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Eliza L. Quattlebaum

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GETTING AWAY WITH MURDER: HOW CALIFORNIA STATE
LAW DETERMINED RECOVERY IN FIRST ROUNDUP
CANCER CASE *JOHNSON V. MONSANTO CO.*

I. A MATTER OF LIFE AND DEATH?: AN INTRODUCTION TO THE
ROUNDUP DEBATE

In 1974, the agrochemical giant Monsanto Company (Monsanto) introduced the herbicide, Roundup, into the market.¹ Over the years, Roundup's popularity has grown, thereby increasing the United States' use of the herbicide.² In June of 2018, Monsanto was bought out by one of the largest pharmaceutical companies in the world, Bayer AG.³ The active ingredient in Roundup is the chemical glyphosate.⁴ Glyphosate is a broad-spectrum herbicide commonly used in agriculture, landscaping, and other settings to combat burdensome weeds.⁵ Roundup's popularity is due, in part, to Monsanto's introduction of 'Roundup Ready' crop seeds, which are genetically modified to withstand the glyphosate chemical, allowing it to be sprayed freely.⁶ These genetically modified crops are convenient for the farming industry, but the widespread and

1. Gary Heiling, *Killing weeds in the garden with glyphosate*, MICH. ST. U. EXTENSION (July 30, 2012), https://www.canr.msu.edu/news/killing_weeds_in_the_garden_with_glyphosate (explaining Roundup product origin).

2. Lorraine Chow, *Monsanto's Roundup - Most Popular Weed Killer in U.S. - 'Probably' Causes Cancer, WHO Report Says*, ECOWATCH (Mar. 23, 2015), <https://www.ecowatch.com/monsantos-roundup-most-popular-weed-killer-in-u-s-probably-causes-canc-1882023016.html> (emphasizing Roundup's popularity in United States).

3. Ruth Bender, *How Bayer-Monsanto Became One of the Worst Corporate Deals—in 12 Charts*, WALL ST. J. (Aug. 28, 2019, 11:12 AM), <https://www.wsj.com/articles/how-bayer-monsanto-became-one-of-the-worst-corporate-deals-in-12-charts-11567001577> (discussing Bayer AG's attempt to become world's largest crop-science business). For the purposes of clarification, Bayer AG is now the parent company and owner. Monsanto is no longer the company name, although it was used in court and will be used throughout this Note. *See id.* (defining Bayer AG relationship to Monsanto).

4. *See* Heiling, *supra* note 1 (stating Roundup consists of forty-one percent glyphosate).

5. *What is Glyphosate Herbicide*, BAUM HEDLUND, <https://www.baumhedlundlaw.com/toxic-tort-law/monsanto-roundup-lawsuit/what-is-glyphosate-herbicide/> (last visited March 16, 2021) (defining glyphosate). Broad-spectrum means that an herbicide is nonselective and will kill all plant life within the territory sprayed. Marie Iannotti, *Controlling Weeds and Unwanted Plants With Herbicides*, THE SPRUCE (Oct. 5, 2019), <https://www.thespruce.com/controlling-weeds-and-unwanted-plants-1403539> (expanding on broad-spectrum herbicide definition).

6. Kevin Yuan, *Monsanto Corporation: Roundup Pros and Cons*, THE PUB. HEALTH ADVOC. (Mar. 2, 2014), <https://pha.berkeley.edu/2014/03/02/monsanto-corporation-roundup-pros-and-cons/> (discussing Roundup's development of glyphosate-resistant crops).

frequent use of Roundup may be cause for concern.⁷ Researchers have uncovered evidence that, overall, Roundup is detrimental to the environment.⁸ As a result of its widespread use, traces of glyphosate have been found in animals, water, soil, and even humans.⁹

While an extremely effective and popular product, Roundup is at the forefront of an ongoing debate concerning whether glyphosate is carcinogenic.¹⁰ According to the Environmental Protection Agency (EPA), however, glyphosate likely is not a human carcinogen.¹¹ The EPA conducts registration reviews every fifteen years in order to reassess the safety of all registered herbicides.¹² As of January 2020, the EPA stands by its assertion that glyphosate poses no risk to human health as long as it is used as directed on the label.¹³ In contrast, the International Agency for Research on Cancer (IARC) found that there is “strong evidence for genotoxicity” in glyphosate, demonstrating its possible cancer causing ability through gene mutation.¹⁴ Based on limited evidence of cancer in humans and sufficient evidence of cancer in animals, IARC categorized glyphosate as a “probable carcinogen.”¹⁵ This is IARC’s least common classification, only given to about ten percent of substances assessed.¹⁶ These diametrically opposed conclusions, from

7. *See id.* (introducing potential issues caused by Roundup Ready crops).

8. *Id.* (noting negative effects on environment resulting from Roundup use).

9. Ramdas Kanissery ET AL., *Glyphosate: Its Environmental Persistence and Impact on Crop Health and Nutrition*, PLANTS (BASEL) 499 (Nov. 13, 2019) (reporting glyphosate detection study results).

10. *See* Dan Charles, *Safe Or Scary? The Shifting Reputation of Glyphosate, AKA Roundup*, NAT’L. PUB. RADIO (May 30, 2019, 5:00 AM), <https://www.npr.org/sections/thesalt/2019/05/30/727914874/safe-or-scary-the-shifting-reputation-of-glyphosate-aka-roundup> (stating different conclusions from various studies on glyphosate).

11. *Glyphosate*, U.S. ENVTL. PROTECTION AGENCY, <https://www.epa.gov/ingredients-used-pesticide-products/glyphosate> (last visited Sept. 12, 2020) (discussing EPA finding that glyphosate poses no human health risk).

12. *Id.* (acknowledging EPA registration review process).

13. *See id.* (reaffirming original conclusion after review).

14. *IARC Monograph on Glyphosate*, WHO, <https://www.iarc.fr/featured-news/media-centre-iarc-news-glyphosate/> (last visited Sept. 14, 2020) (internal quotations omitted) (outlining IARC glyphosate findings). Genotoxicity refers to certain chemicals’ ability to harm genetic material, sometimes leading to cancer. Reginald Davey, *What is Genotoxicity Testing?*, NEWS MED. LIFE SCI., <https://www.news-medical.net/life-sciences/What-is-Genotoxicity-Testing.aspx> (last updated Mar. 30, 2020) (defining genotoxicity).

15. *IARC Monograph on Glyphosate*, *supra* note 14 (explaining IARC classification of glyphosate toxicity).

16. *See Agents Classified by the IARC Monographs, Volumes 1-128*, WHO, <https://monographs.iarc.fr/agents-classified-by-the-iarc/> (last updated Nov. 27, 2020) (emphasizing rarity of probable carcinogen classification).

two of the largest scientific bodies in the world, illustrate the divide among experts and the resulting uncertainty regarding glyphosate's potential link to cancer.¹⁷

This issue has gained significant attention due to upwards of forty-two thousand lawsuits filed against Monsanto.¹⁸ The pending lawsuits claim that Roundup caused users to develop cancer, specifically non-Hodgkin's lymphoma.¹⁹ The first of these Roundup cancer lawsuits to proceed to trial was *Johnson v. Monsanto Co.*²⁰

This Note explores the environmental and legislative issues surrounding *Johnson*, as well as the implications of the groundbreaking victory over such a powerful and controversial corporation.²¹ Part II of this Note outlines the important facts of *Johnson*, the procedural history of the case, and the appellate court's holding.²² Part III provides background information regarding California state law, punitive and compensatory damage awards, the debate concerning whether glyphosate is a carcinogen, and the ongoing environmental studies.²³ Part IV outlines the California Court of Appeal First Appellate District's opinion in *Johnson*.²⁴ A review and analysis of the court's decision is found in Part V of this Note.²⁵ Finally, Part VI discusses the potential impact of *Johnson* on a multitude of similar cases, as well as glyphosate use in general.²⁶

17. See Stacy Malkan, *Glyphosate Fact Sheet: Cancer and Other Health Concerns*, U.S. RIGHT TO KNOW (Oct. 1, 2020), <https://usrtk.org/pesticides/glyphosate-health-concerns/> (noting effects of conflicting conclusions).

18. See *id.* (acknowledging numerous lawsuits filed against Monsanto).

19. *Id.* (explaining claims of over 42,000 lawsuits filed against Monsanto). Non-Hodgkin's lymphoma is a cancer with many subtypes that affects lymph nodes and many other organs, such as the skin. *What Is Non-Hodgkin Lymphoma?*, AM. CANCER SOC'Y, <https://www.cancer.org/cancer/non-hodgkin-lymphoma/about/what-is-non-hodgkin-lymphoma.html> (last updated Aug. 1, 2018) (defining non-Hodgkin's lymphoma).

20. 52 Cal. App. 5th 434 (Cal. Ct. App. 2020) (summarizing California lawsuit against Monsanto regarding Roundup pesticide's alleged cancerous effects).

21. For a discussion of the legislative and environmental issues in *Johnson* and their consequential effects on Roundup use around the world, see *infra* notes 84-114 and accompanying text.

22. For a discussion of the facts, procedural history, and holding of *Johnson*, see *infra* notes 27-49 and accompanying text.

23. For a further discussion of opposing opinions surrounding glyphosate and background of California state law regarding damage awards, see *infra* notes 50-109 and accompanying text.

24. For a summary of the appellate court's reasoning, see *infra* notes 110-47 and accompanying text.

25. For a critical analysis of the appellate court's reasoning in *Johnson*, see *infra* notes 148-80 and accompanying text.

26. For a discussion on the potential impact of *Johnson*, see *infra* notes 181-200 and accompanying text.

II. KNOCKING ON DEATH'S DOOR: FACTS OF *JOHNSON V. MONSANTO CO.*

From 2012 to 2016, Dewayne Johnson worked as the integrated pest manager at a school in the Benicia Unified School District in California.²⁷ As part of his job requirements, Johnson frequently used Monsanto products — Roundup and Ranger Pro — and received certification for their safe application.²⁸ In April 2014, when Johnson was applying Ranger Pro, the hose burst and soaked Johnson through his protective gear.²⁹ After this exposure, Johnson began to develop a skin condition and six months later, his doctors diagnosed him with non-Hodgkin's lymphoma.³⁰ Johnson called Monsanto's hotline on two separate occasions to inquire as to whether his diagnosis could be connected to his exposure to Roundup and Ranger Pro at work.³¹ The hotline representative informed Johnson that someone from Monsanto would return his call, but he never received any such communication.³² After his quality of life began to decrease, Johnson filed a product liability lawsuit against Monsanto in 2016, which reached trial in 2018.³³

At trial, Johnson sought recovery based on theories of design defect and Monsanto's lack of adequate warning regarding Roundup's potential danger.³⁴ In August 2018, Johnson became the first plaintiff to succeed on these claims at trial against Monsanto.³⁵ A unanimous jury awarded Johnson \$289.25 million in total, consisting of \$39.3 million in compensatory damages and \$250 million in punitive damages.³⁶ Monsanto filed a motion for a new

27. *Johnson*, 52 Cal. App. 5th at 437, 440 (explaining Johnson's career before lawsuit).

28. *Id.* at 438 (emphasizing Johnson's training in Monsanto products' correct usages).

29. *Id.* (describing Roundup incident details at Johnson's workplace). During the incident, Johnson's "skin, face, neck, and head" were saturated with Ranger Pro. *Id.* (noting extent of exposure).

30. *Id.* at 439 (stating Johnson's diagnosis from his doctor).

31. *Id.* (discussing Johnson's multiple attempts to get in touch with Monsanto).

32. *Johnson*, 52 Cal. App. 5th at 439 (emphasizing lack of communication from Monsanto).

33. *Id.* at 440 (connecting Johnson's injury to lawsuit against Monsanto).

34. *Id.* (outlining Johnson's theories of strict liability and negligent failure to warn).

35. *See id.* at 444, 448 (ruling in favor of Johnson on all liability theories).

36. *Id.* at 444 (stating Johnson's damages awarded by jury). The compensatory damage award consisted of four million dollars for past noneconomic losses and thirty-three million dollars for future noneconomic losses based on Johnson's argument that he should receive one million dollars for every year, up to the maxi-

trial, claiming the jury's award was excessive.³⁷ The company also filed a motion for judgement notwithstanding the verdict, asserting no reasonable jury would have reached the same conclusion and that Johnson should not receive any punitive damages.³⁸ The trial court denied Monsanto's motion for judgment notwithstanding the verdict, finding the jury's conclusion reasonable and sufficient to support an award of punitive damage.³⁹ Accordingly, the trial court upheld the jury's conclusion that Monsanto showed malice by marketing a product with a potential link to non-Hodgkin's lymphoma.⁴⁰

The court did, however, find the amount of punitive damages the jury awarded could not exceed the compensatory damages.⁴¹ Otherwise, the damages would be excessive and violate Monsanto's constitutional due process rights.⁴² The trial court consequently reduced the punitive damages to match the compensatory damages, which lowered Johnson's total award to seventy-eight million dollars.⁴³ Monsanto appealed again, still unsatisfied with the size of the award, which allowed Johnson to cross-appeal, challenging the reduction of punitive damages.⁴⁴ The court expedited the process and granted Johnson's motion for calendar preference due to his doctors' statement that the cancer had progressed so significantly

mum average estimated life expectancy for a forty-six year old male. *Id.* at 447-48 (detailing breakdown of compensatory damage award).

37. *See Johnson*, 52 Cal. App. 5th at 444 (explaining Monsanto's motion for new trial).

38. *Id.* (discussing Monsanto's second motion arguing against punitive damages).

39. *See id.* (explaining trial court's reason for rejecting Monsanto's first motion).

40. *Id.* (summarizing jury's conclusion of corporate malice).

41. *Id.* at 444-45 (discussing trial court's reasoning for reducing punitive damage award amount). The Fourteenth Amendment guarantee to due process in the Constitution prohibits "grossly excessive" damage awards. *Constitutional Limits on Punitive Damages Awards: An Analysis of Supreme Court Precedent*, EVERYCRSREPORT, <https://www.everycrsreport.com/reports/RL33773.html> (last visited March 18, 2021) (exploring constitutional due process of law protection).

42. *See Johnson*, 52 Cal. App. 5th at 445 (discussing trial court concerns over excessive penalty).

43. *Johnson*, 52 Cal. App. 5th at 449 (reducing Plaintiff's damages); *see also* Carey Gillam, *Monsanto Roundup & Dicamba Trial Tracker*, U.S. RIGHT TO KNOW <https://usrtk.org/monsanto-roundup-trial-tracker-index/> (last updated March 10, 2021) (stating trial court's total damage award amount after reduction). The trial court also denied Monsanto's motion for a new trial, as long as Johnson agreed to accept the reduced award. *Johnson*, 52 Cal. App. 5th at 445 (explaining trial court's reasoning for rejecting Monsanto's second motion).

44. *Johnson*, 52 Cal. App. 5th at 445 (describing aftermath of trial court's decision).

that he may not live for more than two years to see the trial through.⁴⁵

On July 20, 2020, the California Court of Appeal First Appellate District ruled in favor of Johnson.⁴⁶ Based on evidence of his shortened life expectancy, however, it reduced the amount of the future noneconomic damages portion of his compensatory damages from thirty-three million to four million dollars.⁴⁷ The appellate court also found that Johnson was entitled to punitive damages, but the court again reduced the amount to match the compensatory damage award to protect Monsanto's constitutional due process rights.⁴⁸ This slashed both the compensatory and punitive damage awards to \$10.25 million each, totaling about \$20.5 million, a small fraction of his original \$289.25 million dollar award.⁴⁹

III. WORTH MORE ALIVE THAN DEAD: BACKGROUND ON CALCULATION OF DAMAGE AWARDS AND THE SCIENTIFIC BATTLE SURROUNDING GLYPHOSATE

In cases involving personal injury, the goal of awarding compensatory damages is to make the victim whole by theoretically putting them in the position they were in before an incident occurred.⁵⁰ California tort law, however, does not allow compensation for a shortened life expectancy.⁵¹ This prohibition is premised on the idea that courts should not compensate victims for future harm they are not guaranteed to suffer.⁵² The purpose behind pu-

45. *See id.* at 445, 448 (granting Johnson calendar preference due to life expectancy). Calendar preference allows for an expedited appeal schedule in California. *Motion for Calendar Preference and Proposed Briefing Schedule*, U.S. RIGHT TO KNOW, <https://usrtk.org/wp-content/uploads/2018/12/Johnson-motion-for-calendar-preference.pdf> (last visited Sept. 28, 2020) (defining calendar preference).

46. *See Johnson*, 52 Cal. App. 5th at 436 (stating appellate court's decision).

47. *Id.* at 454 (noting appellate court's reasoning for further reducing compensatory damage award).

48. *Id.* at 455 (finding court must further reduce punitive damages to comply with fourteenth amendment).

49. *See id.* at 463 (concluding total amount of damages). Total compensatory damages came to a total of \$10.25 million based on four million dollars for future noneconomic losses, four million dollars for past noneconomic losses, \$819,883 for past economic losses, and \$1.43 million for future economic losses. *Id.* at 446-48 (breaking down compensatory damages).

50. Gloria Belgrad, *Compensation for Negligently Shortened Life Expectancy*, 29 MD. L. REV. 24, 24 (1969) (discussing reasons for awarding compensatory damages to plaintiffs).

51. *See Johnson*, 52 Cal. App. 5th at 452 (reiterating inability to recover for shortened life expectancy under California law).

52. *Id.* at 454 (discussing reasoning behind disallowing recovery for shortened life expectancy). For a discussion of California's lack of compensation for shortened life expectancy, see *infra* notes 71-76 and accompanying text.

nitive damages is to punish the negligent conduct of culpable defendants.⁵³ The Supreme Court has ruled that for an award of punitive damages to be constitutional, it must not be “grossly excessive.”⁵⁴

A. Fault of Defendant for Punitive Damage Award

California Civil Code 3294 allows a jury to award punitive damages where a plaintiff provides “clear and convincing evidence that the defendant has been guilty of oppression, fraud, or malice.”⁵⁵ In 1985, the California Court of Appeal for the Sixth Appellate District found evidence of malice in *West v. Johnson & Johnson Products, Inc.*⁵⁶ The court held that where adequate testing would identify the relationship between use of Johnson & Johnson’s tampon products and toxic shock syndrome, there was substantial evidence that the defendant “acted in conscious disregard of the safety of others.”⁵⁷ Two years later, the California legislature redefined the term “malice” as used in California Civil Code § 3294.⁵⁸ Malice is currently defined as “despicable conduct which is carried on by the defendant with a willful and conscious disregard of the rights or safety of others.”⁵⁹

California case law explored the boundaries of this new definition as it applies to product manufacturers in *Echeverria v. Johnson & Johnson*.⁶⁰ In *Echeverria*, a woman developed ovarian cancer after long-term use of baby powder containing talc, wherein the California Court of Appeal for the Second Appellate District held that the manufacturer knew of the possible link between talc and cancer.⁶¹ The court determined malice could not be shown because it was

53. Daniel Liberto, *Punitive Damages*, INVESTOPEdia, <https://www.investopedia.com/terms/p/punitive-damages.asp> (last updated July 31, 2019) (stating traditional purpose behind punitive damages).

54. *Constitutional Limits on Punitive Damages Awards: An Analysis of Supreme Court Precedent*, *supra* note 41 (exploring Supreme Court decisions awarding punitive damages).

55. CAL. CIV. CODE § 3294(a) (1993) (defining when exemplary damages are allowable in actions for breach of duty not arising from contract).

56. 174 Cal. App. 3d 831, 875 (Cal. Ct. App. 1985) (discussing sufficient evidence for finding corporate malice).

57. *Id.* at 869 (connecting Johnson & Johnson’s inadequate testing to conscious disregard of others’ safety).

58. CAL. CIV. CODE § 3294(c)(1) (1993); *see Johnson*, 52 Cal. App. 5th at 456 (explaining amendment to malice’s definition in § 3294(c)(1)).

59. CAL. CIV. CODE § 3294(c)(1) (1993) (defining malice).

60. 37 Cal. App. 5th 292, 296-97 (Cal. Ct. App. 2019) (delineating background of case).

61. *Id.* at 297-98 (concluding manufacturer knew of possible link). Further, the appellate court held that a jury could reasonably find the manufacturer took

“undisputed that there has not been direct, conclusive evidence establishing genital talc use causes ovarian cancer.”⁶²

B. Recovery of Future Noneconomic Damages

In the landmark case *Seffert v. Los Angeles Transit Lines*,⁶³ the Supreme Court of California considered when, if ever, it is appropriate for appellate courts to interfere with the amount of damages awarded by a jury.⁶⁴ The plaintiff was involved in a serious accident with a Los Angeles Transit Line (LA Transit) bus, resulting in severe, lifelong injuries.⁶⁵ The jury awarded the plaintiff all the claimed damages, and the trial court judge denied LA Transit’s motion for a new trial on a claim of excessive damages.⁶⁶ The California Supreme Court held that an appellate court may intervene where a judgement is excessive if the verdict “shocks the conscience and suggests passion, prejudice or corruption on the part of the jury.”⁶⁷

The California Court of Appeal for the Fourth District affirmed this standard in *Buell-Wilson v. Ford Motor Co.*⁶⁸ In this case, the plaintiff brought a product liability action against the manufacturer of her Ford SUV after an accident caused her car’s roof to cave in, leaving her paraplegic.⁶⁹ The jury award was thirteen times the amount that counsel suggested as fair and reasonable, which the appellate court deemed as compelling evidence that the jury acted out of passion or prejudice.⁷⁰ Additionally, the court in *Buell-Wilson* found the damage award excessive even after a reduction,

steps to avoid the conclusion. *Id.* at 333 (demonstrating manufacturer actively avoided carcinogen characterization by attacking or discrediting studies).

62. *Id.* at 333 (finding insufficient evidence for punitive damages because there was no universally accepted declaration of talc’s link to cancer).

63. 56 Cal. 2d 498, 506-07 (1961) (addressing appellate court boundaries for damage award reevaluation).

64. *Id.* at 507 (discussing appellate court’s role in determining whether damages are excessive). Great deference is given to the jury’s award and to a trial court’s denial of a motion for a new trial because juries hear witnesses and see the injury and impairment resulting from a situation. *Id.* (explaining appellate court’s hesitation to interfere with damage award).

65. *Id.* at 501 (outlining facts of case).

66. *Id.* (stating outcome of trial).

67. *Id.* at 507 (establishing standard for determining whether appellate court can impinge on damage award).

68. 141 Cal. App. 4th 525, 572 (Cal. Ct. App. 2006) (exemplifying situation where appellate court may find damage award excessive).

69. *Id.* at 533 (discussing facts of case).

70. *Id.* at 553 (explaining why appellate court found plaintiff’s award excessive).

because the amount was disproportionate to the plaintiff's remaining years of life.⁷¹

To recover future noneconomic damages, a victim must prove they are "reasonably certain to suffer harm."⁷² In *Bigler-Engler v. Breg, Inc.*,⁷³ for example, a high school student suffered a serious knee injury resulting from a medical procedure and the jury awarded noneconomic damages.⁷⁴ Although the appellate court acknowledged the plaintiff's suffering, it noted her health improved significantly by the time of trial.⁷⁵ The court found nothing to suggest she would experience "a significant future disability, shortened life expectancy, inability to succeed professionally, or a distrust of doctors or other fiduciary advisors[.]" so the plaintiff's award was reduced to match what she was reasonably expected to suffer over the rest of her lifetime.⁷⁶

C. Ratio for Compensatory and Punitive Damages

The Due Process Clause of the Fourteenth Amendment seeks to bar grossly excessive punishment.⁷⁷ The Supreme Court laid out three factors for determining the constitutional upper limit of punitive damages in *State Farm Mut. Auto. Ins. Co. v. Campbell*.⁷⁸ The first factor is the "degree of reprehensibility of the defendant's misconduct."⁷⁹ The second factor is the "disparity between the harm the plaintiff suffered and the punitive damages award."⁸⁰ The final factor is the "difference between the punitive damages awarded by the

71. *Id.* at 550 (giving additional reason for finding damage award excessive).

72. Judicial Council of California Civil Jury Instruction 3905A (CACI 3905A) (providing jury instruction for determining noneconomic damage amount). There is no fixed standard to determine amount; CACI 3905A states "[t]o recover for future pain, mental suffering, loss of enjoyment of life, disfigurement, physical impairment, inconvenience, grief, anxiety, humiliation, and emotional distress," the plaintiff must prove that they are "reasonably certain to suffer that harm." *Id.* (providing jury instruction).

73. 7 Cal. App. 5th 276, 284 (Cal. Ct. App. 2017) (finding noneconomic future damage award disproportionate to victim's amount of future suffering).

74. *Id.* (expressing relevant case facts).

75. *Id.* at 302 (highlighting plaintiff's status at time of trial).

76. *Id.* (discussing plaintiff's lack of future consequences from injury and court's adjustment to award).

77. *Constitutional Limits on Punitive Damages Awards: An Analysis of Supreme Court Precedent*, *supra* note 41 (emphasizing Due Process Clause prevents excessive punishment).

78. 538 U.S. 408, 418 (2003) (outlining considerations for punitive damages analysis).

79. *Id.* at 418 (explaining Supreme Court intended first factor to punish or deter further than compensatory damages for particularly reprehensible conduct).

80. *Id.* (stating second factor suggests fair ratio to satisfy due process).

jury and the awards authorized in comparable cases.”⁸¹ Although the Court found no firm rule, it held that a single digit ratio between punitive and compensatory damages is generally not a due process violation.⁸² The Court determined that “[w]hen compensatory damages are substantial, then a lesser ratio, perhaps only equal to compensatory damages, can reach the outermost limit of the due process guarantee.”⁸³

D. Glyphosate Studies and Litigation

Since 1974, Americans alone have sprayed 3.5 billion pounds of glyphosate, while people across the world have sprayed 18.9 billion pounds of the chemical.⁸⁴ Two-thirds of this total glyphosate usage has occurred since 1996, the year Monsanto introduced modified Roundup Ready crops resistant to glyphosate.⁸⁵ This led to much heavier use of the herbicide since it could be used without fear of unintentionally killing all crops it was sprayed on.⁸⁶ Monsanto promised these genetically modified crops were environmentally safe and would produce more yield than the standard crop, while causing no harm to humans or animals.⁸⁷ A few studies, however, have demonstrated possible toxicity to livestock where glyphosate is sprayed on farmland and feed.⁸⁸ These findings are not conclusive, but scientists are conducting more studies concerning effects on both animals and humans, who ingest byproducts from these animals.⁸⁹

81. *Id.* (providing third factor that Supreme Court determined).

82. *Id.* at 410 (suggesting single digit ratio comports with due process).

83. *State Farm Mut. Auto. Ins. Co.*, 538 U.S. at 425 (quoting Court in determining bounds of due process regarding ratio of damages).

84. *How much glyphosate is used worldwide?*, GLOBAL GLYPHOSATE STUDY, https://glyphostatstudy.org/hrf_fa/qa/how-much-glyphosate-is-used-worldwide/ (last visited Oct. 10, 2020) (giving numbers concerning glyphosate’s prevalence).

85. *See id.* (indicating majority of glyphosate spraying resulted from popularity of genetically modified crops).

86. Lindsey Konkel, *What’s the world’s most widely used herbicide doing to tiny critters?*, ENVTL. HEALTH NEWS (Mar. 18, 2019), <https://www.ehn.org/whats-the-worlds-most-widely-used-herbicide-doing-to-tiny-critters-2631750527.html> (noting reason for increased herbicide usage).

87. *See id.* (explaining purposes of Monsanto’s Roundup Ready crops).

88. Lauren Sandford, *The Health and Environmental Effects of the Controversial Herbicide, Roundup*, ONE GREEN PLANET, <https://www.onegreenplanet.org/environment/health-environmental-effects-controversial-herbicide-roundup/> (last visited March 19, 2021) (stating findings concerning consumption of glyphosate-treated feed on animal wildlife).

89. *Id.* (acknowledging ongoing testing to find effect on animal health).

The overflow from glyphosate-treated farms can also negatively impact nearby ecosystems.⁹⁰ The runoff can be problematic for water supply systems and can also contaminate lakes, rivers, and streams.⁹¹ Behavioral changes in some mollusks, insects, and fish may result from the contamination of these aquatic environments as well.⁹² Researchers are just beginning to investigate the environmental effects of glyphosate more thoroughly, but many believe the problem lies less in the chemical's actual toxicity and more with the scale of its use following the introduction of these genetically engineered crops.⁹³

As for glyphosate's effects on human health, the EPA's regulatory review of the substance concluded it is not likely carcinogenic.⁹⁴ Alternatively, the IARC classified glyphosate as a "probable carcinogen to humans."⁹⁵ IARC's classification led to the California Office of Environmental Health Hazard Assessment (OEHHA) adding glyphosate to Proposition 65 (Prop 65) as a cancerous chemical.⁹⁶ In 2017, plaintiffs — including Monsanto and the National Association of Wheat Growers — challenged this warning under the First Amendment.⁹⁷ In *Nat'l Ass'n of Wheat Growers v. Becerra*,⁹⁸ plaintiffs claimed that the warning requirement would force them to make highly controversial "false and misleading"

90. *Id.* (showing environmental issue resulting from glyphosate runoff).

91. *Id.* (emphasizing effect on neighboring ecosystems).

92. Konkel, *supra* note 86 (finding possible link to various developmental issues in aquatic creatures with glyphosate exposure). Contamination can especially affect amphibians, since they absorb water-borne chemicals through their skin; studies show deformities of tadpoles and a possible decline in the species, although there has been no direct impact testing. *The Environmental Impacts of Glyphosate*, FRIENDS OF THE EARTH EUROPE, 1, 9 (2013), https://www.foeeurope.org/sites/default/files/press_releases/foee_5_environmental_impacts_glyphosate.pdf (emphasizing possible effects on amphibians in particular).

93. Konkel, *supra* note 86 (proposing amount of glyphosate sprayed is leading to environmental effects).

94. For more information on EPA's glyphosate conclusion see *supra* notes 11-13 and accompanying text.

95. *IARC Monograph on Glyphosate*, *supra* note 14 (quoting IARC classification). For more information on IARC's glyphosate conclusion see *supra* notes 14-16 and accompanying text.

96. *Court Bars CA Prop 65 Glyphosate Warning Requirement*, NAT'L L. REV. (June 26, 2020), <https://www.natlawreview.com/article/court-bars-ca-prop-65-glyphosate-warning-requirement> (describing process of adding glyphosate to Proposition 65). Proposition 65 is a law that requires a clear and reasonable warning to individuals by a person in the course of doing business that California considers a chemical to be carcinogenic or a reproductive toxicant. *Id.* (defining purpose of Proposition 65).

97. *Id.* (stating plaintiffs' challenge against Prop 65 warning).

98. 468 F. Supp. 3d 1247, 1252 (E.D. Cal. 2020) (exploring controversy over OEHHA's glyphosate warning).

statements.⁹⁹ In 2020, a judge permanently enjoined Prop 65's warning against glyphosate.¹⁰⁰

Bayer AG has faced thousands of pending lawsuits concerning non-Hodgkin's lymphoma cases caused by Roundup ever since the Monsanto acquisition.¹⁰¹ After Johnson's original trial in 2018, juries heard two more cases claiming Roundup caused plaintiffs to develop cancer.¹⁰² The first was *Hardeman v. Monsanto Co.*¹⁰³ In that case, a unanimous jury found that Roundup was a "substantial factor" in causing plaintiff's non-Hodgkin's lymphoma and awarded the plaintiff eighty million dollars in damages.¹⁰⁴ In July of 2019, the judge upheld the \$5.27 million awarded to Hardeman in compensatory damages but reduced punitive damages from seventy-five million dollars to twenty million dollars, finding the ratio was unconstitutional.¹⁰⁵ The second case was *Pilliod v. Monsanto Co.*,¹⁰⁶ concerning a married couple in their seventies, both of whom developed non-Hodgkin's lymphoma after many years of Roundup use around their three properties.¹⁰⁷ A jury found again that Roundup was a substantial factor in causing the couple's cancer and that Monsanto knew the risks associated with Roundup but failed to warn users of its dangers.¹⁰⁸ The jury awarded more than

99. *Id.* (explaining litigation occurring over glyphosate toxicity debate).

100. *Court Bars CA Prop 65 Glyphosate Warning Requirement*, *supra* note 96 (stating outcome of case).

101. Gillam, *supra* note 43 (discussing Bayer AG's issue with lawsuits after buying Monsanto Co.).

102. Patricia Cohen, *\$2 Billion Verdict Against Monsanto Is Third to Find Roundup Caused Cancer*, N.Y. TIMES (May 13, 2019), <https://www.nytimes.com/2019/05/13/business/monsanto-roundup-cancer-verdict.html> (discussing similar cases following *Johnson*).

103. 216 F. Supp. 3d 1037 (N.D. Cal. 2016) (first case after *Johnson* to hold Roundup contributed to plaintiff's cancer).

104. Mihir Zaveri, *Monsanto Weedkiller Roundup Was 'Substantial Factor' in Causing Man's Cancer, Jury says*, N.Y. TIMES (Mar. 19, 2019), <https://www.nytimes.com/2019/03/19/business/monsanto-roundup-cancer.html> (stating jury verdict in second Roundup case to go to trial).

105. Jonathan Stempel, *U.S. judge slashes Roundup jury award to \$25.3 Million; Bayer still plans to appeal*, REUTERS (July 15, 2019, 4:34 PM), <https://www.reuters.com/article/us-bayer-glyphosate-lawsuit/u-s-judge-slashes-roundup-jury-award-to-25-3-million-bayer-still-plans-to-appeal-idUSKCN1UA2CH> (discussing judge's reduction of jury award).

106. *See generally*, Brief for Respondents at 132, *Pilliod v. Monsanto Co.*, No. A158228, 2020 WL 1986599 (Cal. Ct. App. 2020) (finding Monsanto failed to warn against risk of Roundup).

107. *Id.* (finding against Monsanto); *see also* Associated Press, *Judge reduces \$2B award in Monsanto Roundup case to \$87M*, L.A. TIMES, <https://www.latimes.com/business/story/2019-07-26/monsanto-roundup-cancer-lawsuit-award> (last visited March 19, 2021) (outlining facts of third Roundup case).

108. *Id.* (stating jury findings).

two billion dollars in punitive damages, which the court later reduced to eighty-seven million dollars to fall within constitutional limits.¹⁰⁹

IV. LOOKING DEATH IN THE EYE: THE APPELLATE COURT'S ANALYSIS

In *Johnson*, the California Court of Appeal First Appellate District upheld the jury's award of compensatory and punitive damages, but found the law required a reduction of both.¹¹⁰ The appellate court heavily focused on the future noneconomic damage award, finding the amount improper in light of Johnson's shortened life expectancy.¹¹¹ In reaching this decision, the appellate court relied mainly on California case law and the jury instructions given.¹¹² The court also reviewed the evidence against Monsanto and found it substantial enough to affirm the jury's punitive damage award for Johnson, although the amount of the award was reduced further.¹¹³ This reduction was based on the trial court's finding that a one-to-one ratio was appropriate.¹¹⁴

A. Punitive Damage Award

In considering whether the punitive damage award was warranted, the California Court of Appeal First Appellate District looked to see if the plaintiff had met the burden of proof by providing "clear and convincing evidence that the defendant has been guilty of oppression, fraud, or malice."¹¹⁵ In *West*, adequate testing would have shown a link between tampon use and infection, so the

109. *Id.* (explaining judge's reduction of punitive damage award). The court additionally decreased the couple's combined fifty-five million-dollar compensatory damages to seventeen million dollars. *Id.* (acknowledging judge's decrease of compensatory damages).

110. *Johnson v. Monsanto Co.*, 52 Cal. App. 5th 434, 436 (Cal. Ct. App. 2020) (reversing and modifying trial court judgment as to damages).

111. *Id.* at 451 (concentrating discussion on future noneconomic damage portion of compensatory award).

112. *Id.* at 450-55 (discussing appellate court's reasoning against recovery for shortened life expectancy).

113. *Id.* at 455 (highlighting appellate court's treatment of punitive damage award).

114. *Id.* at 462 (focusing on appellate court's extension of trial court's one-to-one ratio).

115. *Johnson*, 52 Cal. App. 5th at 455 (internal quotation omitted) (citing CAL. CIV. CODE § 3294(a) (1993)). The evidence supporting this must be viewed in the light most favorable to the prevailing party. *Id.* (adhering to standard of review in substantial evidence determination).

company acted in conscious disregard of the safety of others.¹¹⁶ Monsanto attempted to distinguish *West* because the definition of “malice” had changed since *West* to include the terms “despicable” and “willful.”¹¹⁷ While a plaintiff must now show the defendant willfully and consciously disregarded the dangers a product presents, the appellate court stressed that the jury was instructed on the current definition of “malice” and still found reason to apply it against Monsanto.¹¹⁸

The court found it reasonable for a jury to infer malice based on the evidence Johnson presented at trial.¹¹⁹ This was due to Monsanto “discounting legitimate questions surrounding glyphosate’s genotoxic effect and failing to conduct adequate studies.”¹²⁰ Furthermore, Monsanto’s failure to return phone calls from Johnson reinforces the company’s lack of concern for public safety.¹²¹

Monsanto also attempted to use the recently decided *Echeverria* case to bolster its argument against punitive damages, but the court rejected the application of that case’s conclusion here.¹²² In *Echeverria*, the manufacturer knew only of a possible link between their product and cancer, which they worked to try and avoid.¹²³ Also, the IARC conclusion there found limited evidence of a possi-

116. *West v. Johnson & Johnson Prods., Inc.*, 174 Cal. App. 3d 831, 869 (Cal. Ct. App. 1985) (reiterating finding of malice in *West*).

117. *Johnson*, 52 Cal. App. 5th at 456 (stating change in malice’s definition).

118. *Id.* (rejecting Monsanto’s argument).

119. *Id.* at 459 (stating reasonableness based on evidence from trial).

120. *Id.* at 457 (reaffirming reasonableness of jury’s finding based on evidence presented at trial). Johnson’s counsel presented a 1983 study that showed a link between glyphosate and kidney tumors in mice, resulting in an EPA statement calling glyphosate a possible carcinogen. *Id.* (discussing previous glyphosate study on mice). Monsanto refused to accept this and in reaffirming the data, claimed it found a flaw. *Id.* (stating Monsanto’s refusal to accept EPA statement on glyphosate’s cancer causing ability). EPA recommended a new study be completed but Monsanto never did so. *Id.* (emphasizing Monsanto’s lacking follow up study). Subsequent studies reaffirmed an association between glyphosate and tumors in mice. *Johnson*, 52 Cal. App. 5th at 457 (detailing various testing outcomes). It was suggested Monsanto conduct further testing, but it is disputed whether or not this testing was completed. *Id.* (outlining one issue debated at trial).

121. *Id.* at 458 (stating case fact that could contribute to jury’s punitive damage award).

122. *Johnson*, 52 Cal. App. 5th at 459-60 (stating appellate court’s refusal to apply *Echeverria*).

123. *Echeverria v. Johnson & Johnson*, 37 Cal. App. 5th at 322 (Cal. Ct. App. 2019) (highlighting company’s focus on avoiding conclusion that talc could cause ovarian cancer); *see also Johnson*, 52 Cal. App. 5th at 459-60 (differentiating manufacturer’s knowledge of mere possible link).

ble association.¹²⁴ The appellate court distinguished *Echeverria* from this case due to evidence that glyphosate increased the risk of cancer and IARC's conclusion that there is a high probability that glyphosate is cancerous.¹²⁵

Monsanto maintained that independent experts in this field insist that glyphosate does not pose a carcinogenic risk to humans.¹²⁶ The appellate court recognized that, outside of IARC's determination, no regulatory body had found that glyphosate causes cancer.¹²⁷ The evidence presented against Monsanto at trial was nevertheless sufficient to establish corporate malice, warranting punitive damages.¹²⁸

B. Future Noneconomic Damage Award Reduction

The appellate court considered whether Johnson's shortened life expectancy allowed for the future noneconomic damage award of thirty-three million dollars.¹²⁹ The court, relying on *Seffert*, found that Johnson's continuous, significant pain and suffering as a result of his cancer was horrifying and overwhelming.¹³⁰ The large future noneconomic damage award, therefore, did not shock the conscience according to the court.¹³¹ The appellate court rejected Monsanto's argument that the award showed the jurors clearly acted with passion, prejudice, or corruption, noting the jury asked

124. *Echeverria*, 37 Cal. App. 5th at 322 (noting IARC found only limited evidence of talc's possible association with ovarian cancer); see also *Johnson*, 52 Cal. App. 5th at 459-60 (showing stronger link between Roundup and cancer).

125. *Id.* (emphasizing IARC's more serious finding that glyphosate was "probably carcinogenic to humans").

126. *Id.* at 456 (stating Monsanto's argument against punitive damage award). Monsanto also argued that punitive damages have been upheld where there was a "reasonable disagreement" among experts in a particular field, an idea the jury rejected, and the appellate court declined to reevaluate. *Id.* (discussing court's acceptance of jury's finding against scientific consensus concerning glyphosate's link to cancer).

127. *Johnson*, 52 Cal. App. 5th at 460 (highlighting lack of scientific consensus concerning glyphosate's link to cancer).

128. *Id.* (stating evidence is sufficient for punitive damages even absent consensus on glyphosate link to cancer).

129. *Id.* at 449 (outlining court's concern for jury's compensatory award). On appeal, there is a strong presumption in favor of the trial court's damages determination, since the trial court hears all arguments and witnesses. *Seffert v. L.A. Transit Lines*, 56 Cal. 2d 498, 506-07 (Cal. 1961) (discussing difference in appellate and trial court roles).

130. *Johnson*, 52 Cal. App. 5th at 451 (emphasizing Johnson's suffering). Johnson experiences trouble sleeping, problems with memory, severe pain and neuropathy, depression, extreme decrease in quality of life, and embarrassment surrounding his skin condition. *Id.* (listing Johnson's significant suffering).

131. *Id.* at 450 (finding based on Johnson's suffering from cancer).

questions and deliberated for three days before returning a verdict.¹³² While the appellate court recognized the punitive damage award was high, the amount was only two-thirds of what Johnson's counsel had requested, whereas the amount awarded by the jury in *Buell-Wilson* was thirteen times the amount counsel had asked for.¹³³

The appellate court agreed with Monsanto, however, that the future noneconomic damage award was not supported in this case.¹³⁴ The court pointed to the jury instruction under CACI 3905A, which was given with no objection at trial.¹³⁵ On appeal, Johnson argued that he should be awarded damages for his shortened life expectancy.¹³⁶ The court did not accept Johnson's argument that the instructions given in *Buell-Wilson* included shortened life expectancy under noneconomic damages, since that language in CACI 3905A is no longer present.¹³⁷ Johnson also looked to *Bigler-Engler* to help his case because the court in that case listed the lack of a shortened life expectancy as a factor used to reduce the damages amount owed to the victim.¹³⁸ The appellate court clarified that life expectancy was only used in *Bigler-Engler* to show that the amount awarded was disproportionate to how much the plaintiff would actually suffer over the course of her remaining life.¹³⁹

The appellate court found issue with other cases relied on by Johnson because they were from states that allowed recovery for "loss of enjoyment of life beyond a plaintiff's expected shortened life span"¹⁴⁰ Although the appellate court stated there were valid policy arguments to support it, the court emphasized California law does not allow recovery for a shortened life span.¹⁴¹ The appellate court concluded one million dollars per year for pain and suffering was adequate, but since there was no concrete evidence of

132. *Id.* (stating jury deliberation refutes showing of prejudice).

133. *Id.* at 450-51 (distinguishing case from *Buell-Wilson*).

134. *Johnson*, 52 Cal. App. 5th at 451 (agreeing with Monsanto on unwarranted future noneconomic damage award amount).

135. *Id.* at 454 (noting jury instructions were not objected to at trial).

136. *Id.* at 453 (stating Johnson's argument on appeal).

137. *Id.* at 452 (rejecting Johnson's reliance on *Buell-Wilson*).

138. *Id.* at 453 (stating use of shortened life expectancy in damage calculation).

139. *Johnson*, 52 Cal. App. 5th at 453 (clarifying court's proper use of shortened life expectancy to calculate damages).

140. *Id.* (rejecting similar out of state cases).

141. *Id.* at 454 (concluding California law precludes recovery for harm not reasonably certain to suffer).

Johnson's actual life expectancy, the court felt four million dollars was appropriate in this case.¹⁴²

C. One-to-One Ratio Supporting Due Process

The appellate court discussed Johnson's cross-appeal challenging the trial court's reduction of his punitive damage award.¹⁴³ In doing so, it found the trial court acted appropriately in applying the *State Farm Mutual Automobile Insurance Co.* three-factor test for determining the constitutional upper limit in setting punitive damages.¹⁴⁴ The appellate court accepted the trial court's rationalization that, particularly in cases where there is "a punitive element to the compensatory damages award, the law supports a one to one ratio for punitive damages."¹⁴⁵ Although the court also accepted Johnson's argument that there is no formula that requires a one-to-one ratio to be set by a court, it found no error on the trial court's part in doing so based on the facts of the case.¹⁴⁶ Since the appellate court found the one-to-one ratio supported constitutional due process requirements, and the court determined the future noneconomic damages award should be reduced, it further reduced Johnson's punitive award to maintain this ratio.¹⁴⁷

V. KILL OR BE KILLED: A CRITICAL ANALYSIS OF HOW THE APPELLATE COURT SLASHED DAMAGES AND CONTINUED CONFUSION

The California Court of Appeal First Appellate District's finding for the plaintiff was correct under the circumstances of the case.¹⁴⁸ The court's acquiescence of California's state law prohibition on recovery for a shortened life expectancy, however, deprived a dying man of what a jury rightfully awarded him.¹⁴⁹ The appellate

142. *Id.* (listing appellate court's reduced damage award amount).

143. *Id.* at 461 (stating reason for Johnson's cross-appeal).

144. *Johnson*, 52 Cal. App. 5th at 462 (internal quotations omitted) (approving of trial court's constitutional analysis determining punitive damage award cap).

145. *Id.* (showing agreement with trial court's rationale).

146. *Id.* (summarizing appellate court's basis for upholding one-to-one ratio).

147. *Id.* (concluding further reduction of damage award amount was required based on trial court's logic).

148. See *Jury Awards Groundskeeper \$289.2 Million in Landmark Monsanto Roundup Verdict*, BAUM HEDLUND, <https://www.baumhedlundlaw.com/toxic-tort-law/monsanto-roundup-lawsuit/johnson-v-monsanto-co/> (last visited Oct. 3, 2020) (supporting appellate court finding in favor of Johnson).

149. See Carey Gillam, *I Won a Historic Lawsuit, But May Not Live to Get the Money*, TIME, <https://time.com/5460793/dewayne-lee-johnson-monsanto-lawsuit/> (last updated November 21, 2018, 5:18 PM) (discussing effect on plaintiff).

court's insistence on upholding the trial court's one-to-one ratio for compensatory and punitive damages worked to maintain a constitutional limit, although the size of its reduction was unnecessary.¹⁵⁰

The main point of contention for the appellate court concerning Johnson's jury award was the future noneconomic damage element.¹⁵¹ The jury awarded thirty-three million dollars in future noneconomic damages and the amount was found to be fair by the trial court.¹⁵² The appellate court's reduction was in direct opposition to the California Supreme Court's ruling in *Seffert*.¹⁵³ In finding the future noneconomic damage award did not "shock the conscience or suggest passion, prejudice, or corruption on the part of the jury[.]" the appellate court should have deferred to the jury's discretion.¹⁵⁴ Instead, the court emphasized that economic damages for a shortened life expectancy are not recognized in California, maintaining the jury instruction's clarity.¹⁵⁵

That clarity is questionable when looking at the case law Johnson used in his argument in favor of recovery for a shortened life expectancy.¹⁵⁶ The same jury instructions relied on to support the lack of available recovery for shortened life expectancy had previously expressly included shortened life expectancy under noneconomic damages in *Buell-Wilson*.¹⁵⁷ Additionally, in *Bigler-Engler*, the court listed lack of shortened life expectancy as a factor when reducing plaintiff's damages.¹⁵⁸ Logically, this would support the argument that the opposite is true, meaning a shortened life

150. *Johnson*, 52 Cal. App. 5th at 451 (emphasizing trial court's reliance on one-to-one ratio); see also *State Farm Mut. Auto. Ins. Co. v. Campbell*, 538 U.S. 408, 410 (2003) (stating single-digit ratio usually found constitutional).

151. See Carey Gillam, *Appeals court focused on damages question ahead of Johnson v. Monsanto hearing*, U.S. RIGHT TO KNOW (May 14, 2020), <https://usrtk.org/monsanto-roundup-trial-tracker/appeals-court-focused-on-damages-question-ahead-of-johnson-v-monsanto-hearing/> (stating appellate court's intended focus on damage question).

152. See *Johnson*, 52 Cal. App. 5th at 449 (assuming trial court found amount fair since it was not reduced).

153. See *Seffert v. L.A. Transit Lines*, 56 Cal. 2d 498, 507 (Cal. 1961) (stating rule set forth for reevaluating damage awards on appeal).

154. See *Johnson*, 52 Cal. App. 5th at 450 (emphasizing appellate court's lack of shock).

155. *Id.* at 452 (explaining appellate court's reasoning for decision).

156. See *id.* at 452-53 (outlining cases relied on by Johnson to support argument).

157. *Id.* (indicating prior version of jury instructions included term shortened life expectancy).

158. *Bigler-Engler v. Breg, Inc.*, 7 Cal. App. 5th 276, 302 (Cal. Ct. App. 2017) (indicating lack of shortened life expectancy as damage reducing factor); see also *Johnson*, 52 Cal. App. 5th at 452-453 (stating relevant facts of *Bigler-Engler*).

expectancy should result in a higher award.¹⁵⁹ Giving little reasoning as to the inapplicability of these prior cases, the court heavily relied on the current language in the jury instructions.¹⁶⁰ The court recognized valid policy arguments to allow recovery for a shortened life expectancy, but did not explore them further.¹⁶¹ These policy arguments are especially relevant in a case like *Johnson*, where Monsanto will pay less money for shortening a man's life than it would for simply injuring him.¹⁶² This decision leaves Johnson's wife and children not only deprived of a husband and father, but also of financial support for the thirty-three years he could have otherwise lived.¹⁶³

The increasing commonality of states in the twenty-first century allowing recovery for this type of damage strengthens the validity of these policy reasons.¹⁶⁴ Plaintiffs should be compensated for the loss of enjoyment of their lives, particularly when they are still living at the time of the trial and experiencing the detrimental effects of their injuries.¹⁶⁵

In rejecting Monsanto's argument that *Echeverria* applies here, the court properly distinguished the facts of the present case.¹⁶⁶ Although the appellate court could have sided with Monsanto and found no "direct, conclusive evidence" of glyphosate causing cancer, it instead found that the existing studies and level of IARC clas-

159. See *Johnson*, 52 Cal. App. 5th at 453 (explaining logic used by Johnson's counsel that was seemingly in favor of recovery under *Bigler-Engler*).

160. *Id.* at 452 (providing appellate court's reasoning for rejecting argument).

161. *Id.* at 454 (indicating appellate court could support argument favoring recovery for shortened life expectancy).

162. See *The Measure of Damages for a Shortened Life* at 506, U. OF CHICAGO L. REV., <https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=2918&context=uchrev> (last visited Oct. 3, 2020) (discussing arguments to compensate plaintiffs with shortened life expectancies).

163. See *id.* at 506 (relating one argument in favor of recovery for shortened life expectancy to Johnson's situation).

164. *Petition for Review at 6-7, Johnson*, 52 Cal. App. 5th at 434 (Nos. A155940, A156706) (indicating increasing trend toward compensation for shortened life expectancy).

165. *Id.* at 25 (arguing for recovery especially when plaintiff is still living). After the appellate court gave their decision, co-lead trial counsel for Johnson, R. Brent Wisner said "[b]asically, California law does not allow a plaintiff to recover for a shortened life expectancy. This effectively rewards a defendant for killing a plaintiff, as opposed to just injuring him. It is madness. That Lee will not live an entire life with his wife and children should be compensable." *Jury Awards Groundskeeper \$289.2 Million in Landmark Monsanto Roundup Verdict*, *supra* note 148 (quoting statement by Co-Lead Trial Counsel for Johnson).

166. See *Johnson*, 52 Cal. App. 5th at 459 (discussing inapplicability of *Echeverria* in current case).

sification made that determination uncertain.¹⁶⁷ From this finding, the appellate court could have interpreted corporate malice based on the IARC's determination alone, but it instead emphasized the hesitation of sustaining damages due to the lacking evidence from any other regulatory body.¹⁶⁸ Regardless, the appellate court found other substantial evidence to show Monsanto acted with corporate malice, thereby deferring to the jury's punitive damages award.¹⁶⁹ This finding exemplified the deference that should have been given to the jury's compensatory award.¹⁷⁰

The appellate court unnecessarily reduced Johnson's punitive damage award in following a one-to-one ratio regarding the reduced compensatory damage award.¹⁷¹ This alteration decreased the punitive damages awarded by ninety-six percent, bringing Johnson's total award from \$289.25 million to \$20.4 million.¹⁷² Single digit ratios have generally been upheld as constitutional by the Supreme Court, so this large reduction was not essential.¹⁷³ The appellate court itself stated there is no fixed formula requiring this one-to-one ratio.¹⁷⁴

The Supreme Court's only requirement in reducing damages is the consideration of the three factors set forth in *State Farm*.¹⁷⁵ Here, the appellate court did not conduct this analysis, directly opposing California case law.¹⁷⁶ In *Bigler-Engler*, the court reasoned that a reduction of the noneconomic damage award did not automatically call for a reduction of punitive damages; and the court in

167. *Id.* at 459-60 (internal quotation omitted) (showing more than possible link between glyphosate and cancer).

168. *See id.* at 460 (discussing hesitance for sustaining punitive damage award).

169. *Id.* (affirming jury finding of malice).

170. *See id.* (emphasizing significant weight given to jury's punitive damage award not resulting from prejudice or shocking conscience).

171. *See Johnson*, 52 Cal. App. 5th at 462 (discussing reasoning for punitive damage award reduction).

172. *Id.* at 463 (emphasizing large damage award reduction). The punitive damage award amount was originally \$250 million, was then slashed to \$78 million by the trial court, and brought down to about \$10.25 million on appeal. *See Alan Lazarus, California [Again] Confronts the High Cost of Litigation Uncertainty*, NAT'L. L. REV. (July 24, 2020), <https://www.natlawreview.com/article/california-again-confronts-high-cost-litigation-uncertainty> (showing gradual decrease of punitive damage award amount).

173. *State Farm Mut. Auto. Ins. Co. v. Campbell*, 538 U.S. 408, 410 (2003) (emphasizing constitutionality of single-digit ratios).

174. *Johnson*, 52 Cal. App. 5th at 462 (finding one-to-one ratio not required by Constitution).

175. *State Farm Mut. Auto. Ins. Co.*, 538 U.S. at 410 (detailing factors).

176. *See Petition for Review, supra* note 164 at 11-12 (indicating appellate court's lack of independent analysis conflicts with existing California case law).

Buell-Wilson upheld a two-to-one ratio based on a separate assessment of the factors from *State Farm*.¹⁷⁷ The Supreme Court stated that a lesser ratio, such as one-to-one, may be the cap on a damage award where the compensatory damages are substantial.¹⁷⁸ After the reduction, Johnson's compensatory award was less substantial than the other Roundup cases that have gone to trial, but the appellate court here was the only court to subject the award to a one-to-one ratio.¹⁷⁹ The decision in *Johnson* exacerbates conflict and inconsistency in this area.¹⁸⁰

VI. SCARED TO DEATH: IMPACT ON FUTURE ROUNDUP CASES AND GLYPHOSATE USE IN THE UNITED STATES

Since this was the first case concerning Roundup's cancer link to proceed to trial, the California Court of Appeal First Appellate District's analysis was, and continues to be, important for similar plaintiffs awaiting their day in court.¹⁸¹ All three of the Roundup cancer cases that have been tried concluded that Monsanto was at fault.¹⁸² Moreover, all three cases ended with substantial damage awards from the juries.¹⁸³ In all three cases, however, the punitive damage awards have ultimately been decreased to maintain a constitutional limit.¹⁸⁴ This serves as an indicator that any extreme ratio in future similar cases will likely result in a reduction of punitive damages, although *Johnson* has been the only case to go as low as a one-to-one ratio.¹⁸⁵

177. *Bigler-Engler v. Breg, Inc.*, 7 Cal. App. 5th 276, 306 (Cal. Ct. App. 2017) (concluding punitive damages should be individually assessed); *Buell-Wilson v. Ford Motor Co.*, 141 Cal. App. 4th 525, 570 (Cal. Ct. App. 2006) (finding Ford's reprehensibility justified two-to-one ratio); *See also Petition for Review, supra* note 164 at 34-35 (illustrating opposite conclusions in similar cases).

178. *See State Farm Mut. Auto. Ins. Co.*, 538 U.S. at 410 (2003) (detailing situation supporting one-to-one ratio).

179. *Compare Hardeman v. Monsanto Co.*, 216 F. Supp. 3d 1037 (N.D. Cal. 2016) and Brief for Respondents at 132, *Pilliod v. Monsanto Co.*, No. A158228, 2020 WL 1986599 (Cal. Ct. App. 2020), (upholding ratios larger than one-to-one) with *Johnson v. Monsanto Co.*, 52 Cal. App. 5th 434 (Cal. Ct. App. 2020) (keeping one-to-one ratio from trial court).

180. *See Petition for Review, supra* note 164 at 36 (showing result of conflicting case law).

181. *See Lazarus, supra* note 174 (emphasizing importance of first Roundup case).

182. *See Gillam, supra* note 101 (finding Monsanto at fault in all three cases).

183. *See id.* (discussing outcomes of current Roundup litigation).

184. For a discussion of punitive damage reductions in *Hardeman*, see *supra* notes 103-05 and accompanying text. For a discussion of punitive damage reductions in *Pilliod*, see *supra* notes 106-09 and accompanying text.

185. For a discussion of punitive damage reduction in *Johnson*, see *supra* notes 145-49 and accompanying text.

The appellate court's refusal to recognize recovery for shortened life expectancy in this case highlights the detrimental effects on plaintiffs that eventually lose their lives at the hands of a defendant.¹⁸⁶ A majority of other states have found ways to resolve this problem, and hopefully the outcome of this case will give California the push it needs to fairly compensate for life lost.¹⁸⁷ Johnson's counsel affirmed this sentiment stating, "hopefully, when the issue gets before the California Supreme Court, we can change this irrational law."¹⁸⁸

This appeal also called national attention to one of the most interesting and challenging scientific disputes of the day, stemming from the EPA and IARC studies that produced different results concerning glyphosate.¹⁸⁹ The EPA and IARC looked at many of the same studies, but the EPA relied on "unpublished regulatory studies" that were heavily industry-funded, while IARC primarily looked to peer-reviewed studies.¹⁹⁰

The permanent enjoinder of Prop 65's warning against glyphosate, resulting from *Nat'l Ass'n of Wheat Growers*, directly contradicts the finding that Roundup was a substantial factor in causing the *Hardeman* and *Pilliod* plaintiffs' cancer, adding to the confusion and uncertainty that surrounds glyphosate.¹⁹¹ The three courts that found against Monsanto in *Johnson*, *Hardeman*, and *Pilliod* are seemingly a step toward establishing glyphosate as a carcinogen, though there is still no clear consensus.¹⁹² All of the information introduced at the *Johnson* trial could easily lead one to be suspicious

186. See *The Measure of Damages for a Shortened Life*, *supra* note 164, at 506 (detailing policy arguments in favor of recovery for shortened life expectancy).

187. See *Petition for Review*, *supra* note 166, at 34-35 (comparing California's relevant law with other states').

188. *Jury Awards Groundskeeper \$289.2 Million in Landmark Monsanto Roundup Verdict*, *supra* note 150 (quoting Johnson's counsel).

189. See Emily Dixon, *Common weed killer glyphosate increases cancer risk by 41%*, *study says*, CNN HEALTH, <https://www.cnn.com/2019/02/14/health/us-glyphosate-cancer-study-scli-intl/index.html> (last updated Feb. 15, 2019, 2:45 PM) (contrasting EPA study results with IARC study results).

190. See Charles Benbrook, *How did the US EPA and IARC reach diametrically opposed conclusions on the genotoxicity of glyphosate-based herbicides*, ENVTL. SCI. EUR. (Jan. 14, 2019), <https://enveurope.springeropen.com/articles/10.1186/s12302-018-0184-7> (contrasting conclusions of two scientific bodies).

191. For a discussion of the litigation concerning glyphosate, see *supra* notes 97-110 and accompanying text.

192. See *Johnson v. Monsanto Co.*, 52 Cal. App. 5th 434, 456 (Cal. Ct. App. 2020) (discussing lack of unified opinion); see also *Hardeman v. Monsanto Co.*, 216 F. Supp. 3d 1037 (N.D. Cal. 2016) (finding Roundup was substantial factor in causing plaintiff's cancer); see also *Pilliod v. Monsanto Co.*, No. A158228, 2020 WL 1986599 (Cal. Ct. App. 2020) (declaring Roundup played part in couple's cancer and Monsanto failed to warn of risk).

of Monsanto, so it is unsurprising that the jury found against the company.¹⁹³ What is surprising is that the United States has yet to manage the widespread repercussions of failing to identify glyphosate as a carcinogen.¹⁹⁴ Roundup continues to be a best-seller despite the thousands of cases claiming the product caused plaintiffs to develop non-Hodgkin's lymphoma.¹⁹⁵ With the numerous pending lawsuits and possibility of a cancer link, the market value of Bayer AG is declining, and shares have dropped as much as forty percent since the company's acquisition of Monsanto.¹⁹⁶ In response to the growing concern surrounding glyphosate, the chemical has been banned or restricted in twenty-one countries around the world.¹⁹⁷ Most recently, several United States cities and institutions have imposed similar restrictions.¹⁹⁸ These restrictions may be helpful to combat the aquatic and terrestrial environmental concerns that have risen as a result of excessive glyphosate spraying.¹⁹⁹ With more than forty thousand plaintiffs claiming exposure to glyphosate from Roundup caused their cancer, and the emerging studies finding negative consequences on the environment from extensive use, a ban against glyphosate use in the United States may not be too far off.²⁰⁰

*Eliza L. Quattlebaum**

193. *Id.* at 457-59 (emphasizing existence of substantial evidence to support jury's finding of malice).

194. See *Which Countries and States are Banning Roundup?* THE CARLSON L. FIRM (Nov. 19, 2020), <https://www.carlsonattorneys.com/news-and-update/banning-roundup> (explaining United States slow reaction concerning glyphosate). The federal government has not issued any sort of ban on glyphosate, although every state has created an online petition for state governors to ban the chemical and thousands of lawsuits have been filed to hold Bayer-Monsanto accountable. *Id.* (discussing private citizen's actions in fight against glyphosate).

195. See Charles, *supra* note 10 (stating Roundup's continued popularity in United States despite claims against Monsanto).

196. Cohen, *supra* note 102 (discussing effect of glyphosate litigation on Bayer AG).

197. *Glyphosate Herbicides Now Banned or Restricted in 21 Countries Worldwide - Sustainable Pulse Research*, SUSTAINABLE PULSE (May 28, 2019, 4:00 PM), <https://sustainablepulse.com/2019/05/28/glyphosate-herbicides-now-banned-or-restricted-in-17-countries-worldwide-sustainable-pulse-research> (listing countries that have ban or restriction on glyphosate).

198. *Id.* (discussing U.S. locations with glyphosate bans or restrictions).

199. For a discussion of environmental studies concerning glyphosate, see *supra* notes 84-93 and accompanying text.

200. See Malkan, *supra* note 17 (noting number of plaintiffs to be impacted by Johnson decision).

* J.D. Candidate, May 2022, Villanova University Charles Widger School of Law; B.A., Psychology, 2017, East Carolina University. I would like to thank my family and friends for always believing in me, I wouldn't be where I am without you

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