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# Interpreting Intent

## HOW RESEARCH ON FOLK JUDGMENTS OF INTENTIONALITY CAN INFORM STATUTORY ANALYSIS

*Julia Kobick & Joshua Knobe*<sup>†</sup>

On May 4, 2009, the Supreme Court released its opinion in *Shell Oil Co. v. United States*.<sup>1</sup> The case was not only an important one in environmental law, but it also raised a number of complex conceptual issues. In particular, the Court found that it had to make a difficult decision about the relationship between liability and intentionality.

The facts of the case were as follows: Shell Oil Co. contracted to sell a hazardous pesticide to an independent chemical distribution company.<sup>2</sup> Shell knew that some of the pesticide would inevitably end up leaking or spilling as it was being transferred into the distribution company's holding tanks, but Shell was not actively trying to make the pesticide leak.<sup>3</sup> Its goal was just to sell and transport the pesticide. In other words, Shell had the *knowledge* that its actions would be leading to pesticide leaks, but its *purpose* was not to create these leaks, but rather to sell a useful product. Predictably, the dangerous pesticide regularly leaked during transfer, leading to extensive soil and groundwater contamination.<sup>4</sup> The Environmental Protection Agency spent \$8 million cleaning up the environmental damage and sued the parties connected to the environmental harm, including Shell, for remediation costs.<sup>5</sup>

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<sup>1</sup> *Burlington N. & Santa Fe Ry. v. United States (Shell Oil Co.)*, 129 S. Ct. 1870 (2009).

<sup>2</sup> *Id.* at 1874-75.

<sup>3</sup> *See id.* at 1875.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.* at 1876.

Under the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”),<sup>6</sup> Shell could be considered liable for cleanup costs if it had “arranged for disposal . . . of hazardous substances,”<sup>7</sup> a condition which some courts had interpreted as requiring a degree of intentionality in causing the hazardous substances to be disposed.<sup>8</sup> The Court was therefore faced with a complex question. Given that Shell had the knowledge that it would be disposing of the pesticide but did not act with the purpose of disposing of it, could it rightly be said to have disposed of the substance with sufficient *intentionality* to render it liable under CERCLA?

The Court’s decision in *Shell* can serve as a kind of case study of a broader question: how to determine whether an act counts as intentional or unintentional. This question has played a crucial role in numerous branches of legal scholarship, figuring in key debates concerning everything from civil rights law<sup>9</sup> to criminal law.<sup>10</sup> It has been approached from numerous different theoretical perspectives.<sup>11</sup>

Our aim here is to introduce a new consideration into the existing literature on this question. A growing body of empirical work in experimental philosophy has examined the patterns in people’s ordinary judgments about whether specific acts were performed intentionally or unintentionally. This work suggests that such judgments are based on a

<sup>6</sup> 42 U.S.C. §§ 9607-9675 (2006).

<sup>7</sup> *Id.* § 9607(a)(3).

<sup>8</sup> *Compare* United States v. Burlington N. & Santa Fe Ry. Co., 520 F.3d 918, 948 (9th Cir. 2008) (CERCLA permits arranger liability when the hazardous waste is a “foreseeable byproduct of, but not the purpose of, the transaction . . .”) *with* United States v. Cello-Foil Prods., 100 F.3d 1227, 1232 (6th Cir. 1996) (“[O]nce it has been demonstrated that a party possessed the requisite intent to be an arranger, the party cannot escape liability by claiming that it had no intent to have the waste disposed in a particular manner or at a particular site.”) *and* Amcast Indus. Corp. v. Detrex Corp., 2 F.3d 746, 751 (7th Cir. 1993) (the term “arranged for” implies “intentional action”).

<sup>9</sup> For instance, a plaintiff bringing an equal protection challenge to a facially neutral governmental action that has a disparate impact on a protected class has the burden of proving that the government acted intentionally to discriminate. *Washington v. Davis*, 426 U.S. 229, 240 (1976).

<sup>10</sup> For instance, the *Model Penal Code* distinguishes between mens reas sufficient for culpability by describing different levels of intentionality. The distinction between a “purposeful” and “knowledgeable” mens rea in the *Model Penal Code* was meant to clarify logically inconsistent application of a mens rea of “intent” used in many states’ criminal statutes. MODEL PENAL CODE § 2.02(2) (Tentative Draft No. 4, 1955).

<sup>11</sup> *See, e.g.,* R.A. Duff, *The Politics of Intention: A Response to Norrie*, 1990 CRIM. L. REV. 637-42; Nicola Lacey, *A Clear Conception of Intention: Elusive or Illusory?* 56 MOD. L. REV. 621 (1993); Alan Norrie, *Oblique Intention and Legal Politics*, 1989 CRIM. L. REV. 793-807.

sophisticated, and perhaps universal, system of criteria. Strikingly, these criteria are not limited to judgments about an actor's mental state, but instead encompass judgments based on the moral status of an action's consequences.

In Part I, we discuss *Shell* and another recent Supreme Court case, *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*,<sup>12</sup> which also turned on questions of intentionality. We explore the parties' arguments as to whether the action triggering liability in each case requires a purposeful mental state or can be satisfied with knowledge. Part II explores the body of experimental research that looks empirically at the ways in which people actually use the concept of intentional action in ordinary language. In Part III, we bring together the legal and empirical issues discussed in earlier sections, examining the ways in which empirical data about the way people actually use certain concepts might bear on the Supreme Court's reasoning regarding the requisite degree of intentionality in the *Shell* and *Babbitt* case studies.

## I. TWO CASE STUDIES

At first blush, *Shell* appears to be a straightforward case of statutory interpretation. The Court was asked to choose between competing interpretations of "arranged for disposal," a phrase laden with ambiguity as to whether a purpose to dispose of hazardous substances is necessary or whether knowledge that disposal will occur can be sufficient.<sup>13</sup> That semantic determination, however, is grounded in a judgment about intentionality, and, more specifically, requires the Court to decide the degree of intentionality suggested in vague statutory wording.

Courts are often asked to draw bright lines between levels of intentionality when language makes those bright lines difficult to discern. Judges turn to dictionaries and legislative histories to help them parse the clearest reading of unclear

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<sup>12</sup> 515 U.S. 687 (1995).

<sup>13</sup> The Court acknowledged that "CERCLA does not define what it means to 'arrange for' disposal of a hazardous substance." *Burlington N. & Santa Fe Ry. v. United States (Shell Oil Co.)*, 129 S. Ct. 1870, 1879 (2009) (citing *Cello-Foil Prods.*, 100 F.3d at 1231; *Amcast*, 2 F.3d at 751; *Fla. Power & Light Co. v. Allis Chalmers Corp.*, 893 F.2d 1313, 1317 (11th Cir. 1990)).

phrases,<sup>14</sup> but their ultimate conclusions about sufficient intentionality are likely also infused with some intuitive sense of intentionality. In situations where linguistic ambiguity increases the likelihood that intuitions will play a role in drawing a line in the murky terrain between acting for a purpose versus acting with knowledge, it is helpful to understand what empirical research tells us about human intuitions about intentionality. It is, above all, this intuitive human sense that we wish to explore in this paper.

In this section, we introduce the competing arguments in two cases where the Court was forced to make a determination about sufficient intentionality for liability based on determinations of statutory language. *Shell* is the more recent of the two, but the other also involved strong arguments about whether liability was triggered by acting for the specific purpose of causing environmental harm versus knowing that environmental harm would occur. In that case, *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*,<sup>15</sup> the Court determined the level of intentionality required under the Endangered Species Act (“ESA”)<sup>16</sup> for an actor to be held criminally and civilly liable for “taking” an endangered species. Curiously, although both cases presented statutory ambiguity, the Court took different stances in the two cases. These divergent results in *Shell* and *Babbitt* are thus useful lenses for exploring how folk judgments about intentionality can inform legal reasoning, particularly when an agent knows that its actions will lead to a particular outcome, but does not act for the specific purpose of bringing about that outcome.

#### A. *The Litigants’ Positions in Shell*

Because of the ambiguity inherent in the phrase “arranged for disposal,” the parties in *Shell* differed sharply over whether CERCLA required that an agent specifically act for the purpose of disposing of hazardous waste in order to be held liable for the costs of remediation. Central to *Shell*’s argument was its interpretation of CERCLA as requiring a purpose to dispose of hazardous waste rather than knowledge

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<sup>14</sup> See, e.g., *Muscarello v. United States*, 524 U.S. 125, 128-34 (1998) (employing a textual analysis and an inquiry into legislative history to parse the meaning of the statutory term “carry”).

<sup>15</sup> 515 U.S. 687 (1995).

<sup>16</sup> 16 U.S.C. §§ 1531-1544 (2006).

that leaks would foreseeably occur.<sup>17</sup> The government, on the other hand, argued that Shell did act as an arranger under CERCLA because its knowledge that leaks would directly occur was a sufficient level of intentionality to trigger arranger liability.<sup>18</sup> Traditionally, courts have read ambiguous phrases in CERCLA to permit liberal imposition of liability in order to achieve the act's remedial goals.<sup>19</sup>

Shell grounded its claim that CERCLA commands a purpose to dispose in what it saw as the most logical reading of "arranged for." It argued that the plain meaning of "arranged for" implies intent because the preposition "for" indicates a purpose.<sup>20</sup> Reading the words "arranged for" together with "disposal," Shell also argued that it intended to arrange for the sale of a useful product, not to arrange for disposal.<sup>21</sup> That is, Shell did not believe it could be held liable since its primary objective was to enter into a contract to sell and transport the pesticide, not to contract with the distributor to dispose of the pesticide.<sup>22</sup> Despite any statutory definitions of "disposal" that may suggest that disposal can occur unintentionally, Shell argued that it is logically incoherent to claim that a party could

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<sup>17</sup> Brief of Petitioner-Appellant at 18-19, *Shell Oil Co. v. United States*, No. 07-1607 (9th Cir. Nov. 17, 2008); Reply Brief of Petitioner-Appellant at 2, *Shell Oil Co. v. United States*, No. 07-1607 (9th Cir. Jan. 16, 2009).

<sup>18</sup> Brief of Respondent at 17-19, *Shell Oil Co. v. United States*, No. 07-1607 (9th Cir. Dec. 17, 2008).

<sup>19</sup> *See, e.g.*, *United States v. Burlington N. & Santa Fe Ry. Co.*, 520 F.3d 918, 948 (9th Cir. 2008) ("We have avoided giving the term 'arranger' too narrow an interpretation to avoid frustrating CERCLA's goal of requiring that companies responsible for the introduction of hazardous waste into the environment pay for remediation."); *United States v. Aceto Agric. Chems. Corp.*, 872 F.2d 1373, 1380 (8th Cir. 1989) ("While the legislative history of CERCLA sheds little light on the intended meaning of ['arranged for disposal'], courts have concluded that a liberal judicial interpretation is consistent with CERCLA's 'overwhelming remedial' statutory scheme."); *Dedham Water Co. v. Cumberland Farms Dairy, Inc.*, 805 F.2d 1074, 1081 (1st Cir. 1986) ("CERCLA is essentially a remedial statute designed by Congress to protect and preserve public health and the environment. We are therefore obligated to construe its provisions liberally to avoid frustration of the beneficial legislative purposes.") *rev'd*, 129 S. Ct. 1870 (2009); *New York v. Shore Realty Corp.*, 759 F.2d 1032, 1045 (2d Cir. 1985) ("We will not interpret section 9607(a) in any way that apparently frustrates the statute's goals, in the absence of a specific congressional intention otherwise.").

<sup>20</sup> Brief of Petitioner-Appellant, *supra* note 17, at 18; Reply Brief of Petitioner-Appellant, *supra* note 17, at 3.

<sup>21</sup> Brief of Petitioner-Appellant, *supra* note 17, at 20.

<sup>22</sup> *Id.* ("The intent requirement embodied in the phrase 'arranged for' is not satisfied where, as here, there is no evidence that Shell intended to do anything more than arrange for the *sale* (not disposal) of a *useful product* (not hazardous waste) and transfer ownership, possession and control before unloading.").

arrange for an accident.<sup>23</sup> Shell saw the regular pattern of leakage and spillage of the pesticide as accidental occurrences, not incidents that were desired or sought after.<sup>24</sup> From Shell's perspective, "arrang[ing] for disposal" requires a specific purpose to dispose, and knowledge of leakage or spillage is not sufficient for imposition of CERCLA arranger liability.<sup>25</sup>

The government's contention that arranger liability applied to Shell depended on an interpretation of "arranged for disposal" that permits liability when a party has knowledge that disposal will occur. In contrast to Shell, the government argued that the plain reading of CERCLA suggests no intent to dispose requirement, because CERCLA's definition of disposal encompasses accidental processes such as "spilling" and "leaking."<sup>26</sup> That is, the government's theory posited that when a party enters a transaction that it knows will directly result in either intentional or unintentional disposal of hazardous substances, that party has arranged for disposal.<sup>27</sup> This theory recognized that "the delivery of a useful product [may be] the ultimate purpose" of a transaction, but that knowledge that spills would certainly occur as a side effect "was sufficient to establish Shell's intent to dispose of hazardous substances."<sup>28</sup> The government argued that this interpretation of "arranged for disposal" reflects CERCLA's remedial statutory scheme.<sup>29</sup>

Affirming the district court's holding that Shell was an arranger under section 9607(a)(3) of CERCLA, the Ninth Circuit Court of Appeals elaborated on the circumstances under which a party is subject to arranger liability.<sup>30</sup> The court recognized two types of arranger liability: "direct" arranger

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<sup>23</sup> See *id.* at 21 ("Although the statute defines *disposal* to include spilling, the critical words for present purposes are '*arranged for.*' The words imply intentional action. The only thing that [the defendant] arranged for [a common carrier] to do was to deliver [a chemical] to [a customer's] storage tanks. It did not arrange for spilling the stuff on the ground. No one *arranges* for an accident." (alteration in original) (quoting Judge Posner in *Amcast Indus. Corp. v. Detrex Corp.*, 2 F.3d 746, 751 (7th Cir. 1993))).

<sup>24</sup> See *id.*

<sup>25</sup> *Id.* at 18-20.

<sup>26</sup> Brief of Respondent, *supra* note 18, at 17 (citing 42 U.S.C. § 9601(29) (2006) (adopting the definition of "disposal" in 42 U.S.C. § 6903(3))).

<sup>27</sup> *Id.* at 17-18.

<sup>28</sup> *Id.* at 24.

<sup>29</sup> *Id.* at 19.

<sup>30</sup> *United States v. Burlington N. & Santa Fe Ry. Co.*, 520 F.3d 917, 948 (9th Cir. 2008).

liability, and “broader” arranger liability.<sup>31</sup> Direct liability results when the central purpose of a transaction is to dispose of hazardous waste.<sup>32</sup> Broader liability results when there may be a separate specific purpose of the transaction, but the “transactions . . . contemplate disposal as a *part* of, but not the focus of, the transaction.”<sup>33</sup> The court noted that the broader form of arranger liability “can involve situations, like the present one, in which the alleged arrangers did not contract directly for the disposal of hazardous substances but did contract for the sale or transfer of hazardous substances, which were then disposed of.”<sup>34</sup> In this “broader” context, the disposal of the hazardous waste is a “foreseeable byproduct of, but not the purpose of,” the transaction between Shell and the distributor that led to hazardous waste contamination.<sup>35</sup> That is, even though Shell did not specifically act for the purpose of disposing of the pesticide, it was liable because it knew with certainty that leakage and spillage of the pesticide would result from its arrangement with the distributor.<sup>36</sup>

#### B. *The Litigants’ Positions in Babbitt*

The arguments that arose in *Babbitt*, decided fourteen years before *Shell*, raised a similar debate about the degree of intentionality required for liability under a federal statute. The plaintiffs in *Babbitt*, a group representing small landowners

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<sup>31</sup> *Id.* (citing *United States v. Shell Oil Co.*, 294 F.3d 1045, 1054-55 (9th Cir. 2002)).

<sup>32</sup> *Id.* at 948.

<sup>33</sup> *Id.*

<sup>34</sup> *Id.* at 948-49.

<sup>35</sup> *Id.* at 948.

<sup>36</sup> The court cited six factors that demonstrate the foreseeability of the disposal:

- (1) Spills occurred *every time* the deliveries were made; (2) Shell arranged for delivery and chose the common carrier that transported its product to the . . . site; (3) Shell changed its delivery process so as to require the use of large storage tanks, thus necessitating the transfer of large quantities of chemicals and causing leakage from corrosion of the large steel tanks; (4) Shell provided a rebate for improvements in [the distributor’s] bulk handling and safety facilities and required an inspection by a qualified engineer; (5) Shell regularly would reduce the purchase price of the [pesticide], in an amount the district court concluded was linked to loss from leakage; and (6) Shell distributed a manual and created a checklist of the manual requirements, to ensure that [the pesticide] tanks were being operated in accordance with Shell’s safety instructions.

*Id.* at 950-51.

and logging companies, brought a facial challenge to a regulation that clarified prohibitions on “harm[ing]” endangered species under the Endangered Species Act of 1973 (“ESA”).<sup>37</sup> Under section 9 of the ESA, it is unlawful to “take” an endangered or threatened species,<sup>38</sup> and section 3 of the statute defines the term “take” as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect . . . .”<sup>39</sup> Adding meaning to the “harm” prohibition from the “take” definition, the Department of Interior regulation clarified that unlawful “harm” to an endangered species is “an act which actually kills or injures wildlife,” then made clear that “[s]uch act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.”<sup>40</sup>

This regulation deprived the plaintiffs of deriving maximum economic value from their land through logging and other forest products operations, because their land was home to the endangered red-cockaded woodpecker and the threatened northern spotted owl.<sup>41</sup> Had the plaintiffs knowingly engaged in logging or other habitat modification activities that actually resulted in death or injury to members of these species, they would have been liable for criminal and civil penalties under the ESA.<sup>42</sup> The plaintiffs had not yet modified the habitats of the listed species, and thus had not yet incurred civil or criminal penalties at the time of their lawsuit; instead, they chose to challenge the Secretary’s regulation on its face as an impermissible interpretation of the ESA. In other words, they could foresee that if they engaged in habitat modification, with the purpose of earning money, then their logging and other activities would have the side effect of actually killing or

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<sup>37</sup> 16 U.S.C. §§ 1531-1544 (2006).

<sup>38</sup> *Id.* § 1538(a)(1)(B).

<sup>39</sup> *Id.* § 1532(19).

<sup>40</sup> 50 C.F.R. § 17.3 (2006).

<sup>41</sup> The Endangered Species Act defines an endangered species as “any species which is in danger of extinction throughout all or a significant portion of its range” and a threatened species as one “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” 16 U.S.C. § 1532(6), (20).

<sup>42</sup> Section 11 of the ESA permits up to one year of prison and a \$50,000 fine for “knowingly” taking an individual member of an endangered species. *Id.* § 1540(b). Courts have held that section 11 imposes a general, not specific, intent standard. *See United States v. Nguyen*, 916 F.2d 1016 (5th Cir. 1990). The Fish and Wildlife Service has promulgated a regulation asserting that section 11 applies to threatened species as well as endangered species. 50 C.F.R. 17.31(a).

injuring members of endangered or threatened species. This consequence would result in liability for the plaintiff property owners based on the indirect harms caused by habitat modification.

The crux of Sweet Home's argument was that the prohibition on takings in the ESA does not cover habitat modification, but rather only disallows direct, purposeful efforts to harm an endangered or threatened species.<sup>43</sup> Sweet Home contended that the plain meaning of the word "harm," in its context as a statutory descriptor of "take," connotes "*purposeful* efforts to injure or capture wildlife; the direct application of force to, or physical intrusions on, specific creatures; direct and concrete injury to identifiable animals; and actions which a specifically acting human does to a specific creature."<sup>44</sup> In promoting a narrow definition of "harm," Sweet Home argued that the Court should read the ambiguity inherent in the statutory language to require that actors *intentionally* harm discrete animals.<sup>45</sup> According to Sweet Home's view, vagueness in the ESA should not extend liability to "ordinary actions" of habitat modification that "unintentionally deprive listed wildlife of some environmental benefit" like breeding grounds or access to food.<sup>46</sup> In repeatedly insisting that, in the ESA context, "harm" can only mean a "purposeful effort to injure" discrete animals, Sweet Home made the case that the takings prohibition could not include foreseeably harmful effects on individuals within the species.<sup>47</sup> That is, to violate the ESA under Sweet Home's theory, an actor must have acted for the *purpose* of harming the individual in the species, not merely have known that habitat modification actions would eventually harm individuals in the species by impacting essential species behaviors.

Disagreeing with Sweet Home's insistence that "take" clearly mandates direct and intentional harm as prerequisites to liability, the government found no suggestion in ESA language that called for any cabining of the word "harm" with

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<sup>43</sup> Brief for Respondents at \*6, *Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. 687 (1995) (No. 94-859), 1995 WL 130541.

<sup>44</sup> *Id.* at \*8, \*13 (emphasis added).

<sup>45</sup> *Id.* at \*13 n.15 (arguing that harm, like the word "kill," requires "intentional and directed conduct").

<sup>46</sup> *Id.* at \*8-\*9, \*13.

<sup>47</sup> *Id.* at \*10.

an intent requirement.<sup>48</sup> Pointing to section 11 of the ESA, which explicitly imposes a knowing mens rea on violations of the ESA, the government argued that an actor violates the ESA whenever it “knows, for example, that his action harasses, harms, or wounds the types of species affected.”<sup>49</sup> In the government’s view, neither knowledge that the species is listed nor a specific intent to violate the ESA is required under the statute; rather, knowledge that one’s behavior will harm a species by significantly disrupting its essential behaviors is sufficient.<sup>50</sup>

The government used the breadth of several other words in the ESA definition of “take,” including “harass,” “wound,” and “pursue,” to further its claim that “harm” permits imposition of liability on parties that knowingly modify habitats of listed species while foreseeing harm to those species.<sup>51</sup> This breadth, according to the government, underlies Congress’ intent to halt extinction and promote species preservation in the ESA. Analogizing the prohibition on “harming” to “wounding” a listed animal, the government noted, “[W]ounding a protected species violates the ESA even if it is the unintended consequence of otherwise lawful activity directed at a different object.”<sup>52</sup> That is, if an actor specifically intends and desires to engage in a lawful activity, he will be liable under the ESA if he knows that his habitat modification activities will significantly disrupt species behaviors in a way that causes injury or death to members of the species.

Reversing itself on an earlier ruling, the D.C. Circuit Court of Appeals determined that the Department of Interior regulation was an impermissible construction of “harm” within the meaning of the ESA.<sup>53</sup> The court determined that the regulation’s inclusion of habitat modification in the definition

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<sup>48</sup> Reply Brief for the Petitioners at \*1, *Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. 687 (1995) (No. 94-859), 1995 WL 170170.

<sup>49</sup> *Id.* at \*2.

<sup>50</sup> *Id.*

<sup>51</sup> *Id.* at \*2 n.2.

<sup>52</sup> *Id.* at \*4.

<sup>53</sup> *Sweet Home Chapter of Communities for a Great Or. v. Babbitt*, 17 F.3d 1463, 1464 (D.C. Cir. 1994). The Court of Appeals initially determined that the word “harm” was broad enough to permit a wide range of interpretations, and found the agency’s interpretation reasonable. *Id.* After taking the rare step of granting a petition for rehearing, the court reversed its earlier holding, concluding that the statutory words surrounding “harm” counseled against interpreting the word broadly. *Id.* at 1464-65. The three-judge panel split into an opinion of the court, a concurrence, and a dissent. *Id.* at 1464.

of “harm” was too broad of an interpretation of the term.<sup>54</sup> Reading “harm” in the context of the surrounding verbs also defining “take,” the court understood “harm” to mean “a substantially direct application of force” against the listed species.<sup>55</sup> Although directness of force and a purpose or desire to harm are conceptually linked, the D.C. Circuit’s majority opinion did not directly address intentionality. Judge Sentelle’s concurring opinion, however, reincorporated his earlier contention that the ESA does require that an actor act intentionally:

In the present statute, all the other terms among which “harm” finds itself keeping company relate to an act which a specifically acting human does to a specific individual representative of a wildlife species. In fact, they are the sorts of things an individual human commonly does when he *intends* to “take” an animal. Otherwise put, if I were intent on taking a rabbit, a squirrel, or a deer, as the term “take” is used in common English parlance, I would go forth with my dogs or my guns . . . .<sup>56</sup>

Reading Judge Williams’ majority opinion and Judge Sentelle’s concurring opinion together, the D.C. Circuit held that foreseeably harmful effects on listed species resulting from habitat modification are not enough to trigger liability. Instead, an actor is liable under the “harm” prong of the takings prohibition when he directly and intentionally causes death or injury to an endangered or threatened animal.

## II. THE EMPIRICAL FINDINGS

In short, although the Supreme Court faced very different cases in *Shell* and *Babbitt*, these two cases ended up involving the same basic issue: how to determine the precise conditions under which an act counts as “intentional.” In both cases, the Court was faced with an agent that knew that it would bring about a particular outcome as a side effect to its primary objective, but that did not act for the purpose of bringing about that outcome. The question was whether such an agent could be deemed to have acted intentionally. In Part III, we examine how the Supreme Court answered this question in *Shell* and *Babbitt*. This Part, however, will look at

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<sup>54</sup> *Id.* at 1465.

<sup>55</sup> *Id.*

<sup>56</sup> *Id.* at 1472 (Sentelle, J., concurring) (emphasis added) (quoting *Sweet Home Chapter of Communities for a Great Or. v. Babbitt*, 1 F.3d 1, 12 (D.C. Cir. 1993)).

studies that give indication as to how ordinary people might have answered it.

At least initially, it might be thought that this question is a highly technical one, the sort of thing about which ordinary people would not have a definite opinion either way. As it happens, though, recent work in experimental philosophy suggests that these appearances are deceiving. In fact, experimental research indicates that people have a quite complex and sophisticated understanding of the criteria for intentional action. Indeed, it may be that these criteria are a universal feature of our human cognitive capacities. Though most people cannot articulate at an abstract level the properties a behavior would have to have to be intentional, they show remarkably consistent patterns in their intuitions about concrete cases.

To examine people's ordinary criteria for intentional action, experimental philosophers therefore proceed by presenting people with hypotheticals and asking whether the agents in these hypotheticals acted "intentionally" or "unintentionally." By systematically varying the fact pattern of the hypotheticals themselves, one can then determine which factors influence people's ordinary intentional action intuitions. Thus, if one wants to arrive at a better understanding of the roles of purpose and knowledge in people's ordinary conception of intentional action, one can present experimental subjects with hypotheticals in which an agent does not specifically act for the purpose of bringing about a particular outcome but does know that the outcome will arise as a result of his or her actions. One can then look empirically at the precise conditions under which subjects do and do not say that such outcomes were brought about intentionally.

Appropriately enough, one of the key experimental studies in this research program involves an agent who either helps or harms the environment.<sup>57</sup> Subjects in the "help condition" of the experiment received the following hypothetical about an agent who does not specifically have a desire to help the environment but who does know that his actions will bring about environmental help:

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<sup>57</sup> Joshua Knobe, *Intentional Action and Side Effects in Ordinary Language*, 63 ANALYSIS 190 (2003).

The vice-president of a company went to the chairman of the board and said, "We are thinking of starting a new program. It will help us increase profits, and it will also help the environment."

The chairman of the board answered, "I don't care at all about helping the environment. I just want to make as much profit as I can. Let's start the new program."

They started the new program. Sure enough, the environment was helped.<sup>58</sup>

These subjects were then asked whether or not the chairman of the board helped the environment intentionally.<sup>59</sup>

Subjects in the "harm condition" received a hypothetical that was exactly the same, except that the word "help" was replaced with "harm":

The vice-president of a company went to the chairman of the board and said, "We are thinking of starting a new program. It will help us increase profits, but it will also harm the environment."

The chairman of the board answered, "I don't care at all about harming the environment. I just want to make as much profit as I can. Let's start the new program."

They started the new program. Sure enough, the environment was harmed.<sup>60</sup>

These subjects were then asked whether the chairman harmed the environment intentionally.<sup>61</sup>

The results revealed a striking asymmetry. Most subjects in the harm condition (82%) judged that the chairman harmed the environment intentionally, while relatively few subjects in the help condition (23%) reported that the chairman helped the environment intentionally.<sup>62</sup> Yet it seems that the only major difference between these cases lies in the *moral* status of the behavior the agent performed. Hence, it appears that people's moral judgments have an impact on their views as to whether a behavior is performed intentionally or unintentionally.

More specifically, the results indicate that people's moral judgments affect the role of knowledge and purpose in their intuitions about intentional action. There does not seem

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<sup>58</sup> *Id.*

<sup>59</sup> *Id.*

<sup>60</sup> *Id.*

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*

to be any single answer, applicable in all cases, as to whether people think that an agent acts intentionally if he or she has knowledge of an outcome but lacks a specific purpose to bring about that outcome. Instead, people's intuitions in such cases seem to depend on the moral status of the behavior itself. If the behavior is morally good, people regard it as unintentional, whereas if it is morally bad, people regard it as intentional. Though this result may seem surprising, it has been replicated in numerous further experiments.<sup>63</sup> Regardless of whether people are thinking about the environment,<sup>64</sup> about military strategy,<sup>65</sup> or just about a person whose behavior will impact the neighborhood kids,<sup>66</sup> they show the same overall pattern of intuitions. In cases where the agent has knowledge but lacks a specific purpose, they are inclined to regard the action as intentional when it is morally bad but not when it is morally good.

Subsequent research revealed that this basic effect continues to emerge across a wide variety of subject populations and experimental procedures. It emerges when the hypotheticals are translated into Hindi and given to native Hindi speakers.<sup>67</sup> It emerges when the hypotheticals are presented as puppet shows and given to children who are only four years old.<sup>68</sup> It even emerges when the experiment is conducted on subjects who have lesions in the ventromedial prefrontal cortex (VMPFC) and therefore show massive deficits in the capacity for normal emotional response.<sup>69</sup> The effect appears to be a highly robust aspect of our ordinary understanding of human action.

In research on this issue within experimental philosophy, a central aim is to understand the fundamental

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<sup>63</sup> Adam Feltz, *The Knobe Effect: A Brief Overview*, 28 J. MIND & BEHAV. 265 (2007).

<sup>64</sup> Knobe, *supra* note 57, at 191.

<sup>65</sup> Mark Phelan & Hagop Sarkissian, *Is the 'Trade-off Hypothesis' Worth Trading For?*, 24 MIND & LANGUAGE 164, 173 (2009).

<sup>66</sup> Fiery Cushman & Alfred Mele, *Intentional Action: Two and a Half Folk Concepts*, in EXPERIMENTAL PHILOSOPHY 171, 185 (Joshua Knobe & Shaun Nichols eds., 2008).

<sup>67</sup> Joshua Knobe & Arudra Burra, *The Folk Concepts of Intention and Intentional Action: A Cross-Cultural Study*, 6 J. COGNITION & CULTURE 113 (2006).

<sup>68</sup> Alan Leslie, Joshua Knobe & Adam Cohen, *Acting Intentionally and the Side-Effect Effect: 'Theory of Mind' and Moral Judgment*, 17 PSYCHOL. SCI. 421 (2006).

<sup>69</sup> Liane Young et al., *Does Emotion Mediate the Relationship Between an Action's Moral Status and its Intentional Status? Neuropsychological Evidence*, 6 J. COGNITION & CULTURE 291 (2006).

cognitive processes that lie at the root of this effect. The effort to describe these processes has led to an increasingly complex and wide-ranging debate, with a bewildering variety of theoretical proposals and a conflicting array of different experimental studies.<sup>70</sup> Here, however, we will be putting all of these controversial issues to one side. Our aim is not to speculate about the underlying cognitive processes but simply to describe the patterns observed in people's ordinary intuitions. For the present exploration, we will be especially concerned with one key result. In cases where an agent performs a behavior with a morally bad outcome, if the agent does not act for the purpose of bringing about that outcome but does know that the outcome will result, studies show that people have a consistent tendency to regard the behavior as intentional.<sup>71</sup>

### III. A ROLE FOR THE EMPIRICAL DATA IN STATUTORY ANALYSIS

With this empirical framework in hand, we can now return to the cases of *Shell* and *Babbitt*. We noted above that the litigants in both of these cases offered specific proposals about how to apply the notion of acting intentionally. In this section, we examine the actual decisions the Court made in evaluating these proposals.

#### A. *The Court's Decisions in Shell and Babbitt*

The Court announced its decision in *Shell* in May 2009, ruling 8-1 in favor of Shell.<sup>72</sup> In his majority opinion, Justice Stevens began by clarifying the outer bounds of CERCLA liability, noting that liability under CERCLA would clearly

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<sup>70</sup> See generally Cushman & Mele, *supra* note 66 (explaining the effect in terms of three different rules that subjects apply in different cases); Edouard Machery, *The Folk Concept of Intentional Action: Philosophical and Experimental Issues*, 23 MIND & LANGUAGE 165 (2008) (explaining the effect in terms of a "trade-off" between a benefit and a cost); Shaun Nichols & Joseph Ulatowski, *Intuitions and Individual Differences: The Knobe Effect Revisited*, 22 MIND & LANGUAGE 346 (2007) (explaining the effect in terms of two distinct interpretations of the expression "intentionally"); Dean Pettit & Joshua Knobe, *The Pervasive Impact of Moral Judgment*, MIND & LANGUAGE (forthcoming) (explaining the effect in terms of a comparison between the agent's attitude and a norm for what that attitude should be).

<sup>71</sup> Joshua Knobe, *The Concept of Intentional Action: A Case Study in the Uses of Folk Psychology*, 130 PHIL. STUD. 203, 209 (2006).

<sup>72</sup> *Burlington N. & Santa Fe Ry. v. United States (Shell Oil Co.)*, 129 S. Ct. 1870, 1880 (2009).

attach to any entity that entered into a transaction “for the sole purpose of discarding a . . . hazardous substance.”<sup>73</sup> At the other extreme, a party could not be liable under CERCLA if it entered into a transaction with the purpose of selling a useful product, yet was unaware that the buyer disposed of the useful hazardous substance in a manner that caused environmental contamination. Such easy cases are rare, and Justice Stevens acknowledged that in the vast middle area of cases where the seller has some knowledge of the buyer’s disposal, courts must engage in a fact-intensive inquiry to determine if liability is proper.<sup>74</sup>

Attempting to give meaning to CERCLA’s undefined term “arranged for,” the Court then proceeded to parse what it viewed as the ordinary meaning of the term.<sup>75</sup> Under the Court’s reading of “arranged for,” an entity may qualify as an arranger under CERCLA “when it takes intentional steps to dispose of a hazardous substance.”<sup>76</sup> That is, the Court determined that the statute called for intentional action. Addressing the government’s contention that foresight of spills is sufficient to establish intent to dispose under CERCLA, the Court concluded that in this case, the “evidence does not support an inference that Shell intended such spills to occur.”<sup>77</sup> Justice Stevens characterized the spills as minor and accidental, and viewed Shell’s attempts to reduce spills as evidence of a lack of intent for spills to occur rather than as evidence of the foreseeability of hazardous waste spillage.<sup>78</sup>

The Court’s reasoning in *Babbitt* led it to arrive at the opposite conclusion. Justice Stevens’s 6-3 majority opinion held that knowledge that harm to endangered species would be a side effect of otherwise lawful activity was sufficient to trigger liability.<sup>79</sup> At the outset, the Court assumed that logging and habitat modification activities “will have the effect, even though unintended, of detrimentally changing the natural habitat . . . and that, as a consequence, members of those species will be killed or injured.”<sup>80</sup> That is, just as in *Shell*, the

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<sup>73</sup> *Id.* at 1878.

<sup>74</sup> *Id.* at 1879.

<sup>75</sup> *Id.*

<sup>76</sup> *Id.*

<sup>77</sup> *Id.* at 1880.

<sup>78</sup> *Id.*

<sup>79</sup> *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687, 697 (1995).

<sup>80</sup> *Id.* at 696.

environmental harm in *Babbitt* was foreseeable and certain to occur as a side effect of the plaintiffs' actions. Unlike *Shell*, however, the Court deemed reasonable the government's interpretation of "harm" as permitting liability when an actor knows that his actions will "result[] in actual injury or death to members of an endangered or threatened species."<sup>81</sup> In a footnote, the Court also acknowledged that the ESA specifically imposes a criminal mens rea of "knowing," which incorporates "ordinary requirements of proximate causation and foreseeability."<sup>82</sup>

Notably, the Court's majority opinion devoted few lines to actively discussing the level of intent suggested semantically by the word "harm," choosing instead to emphasize the effects on endangered and threatened species that would result from the habitat modification activities.<sup>83</sup> Interpreting a subsequent amendment to the ESA as probative of Congress' understanding of the meaning of "harm" within section 3, the Court reasoned that "Congress had in mind foreseeable, rather than merely accidental, effects on listed species."<sup>84</sup> Such language frames the Court's analysis of the case in terms of the outcome of habitation modification, as opposed to whether or not the plain meaning of the word "harm" requires a purpose to harm or knowledge that harm will certainly occur. In her concurrence, Justice O'Connor agreed with this consequences-oriented basis for deciding the case. Noting that the regulation is limited to foreseeable effects on listed species, she concurred because the regulation was also "limited by its terms to actions that actually kill or injure individual animals."<sup>85</sup>

Justice Scalia's dissent vigorously argued that the ESA called for intentional action as a prerequisite to liability. Choosing to interpret "take" as the operative word in the ESA, Justice Scalia recounted various statutory and common law precedents to conclude that "take" implies actions "done directly and intentionally."<sup>86</sup> Turning next to the word "harm,"

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<sup>81</sup> *Id.* at 697. The Court also noted that *Chevron* deference to the agency's reasonable interpretation of "harm" was appropriate because the ESA was not unambiguous. *Id.* at 703 (citing *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842-43 (1984)).

<sup>82</sup> *Id.* at 696 n.9.

<sup>83</sup> *See id.* at 696-98.

<sup>84</sup> *Id.* at 700.

<sup>85</sup> *Id.* at 709 (O'Connor, J., concurring).

<sup>86</sup> *Id.* at 718 (Scalia, J., dissenting).

his dissent interpreted “harm” in light of its nine surrounding words, and concluded that these words all call for “conduct intentionally directed against a particular animal or animals.”<sup>87</sup> This conclusion that “take” and “harm” suggest that intentionality is a necessary condition for liability under the ESA contrasts with the majority’s reasoning, which rested much of its holding on the outcome-oriented language of the government’s regulation.

*B. Applying the Experimental Results to the Court’s Decisions*

Although both of these cases involved statutory ambiguity as to the level of intentionality required for liability, the Court appears to have taken a different approach in each case to arrive at its conclusion about sufficient intentionality. The decision in *Shell* was that liability is triggered when an entity specifically acts for the purpose of disposing of hazardous substances, whereas the decision in *Babbitt* was that foreseeability of death or injury to listed species is sufficient to trigger liability. A question now arises as to how to think about these different approaches and which would be appropriate to which sorts of cases.

In thinking about such questions, the Court must balance a wide array of competing considerations. It considers relevant precedent, apparent congressional intent, the *Chevron* doctrine’s two-step analysis,<sup>88</sup> and a host of other factors. In this article, however, we will not attempt to discuss the full range of such issues. Instead, we focus on just one type of consideration that figured in the two cases discussed above. In *Babbitt* and *Shell*, the litigants and the Court appealed to notions about how intentionality is suggested by statutory language. Our aim is to introduce another consideration that may aid judicial attempts to parse appropriate intentionality from unclear language.

Drawing on the experimental evidence described above, we argue that people’s ordinary criteria for intentional action differ in certain respects from the criteria the Court invoked in

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<sup>87</sup> *Id.* at 720.

<sup>88</sup> *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842-43 (1984) (when Congress has directly spoken to an issue in a statute, the agency must follow Congress’ command, but when a statute is ambiguous, courts must defer to reasonable agency interpretations of the statute).

its decisions. Indeed, the evidence suggests that people's ordinary way of understanding these issues is quite different from the one employed by the Court. It is not just that people's ordinary criteria depart from the Court's criteria in one or another minor detail; rather, people seem to be departing from the Court's criteria in the basic structure of their decision-making process itself.

In the two cases under discussion here, the Court treated questions about whether an entity acts intentionally as quite separate from questions about whether the entity had actually done anything morally harmful or wrong. The Court's reasoning suggested that questions about whether an entity acted intentionally were ultimately to be decided by the mental states of the entity itself, such as whether it had a specific purpose or mere knowledge. After the issue of intentionality is decided, there may then be additional questions about harm and fault, and these questions may play a role in judgments as to whether the entity is liable for any damages, but such issues were thought not to be relevant to the more basic question as to whether the act itself was intentional or unintentional.

So, for example, after *Shell*, an entity can only qualify as an "arranger" under CERCLA to the extent that it intentionally arranges for the disposal of hazardous substances, and that entity can only be said to have acted "intentionally" to the extent that it acted for the relevant purpose.<sup>89</sup> However, the moral status of the environmental harm caused is entirely irrelevant to a determination about whether an entity can be considered an arranger.

As we noted in Part II, people's ordinary judgments do not seem to work this way. People do not seem to create a strict separation between questions of intentionality and questions of morality, such that the latter can never be relevant to the former. They do not seem to set up a single, invariant standard for intentional action that is applied to all cases, whether they be morally good or morally bad. Instead, people seem to treat moral judgments as relevant in some fundamental way to judgments of intentionality. In cases where the agent had knowledge but not purpose, their intentionality judgments seem to vary depending on whether they regard the behavior as morally good or morally bad.

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<sup>89</sup> *Burlington N. & Santa Fe Ry. v. United States (Shell Oil Co.)*, 129 S. Ct. 1870, 1878-80 (2009).

Hence, if people are faced with the question as to whether certain entities “intentionally” arranged for the disposal of hazardous substances, they will not simply pick out some single type of state and decide all cases by checking to see whether the entity has that state. It is not as though they will always require that the agent act for the purpose of disposing, nor will they always regard mere knowledge as sufficient, nor will they take any other state of the agent to always be necessary and sufficient in every case. Instead, people’s intuitions will vary depending on the moral judgment they make about the case at hand. They will take purpose to be necessary in cases where they judge that disposing of hazardous substances is morally good, whereas they will take knowledge to be sufficient in cases where they judge that disposing of hazardous substances is morally bad.<sup>90</sup> Morally neutral cases will lead to a judgment that lies somewhere in between.<sup>91</sup>

Suppose we now apply this approach to the decision the Court faced in *Shell*. We would no longer regard it as adequate to look only at the degree to which Shell showed knowledge or purpose; we would also be concerned with questions about the moral status of the spills and leaks brought about by Shell’s actions. Here, however, one finds a moral consensus in contemporary American society. Congress originally passed CERCLA amid a public outcry over the moral blameworthiness of the corporations that failed to clean up hazardous waste sites,<sup>92</sup> and empirical studies indicate that people continue to attach strong moral blame to the actors who created hazardous waste dumps.<sup>93</sup> Indeed, the Sixth Circuit has permitted courts to consider the “moral contribution” of owners of a hazardous waste disposal site in determining contribution amounts under

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<sup>90</sup> For a review, see Knobe, *supra* note 71.

<sup>91</sup> Fiery Cushman & Alfred Mele, *Intentional Action, Folk Judgments and Stories: Sorting Things Out*, 31 *MIDWEST STUD. IN PHIL.* 184, 187, 199 (2007).

<sup>92</sup> See, e.g., Michael B. Gerrard, *Demons and Angels in Hazardous Waste Regulation: Are Justice, Efficiency, and Democracy Reconcilable?*, 92 *NW. U. L. REV.* 706, 707-13 (1998) (describing the public notion of the “evil polluter” motivating CERCLA’s passage, and arguing that “the blaming system underlying CERCLA has allowed us to visualize the genesis of hazardous waste sites in the actions of a few evil corporations that can be punished and purged”).

<sup>93</sup> See, e.g., James M. Jasper, *The Emotions of Protest: Affective and Reactive Emotions in and around Social Movements*, 13 *SOC. F.* 397, 411 (1998) (describing a hazardous waste dump as a focused environmental threat “yielding a clear perpetrator to blame”).

CERCLA.<sup>94</sup> Applying people's ordinary criteria for intentional action, we would therefore arrive at the conclusion that Shell intentionally arranged for the disposal of hazardous substances and could be held liable for the morally bad environmental damage that resulted.<sup>95</sup>

Turning to the decision in *Babbitt*, we can apply the same basic logic. In that case, the majority determined that knowledge alone would be sufficient to trigger liability, while Justice Scalia's dissent argued that intentional action was necessary and that the logging companies could not be held liable for any environmental damage brought about as a mere side effect. We can now see that the ordinary understanding of intentional action would regard this debate as resting on a false dichotomy. As long as the outcome itself was widely

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<sup>94</sup> United States v. R.W. Meyer, Inc., 932 F.2d 568, 573 (6th Cir. 1991); see also David August Konuch, Note, United States v. R.W. Meyer: *The Sixth Circuit Clarifies Courts' Use of Equitable Discretion in CERCLA Contribution Actions*, 5 TUL. ENVTL. L.J. 673, 680 (1992) (commenting on the *R.W. Meyer* "majority's contention that moral blameworthiness alone can justify forcing a defendant to pay a contribution percentage which is out of proportion to the harm his conduct actually caused").

<sup>95</sup> Indeed, when this question of whether foresight of hazardous waste spillage sufficed for the level of intent required under CERCLA was pressed by the justices at oral argument, Shell's counsel appeared to intuit that knowledge could establish sufficient intent in this case. In other words, she appeared to contradict Shell's theory of the case that interpreted CERCLA as requiring a specific purpose to dispose. This exchange at oral argument began with a question posed by Justice Alito:

What if Shell had a choice between two companies to do the delivery. One would deliver it with no spillage whatsoever, but the other would deliver it with a certain amount, a small amount of spillage. And Shell chose the latter because it was cheaper. Would it not be arranging under those circumstances?

Transcript of Oral Argument at 11, *Burlington N. & Santa Fe Ry. v. United States (Shell Oil Co.)*, 129 S. Ct. 1870 (2009) (No. 07-1607). In essence, Justice Alito precisely described the aforementioned scenarios about the Chairman in the experimental hypotheticals. That is, he was imagining a situation where Shell chose a course that maximized profits (here, saved money), and did so with the foresight or knowledge that its choice would result in harm to the environment.

Strikingly, the linkage between knowledge and intentional action in such cases is so intuitively powerful that Shell's counsel, inconsistent with her own theory, answered that Shell "might well be" liable under Justice Alito's scenario. *Id.* Yet under Shell's theory of arranger liability, Shell should not be liable regardless of whether it chose a cheaper carrier that happened to spill, because it would not have been Shell's specific intent to dispose of the hazardous material. The spillage would have merely been a morally bad foreseeable side effect of Shell's specific purpose to save money. In answering that Shell might well be liable if it did choose a cheaper carrier but contemplated disposal as a part of the transaction, however, Shell's counsel effectively endorsed the Ninth Circuit's "broader" arranger liability theory and the intuitive judgment about Shell's intentionality predicted by the aforementioned research. Over the remainder of oral argument, Shell's counsel seemingly recognized the inconsistency of her response and did backtrack, but later conceded that "there might be some case in which you might attribute knowledge, infer intent from knowledge." *Id.* at 17.

judged a morally bad one, people's ordinary understanding might say *both* that knowledge alone was sufficient *and* that intentional action was necessary. After all, people's ordinary understanding would say that knowledge was sufficient for intentional action in cases in which the outcome was sufficiently bad. In fact, the evidence does suggest that people regard the killing of endangered species as morally bad,<sup>96</sup> and people's ordinary understanding of the morality of harming endangered and threatened species seems therefore to leave us with the conclusion that the logging companies would be intentionally harming the wildlife if they did so as a foreseeable side effect of attaining some other goal.

Overall, then, people's ordinary understanding seems to differ on a truly fundamental level from the criteria invoked in the Court's recent decisions. People do not appear to regard purpose as a necessary condition for intentional action. Instead, their judgments are affected by their beliefs about the moral status of the action itself, and in cases where the consequence of the action appears to be morally bad, they are willing to take knowledge alone as sufficient for inferring intentionality.

In making this argument, we do not mean to suggest that the Court should take facts about people's ordinary understanding of intentionality to be decisive in cases like the ones we have been discussing here. The Court often appropriately finds that various other considerations, such as *Chevron* deference, stare decisis, or policy arguments, provide strong reasons to depart from people's ordinary understanding of particular words or concepts. However, if such a situation does arise, it would be best to explicitly acknowledge the need to shift away from the practice of using words as they are ordinarily understood and to explain why such a shift would be justified. Absent some special reason, it seems that words like "intentionally" should be understood to have just the same

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<sup>96</sup> For instance, many commentators have cited the moral justification for protection of species through the Endangered Species Act. See, e.g., John Copeland Nagle, *Playing Noah*, 82 MINN. L. REV. 1171, 1178 (1998) ("[T]he case for protecting all species must depend on moral, religious, or ethical arguments."); Zygmunt J.B. Plater, *The Embattled Social Utilities of the Endangered Species Act—A Noah Presumption and Caution Against Putting Gasmasks on Canaries in the Coalmine*, 27 ENVTL. L. 845, 851 n.26 (1997) ("There is a deeply developed moral...argument for preserving endangered species, and this has always been perceived as laying close to the essence of the Act."); Andrew E. Wetzler, Note, *The Ethical Underpinnings of the Endangered Species Act*, 13 VA. ENVTL. L.J. 145, 171 (1993) ("[T]he ESA is, at least in part, a statute that recognizes the moral obligation of humanity to protect species . . .").

meanings they do in ordinary English, and the best way to uncover these meanings is through systematic empirical research.

#### CONCLUSION

In this article, we have examined the implications of research in experimental philosophy for two case studies in environmental law. We found that the Court appeared to be applying the concept of intentional action in different ways in the different cases but that ordinary people show a surprisingly consistent, complex and perhaps universal system of criteria. These criteria involve a more holistic approach to the understanding of human action. People's intuitions about what an agent did "intentionally" do not merely take into account that agent's principal purpose. Instead, people look at the agent's purpose, at the side effects that came along with an attempt to bring about that purpose, and at the moral status of the outcomes that actually resulted. To the extent that the Court takes into account the concept of intentional action in a way that accords more with people's ordinary folk understanding, it will adopt a broader notion of what it means for an agent to intentionally bring about environmental harm.

But the point does not stop there. These questions in environmental law can be seen as just one case study of a far more general phenomenon. The concept of intentional action plays a central role in numerous areas of the law, and in each of these areas, courts are faced with difficult decisions about the precise criteria under which an agent should be said to have acted "intentionally" or "unintentionally." Future research can draw on empirical data to shed light on the ways in which people ordinarily make sense of this whole range of different cases. Though such empirical research would of course not become decisive in legal determinations, it would add an important and frequently overlooked consideration to the existing debate on these complex legal issues.