143.
104 *Id.*
105 *Id.*
106 *Id.*
107 *Id.*
108 *Id.* at 144.
109 Morriss, *supra* note 99, at 142.
110 *Id.* at 144.
111 *Id.* at 144-45.
112 *Id.* at 153-54.
113 Zywicki, *supra* note 82, at 991.
114 *Id.* at 991-96.
115 *Id.* at 1002. Zywicki does not argue that the unanimity created through the legislative process is unacceptable. *Id.* at 1029-30. His argument is that the common law's institutional capacity and efficiency are fairly equal to that of the legislative process. *Id.* He suggests that legislatures "appropriate resources previously administered by the common law" when these resources dramatically increase in value. *Id.* at 1030. Thus, the revolution of statutory regulation in environmental law reflects a growing population drawing upon finite natural resources, more valuable by the minute. Zywicki, *supra* note 82, at 1030 -31.

regulation.[116] Liability has an advantage in ease of administration and in facilitating conflict resolution when private parties have a superior knowledge of the risks involved.[117] Regulation has an advantage when private parties can escape suit for their harm and when they cannot pay for the harm they create.[118] Thus, common law liability has an advantage when private parties are more knowledgeable about specific costs and harms, when their actions create few externalities, and when the defendants can pay for their harms.[119]

Professor J.B. Ruhl suggests three explanations why the common law appears to have faltered during the revolution of federal environmental regulation.[120] First, the common law may be structurally inadequate to address risks and harms at an ecosystem level.[121] Nuisance may have worked well enough for a while, but "there is just something about protecting ecosystems . . . that puts it outside the domain of the common law."[122] Second, the common law has failed to develop principles that would guide decisions regarding ecosystem management.[123] That is, where does a healthy, functioning ecosystem that provides benefits to all citizens plug into a lawsuit between just a few citizens?

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[116] Steven Shavell, *Liability for Harm Versus Regulation of Safety*, 13 J. LEGAL STUD. 357, 365 (1984).

[117] *Id.*

[118] *Id.*

[119] *Id.* at 367-38.

[120] J. B. Ruhl, *Ecosystem Services and the Common Law of "The Fragile Land System,"* NAT. RESOURCES & ENV'T, Fall 2005, at 3, 4-6.

[121] *Id.* at 4. Ecosystems possess a number of characteristics that create management challenges including scale, the need to work across political boundaries, and the imperative of maintaining biodiversity at all trophic levels. R. Edward Grumbine, *What is Ecosystem Management?*, 8 CONSERVATION BIOLOGY 27, 27-31 (March 1994).

[122] Ruhl, *supra* note 120, at 4. Ruhl characterized this as a "lack of capacity" argument. *Id.* He bookended the draining away of the common law's confidence with *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 238 (1907) (the common law playing a prominent role in controlling noxious fumes) and *Boomer v. Atlantic Cement Co.*, 257 N.E.2d 870, 871 (N.Y. 1970) (the common law throwing up its hands and asking for legislative assistance to ameliorate air pollution). *Id.* at 4-5.

[123] *Id.* at 5. Ruhl described this as a "lack of opportunity" argument. *Id.* He discussed the Public Trust Doctrine and its possibilities as an ecosystem management principle. *Id.* The seminal work in this area is by Professor Joseph Sax, who suggested that the "public trust doctrine seems to have the breadth and substantive content which might make it useful as a tool of general application for citizens seeking to develop a comprehensive legal approach to resource management problems." Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 474 (1970). Sax emphasized that the "fundamental function of courts in the public trust area is one of democratization." *Id.* at 561. He concluded that "courts have an important and fruitful role to play in helping to promote rational management of our natural resources." *Id.* at 565. They "have been both misunderstood and underrated as a resource for dealing with resources." *Id.* Ruhl noted that state courts have, for the most part, declined to take up Professor Sax's challenge. Ruhl, *supra* note 120, at 5. He suggested that with the environmental statutory revolution, courts did not need to reexamine the Public Trust Doctrine because it now appeared superfluous. *Id.* at 6.

Third, the common law has an anti-environmental bias that protects property rights and economic uses at the expense of wilderness and ecological services.[124] For example, a nuisance in a populated city is often not a nuisance in the countryside; however, moving polluting industries into wilderness areas impacts the ecological functioning of these areas.[125] Ruhl is nonetheless optimistic that society's improved ability to value ecological services will allow the use, and any impairment, of such services to be mediated through the common law.[126] He concludes that "common law tort and property doctrines are aptly suited for evolution toward the new understanding of the value of natural capital and the ecosystem services it provides."[127]

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[124] Ruhl, *supra* note 120, at 6. Ruhl called this a "lack of will" argument. *Id.* Beyond a lack of advocates for an ecologically oriented common law, he suggested that common law institutions have a bias in favor of property and economic rights at the expense of ecological functioning. *Id.*

[125] *See* John G. Sprankling, *The Antiwilderness Bias in American Property Law*, 63 U. CHI. L. REV. 519, 582-83 (1996). Sprankling traced an anti-wilderness bias to early American attitudes about utilitarianism, agrarianism, and the subjugation of the land and those who used it improvidently. *Id.* at 531-33. He concluded that "exploitation, while perhaps defensible in an era of wilderness abundance, is now both unnecessary and dangerous." *Id.* at 584. He suggested that the judiciary of the twenty-first century apply a "green thumb" to the scales of justice – preferring preservation of wilderness and ecological services over destruction of these resources. *Id.* at 588.

[126] Ruhl, *supra* note 120, at 7-9, 69. "It may very well be that nuisance law was overwhelmed by industrial society, that the Public Trust Doctrine was eclipsed by federal legislation, and that property law was heavily influenced by our nation's boundless frontier mentality, but all those conditions have changed." *Id.* at 8. Contrary to Sprankling, Ruhl suggested that a "green thumb of justice" is not necessary. *Id.* He proposed that the reinvigoration of the common law be based on the valuation of ecosystem services. *Id.* What has been missing to date has been a means for the common law to identify specific services within an ecosystem that have been impaired and to assign them a monetary value. *Id.* at 8-9. In short, he suggested ecological economics coming to the aid of the common law.

Ruhl proposed the following thought experiment: Consider an apple orchard situated between an industrial facility and a forest. *Id.* at 9. If emissions from the industrial facility impaired the bark of the trees or scarred the apples, the facility would likely be liable for nuisance. Ruhl, *supra* note 120, at 9. If emissions interfered with photosynthesis by the leaves or deterred pollinators residing in the forest from pollinating apple blossoms, the facility would be interfering with ecosystem services (photosynthesis, pollination) and likely liable for nuisance. *Id.* The causal chain may be slightly longer but is transparent and able to be valued. *Id.* Finally, if the forest was cut down and the land developed, and the apple orchard suffered a loss of pollination services, it is also likely that a nuisance claim would lie. *Id.* The orchard has suffered a loss that can be valued in that the orchard owner's use and enjoyment of the property has been impaired. *Id.* at 9.

Ruhl suggested that once landowners better understand ecological services and valuations, they will sue when these services are lost, and that this will, eventually, be "mundane because there will be nothing about it that is out of the ordinary for the common law." *Id.* at 69. For an overview of ecological services and their valuation, see Robert Constanza et al., *The Value of the World's Ecosystem Services and Natural Capital*, 387 NATURE 253 (1997) (estimating the value of the earth's ecosystem services at thirty-three trillion dollars per year).

[127] Ruhl, *supra* note 120, at 69.

B. Defining Duties to Others

1. Negligence

Duty is the first element of the common law tort of negligence.[128] If there is no duty, there can be no negligence.[129] Whether a duty exists toward another is "not a discoverable fact of nature."[130] As Professor William Prosser has noted: "There is a duty if the court says there is a duty; the law, like the Constitution, is what we make it. Duty is only a word with which we state our conclusion that there is or is not to be liability; it necessarily begs the essential question."[131] Nonetheless, courts discover and assign duties every day, and in doing so they rely on a multiplicity of factors.[132] These factors include fairness, custom, and public policy.[133] They also include foreseeability, deterrence, and administrative ease.[134] As Professor Dan Dobbs points out: "These factors are so numerous and so broadly stated that they can lead to almost any conclusion."[135]

However, as Professor Morris notes, such conclusions are constrained by the facts of the case and by precedent.[136] Conclusions of duty are also constrained by time. They exist at a particular point in time, when particular customs, policies, and understandings exist.[137] Thus, duties assigned by courts today are different from duties of a hundred years ago.[138] Duties can be viewed as relational in that a duty exists only in relation to a specific party.[139] Nonetheless, as ably noted by Judge Andrews in the dissent

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[128] DOBBS, *supra* note 41, § 114, at 269-70. Minnesota follows traditional negligence analysis: "[t]he essential elements of a negligence claim are: (1) the existence of a duty of care; (2) a breach of that duty; (3) an injury was sustained; and (4) breach of the duty was the proximate cause of the injury." Lubbers v. Anderson, 539 N.W.2d 398, 401 (Minn. 1995).

[129] DOBBS, *supra* note 41, § 114, at 269-70.

[130] DOBBS, *supra* note 41, § 229, at 582.

[131] William L. Prosser, Palsgraf *Revisited*, 52 Mich. L. Rev. 1, 15 (1953).

[132] DOBBS, *supra* note 41, § 229, at 582.

[133] *Id.*

[134] *Id.*; *see also* Benjamin C. Zipursky, *Rights, Wrongs, and Recourse in the Law of Torts*, 51 VAND. L. REV. 1, 16-17 (1998) (stating that foreseeability is a key factor in describing a duty, but that tort law duties do not always follow foreseeability, suggesting that duties are relational and require a type of "substantive standing"); John C. P. Goldberg & Benjamin C. Zipursky, *The Moral of* MacPherson, 146 U. PA. L. REV. 1733, 1743-44 (1998) (arguing that duties embody moral principles and civil obligations, but that they are expressed through specific relationships and thus are "relationship-sensitive").

[135] DOBBS, *supra* note 41, § 229; Goldberg & Zipursky, *supra* note 134, at 1741 (warning against a meltdown of negligence elements into an "unstructured and indeterminate policy inquiry").

[136] *See supra* notes 99-112 and accompanying text (discussing the limits of common law evolution).

[137] Prosser, *supra* note 131, at 13-14.

[138] *Id.*

[139] *Id.* at 13 ("[E]very one agrees that a duty must arise out of some 'relation' between the parties, but what this relation is no one ever has succeeded in defining."). As

of *Palsgraf v. Long Island Railroad Co.*, describing a duty need not require a relationship.[140]

Judge Cardozo explained: "What the plaintiff must show is 'a wrong' to herself; i.e., a violation of her own right, and not merely a wrong to some one else, nor conduct 'wrongful' because unsocial, but not 'wrong' to any one." Palsgraf v. Long Island R.R. Co., 162 N.E. 99, 100 (N.Y. 1928).

[140] *Palsgraf*, 162 N.E. at 101-04 (Andrews, J., dissenting). Judge Andrews explained:

> The result we shall reach depends upon our theory as to the nature of negligence. Is it a relative concept – the breach of some duty owing to a particular person or to particular persons? Or, where there is an act which unreasonably threatens the safety of others, is the doer liable for all its proximate consequences, even where they result in injury to one who would generally be thought to be outside the radius of danger?
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> . . . .
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> . . . [W]e are told that "there is no negligence unless there is in the particular case a legal duty to take care, and this duty must be one which is owed to the plaintiff himself and not merely to others." This I think too narrow a conception. Where there is the unreasonable act, and some right that may be affected there is negligence whether damage does or does not result. That is immaterial. Should we drive down Broadway at a reckless speed, we are negligent whether we strike an approaching car or miss it by an inch. The act itself is wrongful. It is wrong not only to those who happen to be within the radius of danger, but to all who might have been there – a wrong to the public at large.
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> . . . .
>
> The proposition is this. Every one owes to the world at large the duty of refraining from those acts that may unreasonably threaten the safety of others.

Id. at 102-03 (citations omitted).

The general duty of care is commonly expressed as the care that would be exercised by a reasonable person.[141] However, courts have recognized that for particular relationships and particular harms a different level of duty may be recognized.[142] For example, trespassers of land are frequently owed a limited duty by the landowner to avoid intentional or wanton injury.[143] Accordingly, when the relationship changes, such as when the landowner discovers the trespasser, the duty also changes.[144]

By grouping "like cases," courts develop categorical rules and gain consistency in their decisions, but do so at the risk of overreaching.[145] That is, by deciding as a matter of law that a defendant has a limited duty, the court is limiting the jury's role in determining negligence.[146] Professor Dobbs suggests the duty of reasonable care preserves "an appropriate arena for adjudication of individual cases."[147] Reasonable care preserves the role of juries.[148] He concludes that "[i]n the great majority of injury cases, the elaborate efforts to describe particular duties are both unnecessary and undesirable."[149]

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[141] DOBBS, *supra* note 41, § 117, at 277.

[142] *Id.* § 228, at 581. Examples include health care providers, who must provide a duty of care established by their peers; charities and parents who are immune to suits by beneficiaries and children respectively; and common carriers who have traditionally owed a duty of utmost care. *Id. See generally* DAN B. DOBBS & PAUL T. HAYDEN, TORTS AND COMPENSATION: PERSONAL ACCOUNTABILITY AND SOCIAL RESPONSIBILITY FOR INJURY, 308-422 (4th ed. West Group 2001) (discussing the limiting of duties according to the status of the parties involved).

[143] DOBBS, *supra* note 41, § 232, at 592-93.

[144] *Id.* at 593-94 ("[T]he possessor is under a duty of reasonable care once he knows or is on notice of both the trespasser's presence and the impending danger."). Some courts will treat foreseeable trespassers, e.g., hikers, horseback riders, snowmobilers and the like who make "paths" on the land, as creating a duty of reasonable care. *Id.* at 594-95.

[145] *Id.* § 227, at 579-80.

[146] *Id.* at 579. Professor Dobbs illustrates this point with the example of landowners who fail to trim tree branches near automotive intersections resulting in limited visibility and accidents. *Id.* Many courts have held, as a matter of law, that landowners owe no duty to trim their trees. DOBBS, *supra* note 41, § 227, at 579-80. Dobbs suggests that these courts are not implementing a true no-duty rule, but are engaging in activities more appropriate for the jury, i.e., costs, benefits, foreseeability, prudence. *Id.* at 580. Some courts have rejected a no-duty rule for such landowners and apply a duty of reasonable care. *Id.* Using such an approach trial judges are less likely to create rules of law defining specific duties and are more likely to obtain necessary facts about the case. *Id.* As one Oregon judge noted about tree trimming disputes:

> You need facts or data to determine how risky the intersection might be and similarly to determine costs of clearing it. These facts will differ from case to case, and consequently the issue is not to be decided by a rule of law covering all intersections, at all times, and at all costs.

Id. (citation omitted).

[147] *Id.* § 229, at 584.

[148] DOBBS, *supra* note 41, § 229, at 584.

[149] *Id.* at 584. Accordingly, many jurisdictions have abolished categorical duties for landowners. DOBBS, *supra* note 41, § 237, at 617-19 (citing concerns with judicial fiat, feudal-like land privileges, difficulties of administration, and a misplaced distrust of rogue

2. *Nuisance*

Private nuisance is a "condition or activity that interferes with a possessor's use and enjoyment of her land . . . to such an extent that the landowner cannot reasonably be expected to bear without compensation."[150] Nuisances can arise from all manner of conduct including intentional and negligent acts.[151] The touchstones of nuisance are "substantial" and "unreasonable," i.e., the invasion of the plaintiff's enjoyment must be both substantial and unreasonable.[152] Unlike negligence, the reasonability at issue here is not the defendant's conduct, but rather the expectations of a normal person occupying land.[153] However, similar to negligence, what constitutes an unreasonable invasion depends on numerous considerations.[154] These include the social expectations of the neighborhood, the duration of the invasive conduct, and the gravity of the harm.[155] They also include the usefulness of the defendant's activities and whether these activities might be considered new to the area.[156] As might be expected from this broad brush, nuisance is often included in a plaintiff's portrayal of harm.[157]

Though it is a question of fact whether the defendant's invasion is substantial and unreasonable, it is a question of law whether the invasion affects a plaintiff's interest in land.[158] The parameters of such an interest are not always clear. As Professor Prosser describes it, "any interest sufficient to be dignified as a property right will support the action."[159] Thus tenants,

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juries). As an example, Minnesota has abolished the distinction between licensees and invitees. Peterson v. Balach, 199 N.W.2d 639, 647 (Minn. 1972).

150 DOBBS, *supra* note 41, § 463, at 1321.

151 WILLIAM L. PROSSER, THE LAW OF TORTS § 88 (3rd ed. 1964).

152 DOBBS, *supra* note 41, § 465, at 1325-30.

153 *Id.* at 1326.

154 *Id.* These considerations prompted Professor Prosser's famous passage: "There is perhaps no more impenetrable jungle in the entire law than that which surrounds the word 'nuisance.' It has meant all things to all men and has been applied indiscriminately to everything from an alarming advertisement to a cockroach baked in a pie." PROSSER, *supra* note 151, § 87.

155 DOBBS, *supra* note 41, § 465, at 1326-28. Accordingly, "a nuisance may be the right thing in the wrong place, like a pig in the parlor instead of the barnyard. Noise, odors, or sights that are consistent in nature and extent with the neighborhood's legitimate use patterns are seldom if ever a nuisance." *Id.* at 1326. Dobbs notes that this emphasis on neighborhood character could reinforce already unfairly distributed environmental burdens. *Id.* at 1327; *see also* PROSSER, *supra* note 151, § 90, at 617-19.

156 DOBBS, *supra* note 41, § 465, at 1327-28.

157 PROSSER, *supra* note 151, § 87.

158 *Id.* § 90.

159 *Id.* at 613; *see also* RESTATEMENT (SECOND) OF TORTS § 821E (1979) (discussing nonpossessory estates and interests in land). If the plaintiff has a nonpossessory estate other than an easement or profit, she has no rights or privileges with respect to present use of the land and thus traditionally "has no action for interference with it." *Id.*

mortgagors, and easement holders have been found to have interests in land, while licensees, employees, and lodgers have not.[160]

In contrast, it may be that the plaintiff and the defendant claim a property right in the same property.[161] For example, property owners along a stream may both claim use of the stream, yet the upstream landowner cannot unreasonably interfere with the downstream landowner's use.[162] In such cases, courts must strike a balance between competing claims.[163] The elasticity of property rights will depend on the jurisdiction, the facts, and the considerations that animate nuisance.[164]

C. The Evolution of Rights and Duties in an Ecologically Interdependent Society

The torts of negligence and nuisance, intertwined as they are with social norms, customs, and society's conceptions of property and duty, have evolved over time.[165] Not surprisingly, society's definitions of property and property rights have also evolved.[166] Among the most powerful evolutionary forces currently influencing society and the law is society's understanding of ecological principles and the resulting imperatives of ecological interdependence.[167] The laws of nature cannot be changed. The world is finite, and society is mutually dependent upon it.[168] Professor Joseph Sax

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[160] PROSSER, *supra* note 151, § 90.

[161] *Id.*

[162] *Id.*

[163] *Id.*

[164] *Id.*

[165] *See supra* notes 128-164 and accompanying text (discussing negligence and nuisance and their dependence on socially constructed, temporal norms, customs and policies).

[166] Carol M. Rose, *Property Rights and Responsibilities*, *in* THINKING ECOLOGICALLY: THE NEXT GENERATION OF ENVIRONMENTAL POLICY 49, 50 (Marian R. Chertow & Daniel C. Esty eds., 1997) (noting that property rights are not immutable, but rather responsive to economic and social conditions); Joseph Sax, *Property Rights and the Economy of Nature: Understanding* Lucas v. South Carolina Coastal Council, 45 STAN. L. REV. 1433, 1446-51 (1993) (noting that property rights have always adjusted to facilitate economic and social change).

[167] *See* ROBERT CONSTANZA ET AL., AN INTRODUCTION TO ECOLOGICAL ECONOMICS, 1-18 (CRC Press 1997) (noting that the "material scale of human activity [currently] exceeds the sustainable carrying capacity of the earth"); Peter Miller & William E. Rees, *Introduction*, *in* ECOLOGICAL INTEGRITY: INTEGRATING ENVIRONMENT, CONSERVATION, AND HEALTH 3-17 (Island Press 2000) (asking whether the fate of the residents of Easter Island is the fate that awaits the rest of the globe, and noting particular grief with the disciplines of economics and ecology); Jim Chen, *Legal Mythmaking in a Time of Mass Extinctions: Reconciling Stories of Origin with Human Destiny*, 29 HARV. ENVTL. L. REV. 279, 280-90 (2005) (noting that human impacts on biodiversity will likely cause the next mass extinction on the planet).

[168] CONSTANZA ET AL., *supra* note 167, at 6-7 (illustrating the challenges of a finite ecosystem); *see also* David B. Hunter, *An Ecological Perspective on Property: A Call for Judicial Protection of the Public's Interest in Environmentally Critical Resources*, 12 HARV.

describes the tension between society's heretofore profligate use of the world's natural resources and society's future ecologically dependent use as a tension between two economies – the transformative economy and the economy of nature.[169] Just as the Industrial Revolution reframed acceptable duties and expectations for landowners and citizens, so too will this ecological revolution.[170]

It can be expected that not everyone would be happy with new "economy of nature" duties.[171] One possible defense against this reframing

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ENVTL. L. REV. 31, 313-17 (1988) (noting that the finite nature of the world provides an ecological imperative that informs all facets of one's life).

[169] Sax, *supra* note 166, at 1442-47. Society's traditional, transformative economy builds on the idea that land is passive, full of possibility, but requiring human intervention to become useful and productive. *Id.* at 1442. An ecological view of land leads to the discovery that land is already at work within its own economy, an economy of nature. *Id.* The land provides support for plants, climate regulation, water regulation, nutrient cycling, and other services upon which all other economies depend. *Id.* The article states:

> This emerging ecological view generates not only a different sense of the appropriate level of development, but also a different attitude towards land and the nature of land ownership itself. The difference might be summarized as follows:

Transformative Economy	**Economy of Nature**
Tracts are separate. Boundary lines are crucial.	Connections dominate. Ecological services determine land units.
Land is inert / waiting; it is a subject of its owner's dominion.	Land is in service; it is part of a community where single ownership of an ecological service unit is rare.
Land use is governed by private will; any tract can be made into anything. All land is equal in use rights (Blackacre is any tract anywhere).	Land use is governed by ecological needs; land has a destiny, a role to play. Use rights are determined by physical nature (wetland, coastal barrier, wildlife habitat).
Landowners have no obligations.	Landowners have a custodial, affirmative protective role for ecological functions.
Land has a single (transformative) purpose.	Land has a dual purpose, both transformative and ecological.
The line between public and private is clear.	The line between public and private is blurred where maintenance of ecological service is viewed as an owner's responsibility.

Id. at 1445.

[170] *Id.* at 1454 (noting that a consensus will evolve as to which ecological functions trigger duties and rights for landowners); *see* J. Peter Byrne, *Green Property*, 7 CONST. COMMENT. 239, 243 (1990) (proposing a green theory of property animating an "ecological land ethic"); Rose, *supra* note 166, at 51(noting that traditional use of common resources does not create a guarantee of future use; what is considered an appropriate use of natural resources changes over time).

[171] Rose, *supra* note 166, at 54-55 (discussing the investments, sunk costs, and expectations of citizens operating under a traditional, transformative economy).

is a claim of takings.[172] As Justice Oliver Wendell Holmes explained, "while property may be regulated to a certain extent, if regulation goes too far it will be recognized as a taking."[173] Professor Carol Rose notes that takings law is a proper framework for transitions in property rights and duties.[174] She suggests that an ecologically driven transition of property rights is likely best affected through compromise, accommodation of current property expectations, and good faith efforts to ameliorate any upheaval created by a transition.[175]

As takings claims are indicative of the "braking power" applicable to an ecological transition in property rights and duties, they illuminate whether this transition will be a revolution or an evolution.[176] Justice Antonin Scalia struck a note for evolution when, writing for the majority in *Lucas v. South Carolina Coastal Council*, he explained that limitations on property rights "must inhere in the [property] title itself, in the restrictions that background principles of the State's law of property and nuisance already place upon land ownership."[177] He considered background principles of the common

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[172] *Id.* at 51-52 (discussing takings as a traditional defense, but also noting moderating influences such as legislative action, zoning, and equity-of-the-burden considerations). The Fifth Amendment of the United States Constitution provides that private property shall not be "taken for public use, without just compensation." U.S. CONST. amend. V. The Supreme Court has recognized that property can be taken by a permanent physical invasion. Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 441-42 (1982). It can also be taken by regulations that deprive the property owner of the economic or productive use of the property. Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 495 (1987). The Court has employed a fact-intensive balancing test to determine when a regulation, validly executed under the police power of the State, has gone too far and resulted in a taking. Penn. Central Trans. Co. v. City of New York, 438 U.S. 104, 123-28 (1978) (noting factors such as the economic impact of the regulation, its impact on investment-backed expectations, the appropriateness of the subject matter of the regulation with respect to the state's police power, and the ability to spread the regulatory burden over similarly situated property owners). For an overview of takings, see J. GORDON HYLTON ET AL., PROPERTY LAW AND THE PUBLIC INTEREST: CASES AND MATERIALS 119-87 (Matthew Bender & Co. 2003).

A takings claim is certainly not the only defense against a reframing of property rights. Legislatively imposed duties and expectations can be changed through subsequent legislation. *See* Felicity Barringer, *House Votes for New Limits on Endangered Species Act*, N.Y. TIMES, Sept. 30, 2005, at A24 (noting a vote by the United States House of Representatives to relax provisions of the Endangered Species Act and to require reimbursement to property owners for reductions in land value due the Act); Felicity Barringer, *Property Rights Law May Alter Oregon Landscape*, N.Y. TIMES, Nov. 26, 2004, at A1 (describing how Oregon Ballot Measure 37 allows landowners to receive compensation for environmental or zoning rules that have hurt their investments).

[173] Penn. Coal Co. v. Mahon, 260 U.S. 393, 415 (1922).

[174] Rose, *supra* note 166, at 54-57.

[175] *Id.*

[176] Byrne, *supra* note 170, at 239 (noting that to date, ecological imperatives have had little influence on core legal principles); Hunter, *supra* note 168, at 312, 378-83 (arguing that courts must include ecological thinking in defining property rights and must impose ecological obligations accordingly); Sax, *supra* note 166, at 1455-56. (describing the ways in which an evolution is possible).

[177] Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1029 (1992). The petitioner, David Lucas, had purchased two lots on the South Carolina coast in 1986 with the

law a bulwark against ecologically driven statutory rearrangements of property rights.[178] Justice Anthony Kennedy, concurring, argued that the "Takings Clause does not require a static body of state property law."[179] He suggested that property rights and expectations are appropriately found in a fluid blend of the common law and state regulations.[180]

Writing in dissent, Justice John Paul Stevens chastised the majority for "freezing" the common law and denying the traditional powers of the legislature.[181] He argued that "[a]rresting the development of the common law is not only a departure from . . . prior decisions; it is also profoundly unwise. The human condition is one of constant learning and evolution, both moral and practical."[182] Professor Sax described the majority view in *Lucas* as "outdated" and "not satisfactory in an age of ecological awareness."[183]

Given the range of opinions flowing from *Lucas*, and recognizing that it is only one point of reference, it appears that ecologically driven changes to the rights and duties of landowners and citizens will occur at an evolutionary pace.[184] Though it is uncertain how frozen or how fluid the

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intent of developing them through the building of single-family homes. *Id.* at 1008. In 1988, the South Carolina legislature passed the Beachfront Management Act, an act designed to preserve ecological as well aesthetic functions of South Carolina's beach areas. *Id.* at 1008, 1020-23. The South Carolina trial court found that the Act rendered Lucas's property valueless. *Id.* at 1020. The United States Supreme Court accepted this finding and based its analysis on South Carolina having deprived Lucas of "all economically beneficial use" of his land. *Id.* at 1027. The majority called this a "total taking inquiry." *Id.* at 1030. The dissent found such a total taking to be implausible and improvidently considered. *Lucas*, 505 U.S. at 1036, 1044 (Blackmum, J, dissenting).

The majority's goal was to prevent and/or slow States from recognizing ecological functions that could require landowners to maintain land in an ecologically functioning state. Sax, *supra* note 166, at 1438-43. However, the majority's intended use of background principles to govern ecologically driven property rights reform has in fact redounded to the benefit of local governments. Michael Blumm & Lucus Ritchie, Lucas's *Unlikely Legacy: The Rise of Background Principles as Categorical Takings Defenses*, 29 HARV. ENVTL. L. REV. 321, 322-23 (2005).

[178] *Lucas*, 505 U.S. at 1027-32. Justice Scalia referred to an "ordinary" application of nuisance law, i.e., a balancing of harms, the social value of the proposed activities, their appropriateness for the area, and the ease with which they could be mitigated. *Id.* at 1030-31. He referenced the *Restatement of Torts*, tradition, and the "historical compact" of the Takings Clause. *Id.* at 1028, 1031. He concluded: "It seems unlikely that common-law principles would have prevented the erection of any habitable or productive improvements on petitioner's land." *Id.* at 1031.

[179] *Id.* at 1035 (Kennedy, J., concurring).

[180] *Id.* Justice Kennedy suggested that "reasonable expectations must be understood in light of the whole of our legal tradition. The common law of nuisance is too narrow a confine for the exercise of regulatory power in a complex and interdependent society." *Lucas*, 505 U.S. at 1035 (Kennedy, J., concurring).

[181] *Id.* at 1068-69 (Stevens, J., dissenting).

[182] *Id.* at 1069.

[183] Sax, *supra* note 166, at 1455.

[184] *See* J. Peter Byrne, *Property and Environment: Thoughts on an Evolving Relationship*, 28 HARV. J.L. & PUB. POL'Y 679, 688-89 (2005) (concluding that property rights will continue to evolve based on social, environmental, economic, and legal innovations); Marc Poirier, *Property, Environment, and Community*, 12 J. ENVTL. L. & LITIG. 43, 64 (1997)

common law might be in this effort, it remains, with respect to statutory regulation, a complementary means to evolve rights and duties.[185]

IV. ANALYSIS

A. *The Common Law as a Complementary Actor in Environmental Law*

The Minnesota Supreme Court was correct in examining the role of the common law in light of extensive statutory environmental regulation. In doing so, the majority was not, as suggested by the dissent, discovering a common law "arising from state or federal regulation."[186] The majority was attempting to define the space afforded the common law with respect to statutory regulation.[187] If the common law and statutory regulation are to complement and support each other, this referencing by the court is entirely appropriate.[188]

In deciding that the beekeepers' claim of common law negligence was viable, the court was correct in identifying for itself an appropriate and effective role. The case before it was a case of specific facts in a specific geography.[189] There was no direct precedent in Minnesota for harms to beekeepers when their bees forage on lands treated with pesticides.[190] This was a case of first impression for the community.[191] The plaintiffs and defendants here were well acquainted, and they were aware of the specific

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(calling for "sane negotiation," and a "maturation of environmental discourse" in society's discussions of community and property).

[185] As Justice Scalia described the traditions of the common law, "[c]hanged circumstances or new knowledge may make what was previously permissible no longer so." *Lucas*, 505 U.S. at 1031 (citing the RESTATEMENT (SECOND) OF TORTS § 827 (1979)); *see supra* note 126 and accompanying text (describing the readiness of the common law to address torts related to the impairment of ecological services).

[186] *See supra* note 63 and accompanying text (discussing statutory pesticide regulation and the conclusions drawn by the majority and the dissent).

[187] *See supra* notes 62-63, 80-87 and accompanying text (discussing the court's consideration of statutory regulation and the historical role of the common law in environmental protection).

[188] *See supra* notes 59-64, 88-96 and accompanying text (discussing the court's examination of common law and statutory approaches, and the complementary role of the common law under FIFRA).

[189] *See supra* notes 18-28, 100-119 and accompanying text (discussing the beekeepers' claims and the appropriateness of the common law in dealing with fact intensive deliberations).

[190] *See supra* notes 35-36, 100-112 and accompanying text (noting the lack of a Minnesota precedent and the ability of common law courts to use persuasive reasonings from other jurisdictions to address unique situations).

[191] *See supra* notes 35-36, 113-115 and accompanying text (discussing the beekeepers' case as one of first impression and the role of common law in addressing expectations of the community).

harms and specific costs involved.[192] They were, in fact, the most knowledgeable parties involved.[193] Additionally, there were limited externalities; the harm was to specific animals (bees) kept by specific persons (beekeepers) within a specific geography (central Minnesota).[194] Finally, the defendants were quite capable of paying for their harms.[195] These factors support the appropriateness of the court's role in arbitrating this dispute and the effectiveness of the common law in deciding it.[196]

The court could have relied solely on statutory interpretation to inform the common law, that is, allowing only a negligence per se claim.[197] However, this approach is a hybrid that does not afford the common law its own footing.[198] Deference to the legislature moves the court into a more politicized arena and limits the court's responsiveness.[199] Legislative bodies are certainly appropriate venues for discourse and likely society's most common means of reaching consensus.[200] But they need not be the only means. All of this said, the court did not proceed with a common law negligence claim because it could.

There are two key reasons why the court proceeded as it did. First, the court appeared to be most concerned with foreseeability and fairness in business enterprise.[201] It was deciding a dispute between two business enterprises, that have known each other for years, that know how and why their specific businesses might be incompatible, and yet have been unable or unwilling to work out a solution.[202] To resolve this matter, the court required

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[192] *See supra* notes 24-28, 116-119 and accompanying text (noting the on going relationship between the parties and the relative advantage of liability rules when parties have superior knowledge of specific facts).

[193] *See supra* notes 24-28, 116-119 and accompanying text (describing the on going relationship between the parties and the relative advantage of liability rules when private parties have superior knowledge of the facts).

[194] *See supra* notes 18-28, 116-119 and accompanying text (discussing the beekeepers' claims and the advantage of common law liability rules when there are limited externalities).

[195] *See supra* notes 29, 116-119 and accompanying text (noting the defendant corporation and the State, and the relative advantage of common law liability rules when defendants can compensate plaintiffs for the harm they have caused).

[196] *See supra* notes 59-66, 97-127 and accompanying text (describing the court's application of the common law and situations where it is appropriate to apply common law rules because they are relatively more effective than other approaches).

[197] *See supra* notes 50-53 and accompanying text (discussing the beekeepers' negligence per se claim).

[198] *See supra* notes 120-127 and accompanying text (discussing the difficulties experienced by the common law in finding a footing from which to address ecological harms).

[199] *See supra* notes 100-115 and accompanying text (noting the relative resistance of courts to special interest groups and their agility in achieving environmental unanimity).

[200] *See supra* note 115 and accompanying text (discussing the pursuit of environmental consensus through the courts and through the legislature).

[201] *See supra* notes 60-63 and accompanying text (discussing the factors influencing the court's allowance of a common law negligence claim).

[202] *See supra* notes 18-28 and accompanying text (describing the ongoing relationship between the beekeepers and the silviculturists of the poplar groves).

a broad, flexible duty – a duty of reasonable care.[203] The statutory duty expressed in Minnesota's Pesticide Control Act did not address foreseeability, neighborliness, reasonableness, or fairness in business enterprise.[204] It did not provide a hook upon which the court could hang its hat and feel confident that it had the tools it needed to successfully resolve the matter. A common law duty of reasonable care allowed a broader discussion of forseeability, neighborliness, and fairness, which in the court's eyes were all important elements of the case.[205]

Second, the court had a unique, relatively clear path to applying an ecologically oriented common law to the dispute.[206] The court did not suffer from a lack of capacity, i.e., it did not need to throw up it hands as did the *Boomer* court and ask for assistance.[207] The court was not at the front end of an impending environmental legislative landslide; it was working in the aftermath of the landslide and thus was capable of dealing with the issues before it.[208] The court also did not suffer from lack of an operable doctrine.[209] It did not need to refer to or apply an eco-friendly doctrine (e.g., Public Trust Doctrine) in order to address the beekeepers' case.[210] Finally, the court need not suffer from a lack of will.[211] And, it did not. Whether the court was considering a "green thumb" on the scales of justice, or the ability to incorporate ecosystem services in its deliberations, is not known.[212] This casenote argues that the court saw and understood the common law path open to it and its possible ecological orientation.[213] Unlike the dissent, which

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[203] *See supra* notes 145-149 and accompanying text (discussing the possible advantages of a reasonable duty of care relative to a limited duty).

[204] *See supra* note 50 and accompanying text (listing the elements of the Minnesota Pesticide Control Act and its concerns with inconsistent uses of pesticides, damage to products and/or wildlife, and unreasonable impacts on the environment).

[205] *See supra* notes 59-65 (describing the courts emphasis on forseeability, fairness in business enterprise, and the neighborly use of land).

[206] *See supra* notes 120-127 and accompanying text (discussing three possible impediments to the use of the common law in resolving environmental disputes: a lack of capacity; a lack of opportunity; and a lack of will).

[207] *See supra* note 122 and accompanying text (discussing the relative confidence or capacity of the common law to deal with environmental problems).

[208] *See supra* notes 80-87 and accompanying text (discussing the revolution in statutory environmental regulation in the United States during the 1970s and the 1980s).

[209] *See supra* note 123 and accompanying text (discussing the lack of a common law doctrine that might address ecosystem management and harms).

[210] *See supra* note 123 and accompanying text (discussing the Public Trust Doctrine and its possible use as a common law doctrine that could address ecosystem harms).

[211] *See supra* notes 124-125 and accompanying text (noting not only a lack of advocates for an ecologically oriented common law, but also a traditional anti-wilderness bias in the application of the common law).

[212] *See supra* notes 125-127 and accompanying text (discussing two options for integrating ecological concerns into an evolving common law: a "green thumb" weighting by the court and the use of identifiable and valued ecosystem services as a means to describe damages).

[213] *See supra* notes 59-66 and accompanying text (discussing the majority's willingness to find a common law duty of reasonable care).

argued that taking such a path was imprudent, the majority was interested enough in an ecological perspective to proceed.[214]

B. Reasonable Care is the Correct Duty for Evolving Ecological Norms

The court correctly determined that the duty owed to beekeepers was a duty of reasonable care.[215] Proceeding under the common law, the court was influenced by decisions in other jurisdictions.[216] However, it realized that defining the duty owed to beekeepers was a multifaceted process.[217] Though the court's reasoning was not completely transparent, it is clear that the court gave several factors more weight. The court emphasized knowledge and foreseeability.[218] Regardless of whether bees are trespassers, there is harm to beekeepers that were known to be operating in the area.[219] Likewise, the defendants chose a pesticide known to be extremely toxic to bees and applied it from the air.[220] This scenario occurred over several years.[221] The court also emphasized fairness.[222] If ranchers can husband cattle and be owed a reasonable duty of care when their animals are discovered on a neighbor's property, why would the duty be different for beekeepers who husband bees?[223] That is, why would society treat one legitimate business interest different than the other?

This casenote argues that the court also considered ecological interdependence in its deliberations.[224] Duties and relationships evolve over time.[225] This evolution is path dependent. It results from a specific unfolding

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[214] *See supra* notes 71-76 and accompanying text (discussing the dissent's concerns with a common law negligence claim).

[215] *See supra* notes 59-66 and accompanying text (discussing the court's finding of a duty of reasonable care).

[216] *See supra* notes 37-49 and accompanying text (discussing beekeeping cases from California and Wisconsin).

[217] *See supra* notes 58-66, 128-149 and accompanying text (discussing the court's considerations, the formulation of a duty, and the multiple factors involved).

[218] *See supra* notes 60, 128-135 and accompanying text (discussing the court's emphasis on forseeability and the use of forseeability in formulating duties).

[219] *See supra* note 60 and accompanying text (discussing foreseeability and the implications for a resulting duty).

[220] *See supra* notes 25-28 and accompanying text (describing the application of pesticides by the poplar growers).

[221] *See supra* notes 18-28 and accompanying text (describing the relationship between the beekeepers and poplar growers).

[222] *See supra* note 60 and accompanying text (discussing the court's interest in fairness).

[223] *See supra* note 60 and accompanying text (discussing the fairness in business enterprise reasoning).

[224] *See supra* notes 59-66 (discussing the court's considerations in formulating a duty, including neighborly land use).

[225] *See supra* notes 137-138 and accompanying text (discussing the evolution of duties over time).

history of social, economic, scientific and moral norms.[226] Thus, the court was aware of society's understanding, nascent as it may be, of ecological interdependence and Professor Sax's economy of nature.[227] This does not mean that all members of the court (or all citizens) need to be ecologists. However, the court does not live in a cave. It lives in the same challenged world that society lives in – the world of global warming, species extinction, and impaired natural resources.[228] Thus, the key for the court was not "judging" the sciences at hand, but rather knowing when a change in society and the sciences was occurring.[229]

The court correctly recognized that a change was at hand. A new congruency between society's understanding of ecology and the ecological sciences themselves was forming.[230] This recognition impacted the court's formulation of a duty in at least three ways. First, for a court already concerned with knowledge and foreseeability, an improved understanding of ecological interdependence only heightened this interest.[231] What might have been foreseeable with respect to pesticides and their impact on ecological systems thirty years ago is more foreseeable today.[232] A limited duty likely forecloses a discussion of ecological interdependence and foreseeability while a duty of reasonable care enables it.[233]

Second, the court recognized that duties exist in a specific time and that the timeline of events at issue can be revealing.[234] The poplar groves were relatively new to central Minnesota.[235] They were, in fact, an experiment.[236] The beekeepers were not new. The husbandry of bees is

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[226] *See supra* notes 128-149 and accompanying text (describing the factors involved in formulating a duty and how, over time, these factors may change).

[227] *See supra* notes 165-185 and accompanying text (discussing the "economy of nature" and its possible influence on rights and duties).

[228] *See supra* notes 113, 167-168 and accompanying text (characterizing judges as the embodiment of the community and the ecological challenges that the modern communities face).

[229] *See supra* notes 128-149 and accompanying text (discussing duties and how they depend upon customs and understandings that change over time).

[230] *See supra* notes 59-76, 126 and accompanying text (noting the majority's willingness to pursue a broad consensus on the reasonable use of pesticides, and discussing ecological services, their valuation, and how their impairment might be used in common law claims).

[231] *See supra* notes 60-61 (noting the court's emphasis on forseeability in determining a duty).

[232] *See supra* note 126 and accompanying text (discussing society's improved understanding of ecological systems and valuation of ecosystem services).

[233] *See supra* notes 146 and accompanying text (noting that the imposition of a limited duty constrains the types of facts considered in a particular case).

[234] *See supra* notes 60, 128-149 and accompanying text (discussing the court's interest in fairness in pursuing livelihoods and how related duties may change over time).

[235] *See supra* note 22 and accompanying text (describing the relative newness of poplar growing in central Minnesota).

[236] *See supra* note 22 and accompanying text (describing poplar biomass production as a new project that required feasibility analysis).

traditional work and the harvest of honey a traditional harvest.[237] Thus, the court asked "do we have a new kid on the block?" – touching both on custom and on nuisance's consideration of first-in-place.[238] To the extent that custom informs reasonableness and was important in formulating a duty, a duty of reasonable care was appropriate.[239]

This casenote suggests that the court also considered an ecologically informed definition of custom. Custom can be defined as time honored or traditional. These descriptors could be applied generally to the businesses at issue, but they could also be applied to the specific ways in which businesses interact with the environment.[240] Thus, it is not customary to pollute or despoil the natural resources of the community in which one lives.[241] Or, more specifically, it is not customary for businesses to impair the ecosystem services upon which communities depend.[242] This line of reasoning and application of custom were best facilitated by a duty of reasonable care.[243]

This is not to suggest that the court looked at Professor Sax's economies and placed beekeeping in the economy of nature and biomass production in the transformative economy.[244] The court did not have an ecosystem services calculator on its desk.[245] Nor is this to say that poplar growing and beekeeping are ecologically incompatible. The point here is that the court was not only looking at custom to guide its formulation of duty, but that it was doing so through an ecological lens.[246]

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[237] *See supra* notes 3, 18-21 and accompanying text (discussing honey production and the beekeepers of central Minnesota).

[238] *See supra* notes 128-135, 150-157 and accompanying text (discussing the role of custom in formulating duties, and nuisance's emphasis on unreasonableness characterized as unreasonable for a specific locality and/or time).

[239] *See supra* notes 132-135, 146 and accompanying text (discussing custom as a factor in formulating a duty and noting that a limited duty constrains the types of facts considered in a particular case).

[240] *See supra* notes 150-156 (noting that nuisances are typically activities inconsistent with customary uses of the environment or of the neighborhood).

[241] *See supra* note 82 (noting the use of the common law to enjoin copper smelters from despoiling the land and environment of Georgia).

[242] *See supra* note 126 (discussing the reframing of environmental harms as harms to ecological services that can be valued and addressed by the common law).

[243] *See supra* notes 128-149 and accompanying text (discussing the many factors in formulating a duty and noting that a limited duty constrains the types of facts considered in a particular case).

[244] *See supra* note 169 and accompanying text (discussing Professor Sax's proposed economies).

[245] *See supra* notes 126, 170 and accompanying text (discussing ecosystem services and noting that it will require a consensus to establish those ecological functions which trigger rights and duties for landowners).

[246] *See supra* notes 59-66 (discussing the court's considerations in formulating a duty, including an emphasis on the neighborly use of land).

Finally, the court recognized that Judge Andrews was prescient in his description of duty in an interdependent world.[247] If limiting duties through relationships in an industrial economy would not do, it certainly will not do in an ecological economy.[248] Judge Andrews's illustration is appropriate – driving down Broadway at a reckless speed and applying pesticides from airplanes are both accidents waiting to happen.[249] It is true that care and chance determine how these scenarios play out. However, the court is not limiting negligence by limiting the duty owed; the duty owed is broad and runs to society at large.[250] The limit on this duty occurs solely through the subsequent elements of negligence – breach of duty, causation, and damages.[251]

The court's response to its recognition of a change in society's understanding of ecological norms was proportional. The response was to refrain from applying a limited duty (as suggested by other jurisdictions) and to insist on a duty of reasonable care.[252] If the court's reading of change was correct, the broader duty of reasonable care fosters a broader dialogue of rights and duties in an ecologically interdependent world.[253] By refusing to narrow the scope of duty, the court was stating that it did not want to prematurely decide the case and that it desired a broad set of facts and a robust discussion.[254] A limited duty does not foster a discussion of ecological norms; a duty of reasonable care does.[255]

If the court's reading of change was incorrect, the broader duty, though impacting the current plaintiffs and defendants, will likely have limited applicability.[256] The court's decision to use a duty of reasonable care

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[247] *See supra* notes 59-65, 140 and accompanying text (noting the majority's willingness to employ a duty of reasonable care, and Judge Andrews's call for an expansive understanding of duty).

[248] *See supra* notes 167-170 and accompanying text (discussing ecological imperatives and their impact on society).

[249] *See supra* notes 24-28, 140 and accompanying text (describing the pesticide applications at issue and Judge Andrews's example of a car speeding down Broadway as an accident waiting to happen).

[250] *See supra* notes 59-65, 140 and accompanying text (noting the court's imposition of a broad duty and Judge Andrews's urging of duties that run to the world at large).

[251] *See supra* note 128 (discussing the elements of negligence).

[252] *See supra* notes 59-66 and accompanying text (discussing the court's imposition of a duty of reasonable care).

[253] *See supra* notes 59-65, 141-149 and accompanying text (noting the court's finding of a duty of reasonable care and that limited duty rules constrain the types of facts considered in a particular case).

[254] *See supra* notes 59-65, 141-149 and accompanying text (discussing the court's finding of a duty of reasonable care and noting that when limited duty rules are applied, there is a risk of the judge deciding the case by taking over jury functions and by limiting the types of facts to be considered).

[255] *See supra* notes 128-135 and accompanying text (noting the breadth of the duty of reasonable care).

[256] *See supra* notes 106-112 and accompanying text (discussing the common law's reliance on precedent, but also its ability to work around unpersuasive decisions).

serves the purposes of a broader dialogue and better linkage between the common law and society.[257] If the court can be seen as "following up on an ecological hunch," then the results of imposing a duty of reasonable care are important no matter if the court's hunch was, over time, correct or incorrect. Heeding Professor Dobbs's advice, the court was using the duty of reasonable care to provide "an appropriate arena" for a dialogue that it wants to hear and consider.[258]

C. Reasonable Care Elevates the Discussion and Understanding of Ecological Interdependence

The court's recognition of a duty of reasonable care is correctly in line with Professor Sax's challenge to the courts to "intervene in this transformative era" because an ecological perspective on rights and duties related to property can no longer be ignored.[259] What will evolve from this era is a consensus on those ecological functions that society will require landowners to maintain.[260] Reaching this consensus requires dialogue. It cannot be reached through silence over the table. The legislative process is well adapted for this dialogue, but courts must also participate.[261] Where and how the courts might engage in this dialogue is not always clear; nonetheless, there is an important role for the courts.[262]

The Minnesota Supreme Court, with one small step, embraced this role.[263] The court did not describe ecological services or lay out the ecological functions of honey bees or poplar production. The court, to all appearances, was focused on the practical matters of foreseeability and fairness.[264] Nonetheless, the importance of considering and addressing ecological services is a fundamental undertone. The court is rightly

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[257] *See supra* notes 113-115 and accompanying text (discussing judges as the embodiment of a community's customs and expectations and as persons who participate in a continuing dialogue with the community in search of consensus).

[258] *See supra* notes 145-149 and accompanying text (discussing the advantages of the duty of reasonable care and its appropriateness for most all negligence claims).

[259] *See supra* notes 59-65, 165-185 and accompanying text (noting the court's recognition of a duty of reasonable care, and discussing ecological imperatives and their impact on rights and duties).

[260] *See supra* notes 169-175 and accompanying text (discussing the reframing of rights and duties based on ecological principles).

[261] *See supra* notes 80-127 and accompanying text (discussing the historical role of the common law and noting that the common law has the institutional capacity to participate in an ecological dialogue and in some situations can be more effective than regulatory approaches at resolving disputes within this dialogue).

[262] *See supra* notes 97-127 and accompanying text (noting the important roles that courts and the common law can play in addressing natural resource issues).

[263] *See supra* notes 59-65, 113-115 and accompanying text (discussing the court's finding of a duty of reasonable care and the role of judges and the common law in facilitating consensus).

[264] *See supra* note 60 and accompanying text (discussing the court's emphasis on foreseeability and fairness).

broaching the subject of ecological interdependence.[265] Inevitably, the court must address the cases that emerge from the tension between a transformative economy and an economy of nature.[266] The court needs help in formulating the terms, functions, burdens, and themes. The court's emphasis on reasonableness enables this formulation.[267] Holding to a reasonable duty of care ensures a broad, multifaceted discussion in which new ideas can be considered, not quashed.

In the court's dissent, Justice Helen Meyer found it difficult "to imagine how a jury could determine that spraying was conducted in a manner that creates an unreasonable risk of harm without reference to the [pesticide] label's requirements."[268] Justice Meyer's concern was that there was no community consensus on ecological interdependence, a consensus apart from the pesticide label, that existed and that could inform a jury on the reasonable care due in protecting the ecological functions of bees and the work of beekeepers.[269] This concern is well founded.

However, a consensus on ecological services within the common law will never exist without the discussion necessary to create it.[270] If you elevate the discussion, you elevate understanding and the possibility of consensus. A transformative era will have stops and starts, and it may have conflicts and preemptions.[271] Nonetheless, as a complementary actor in this era, the common law must hold up its end of the discussion.[272] Whether the jury is ready to hear a common law theory that invokes ecological interdependence or presents it as a lens through which to view rights and duties depends on the discussions in which jury members have participated and their understanding of the ideas involved.[273] If society leads these discussions, then the court will begin to use them. If the court leads these discussions, then society will begin to use them. To this chicken and egg

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[265] *See supra* notes 59-65, 76 and accompanying text (noting the majority's emphasis on the neighborly use of land and the dissent's uncertainty as to how a consensus on the reasonable use of pesticides in a community can be reached outside of a pesticide label).

[266] *See supra* note 169 and accompanying text (describing transformative economies and the economy of nature).

[267] *See supra* notes 59-65, 128-135, 145-149 and accompanying text (noting the court's finding of a duty of reasonable care, the breadth that is possible in formulating a duty, and that a duty of reasonable care best preserves this breadth).

[268] *See supra* note 76 and accompanying text (discussing Justice Meyer's concern in allowing a common law negligence claim).

[269] *See supra* notes 71-76 and accompanying text (discussing Justice Meyer's concern in allowing a common law negligence claim).

[270] *See supra* notes 128-149 and accompanying text (discussing the many socially constructed factors that enter into the formulation of a duty).

[271] *See supra* notes 88-96 and accompanying text (discussing preemption and the role of the common law in addressing environmental harms).

[272] *See supra* notes 80-86 and accompanying text (discussing the historical role of the common law in environmental protection).

[273] *See supra* note 126 and accompanying text (suggesting that landowners and citizens are capable of understanding ecosystem services and will use ecological valuations to pursue lawsuits when these services are impaired).

dilemma, the majority has formulated the correct response.[274] The arrow, if it is pointing in any direction, is pointing toward Professor's Sax's economy of nature as the road ahead.[275] Accordingly, the court has taken a first step.

D. Back to the Hive

The Minnesota Supreme Court appropriately remanded the beekeepers' case for trial.[276] It correctly recognized a negligence claim with a duty of reasonable care.[277] The beekeepers' claims are well suited for this disposition. Common law liability is appropriate for cases where the parties have relatively superior knowledge of the facts and risks involved, where there are limited externalities, and where the defendants have the ability to compensate the plaintiffs.[278] All three factors are present here.[279]

The court recognized that the beekeepers' claims were claims of first impression and that foraging bees represented an analytical challenge to traditional trespassing relationships and duties.[280] Thus, the duty owed to the beekeepers could not be determined by categorical analysis. It would not do to try and fit this "round beekeeping peg" into a "square trespassing hole."[281] The court also recognized that the contestants were involved in an ongoing relationship, thus underscoring foreseeability and a concomitant duty.[282] The court understood that there could exist, if the jury were allowed to hear and consider the facts, a consensus on the reasonable mitigation of pesticide risks independent of the requirements of a pesticide label.[283] A limited duty would have quashed this possibility; however, a duty of reasonable care enabled the court to further consider the beekeepers' unique situation.

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[274] *See supra* notes 59-65, 128-149 and accompanying text (discussing the majority's imposition of a duty of reasonable care and the ability of such a duty to preserve the role of juries and discourse).

[275] *See supra* notes 167-170 and accompanying text (discussing ecological imperatives and the economy of nature).

[276] *See supra* note 58 and accompanying text (noting the court's remand).

[277] *See supra* notes 59-65 and accompanying text (discussing the majority's holding of a duty of reasonable care).

[278] *See supra* notes 116-119 and accompanying text (discussing the situations in which liability rules are superior to regulation).

[279] *See supra* notes 18-28 and accompanying text (discussing the parties, their ongoing relationship, and the damages alleged).

[280] *See supra* notes 35-49, 60-61 and accompanying text (discussing the case as one of first impression and the difficulties of applying a limited duty rule based on trespassing).

[281] *See supra* notes 35-49 and accompanying text (discussing the problem of bees as trespassers).

[282] *See supra* note 60 and accompanying text (discussing foreseeability and the knowledge of the parties).

[283] *See supra* notes 64-66, 71-76 and accompanying text (discussing the difference of opinion between the majority and the dissent on whether there could exist a consensus outside the requirements of a pesticide label).

At trial, the definition and extent of the reasonable care owed to the beekeepers will be determined. Factors such as foreseeability, fairness, custom, and public policy will be debated.[284] This casenote argues that it is appropriate and necessary to view these factors through an ecological lens. Reasonable care is what is reasonable in an ecologically interdependent society.[285] Ecological interdependence challenges and reinterprets customs. It asks society to reexamine its public policies. It questions notions of foreseeability. Accordingly, it is entirely proper for the trier of fact to consider the application of pesticides by air.[286] It is appropriate to consider the options for mitigating the risks of such an activity.[287] It is appropriate to consider the underlying ecological functions of the enterprises at issue and to weigh their relative value in society's movement toward an economy of nature.[288]

The trier of fact will likely find that the poplar growers have breached a duty of reasonable care to the beekeepers.[289] As the court points out, independent of ecological concerns, there appear to be several facts that indicate the foreseeability of the harms that occurred and the ability to mitigate these harms.[290] A lens of ecological interdependence only heightens this foreseeability and expands society's expectations for mitigation.[291] Where an experimental project negates a traditional business and a high value ecosystem service (pollination), a breach of duty is likely found.[292]

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[284] *See supra* notes 132-149 and accompanying text (discussing the factors involved in formulating a duty).

[285] *See supra* notes 165-170 and accompanying text (discussing the imperatives of ecological interdependence and their influence on the duties, rights, and expectations of citizens).

[286] *See supra* notes 24-28 and accompanying text (describing the application of pesticides to poplar groves).

[287] *See supra* note 39 and accompanying text (discussing ways in which beekeepers might mitigate the risks from aerially applied pesticides).

[288] *See supra* notes 169-170 and accompanying text (discussing the reframing of rights and duties in an economy of nature).

[289] *See supra* notes 18-28 and accompanying text (discussing the ongoing relationship between the parties, the forseeability of harm, and the decision by the DNR to notify registered beekeepers of pesticide applications three years after the beekeepers began experiencing bee deaths).

[290] *See supra* notes 18-28 and accompanying text (discussing the ongoing relationship between the parties and their business decisions).

[291] *See supra* note 170 and accompanying text (discussing a reframing of duties and expectations in an ecologically interdependent society).

[292] *See supra* notes 3, 18-28, 126, 132 and accompanying text (discussing beekeeping, the experimental nature of the poplar project, the valuation of ecosystem services and remedies for ecological impairment through the common law, and the inclusion of custom or tradition in the formulation of a duty).

V. CONCLUSION

The revolution in human understanding called "ecology" has implications for all facets of society. This includes the laws that describe people's relationships to each other, society's expectations, and the ways in which society will enforce these expectations. As this casenote has illustrated, society's expectations and its methods of enforcement have changed over time. It is now common for a multitude of human activities to be regulated by statutes and agencies. The growth in society's knowledge of ecological interdependence has been mirrored by a growth in the law employing this knowledge.

The common law, though a complement to statutory regulation, has been challenged to participate in this ecological revolution. While a cornerstone of environmental law, it has been relegated to the back burner. This casenote has suggested that this does not have to be the case, and more, it should not be the case if society's goal is a broad dialogue that informs its common understanding of ecological interdependence. Courts and legislatures need to work in tandem as complements. Where it is traditionally appropriate for the court to address claims under the common law, it is appropriate for the court to reexamine its work in light of ecological tenets. Where once custom, policy, fairness, and foreseeability created duty X, they may now create duty Y.

There is, in some sense, nothing new in this equation. The common law has always evolved. What is new is the impetus for this evolution, its force and its undeniability. If people are not willing to view their relationships and duties to each other through an ecological lens, the consequences will be dire. It is an understatement to say that the sooner society can begin, the better. On the bright side, humans are an adaptive species and even small steps will, eventually, move society considerably toward the goal of ecologically informed duties and relationships.