

February 1995

Monkey Trials: Science, Defamation, and the Suppression of Dissent

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MONKEY TRIALS: SCIENCE, DEFAMATION, AND THE SUPPRESSION OF DISSENT

Michael Kent Curtis*

In 1992, Rolling Stone magazine published "The Origin of AIDS . . . ?" The article explored a controversial and unconfirmed theory that the AIDS epidemic had been an inadvertent result of a polio vaccine trial conducted in Africa in the late 1950s. The researcher who conducted the African trials discussed by Rolling Stone sued the magazine for libel. He alleged that the article should be interpreted as asserting that he had caused the epidemic, that the AIDS-polio vaccine theory was false, and that it defamed him.

Monkey Trials explores the controversial theory of the origin of AIDS and considers whether discussion (or advocacy) of such a hypothesis should be protected by guarantees of free speech and press. It concludes that such complex criticism should be entitled to heightened protection, at least in those cases where the criticism is alleged to defame people with extraordinary power to shape the world in which we live. A broad, objective, and powerful rule is required to protect "complex criticism" because of its contribution to understanding (even when it is mistaken), and because complex criticism is often of great importance in setting the political agenda.

* * *

[I]n many areas which are at the center of public debate "truth" is not a readily identifiable concept, and putting to the pre-existing prejudices of a jury the determination of what is "true" may effectively institute a system of censorship. Any nation which counts the Scopes trial as part of its heritage cannot so readily expose ideas to sanctions on a jury finding of falsity.

Time, Inc. v. Hill, 385 U.S. 374, 406 (1967) (Harlan, J., concurring).

* Professor of Law, Wake Forest University School of Law. I wish to thank David Anderson, William W. Van Alstyne, Dr. Cecil H. Fox, Alan Palmiter, Miles Foy, David Logan, Ronald Wright, Stephen Heyman, Tom Curtis, Edward J. Imwinkelried, Brian Martin, and my research assistants, Paul Goodson, Mark Leach, and John Hughes, for their assistance and comments on an earlier draft of this Article. I wish to thank John Perkins for his help in locating sources. Views expressed here are merely my own and do not represent those of any other person or institution. Mistakes and misconceptions are entirely my own.

Change in any complex system ultimately depends on the ability of outsiders to challenge accepted views and the reigning institutions.

American Booksellers Ass'n, Inc. v. Hudnut, 771 F.2d 323, 332 (7th Cir. 1985) (Easterbrook, J.).

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I. A SCIENTIFIC HYPOTHESIS MEETS DEFAMATION LAW

A. A Rolling Stone Article: The Origin of AIDS . . . ?

In March 1992, *Rolling Stone* magazine published an article entitled *The Origin of AIDS: A Startling New Theory Attempts to Answer the Question 'Was It an Act of God or an Act of Man?'*¹ In the article, free-lance journalist Tom Curtis (who is my brother) reported on a little-known "theory" that suggests a possible link between the AIDS epidemic and early polio vaccines. The theory reported by Tom Curtis had initially been developed by Blaine Elswood² and, unbeknown to Tom Curtis, had been developed independently by Louis Pascal.³ Elswood was an AIDS activist with a liberal arts background who had published several scientific papers related to the disease. Pascal is also an independent researcher outside the scientific establishment. Neither, apparently, was a scientist by profession. Taken literally neither Elswood nor the *Rolling Stone* article claimed that the AIDS/polio vaccine link was proved. Instead they insisted that the theory raised serious questions, that attempted refutations were not convincing, and that the theory might well be true. Prior to the publication of the *Rolling Stone* article, a possible link between AIDS and polio vaccines had been

¹ Tom Curtis, *The Origin of AIDS: A Startling New Theory Attempts to Answer the Question 'Was It an Act of God or an Act of Man?'*, ROLLING STONE, Mar. 19, 1992, at 54. Prior to the *Rolling Stone* article, scientists had raised, more or less directly, and sometimes discounted, the possibility of an AIDS-polio vaccine link. See, e.g., Sergio Giunta, *The Primate Trade and the Origin of AIDS Viruses*, 329 NATURE 22 (1991); G. Lectasas, *Origin of AIDS*, 351 NATURE 262 (1991); Herbert Ratner, *Monkey Viruses, AIDS, and the Salk Vaccine*, 20 CHILD & FAM. 134-38 (1988); J. Seale, *Crossing the Species Barrier—Viruses and the Origins of AIDS in Perspective*, 82 J. ROYAL SOC. OF MED. 519 (1989); Arie J. Zuckerman, *AIDS in Primates*, 292 BRIT. MED. J. 158 (1986). For a related theory, see Charles Gilks, *AIDS, Monkeys and Malaria*, 354 NATURE 262 (1991).

² See Curtis, *supra* note 1, at 54, 56.

³ See LOUIS PASCAL, WHAT HAPPENS WHEN SCIENCE GOES BAD: THE CORRUPTION OF SCIENCE AND THE ORIGIN OF AIDS: A STUDY IN SPONTANEOUS GENERATION 5-11 (University of Wollongong Science and Technology Analysis Research Programme Working Paper No. 9, 1991).

briefly mentioned several times and sometimes discounted in the scientific literature.⁴

In a nutshell (which is where some critics implied the theory came from), the hypothesis suggested that a monkey virus had caused the AIDS epidemic by infecting people in central Africa. The hypothesis suggested that the transmission occurred as a result of the administration of a polio vaccine that had been inadvertently contaminated by a monkey virus. The hypothesis suggested that contamination could have occurred because of the use of monkey kidneys to manufacture polio vaccine.⁵ In the African inoculation hypothesized as a link to AIDS, the vaccine had been given to more than 300,000 people from 1957 to 1960.⁶ The theory suggested that a possible medical calamity had accompanied the great public health triumph against polio.⁷

Most commentators in the scientific community reacted to the hypothesis with disdain. They dismissed both the hypothesis and any suggestion that it be empirically tested. The hypothesis encountered more than a scientific snub, however. The researcher⁸ who had conducted the polio vaccine trials sued *Rolling Stone* and Tom Curtis for defamation.⁹ Although the suit was settled, it continues to cast a pall over scientific discussion of the topic. The legal logic that encourages such actions threatens to undermine the tolerance and open debate that are essential both to science and to political freedom.

⁴ See *supra* note 1; *infra* note 31.

⁵ The African polio vaccine was administered orally by means of "squirting the vaccine . . . into the mouths of recipients." REPORT FROM THE AIDS/POLIOVIRUS ADVISORY COMMITTEE TO THE WISTAR INSTITUTE 3 (1992) [hereinafter COMMITTEE REPORT]. The polio vaccine also was administered through syrup and sugar cubes. B.F. Elswood & R.B. Stricker, *Polio Vaccines and the Origin of AIDS*, 42 MED. HYPOTHESES 347, 348 (1994). Cecil Fox reports that he had discussed the possible AIDS-polio vaccine link before either Pascal or Tom Curtis had written about the theory. Letter from Cecil Fox, Molecular Histology Laboratory, Inc., to author (Apr. 1995) (on file with author).

⁶ Curtis, *supra* note 1, at 56.

⁷ "Polio vaccine is saving, by conservative estimate, 450,000 children per year from paralytic polio and preventing more than 40,000 deaths worldwide." Tom Curtis, "Easy Test" for Theory on AIDS, HOUSTON POST, Mar. 16, 1992, at A1, A9 (quoting Dr. Joseph Melnick, Baylor College of Medicine).

⁸ The reader may note that the text does not refer by name to the scientist who conducted the trials. Use of his name is avoided in the text because if the transmission occurred as the polio vaccine/AIDS hypothesis suggests, then it was an unforeseen accident that could have occurred during any of the vaccination programs conducted by any of the researchers involved. Omission of the name thus is intended to emphasize the non-personal nature of the issue.

⁹ Constance Holden, *Rolling Stone Rolls Over for Koprowski*, 262 SCIENCE 1369 (1993).

This Article explores the science-defamation conundrum. It describes the still-evolving scientific debate on early polio vaccines as a possible origin of the AIDS epidemic, and discusses the dangers of relegating such controversies to the courtroom. Libel suits that discourage scientific discussion merit concern, as do suits that discourage political debate. Because scientific and political speech frequently overlap, suits that inhibit scientific speech also often inhibit political speech.

The AIDS/polio vaccine controversy and the resulting defamation suit provide one way to explore the laws of defamation and free speech, and how they interact with complex ideas such as scientific hypotheses. After discussing the *Rolling Stone* lawsuit and similar cases, I suggest expanded tests to achieve the following purposes: (1) to increase the protection for complex criticism, including scientific discussion, from libel and defamation actions; and (2) to protect public criticism of the exercise of private power from attempts to chill such criticism.

As originally reported in *Rolling Stone*, the AIDS/polio vaccine hypothesis was supported by circumstantial evidence, including a rough geographical proximity between the site of the vaccine trials and a subsequent major AIDS epidemic;¹⁰ an apparent chronological connection between the outbreak of AIDS and the vaccine trials;¹¹ the increasingly accepted idea that the AIDS virus originated as a simian virus;¹² and the fact that polio vaccines, including the one used in the African trials, were grown in monkey kidney cultures, which often contained monkey white blood cells and therefore possibly monkey viruses.¹³ Finally, there was the fact that human subjects who got some early polio vaccines apparently as a result developed antibodies to *another* monkey virus, SV-40.¹⁴ Some of these people also may have developed serious illnesses.¹⁵

When the *Rolling Stone* article was published, there was no conclusive evidence that human beings could contract Simian Immunodeficiency Virus

¹⁰ Curtis, *supra* note 1, at 57.

¹¹ *Id.* at 61.

¹² *Id.* at 56.

¹³ *Id.* at 56-57.

¹⁴ *Id.* at 57.

¹⁵ *Id.* at 54. A recently published journal article elaborating on the AIDS/polio vaccine hypothesis, co-authored by Blaine Elswood, an independent researcher, and R.B. Stricker, a medical doctor, lists several sources that discuss SV-40. Elswood & Stricker, *supra* note 5, at 353 nn.13-15 (citing Daniel J. Bergsagel et al., *DNA Sequences Similar to Those of Simian Virus 40 in Ependymomas and Choroid Plexus Tumors of Childhood*, 326 NEW ENG. J. MED. 988 (1992); M.P. Bravo & J. Del Rey-Calero, *Association Between the Occurrence of Antibodies to Simian Vacuolating Virus 40 and Bladder Cancer in Male Smokers*, 35 NEOPLASMA 285 (1988); Erhard Geissler, *SV 40 and Human Brain Tumors*, 37 PROGRESS. MED. VIROLOGY 211 (1990)). The Elswood and Stricker article is discussed in detail *infra* part I.E.

(SIV). SIV is the monkey cousin, or possible ancestor, of the AIDS virus in humans, Human Immunodeficiency Virus (HIV).¹⁶ Lack of conclusive evidence that humans could contract SIV was one of many initial arguments against the theory.¹⁷ Recent reports show that laboratory workers exposed to SIV through accidents such as needle sticks have developed antibodies to SIV.¹⁸ Whether illness will follow remains to be seen.

In addition to noting facts that supported the theory, the *Rolling Stone* article also reported arguments in opposition. The first related to the genetic makeup of HIV-1 and its evolutionary distance from the monkey virus SIV. No known monkey virus was sufficiently similar to HIV-1 to have been the source of infection in people, if the introduction occurred in the late 1950s.¹⁹ Further, critics said, the AIDS virus could not live in the monkey kidney epithelial cells used to culture the polio vaccine.²⁰ The Asian rhesus monkey, the chief type of monkey whose kidneys were initially used to manufacture polio vaccines, was not a natural host for AIDS-related viruses.²¹ At the time of publication of the *Rolling Stone* article, no evidence existed that African green monkeys in the wild carried a virus similar to HIV-1. Furthermore, efforts to infect those monkeys in the lab had been unsuccessful.²² Finally, as critics of the article later noted, prior tests of some seed stocks of the poliovirus vaccine had failed to reveal SIV or HIV.²³ In addition, a number of other potential problems with the theory existed,²⁴ some of which went undiscussed in the article.

As it appeared in *Rolling Stone*, the hypothesis suggested that kidneys from monkeys infected with a rare SIV similar to HIV-1 may have been

¹⁶ See Curtis, *supra* note 1, at 106. HIV has been further subdivided into two different viruses, HIV-1 and HIV-2. See Elswood & Stricker, *supra* note 5, at 350.

¹⁷ See Tom Curtis & Patricia Manson, *Do Cold, Hard AIDS Facts Lie in Freezer?*, HOUSTON POST, May 8, 1992, at A1, A15; Gina Kolata, *Theory Tying AIDS to Polio Vaccine is Discounted*, N.Y. TIMES, Oct. 23, 1992, at A16.

¹⁸ Elswood & Stricker, *supra* note 5, at 350; Rima F. Khabbaz et al., *Brief Report: Infection of a Laboratory Worker with Simian Immunodeficiency Virus*, 330 NEW ENG. J. MED. 172, 174-76 (1994); Rima F. Khabbaz et al., *Simian Immunodeficiency Virus Needlestick Accident in a Laboratory Worker*, 340 LANCET 271, 271-73 (1992); Daniel J. DeNoon, *HIV Crossed Species Barrier From Monkeys to Humans*, AIDS WEEKLY PLUS, Oct. 9, 1995, at 1 (suggesting "chimpanzees as the natural reservoir for HIV-1").

¹⁹ Curtis, *supra* note 1, at 108.

²⁰ *Id.* at 106.

²¹ *Id.* at 59.

²² See Affidavit of Jonathan Allan, D.V.M. at 1-3, *Koprowski v. Straight Arrow Publishers, Inc.* (E.D. Pa. 1993) (Civ. Action No. 92-CV-7431) [hereinafter Allan Affidavit]. Dr. Allan concluded that "[t]he import of Curtis's article, that Dr. Koprowski's polio vaccine was the origin of AIDS, is false." *Id.* at 3.

²³ Elswood & Stricker, *supra* note 5, at 350.

²⁴ See Ronald C. Desrosiers, *A Finger on the Missing Link*, 345 NATURE 288 (1990).

used to make polio vaccine cultures; that the rare SIV may have then contaminated at least some polio vaccine; that the concentration of the virus in the vaccine may have been large enough to cause an infection; and the contaminated polio vaccine may have infected people with the AIDS virus.²⁵ Each of these steps is as yet unproven. That fact underlines what the authors of the theory acknowledge: that it is a hypothesis not yet proven to be true. Finally, assuming SIVs contaminated early polio vaccines that were then used throughout the world, there was the question of why HIV-1 apparently originated in Africa, and why HIV illnesses did not surface elsewhere. Proponents of the theory suggest possible answers for such questions. A possible explanation, of course, is that not all SIVs infect people and that the African trials had some unique characteristics. In addition, as the *Rolling Stone* article noted, there were other possible origins, such as a hunter becoming infected when he butchered a monkey.²⁶

To many of the arguments critical of the theory, the *Rolling Stone* article reported counterarguments. Although kidney cells might not support HIV or SIV, monkey white blood cells are typically present with kidneys cells, and the blood cells could harbor SIV, including perhaps a simian virus close to HIV-1.²⁷ Although rhesus monkeys are not natural hosts for SIVs, some can be infected with it. Moreover, an interruption in the supply of monkey kidneys occurred during the time in question, causing possible substitution of kidneys from African green monkeys, many of whom had viruses that were simian relatives of the human AIDS virus.²⁸ As for the green monkeys' inability to be infected with HIV-1, proponents now can point (subsequent to the *Rolling Stone* article) to the discovery of an African green monkey that reportedly tested positive for a simian virus like HIV-1 and the successful infection of one type of macaque monkey with HIV-1.²⁹ Such evidence increased the possibility that other monkeys might have been infected or that a monkey or a chimp might have infected a monkey whose

²⁵ Curtis, *supra* note 1, at 54.

²⁶ *Id.* at 56.

²⁷ *Id.* at 57.

²⁸ *Id.* at 61.

²⁹ Evidence exists that at least one type of macaque monkey was infected in captivity with HIV and presumably with SIV:

In 1990 2 wild chimpanzees in Africa were discovered to be infected with a strain of SIV that was 75-84% identical to HIV-1, leading some researchers to call it 'the missing link' to the origins of HIV-1 in man. It was thought that the chimpanzees may have been infected through contact with an unknown monkey species. . . . [C]himpanzees had been used to attenuate and test viruses for potential use in vaccines and were often kept in captivity by vaccine laboratories. Chimpanzees, therefore, could be a source of vaccine contamination and infection of other captive monkeys.

Elswood & Stricker, *supra* note 5, at 351 (citations omitted).

kidneys were taken.³⁰ Finally, as to prior negative tests of seed stocks, proponents of the theory point out that current testing methods are more sensitive and have found DNA of the virus in places such as kidney cells, where it had previously not been detected.³¹ Apparently no such powerful tests for SIV or HIV have yet been performed on samples of the older polio vaccines.

Although scientists had not discovered a monkey virus similar enough to be the origin of the human AIDS virus, the *Rolling Stone* article posited that there were undiscovered monkeys infected with such a virus.³² After publication of the article, the chair of a virology department at a medical school in South Africa reported in a letter to *The Lancet*, a medical journal, that he had found such a monkey.³³ Some researchers have remained skeptical pending more conclusive tests.

Substantial criticisms were made of the AIDS/polio vaccine hypothesis reported by the *Rolling Stone* article. Still, the responses to these criticisms, made then and more recently, suggest that critics were unsuccessful in showing conclusively that the theory was flatly impossible. Possibility, of course, does not prove a theory to be true. Possibility bears instead on assessing whether the hypothesis warrants further consideration. Possibility is a factor in evaluating attempts to hoot the hypothesis from the stage by ridicule or to drive it from the stage by litigation.

While the *Rolling Stone* article gave the AIDS/polio vaccine theory a sympathetic airing, it concluded that the hypothesis was not yet proved. "We may never know for certain the answers to [questions about the origin of AIDS]," the article quotes Robert Gallo as saying in his earlier book *Virus Hunting*, but "answering them may help avoid future zoonotic catastrophes—that is transmission of the disease from lower animals to humans."³⁴ The *Rolling Stone* article concluded that "[i]f the Congo vaccine turns out not to be the way AIDS got started in people, it will be because medicine was lucky, not because it was infallible."³⁵ The extraordinary sci-

³⁰ For speculation on the hypothetical monkey, see Curtis, *supra* note 1, at 106, 108.

³¹ *Id.* at 350. C.J. Dommann reports that "60% of the monkeys used as kidney donors" in the polio vaccine project at the National Institute for Virology in South Africa had "antibodies against simian immunodeficiency virus (SIV)." C.J. Dommann, *The Effect of Serial Passage of Sabin Oral Poliomyelitis Vaccine Virus in Secondary Monkey Kidney Versus Vero Cells as Measured by the Monkey Neurovirulence Test*, 23 J. MED. PRIMATOLOGY 388, 388-89 (1994). He also reported that a "high percentage of vaccine" had to be discarded because of "adventitious monkey viruses [apparently viruses other than SIV], mainly foamy virus." *Id.* at 388-89.

³² Curtis, *supra* note 1, at 108.

³³ G. Lectasas & J.J. Alexander, *Origins of HIV*, 339 LANCET 1427, 1427 (1992).

³⁴ Curtis, *supra* note 1, at 108 (quoting ROBERT GALLO, *VIRUS HUNTING* (1991)).

³⁵ *Id.*

entific controversy and criticism that followed publication of the *Rolling Stone* article showed that the article was not infallible either.

B. Scientific Reaction

Reaction from the scientific establishment to the *Rolling Stone* article was immediate, sometimes intense, and largely, but not entirely, dismissive. Most AIDS investigators thought “the hypothesis . . . far too speculative to be taken seriously—since, they argue, there isn’t a picogram of evidence for it,” Jon Cohen reported in *Science* magazine.³⁶ Later evaluations tended to concur with the early dismissals. One leading polio expert said the “‘hypothesis is so unlikely that we don’t have to take it seriously.’”³⁷ The Public Health Service announced that it “ha[d] seen no convincing evidence to support this alleged connection, or even [that] indicate[d] it is remotely possible.”³⁸

Others thought the theory plausible, but argued that it should not have been published without more satisfactory proof. One leading expert on monkey viruses told *Science* that he had “‘never heard a good reason why it’s not plausible.’”³⁹ The expert said, however, that the story was “‘irresponsible . . . like saying that [a famous professional athlete] does cocaine and is on steroids without producing any evidence.’”⁴⁰ He later joined others in concluding that the hypothesis reported by *Rolling Stone* was extremely unlikely.

Some critics made ample rhetorical use of the inescapably curious facts. Here, after all, was a scientific hypothesis developed by a nonprofessional and put forth in a rock music magazine by a reporter with no scientific training. So some critics labeled the hypothesis the Curtis-*Rolling Stone* theory.⁴¹ After burlesquing the theory (“Debate on AIDS Origin: *Rolling Stone* Weighs In”), Jon Cohen in *Science* quoted scientists who dismissed it and sources who objected to how they had been quoted by *Rolling Stone*.⁴²

³⁶ Jon Cohen, *Debate on AIDS Origin: Rolling Stone Weighs In*, 255 SCIENCE 1505, 1505 (1992).

³⁷ Kolata, *supra* note 17, at A16 (quoting Dr. Eckard Wimmer, State University of New York at Stony Brook).

³⁸ Tom Curtis, *Officials Continue to Ignore Signs of AIDS Vaccine Link*, HOUSTON POST, Aug. 19, 1992, at A1 (quoting a written statement made by the FDA in April 1991).

³⁹ Cohen, *supra* note 36, at 1505 (quoting Ronald Desrosiers, New England Regional Primate Research Center).

⁴⁰ *Id.* (quoting Ronald Desrosiers, New England Regional Primate Research Center) (alteration in original).

⁴¹ *Id.*; Brian Martin, *Peer Review and the Origin of AIDS—A Case Study in Rejected Ideas*, 43 BIOSCIENCE 624, 626 (1993).

⁴² Cohen, *supra* note 36, at 1505 (quoting Tom Folks, Gerald Quinnan Jr., and Ger-

Not all commentators were equally dismissive. One long-time AIDS researcher found Cohen's *Science* article "lightweight" and oversimplified.⁴³ He insisted that evidence indicated that HIV came from some sort of simian-human interaction and suggested testing *all* serum samples and vaccines from the period between 1952 and 1982.⁴⁴ He implied that African injections of other early polio vaccines should also be considered as a possible source of AIDS.⁴⁵ "Positive results," this researcher opined, "would result in some remorse and a number of lawsuits."⁴⁶

Meanwhile, Tom Curtis learned for the first time that the AIDS/polio vaccine hypothesis had been anticipated by Louis Pascal.⁴⁷ Pascal unsuccessfully had submitted papers to a number of journals, including the *Journal of Medical Ethics*. In an editorial, the *Journal* explained its failure to publish Pascal's paper and let its readers know that it later had been published elsewhere.⁴⁸ "The thesis of Mr. Pascal's paper is essentially based on circumstantial evidence," the *Journal* wrote, "but an impressive amount of it."⁴⁹ The *Journal* found the evidence "impressively coherent and entirely consistent with the causal thesis propounded by Mr. Pascal."⁵⁰ The *Journal* warned, however, "consistency does not show causality."⁵¹ The *Journal* noted powerful counterarguments to Pascal's thesis in scientific literature and Pascal's rebuttals to those arguments.⁵² The *Journal* concluded: "It is

ald Myers). A recent critique appears in Robin Weiss, *Of Myths and Mischief*, DISCOVER, Dec. 1994, at 36, 38. The article discusses AIDS conspiracy myths and notes the AIDS/polio vaccine theory, although it recognizes that the theory does not fit the conspiracy model. For discussion of the theory and the lawsuit in the Italian press, see Maria Luisa Bozzi, *Un Vaccino Causo l'AIDS?*, LA STAMPA, Sept. 28, 1994, at m.635.

⁴³ Cecil H. Fox, *Possible Origin of AIDS*, 256 SCIENCE 1259, 1259 (1992).

⁴⁴ *Id.* at 1259-60.

⁴⁵ *Id.* at 1259.

⁴⁶ *Id.* at 1260. Although positive results would tend to confirm the possible link, they would not establish it, because the virus could have been present in the vaccine without infecting people.

⁴⁷ See Raanan Gillon, *A Startling 19,000-word Thesis on the Origin of AIDS: Should the JME Have Published It?*, 18 J. MED. ETHICS 3, 3 (1992).

⁴⁸ *Id.* (citing PASCAL, *supra* note 3, at 5-11).

⁴⁹ *Id.*

⁵⁰ *Id.* at 4.

⁵¹ *Id.*

⁵² *Id.* The Gillon editorial cited negative evidence, including "deliberations of a World Health Organization group of experts in 1985, the assessment of a British professor of microbiology in 1986 of the WHO specialists' conclusions as 'reassuring,' and a Japanese study producing negative tests for SIV in the kidneys of monkeys known to have the infection." *Id.* (citing, for example, Y. Otha et al., *No Evidence for the Contamination of Live Oral Poliomyelitis Vaccines with Simian Immunodeficiency Virus*, 3 AIDS 183 (1989); *T-lymphotropic Retroviruses of Non-human Primates*, WKLY. EPIDEMIOLOGICAL REC., Aug. 30, 1985, at 269; A.J. Zuckerman, *AIDS in Primates*, 292

not the role of the *Journal of Medical Ethics* to opine on the truth or falsity of Mr. Pascal's thesis. What does seem clear is that it is an important and thoroughly argued one and ought to be taken seriously by workers in the AIDS field."⁵³

Meanwhile, the controversy continued in the press. Tom Curtis and reporter Patricia Manson wrote a series of articles on polio vaccines and monkey viruses for the *Houston Post*.⁵⁴ The polio researcher who had conducted the African vaccinations focused on by the AIDS/polio vaccine hypothesis wrote a letter to *Science* that disputed certain facts in the *Rolling Stone* article, including facts about the sort of monkey used to make the vaccine.⁵⁵ He insisted that the type of monkey used was not infected with SIV.⁵⁶ He also disputed the geographical fit between the later African AIDS epidemic and the polio vaccinations that he had conducted.⁵⁷ The researcher's letter responded to an earlier letter to *Science* from Tom Curtis,⁵⁸ and it presented a detailed attack on the *Rolling Stone* version of the theory.

BRIT. MED. J. 158 (1986)).

⁵³ *Id.*

⁵⁴ The series of articles ran between March 26, 1992, and October 23, 1992. See, e.g., Tom Curtis & Patricia Manson, *Discovery Too Grave to Imagine*, HOUSTON POST, Apr. 5, 1992, at A1 [hereinafter Curtis & Manson, *Discovery Too Grave to Imagine*]; Tom Curtis & Patricia Manson, *Scientist's Polio Fears Unheeded: How U.S. Researcher's Warning Was Silenced*, HOUSTON POST, Apr. 17, 1992, at A1 [hereinafter Curtis & Manson, *Scientist's Polio Fears Unheeded*]; Tom Curtis & Patricia Manson, *Scientists Urge Screening of Polio Vaccine for HIV*, HOUSTON POST, July 18, 1992, at A9.

⁵⁵ Hilary Koprowski, Letter, *AIDS and the Polio Vaccine*, 257 SCIENCE 1025, 1025-26 (1992).

⁵⁶ *Id.* at 1026. "Even if," the researcher noted, "one speculates that green monkey tissue could somehow have been mixed up with the rhesus monkey tissue [used for making the polio vaccine], it has been shown that neither embryonic nor kidney tissue removed from SIV-infected African green monkeys contains SIV." *Id.* The World Health Organization (WHO) also tested 250 vaccine recipients for HIV antibodies, and none tested positive. Elswood & Stricker, *supra* note 5, at 350. Nevertheless, "[i]n May 1991, it was reported that researchers using more sensitive tests for SIV had found virus DNA in virtually all of the tissues and organ systems of infected [rhesus macaque] monkeys, including the kidneys." *Id.* (citing V.M. Hirsch et al., *Simian Immunodeficiency Virus Infection of Macaques: End-State Disease is Characterized by Widespread Distribution of Proviral DNA in Tissues*, 163 J. INFECTIOUS DISEASE 976 (1991)).

⁵⁷ Koprowski, *supra* note 55, at 1025. A very detailed critique of the Koprowski letter to *Science* is set out in Louis Pascal, *Carelessness with Human Lives, Errors in Hilary Koprowski's Letter to Science Concerning the Origin of AIDS and the Refusal by Science to Correct Them* (Sept. 19, 1994) (unpublished manuscript, on file with author).

⁵⁸ Tom Curtis, *Possible Origins of AIDS*, 256 SCIENCE 1259 (1992).

Science magazine had, by this time, devoted far more than a picogram of print to a hypothesis which it had initially reported as unsupported by a picogram of evidence. The journal, however, declined to publish both a subsequent criticism of the researcher's letter by Tom Curtis and a critique of the researcher's letter by Professor W.P. Hamilton of Oxford University.⁵⁹ Professor Hamilton, like the researcher, was a distinguished scientist. *Science* had devoted considerable space to the theory, much of it heavily weighted on the side of negative comments. This weighing reflected the balance of the scientific response.

In response to the uproar raised by the *Rolling Stone* article, the Wistar Institute, the originator of the African vaccine in question, selected and convened a panel of eminent scientists to consider the hypothesis.⁶⁰ The scientists *seemed* to distinguish, as the *Rolling Stone* article did not, between the origin of AIDS in terms of its first appearance anywhere in the world, as to which the panel found the theory almost certainly wrong, and the origin of the modern AIDS epidemic, as to which they found the theory extremely unlikely.⁶¹

The panel's report cited the case of the man who allegedly died of AIDS in 1959 in Manchester, England.⁶² The man apparently came down with AIDS in December 1958, at a time and under circumstances that would make the Congo trials an unlikely, if not impossible, source for the initial appearance of AIDS.⁶³ According to the report, the man, employed by the Royal Navy, "returned to England by the first half of 1957 before the Congo trial was begun."⁶⁴ In light of that incident, the Report continued, "it can be stated with almost complete certainty that the large poliovaccine trial begun late in 1957 in Congo was not the *origin of AIDS*."⁶⁵

Still, the Manchester case, even if accurately reported, does not logically exclude the hypothesis as an explanation for the appearance of the AIDS

⁵⁹ Letter from W.D. Hamilton, Royal Society Research Professor, Department of Zoology, Oxford University, to *Science* magazine (Jan. 17, 1994) (on file with author).

⁶⁰ See COMMITTEE REPORT, *supra* note 5. The panel included Claudio Basilico, NYU School of Medicine; Clayton Buck, The Wistar Institute; Ronald Desrosiers, New England Regional Primate Research Center; David Ho, Aaron Diamond AIDS Research Center; Frank Lilly, Albert Einstein College of Medicine; and Eckard Wimmer, SUNY Stony Brook.

⁶¹ *Id.* at 4. If the AIDS/polio vaccine theory were true, then the modern AIDS epidemic would have originated in central Africa, where the vaccine was administered. See Elswood & Stricker, *supra* note 5, at 351; Tom Curtis & Patricia Manson, *Scientists Scramble to Solve Interplay of Immunodeficiency Viruses*, HOUSTON POST, May 8, 1992, at A15.

⁶² COMMITTEE REPORT, *supra* note 5, at 4.

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.* (emphasis added).

epidemic in Africa, even if it cannot account for how AIDS first entered the human population. If AIDS entered the human population from monkeys, it could have done so in several ways and at different times. Further, proponents of the theory insisted that the African trials in fact began in February, 1957,⁶⁶ making transmission of the virus to the man as a result of the trials less implausible.

In March 1995, several years after the Wistar Committee's report, new work by David Ho, one of its members, indicated that the Manchester man did not die of AIDS after all.⁶⁷ Dr. Ho was spurred on by persistent questions about the case by Dr. Gerald Myers, a leading expert of the genetics and genetic history of HIV-1.⁶⁸ Dr. Myers was puzzled because the genetic makeup of the AIDS virus reported in the Manchester man looked like HIV-1 of the 1990s, not like the fast evolving virus should have looked in the 1950s.⁶⁹ As a result of Ho's work, one of the main arguments used to suggest that the AIDS/polio vaccine theory was impossible or improbable seems to have crumbled. Until efforts to confirm Dr. Ho's work are complete, it is too early to draw final conclusions.⁷⁰ That a powerful argument against the theory has collapsed (if that proves to be the case) does not prove the theory true, but it weakens the claim that it is clearly false.

When the Committee reported, it did not have the benefit of Dr. Ho's later work. The Committee concluded that "the probability of *the AIDS epidemic* having been started by the inadvertent inoculation of an unknown HIV precursor into African children during the 1957 poliovirus vaccine trials" was "extremely low."⁷¹ It rejected, however, some of the arguments that claimed to prove the impossibility of the theory. Because of the possible presence of monkey blood with the monkey kidneys used to make the vaccine, the Committee concluded that "the possibility of the presence of a small amount of SIV particles in these culture supernatants cannot be discounted."⁷² The Committee noted an interruption of the supply of Asian

⁶⁶ Elswood & Stricker, *supra* note 5, at 350-52.

⁶⁷ Steve Connor, *How Scientists Discovered False Evidence on the World's "First AIDS Victim": U.S. Experts Have Destroyed Claims That the Death in 1959 of a British Printer was Caused by HIV*, THE INDEPENDENT, Mar. 24, 1995, at 2-3.

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ A lucid discussion of the controversy appears in Brian Martin, *Polio Vaccines and the Origin of AIDS: The Career of a Threatening Idea*, TOWNSEND LETTER FOR DOCTORS, Jan. 1994, at 97, 100. For the story of persistent pursuit of scientific truth by Drs. David Ho and Gerald Myers, see Lawrence K. Altman, *Earliest AIDS Case is Called into Doubt*, N.Y. TIMES, Apr. 4, 1995, at C1; Declan Butler, *New York Researchers Question Claims of 'First' AIDS Case*, 374 NATURE 397 (1995); Connor, *supra* note 67; Tuofu Zhu & David D. Ho, *Was HIV Present in 1959?*, 374 NATURE 503 (1995).

⁷¹ COMMITTEE REPORT, *supra* note 5, at 6 (emphasis added).

⁷² *Id.* at 1.

monkeys at the time of the Congo trials and the possible substitution of African green monkeys, which are known to harbor SIV in the wild.⁷³

The Committee conceded that "the possible presence of SIV or related virus particles in the vaccine preparation could not be discounted," although it believed that any concentration would be quite low.⁷⁴ (As the concentration drops, so does the likelihood of infection.) It further asserted that the virus would likely have been killed by the alleged repeated freezing and thawing of the vaccine preparations.⁷⁵ The Committee noted that although oral administration was an inefficient route for the transmission of HIV, the possibility of a wound or blister, and evidence of rare transmission through mothers' breast milk, meant that transmission by oral administration of the vaccine could not be ruled out.⁷⁶ The Committee concluded:

Almost every step in this hypothetical mode of transmission is problematic. The contamination of the poliovirus vaccine lots with SIV/HIV particles, if any, is likely to have been extremely small. Transmission by the oral route is extremely rare for HIV or SIV. Finally the evolutionary distance between known monkey immunodeficiency viruses and HIV-1, the prevalent virus in the AIDS epidemic, probably took decades or centuries to be bridged and not a few years. The most telling evidence is the case of the Manchester sailor who appears to have been infected with HIV-1 even before the poliovirus trials were begun in Congo.⁷⁷

The Committee's report was one of the most careful, balanced, and thoughtful critical responses to the AIDS/polio vaccine theory discussed in the *Rolling Stone* article. Still, after apparently distinguishing between the

⁷³ *Id.* at 2.

⁷⁴ *Id.*

⁷⁵ *Id.* at 2-3.

⁷⁶ *Id.* at 3.

⁷⁷ *Id.* at 6. The Committee noted that the Sabin vaccine, also produced in monkey kidney cells, had been distributed to millions in Eastern Europe with no ensuing AIDS epidemic. The Sabin vaccine was administered by sugar cubes, as opposed to the spray used for the African vaccine. *Id.* at 3. The explanation that the spray might have been a source of transmission to the lungs in a way that sugar cubes could not be was deemed by the Committee to constitute an improbable distinction. *Id.*

Soon after the *Rolling Stone* article appeared, a different theory of AIDS transmission to humans in the United States by means of polio vaccines appeared. See Walter S. Kyle, *Simian Retroviruses, Poliovaccine, and Origin of AIDS*, 339 LANCET 600 (1992). This theory involved oral administration of live polio vaccine to individuals with herpes sores in an effort to treat the problem by promoting a generalized immune response. *Id.* at 601.

origin of AIDS and the origin of the epidemic, the Committee conflated the two in its evaluation of the theory. The report also failed to note a salient statistical fact. If event *A* is improbable, and event *B* is improbable, and event *C* is improbable, and each is independent of the other, then the likelihood of a conjunction of *A*, *B*, and *C* is much more improbable. This fact supports the Committee's improbability theory. On the other hand, as the number of occasions on which *A*, *B*, and *C* could occur increases, the probability of each occurring at least once increases and so does the probability of their conjunction. The oral route is an unlikely mechanism for transmission of SIV or HIV, but the likelihood of one or a few transmissions occurring increases dramatically considering the number of administrations—300,000 in the Congo. If the presence of SIV or a viral relative in any given monkey kidney is unlikely, the likelihood for its presence in at least some kidneys increases dramatically if kidneys from 200,000 monkeys are used worldwide each year.⁷⁸ The same is true if a rare monkey AIDS virus exists that is closer to the human AIDS virus. As the number of monkeys captured and killed for their kidneys increases, so does the likelihood that some that are captured have the posited, but as yet not fully confirmed, virus. Assuming the existence of a virus-contaminated monkey kidney, the process is like a negative lottery. It is extremely unlikely that any given person or preparation will "win" the hypothetical virus, but the possibility is higher that, of numerous entrants, one preparation or person somewhere in the multitude will "win."⁷⁹

The polio vaccine is made by attenuating or weakening the polio virus.⁸⁰ Seed stocks of the weakened virus are used to grow additional supplies of vaccine, much as yogurt starter culture is used to produce additional batches of yogurt.⁸¹ The monkey kidneys provide the medium used to grow additional batches,⁸² as milk provides the medium for additional batches of yogurt. The AIDS/polio vaccine theory, as reported in *Rolling Stone*, never

⁷⁸ The United States alone imported more than 200,000 monkeys a year in the late 1950s and early 1960s. DEBORAH BLUM, *THE MONKEY WARS* 250 (1994). The rhesus macaque population of India may have dropped from between five and ten million to fewer than 200,000 as a result. *Id.*

⁷⁹ Brian Martin makes a related point:

Even if, *a priori*, the chance of causing AIDS from polio vaccines was quite low, we know now that AIDS did develop somehow. Therefore, the key issue is not the absolute probability of AIDS developing from a particular sequence of events, but the relative probability, namely the probability compared to other ways that AIDS might have developed (cut hunters, monkey bites, and so forth). But the Wistar Committee made no such comparisons.

Martin, *supra* note 70, at 100.

⁸⁰ JANE SMITH, *PATENTING THE SUN* 126-31, 356 (1990).

⁸¹ *Id.*

⁸² *Id.*

made clear whether all of the African batches or just a few were supposedly contaminated. The second possibility reduces the probability of transmission, but could help explain why AIDS epidemics did not occur in other places that used some form of polio vaccine.

The report was ambiguous as to the significance of the Committee's conclusion that the hypothesis was improbable. One Committee member said in a news conference that the hypothesis was so improbable that it could be ignored.⁸³ Nevertheless, according to Sir Karl Popper, the late philosopher of science, the mere fact of improbability should not lead to the dismissal of a theory:

The probability of a statement (or a set of statements) is always the greater the less the statement says; it is inverse to the content or the deductive power of the statement, and thus to its explanatory power. Accordingly every interesting and powerful statement must have a low probability; and vice versa: a statement with a high probability will be scientifically uninteresting, because it says little and has no explanatory power.⁸⁴

Finally, the Wistar Committee made a startling recommendation:

In closing, we feel compelled to mention that the current controversy highlights the problems and difficulties associated with using monkey tissue for production of vaccines administered to humans. To this day, live-attenuated poliovirus vaccine is produced in the United States and in most other countries using primary African green monkey kidney cells. Although green monkeys can now be certified free of SIV for use in vaccine production, specific tests could not have been performed prior to 1985 when SIV was first isolated. There may well be other monkey viruses that have not yet been discovered that could possibly contaminate vaccine lots. This provides a powerful argument for the use of well-characterized cell lines for vaccine production.⁸⁵

⁸³ Kolata, *supra* note 17, at A16 (quoting Dr. Eckard Wimmer as stating that "the hypothesis is so unlikely that we don't have to take it seriously").

⁸⁴ KARL R. POPPER, CONJECTURES AND REFUTATIONS: THE GROWTH OF SCIENTIFIC KNOWLEDGE 58 (1965).

⁸⁵ COMMITTEE REPORT, *supra* note 5, at 7.

It is puzzling that at least one member of the Committee found the AIDS/polio vaccine theory so unlikely that it should be ignored and then proceeded to join a recommendation against the use of monkey kidneys to manufacture vaccines. The recommendation seems to imply that the transmission of monkey viruses by vaccines is a significantly possible danger, offering at least some support for the hypothesis reported by *Rolling Stone*.⁸⁶

C. To Test Or Not To Test

Some leading AIDS and polio researchers supported testing of samples of all polio vaccine used between the 1950s to the 1980s, both for HIV and related simian viruses.⁸⁷ They expressed doubts, however, that HIV contamination would be found.⁸⁸ Dr. Joseph Melnick of Baylor College of Medicine, an eminent virologist and polio expert, said, "I think all the stocks that were used in human beings at the time in any part of the world should be tested, [to] put these questions to rest."⁸⁹ In contrast, the Wistar Committee, which saw its mission as limited to the Congo trials, recommended only a single sample for testing because it was the only sample that could almost certainly be tied to the Congo trials.⁹⁰

A scientist-entrepreneur with a Ph.D. in molecular virology offered to conduct the testing for free.⁹¹ The entrepreneur was developing test kits

⁸⁶ In a discussion that arose from the AIDS/polio vaccine controversy, Dr. David Ho, a leading AIDS researcher and member of the Wistar Committee, said that he and fellow scientists were seriously concerned when a baboon liver was transplanted into a human being. Such transplants involve immune suppression to avoid rejection, which can make a person more susceptible to simian viruses. See Tom Curtis & Patricia Manson, *Scientists Urge Major Changes in How Polio Vaccines Made: Suggest Old Sample Be Studied for Link to the AIDS Virus*, HOUSTON POST, Oct. 23, 1992, at A16. Dr. Ho said: "The baboon thing gave many of us a lot of concerns because you don't know what's in there, what possibly could be transmitted" to other people. "If the person lives, are we at risk of starting an epidemic from some primate virus or agent?" *Id.*

⁸⁷ Tom Curtis, *Expert Says Test Vaccine, Backs Check of Polio Stocks for AIDS Virus*, HOUSTON POST, Mar. 22, 1992, at A1; Tom Curtis & Patricia Manson, *Polio Experts Support Vaccine Tests for HIV*, HOUSTON POST, Mar. 26, 1992, at A1. Dr. Anthony Fauci stated that "[i]f there are lots (samples of the various polio vaccines) from back then, then certainly it would seem reasonable to go back and test them using our modern techniques." Curtis & Manson, *supra*, at A1. Dr. Fauci was identified as "one of the federal government's chief AIDS researchers." *Id.*

⁸⁸ Curtis & Manson, *supra* note 87, at A1.

⁸⁹ *Id.*

⁹⁰ See COMMITTEE REPORT, *supra* note 5, at 6.

⁹¹ Indeed, the entrepreneur unsuccessfully had sought samples of old polio vaccine to test for some time before the *Rolling Stone* article appeared. See Tom Curtis & Patricia Manson, *Doctor Wants Houston Researcher to Test Polio Vaccines for AIDS Link*,

and other ways of manufacturing vaccines, and might have benefitted financially if contamination had been found.⁹² Because of the entrepreneur's personal stake in the results, one member of the Wistar Committee thought that he was unsuitable to perform testing.⁹³ As the entrepreneur noted, however, if the results of his tests were positive, they could be verified by others.⁹⁴ Another investigator, Cecil Fox, reported that his efforts to conduct tests of early polio vaccines were rebuffed by the FDA because "no vaccine was available" for such tests.⁹⁵ As of this writing, three years after the researchers and the committee recommended testing, even the extremely limited testing recommended by the Wistar Committee apparently has not been done, and no significant testing appears likely in the future.

There may be several reasons for this reluctance to test. If the theory is wildly improbable, testing may waste time, effort, and expense. That explanation, however, loses force in the face of a volunteer who offered to test the samples for free. There are also prudential and political objections. The health questions raised by the controversy go beyond AIDS, and raise concerns about other simian viruses that early vaccines might have transmitted to people. Discovery of contamination, and then possibly of a vaccine-illness link, might cause serious problems for organized and powerful interests.

This is not a question of pure self-interest. Self-interest is often, perhaps typically, compatible with genuine and important public interests. Discovery that medicine had spawned a modern plague in the midst of one of the great public health triumphs of the century could undermine the public's faith in science and medicine. People might become more skeptical about vaccinations and other medical procedures, and public skepticism might cause further public health problems. Furthermore, the discovery of an AIDS/polio vaccine link could produce greater regulation of scientific research, regulation that some would find stifling. The press is also motivated in good part by self interest. Self interest of owners of the press can (and often does) also collide with the public interest as the growth of tabloid journalism and timidity in covering subjects disapproved by advertisers show.

Historically, concern about protecting the government's legitimacy supported the idea that criticism of rulers should be punished as sedition. Government, after all, is an important good. Undermining its legitimacy can make it impossible for government to perform its necessary functions. Criticism of governmental officials, the argument goes, tends to undermine legitimacy. As an 18th century English judge observed, "[i]f people should not

HOUSTON POST, July 18, 1992, at A9.

⁹² *Id.*

⁹³ Curtis & Manson, *supra* note 86, at A16.

⁹⁴ *Id.*

⁹⁵ Letter from Cecil Fox to author, *supra* note 5, at 1.

be called to account for possessing the people with an ill opinion of the government no government can subsist. For it is very necessary for all governments that the people should have a good opinion of it.”⁹⁶ By this theory, true criticisms of government were regarded as worse than false ones.

In retrospect, supporters of sedition exaggerated its genuine dangers and underestimated the benefits of criticism. As Professor Harry Kalven noted, “[p]olitical freedom ends when government can use its powers and its courts to silence its critics.”⁹⁷ The same is true if government allows private actors with special power to shape the world to use the power of government and the courts to silence their critics. The sedition model⁹⁸ may be particularly appropriate because much medical science is often a joint venture between scientists, industry, and government. Some might think that the model is not sedition, but is instead shouting “fire!” in a crowded theater. In that case, however, the harm occurs immediately and before the chance for counter speech.

There is a negative as well as a positive side to protecting the reputation of powerful governmental and private interests, as a story from the history of polio vaccines shows.

Government researcher Bernice Eddy found that something in the monkey kidney cells used to make adenovirus vaccine and early polio vaccine caused cancer in baby hamsters. The problem was later identified as the monkey virus SV-40. Dr. Eddy, the pioneering female scientist and government researcher who first flagged this as well as other problems, was chastised and demoted. “From ancient times the bearer of bad tidings has met with poor reception,” author Elizabeth Moot O’Hern noted in her chapter on Eddy in *Profiles of Pioneer Women Scientists*.⁹⁹

It is understandable that there are not a lot of volunteers for the role of messenger, particularly when, without further investigation, we cannot even be sure that the news is bad. If the messenger who brings bad news is often killed, what fate is likely to befall the messenger who insists on searching in

⁹⁶ Rex v. Tutchin, 14 HOWELL STATE TRIALS 1095, 1128 (1704) (quoted in 2 JAMES F. STEPHEN, HISTORY OF THE CRIMINAL LAW OF ENGLAND 318 (reprint 1973) (1883)).

⁹⁷ Harry Kalven, Jr., *The New York Times Case: A Note on “The Central Meaning of the First Amendment”*, 1964 S. CT. REV. 191, 205.

⁹⁸ *Id.*

⁹⁹ ELIZABETH M. O’HERN, PROFILES OF PIONEER WOMEN SCIENTISTS 153-57 (1985). According to Dr. O’Hern, Eddy was invited to address the New York Cancer Society on her work and got official approval to speak. Still, “her supervisor angrily reprimanded her for mentioning the discovery publicly.” Henceforth, her statements to outside groups were to be submitted for approval. Publication of her results was delayed for two years, over Dr. Eddy’s protests. Dr. O’Hern believes evidence that SV-40 does not cause health hazards in humans is now convincing. *Id.* at 155; see also Curtis & Manson, *Scientist’s Polio Fears Unheeded*, *supra* note 54, at A1; *supra* note 15.

what seem to be the most unlikely places, when such searches may lead to the reporting of bad news?¹⁰⁰

There is limited enthusiasm for testing the possible, but seemingly unlikely, AIDS/polio vaccine link. Asked in 1992 why he thought scientists and government officials had not already performed the tests, David Ho explained that "[i]f you really think about it, what do you have to gain and what do you have to lose?"¹⁰¹ In one of his many stories of the testing issue, Tom Curtis quoted a researcher who works at an Ivy League medical school who asked that his name not be used: "'Nobody wanted to do anything' to test the old polio vaccine stocks 'Everybody was afraid there would be a public panic or a scandal.'"¹⁰² Professor W.D. Hamilton stated bluntly:

I am finding, people far better qualified to investigate or support [the theory] than I am[,] who say to me things like: "Well, I can see the theory may have a case, but I'm afraid I can't touch any of that: our grant comes from the Medical Research Council" or "Labs that could test what you want in Britain are all in the same boat, they all get money from the MRC or drug companies. I don't think you are going to find any of them wanting to be testing an old vaccine with a risk of turning up something. You just have to accept this is what the AIDS field is like"¹⁰³

D. *The Libel Suit*

Although the AIDS/polio vaccine theory was not tested in the laboratory, it was challenged in court. On December 16, 1992, the scientist who conducted the vaccinations in the Congo sued the publisher of *Rolling Stone*

¹⁰⁰ Although Dr. Joseph Melnick has stated that doctors should monitor the subsequent medical histories of people who received the early SV-40 vaccine that was allegedly contaminated, little follow-up has in fact been done. Such limited monitoring as has occurred has in some cases yielded equivocal data. See O'HERN, *supra* note 99, at 154-56; Curtis & Manson, *Discovery Too Grave to Imagine*, *supra* note 54, at A1; *supra* note 15.

¹⁰¹ Curtis, *supra* note 38, at A1.

¹⁰² Tom Curtis, *Vaccines Not Tested for HIV? Official Reports FDA Scrapped Plan to Do So*, HOUSTON POST, Mar. 18, 1992, at A1.

¹⁰³ Letter from W.D. Hamilton, Professor, Oxford University, to Dr. Daniel E. Koshland, Jr. 3 (Feb. 23, 1993) (on file with author).

magazine, the corporation that owns *Rolling Stone*, and Tom Curtis.¹⁰⁴ The complaint raised a number of issues related to defamation. A central issue, however, and the one discussed in this article, involved the allegation that the article “destroyed the reputation of [the researcher] in that a reasonable reader could infer that [the researcher’s] polio vaccine infected its recipients with the AIDS virus.”¹⁰⁵ This statement was alleged to be libelous because “[t]here is no scientific evidence to support the accusation that [the researcher’s] polio vaccine introduced the AIDS virus into the human population.”¹⁰⁶ The complaint also alleged that Curtis “wrote the article with a preconceived conclusion, namely, that [the] polio vaccine introduced AIDS into the human population, and purposely avoided including in the article facts which would have shown his preconceived conclusion for what it is; namely, false.”¹⁰⁷ The complaint further warned that the hypothesis might cause parents to refuse to vaccinate their children for polio.¹⁰⁸

After spending a very large amount on legal fees before trial or even a decision on summary judgment, *Rolling Stone* settled with the researcher. *Science* magazine reported the settlement with the chortling headline, “*Rolling Stone* Rolls Over . . .”:

In a “clarification” that fills up nearly half a page, *Rolling Stone* magazine states in its 9 December issue that its editors “never intended to suggest . . . that there is any scientific proof, nor do they know of any scientific proof” that [the researcher], “an illustrious scientist,” introduced AIDS to the human population. . . . The story explored the hypothesis that a polio vaccine developed in the 1950s . . . was contaminated with a form of the AIDS virus. This raised the possibility that [the researcher] was, in the magazine’s words, “the father of AIDS.” [In fact, *Rolling Stone* had not used those words in its story.]

Many scientists lambasted the account for piling speculation upon speculation.¹⁰⁹

¹⁰⁴ Complaint at 3, *Koprowski v. Straight Arrow Publishers, Inc.* (Ct. C.P. Phila. County 1992) (Civ. Action No. 2030).

¹⁰⁵ *Id.* at 9-10.

¹⁰⁶ *Id.* at 10. The complaint also alleged that the *Rolling Stone* article accused the researcher of failing to follow sufficient safety precautions. *Id.* I do not read the article as making a judgment on that question. If the transmission of the AIDS virus occurred as the article’s hypothesis suggests, it was a transmission that leading experts in the field did not foresee.

¹⁰⁷ *Id.* at 13.

¹⁰⁸ *Id.* at 13-14. Because SIVs now have been identified, polio vaccine makers can screen for them and avoid SIV contaminations.

¹⁰⁹ Holden, *supra* note 9, at 1369.

Science magazine reported that the researcher felt "very well" about the settlement.¹¹⁰ *Science* did not, however, discuss the civil liberties implications of the use of defamation actions to punish the expression of controversial scientific ideas on matters of great public concern, in those cases where the ideas may also affect reputation.¹¹¹

Although the settlement precluded a judicial determination, there are substantial arguments that the *Rolling Stone* article was protected speech under existing law. First, an article reporting a hypothesis simply may not be defamatory, given the nature of a hypothesis as scientific, speculative discourse. Second, the researcher who conducted the Congo vaccinations is a famous scientist who made substantial contributions to a celebrated effort to defeat a deadly disease. As such, he was probably a limited purpose public figure.¹¹² If so, the researcher would have had the burden of showing that the article discussing his public activities was intentionally false or written in reckless disregard of the truth.¹¹³ The researcher alleged exactly

¹¹⁰ *Id.*

¹¹¹ There are puzzling aspects to the clarification and to the way *Science* magazine has interpreted it. *Rolling Stone's* clarification states that it does not know of any scientific proof of the theory. If that means, as *Science* magazine suggested, that there is no evidence to support the theory, then the statement is untrue. As noted, there is circumstantial evidence that supports the theory, even though the theory may well be false. If, on the other hand, the clarification means simply that the theory is unproven, then the clarification says no more than the original article said. At any rate, the subtext of the *Science* piece on the settlement seemed to be that *Rolling Stone's* settlement had driven a stake through the heart of the theory.

As a result of the clarification, *Science* implied, the AIDS/polio vaccine theory has finally been laid to rest. But *Science* made much of the fact that the hypothesis originally had been published in *Rolling Stone*, a source which it implied is entitled to no scientific credence. If that is the case, it is hard to see why the clarification by *Rolling Stone* is entitled to significant weight. Further, one cannot avoid noting that the clarification was made under threat of suit.

¹¹² "Few would argue . . . that the Nobel Prize-winning scientists who pioneered the polio vaccines are not public figures." Vincent Brannigan & Bruce Ensor, *Did Bose Speak Too Softly?: Product Critiques and the First Amendment*, 14 HOFSTRA L. REV. 571, 590 (1986). Although the researcher, like Drs. Jonas Salk and Albert Sabin, did not win a Nobel Prize, he was a famous participant in the battle against polio, and as *Rolling Stone* noted in its clarification, "illustrious." Cf. *Fitzgerald v. Penthouse Int'l, Ltd.*, 691 F.2d 666, 668 (4th Cir. 1982) (in determining whether an individual is a public figure, factors for a court to consider include whether the controversy predated the publication of the allegedly defamatory publication and whether public figure status was retained as the time of publication), *cert. denied*, 460 U.S. 1024 (1983). See generally RODNEY A. SMOLLA, LAW OF DEFAMATION §§ 2.09-.11 (1994) (discussing who is to be classified as a limited public figure).

¹¹³ *Harte-Hanks Communications, Inc. v. Connaughton*, 491 U.S. 657, 659 (1989) (noting that "[a] public figure may not recover damages for a defamatory falsehood without clear and convincing proof that the false 'statement was made with 'actual

that. The burden of proving intentional falsity or recklessness, though not impossible, is a very difficult one to meet. Simple negligence, such as factual mistakes or omissions, standing alone, does not show recklessness.¹¹⁴ Third, regardless of whether he was a public figure, because the *Rolling Stone* article dealt with a matter of public concern, the burden would be on the researcher to prove the article was false.¹¹⁵ Fourth, the *Rolling Stone* article may have been protected under the relevant state's common law doctrine of fair comment for matters of public concern, or by its common law rules protecting opinion. Over time, some courts have developed a doctrine of privilege protecting fair comment and opinion based on true and disclosed facts, regardless of whether the opinion was reasonable.¹¹⁶ According to the *Restatement of Torts*, "[a] defamatory communication may consist of a statement in the form of an opinion, but a statement of this nature is actionable only if it implies the allegation of undisclosed defamatory facts."¹¹⁷ Finally, *Rolling Stone's* report of the theory might have been covered by the neutral reportage privilege.¹¹⁸ These protections, valuable as they are, are insufficient because of the uncertainty of their application. The public figure test may not preclude long and expensive trials and appeals. Libel actions thus may have an inhibiting effect on otherwise constitutionally protected speech and press.

malice"—that is, with knowledge that it was false or with reckless disregard of whether it was false or not").

¹¹⁴ For a discussion of the operation of these tests, compare *St. Amant v. Thompson*, 390 U.S. 727, 731 (1968), with *Harte-Hanks*, 491 U.S. at 659. For a discussion of the *New York Times* fault standard, see SMOLLA, *supra* note 112, § 3.13.

¹¹⁵ See *Philadelphia Newspapers, Inc. v. Hepps*, 475 U.S. 767, 776 (1986).

¹¹⁶ SMOLLA, *supra* note 112, § 6-6.

¹¹⁷ RESTATEMENT (SECOND) OF TORTS § 566 (1977). Other authorities have noted that a problem may exist where the opinion is based on true facts, but crucial facts are omitted. See *Ollman v. Evans*, 750 F.2d 970, 1022-23 (D.C. Cir. 1984) (en banc) (Robinson, J., dissenting in part), *cert. denied*, 471 U.S. 1127 (1985). Judge Robinson gives the example of an opinion that a homicide is murder, where the facts recited are true, but crucial facts showing self-defense are omitted. The omission, some argue, should make the statement actionable. *Id.* (Robinson, J., dissenting in part). Under this second approach, for articles like *The Origin of AIDS . . . ?*, the common law fair comment or opinion analysis would likely focus on the nature and significance of omitted facts and the accuracy of the facts reported.

¹¹⁸ See *Edwards v. National Audubon Soc'y, Inc.*, 556 F.2d 113, 120 (2d Cir.), *cert. denied*, 434 U.S. 1002 (1977). The doctrine would not protect the originator of the theory, but an extension of the doctrine might.

E. *Publication of the Elswood & Stricker Article*

In 1994, the journal *Medical Hypotheses* finally published B.F. Elswood and Dr. R.B. Stricker's article, *Polio Vaccines and the Origin of AIDS*.¹¹⁹ In lucid prose, the article traced current scientific knowledge about simian viruses, polio vaccines, and humans.¹²⁰ It reiterated the basic thesis reported earlier by Tom Curtis in *Rolling Stone*, and supported it with significant additional circumstantial evidence, including evidence developed since the *Rolling Stone* controversy first began. New and more powerful tests had disclosed viral DNA in monkey tissue that was thought previously to be free of the virus.¹²¹ Lab workers working with monkeys infected with SIV had developed antibodies to SIV after lab mishaps.¹²² The chairman of the virology department at a South African medical university reported in a letter to *The Lancet* that he had found a monkey in the wild which tested positive for a virus similar to HIV-1.¹²³ Chimps had been found to be infected with an SIV strain much closer to HIV-1 than most other simian viruses, and those chimps, Elswood and Stricker speculated, could have infected other monkeys or vaccine cultures.¹²⁴ The authors stated that chimps had been used to attenuate some polio viruses, though it was unknown whether chimps were used for the Congo vaccine.¹²⁵ Some infants had contracted HIV from breastfeeding, indicating that oral transmission may be a more likely route than once thought.¹²⁶ The authors recognized that prior testing of polio vaccine stocks for SIV had yielded negative results, but suggested that new and more powerful tests now available might produce different results.¹²⁷

The Elswood-Stricker article concluded that it "remains to be proven" whether "the 1957-59 polio vaccine inoculations in the Belgian Congo were the cause of the cross-species transfer of HIV to man."¹²⁸ So far, the arti-

¹¹⁹ Elswood & Stricker, *supra* note 5, at 347.

¹²⁰ *See id.*

¹²¹ *Id.* at 349.

¹²² *Id.* at 350.

¹²³ *Id.* at 351. Critics have suggested that this result may be explained as a false positive.

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *Id.* at 350. Compare COMMITTEE REPORT, *supra* note 5, at 3.

¹²⁷ Elswood & Stricker, *supra* note 5, at 350.

¹²⁸ *Id.* at 352. For a brief earlier account of the theory, see B.F. Elswood & R.B. Stricker, *Polio Vaccines and the Origin of AIDS*, 144 RESEARCH IN VIROLOGY 175, 175-77 (1993). In response, the editors of *Research in Virology* set out reasons for believing the infection had not occurred:

It is legitimate to raise questions about the still mysterious origin of the AIDS

cle does not appear to have changed the scientific consensus that the validity of the AIDS/polio vaccine theory is extremely unlikely. Still, as of fall 1995, discussion of the theory in the scientific journals remains in its early stages.

F. *The Science Defamation Conundrum*

Current law in the United States seeks to protect free speech from defamation actions by several doctrines. First, the law broadly protects the discussion of public officials, famous people, and those who have engaged in high-profile participation in ongoing controversies on matters of public concern. The First Amendment protects critics of such people, except where the writer says things known to be false or acts in reckless disregard of the truth.¹²⁹ Second, the First Amendment is interpreted to require that, as to matters of public concern, the defamed party must prove the falsity of the offending statement.¹³⁰

For discussions of things like scientific hypotheses, these safeguards provide insufficient protection of free speech values. Regardless of the outcome, long and expensive libel suits may have a chilling effect, not only on

epidemic and not to exclude the role of medical actions.

However, available data indicate that HIV-1 is not present, nor is any related virus (SIV), in wild rhesus macaques and in cynomolgus monkeys, which were the sources of kidney cultures used to produce the poliovirus for vaccines up until 1961. Only two macaque colonies were infected in US Primate Centers in the seventies, with the so-called SIVmac

From 1961 onwards, polio vaccines were prepared from cells derived from African green monkeys and baboons (this was because of SV-40 contamination of rhesus macaques).

Both of these monkey species can be infected by a retrovirus of the SIV type, but which is different from SIVmac and SIVmm.

Nucleotide sequence analysis of the genomes of these various primate retroviruses indicated that all of them are very distant from HIV-1 and therefore could not be the recent origin of the latter virus [The editors then noted the case of the man from Manchester.]

. . . .

The primate virus which is closest to HIV-1 is the CPZ virus isolated from the lymphocytes of a chimpanzee captured in Gabon. Since chimpanzee tissues have never been used for poliovirus production, it is difficult to imagine how massive contamination of polio vaccines by a virus rarely detectable in chimpanzees could have occurred.

Id. at 176-77. For the Elsworth-Stricker response on the chimpanzee question, see *supra* note 5, at 351.

¹²⁹ See, e.g., *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 339-48 (1974); *New York Times Co. v. Sullivan*, 376 U.S. 254, 271, 283-92 (1964).

¹³⁰ *Milkovich v. Lorain Journal Co.*, 497 U.S. 1, 19 (1990).

false ideas, but also on those that are true, and on those whose truth is problematic. Critics may be intimidated by the possibility of libel actions. The vagueness of current rules encourages litigation.

Those who can be criticized as long as the critics believe their non-reckless statements to be true should include not only the famous and those involved in high profile controversies, but also those with significant power to influence events in the real world.¹³¹ Courts allow greater latitude for criticism of public officials because of their importance in shaping the world and because of the importance of democratic choice. Courts should also allow similar latitude for criticism in the case of those with the extraordinary power to shape the lives of ordinary people. This category would include many people, but the criticisms receiving heightened protection should be limited to criticism addressing their exercise of special power in the world.

While existing protection is helpful, it is not sufficient. Current doctrine assumes that ideas that can be proved false and also defamatory are of little value and therefore unworthy of free speech protection. That view may be correct for many false statements that are of the "John is a thief" variety. As to complex ideas, however, such as criticism of Alar as a carcinogen,¹³² or a hypothesis about the origin of the AIDS epidemic, and much legal, historical, psychological, and other criticism, the conventional legal wisdom does not work well. I call this kind of discourse "complex criticism." Existing legal protections are inadequate for complex criticism because a hypothesis that proves false, or a criticism that proves mistaken, may still have substantial value in advancing knowledge and political understanding. Furthermore, as the examples below will show, powerful interests exercise an extraordinary ability to shape debate. Adding libel and related claims such as product disparagement to their arsenal is unwise. Because we need to learn from our mistakes, we must avoid punishing those who attempt to expose them—even when, as will sometimes be the case, the critics turn out to be wrong.

We need a test that protects most criticism involving complex questions. As long as the criticism is supported by rational arguments, it should be protected, even though the arguments later prove wrong or incomplete. While this is a tough rule for the defamation plaintiff, it is justified because of the role played by hypothesis and criticism in the growth of knowledge and in the democratic process. Decisions about health, risk, and regulation lie at the heart of democratic choice. Furthermore, diffusion of knowledge about serious risks will often lead to voluntary safety measures. Complex criticism has as its primary focus ideas, products, risks and benefits, and

¹³¹ A still broader additional protection through the use of a rational basis test to protect complex criticism is suggested below. See discussion *infra* part IV.B.5.

¹³² See discussion *infra* part II.B.

processes. Still, it also may, and through innuendo often will, impact the reputation of a person or a product.

One essential characteristic of complex criticism is its central relation to existing ideas. Complex criticism reaffirms, challenges, or develops existing theories or ideas in ways that potentially impact our larger understanding of the social or physical world. In that sense, complex criticism involves more than mere complexity. The solution of a murder mystery is a complex intellectual endeavor, as any reader of detective stories knows. Although proof that John is a thief may be complex, the hypothesis that John has done the deed typically has minimal impact on existing bodies of knowledge about the way the social, political, or physical world works. Complexity in that case does not indicate that the hypothesis is "complex criticism" worthy of enhanced constitutional protection.

As the *Rolling Stone* article shows, complex criticism is often not about wrongdoing.¹³³ Suggestions of wrongdoing, however, should not necessarily defeat a claim that a work is complex criticism. So long as a primary focus of the work is, for example, on ideas, processes, risks and benefits, or the nature of political and economic power, it should qualify as complex criticism. Mere name calling—calling a scientist opposed to fluoridation a "quack" or an expert witness a "whore"—would not qualify. By contrast, stories about the Dalkon Shield, the behavior of the asbestos industry, or AIDS and the blood supply should qualify. Despite claims of wrongdoing, such stories should be protectable complex criticism because they involve questions of scientific causation, risk allocation, the effect of economic power on political decisions about safety, and the exercise of corporate power.

Of course, it is possible that greater freedom of expression on these topics will have bad consequences, beyond injury to reputation. In free speech analysis, such a bad tendency rationale is typically insufficient to justify suppression. We rely instead on the corrective of counterspeech. There should be no special exception from such protective free speech rules in the case of scientific or other complex criticism. At least in those cases where people or organizations with special power to influence events bring libel suits challenging complex criticism, a rational basis test already has found some significant support in the case law.¹³⁴

The law is a system designed to work in the world. Cases are full of impressive statements about the First Amendment as crucial to democratic

¹³³ As noted in *supra* notes 1-7 and accompanying text, the AIDS/polio vaccine theory in the *Rolling Stone* article hypothesized that transmission of the virus to humans was an inadvertent and unforeseen accidental event. As I read it, the article did not charge wrongdoing or negligence on the part of those involved in developing and administering the vaccine.

¹³⁴ See discussion *infra* part IV.B.5.

choice, as not supporting one orthodoxy in conflict with rival ideas, as a mechanism in the search for truth, and as encouraging robust and wide-open debate on matters of public concern.¹³⁵ Understanding the way in which the system of free expression actually works is crucial to thinking about how court decisions should be fashioned to protect democratic debate. Some stories that are recounted here help to explain how the law works in the lives of people and of the nation.

Real world cases are not reassuring. Libel actions can be potent weapons in a political war. Sometimes battles over issues like medical and food safety are political battles, even when conducted in the scientific arena.¹³⁶ One of the stories set out below involved a company that allegedly attempted to channel scientific debate on its products so that favorable ideas appeared in the scientific press, while unfavorable ones did not.¹³⁷ A drug company attacked a scientific critic as a "junk scientist," much as political opponents are attacked and labeled. Financial links between industry and scientific experts can also influence the political battle and the scientific debate.

Free speech and free press rules are designed in part to foster democratic and wise decision making,¹³⁸ and that function should be the polestar that guides courts in their search for free speech rules. We should look at how rules function, not simply at formal considerations.

II. HYPOTHESIS AND SCIENTIFIC DISCUSSION AS DEFAMATION

A. *The Rolling Stone Article*

The *Rolling Stone* article suggested that the polio researcher, acting unintentionally and in accordance with procedures followed by scientists at the time, might have spawned a modern plague. The article also quoted scientists who denied the possibility. The article, the researcher insisted, damaged his professional reputation. The researcher, after all, was part of an heroic struggle against a deadly and crippling disease.

The *Rolling Stone* case raises important issues, and pits the protection of reputation against the right to discuss scientific hypotheses bearing on matters of urgent public concern.¹³⁹ The lawsuit against *Rolling Stone* is not

¹³⁵ See, e.g., *Hustler Magazine v. Falwell*, 485 U.S. 46, 50-51 (1988); *New York Times Co. v. Sullivan*, 376 U.S. 254, 269-71 (1964); *West Virginia State Bd. of Educ. v. Barnette*, 319 U.S. 624, 641-42 (1943).

¹³⁶ See PHILLIP M. BOFFEY, *THE BRAIN BANK OF AMERICA: AN INQUIRY INTO THE POLITICS OF SCIENCE* (1975); DAVID DICKSON, *THE NEW POLITICS OF SCIENCE* (1984); THOMAS R. DUNLAP, *DDT: SCIENTISTS, CITIZENS, AND PUBLIC POLICY* (1981)

¹³⁷ Cf. *infra* part III.D.1.

¹³⁸ Kalven, *supra* note 97, at 191; see also David Logan, *Tort Law and the Central Meaning of the First Amendment*, 51 U. PITT. L. REV. 493, 536 (1990).

¹³⁹ Much academic writing about free speech and science has focused on experimen-

unique. Even successful defenses of complex criticism cases come at a high cost, as two examples noted below will show.

B. *The Alar Controversy*

On February 26, 1989, the CBS News program *60 Minutes* aired a program that was highly critical of the use of Alar, a substance used to keep apples firm. Before the broadcast, animal studies relied on by the EPA had repeatedly indicated that Alar and its breakdown products were carcinogens.¹⁴⁰ Governmental and other investigators regularly extrapolate from such animal studies to ascertain risks to human beings. Still, some scientists, including some affiliated with the chemical industry, have criticized the inference that animal studies prove human risks. Mice, critics insist, are not little men. High doses in animals, they argue, should not be treated as proof of the dangers of much lower doses in people.¹⁴¹ There are serious shortcomings to animal testing models, shortcomings noted by careful and independent researchers.¹⁴² Yet health effects on animals have been defended as providing a useful early warning of dangers to humans.

In spite of the animal studies, a scientific advisory panel expressed doubts about the effects of Alar.¹⁴³ The EPA continued to study the prob-

tation. The literature on science and free speech is substantial. *See, e.g.*, Richard Delgado et al., *Can Science be Inopportune? Constitutional Validity of Governmental Restrictions on Race-IQ Research*, 31 UCLA L. REV. 128 (1983); Richard Delgado & David R. Millen, *God, Galileo, and Government: Toward Constitutional Protection for Scientific Inquiry*, 53 WASH. L. REV. 349 (1978); David Favre & Matthew McKinnon, *The New Prometheus: Will Scientific Inquiry be Bound by the Chains of Governmental Regulation?*, 19 DUQ. L. REV. 651 (1981); James R. Ferguson, *Scientific and Technological Expression: A Problem in First Amendment Theory*, 16 HARV. C.R.-C.L. L. REV. 519 (1981); James R. Ferguson, *Scientific Inquiry and the First Amendment*, 64 CORNELL L. REV. 639 (1979); Gary L. Francione, *Experimentation and the Marketplace Theory of the First Amendment*, 136 U. PA. L. REV. 417 (1987); Diane L. Zimmerman, *Scientific Speech in the 1990s*, 2 N.Y.U. ENVTL. L.J. 254 (1993); *see also* Christopher T. Wonnell, *Truth and the Marketplace of Ideas*, 19 U.C. DAVIS L. REV. 669 (1986).

¹⁴⁰ *See infra* notes 145-46 and accompanying text; *see also* Defendant CBS, Inc. Reply Memorandum in Support of Motion for Summary Judgment at 10, *Auvil v. CBS "60 Minutes"*, 836 F. Supp. 740 (E.D. Wash. 1993) (No. CS-90-553-WFN) [hereinafter *Auvil*, Defendant's Memorandum].

¹⁴¹ Plaintiffs' Memorandum in Opposition to Motion by Defendant CBS, Inc. for Summary Judgment at 33, *Auvil v. CBS "60 Minutes"*, 836 F. Supp. 740 (E.D. Wash. 1993) (No. CS-90-553-WFN) [hereinafter *Auvil*, Plaintiffs' Memorandum].

¹⁴² BLUM, *supra* note 78, at 211-12; Bert Black et al., *Science and the Law in the Wake of Daubert: A New Search for Scientific Knowledge*, 72 TEX. L. REV. 715, 771 n.358 (1994).

¹⁴³ *Auvil*, Plaintiffs' Memorandum, *supra* note 141, at 37-38.

lem, and did not ban the substance.¹⁴⁴ "Five scientific studies conducted between 1973 and 1984 demonstrated with statistically significant results a correlation between ingestion of Alar and various types of tumors in certain lab animals."¹⁴⁵ Meanwhile the American Academy of Pediatrics, concerned about children's health, urged the EPA to ban Alar.¹⁴⁶

Risk assessments are controversial and, given present knowledge, uncertain. They raise critical questions of how risk should be allocated in the face of uncertainty. Even among those who recognized Alar as a risk, some disputed the degree and the imminence of the risk.¹⁴⁷ Some at the EPA, the agency that had failed for some years to ban Alar, also saw press coverage of Alar as unduly alarmist.¹⁴⁸

After the *60 Minutes* program, consumer reaction was decisive and swift. Sales of apples fell sharply.¹⁴⁹ As a result of this consumer action, Alar was withdrawn from the market.¹⁵⁰ The apple industry recovered, though many farmers and others suffered serious losses.¹⁵¹ To some, it seemed a story with a happy ending. A potentially dangerous product was removed from the food supply and apples seemed to be fine without it. Some apple growers, however, never escaped from the economic cul de sac into which using Alar had led them.

On November 28, 1990, eleven apple growers in the State of Washington, with financial assistance from chemical interests, sued CBS for its broadcast on Alar and apples.¹⁵² The action was based on product disparagement, in this case defamation of a fruit.¹⁵³ The plaintiffs interpreted the

¹⁴⁴ *Id.*

¹⁴⁵ *Nader v. EPA*, 859 F.2d 747, 749 (9th Cir. 1988), *cert. denied*, 490 U.S. 1034 (1989). Early battles over arsenic and lead residues on fruit bear some resemblance to the later Alar struggle. See DUNLAP, *supra* note 136, at 41-55.

¹⁴⁶ Letter from Dr. Martin Smith, President, American Academy of Pediatrics, to Lee Thomas, Administrator, EPA (May 8, 1986) (on file with author); see also Auvil, Defendant's Memorandum, *supra* note 140.

¹⁴⁷ Auvil, Defendant's Memorandum, *supra* note 140, at 30-32.

¹⁴⁸ EPA officials wrote Uniroyal:

We disagree strongly with the recent reports appearing on television and in the newspapers and magazines concerning the analysis developed by the Natural Resources Defense Counsel (NRDC) which created the impression that there is a massive and imminent public health problem as the result of pesticide residues in food, and particularly from Alar residues in apples and apple products. This is simply untrue.

Auvil, Plaintiffs' Memorandum, *supra* note 141, at 37.

¹⁴⁹ *Auvil v. CBS "60 Minutes"*, 800 F. Supp. 928, 930-31 (E.D. Wash. 1992).

¹⁵⁰ Auvil, Plaintiffs' Memorandum, *supra* note 141, at 19.

¹⁵¹ Auvil, 800 F. Supp. at 930.

¹⁵² *Id.*

¹⁵³ *Id.* at 928. For a discussion of the tort of product disparagement and the Alar controversy, see Bruce E.H. Johnson & Susanna M. Lowy, *Does Life Exist on Mars?*

CBS program as saying that "scientific evidence conclusively demonstrates that apples are an immediate hazard to public health because apples cause cancer in children."¹⁵⁴ The program's assertion was allegedly false because "scientific evidence was inconclusive and debatable with regard to public health hazards and cancer-causing properties of apples treated with Alar."¹⁵⁵

In September 1993, the district court granted summary judgment for CBS.¹⁵⁶ The farmers were required to prove the statements made by CBS were false and made with knowledge of falsity or in reckless disregard of the truth.¹⁵⁷ In light of the EPA findings, the court ruled that they were unable to do so.¹⁵⁸ The case was appealed and recently affirmed.¹⁵⁹

The current pesticide dialogue is seriously distorted by threats of defamation actions which are insufficiently deterred by existing legal rules. The scientist who believes that pesticides causing cancer in laboratory animals are little cause for concern is comparatively safe in making unequivocal and bland assurances of safety. This is primarily because of the difficulties of individual proof and causation, and because consumers, unless they can prove reliance and injury, are not in a position to launch lawsuits. For diseases that have a long latency period, like cancer, injury occurs years after the assurances of safety. Meanwhile, scientists who think that pesticides in foods expose the public to unreasonable risks must express themselves in a much more guarded fashion or face the possibility of an immediate product disparagement action.

As the rules play out, certain viewpoints are favored over others. The law, if it allows claims of product disparagement like those made in the Alar case to succeed, or even to have a colorable chance of succeeding, supports an industry orthodoxy. Indeed, by permitting long and expensive proceedings—whatever the outcome—the law deters one viewpoint while promoting another. A number of state statutes have been passed to protect agricultural products from being disparaged without an "adequate" scientific basis.¹⁶⁰ Meanwhile, in 1993, the chair of the National Academy of Sci-

Litigating Falsity in a Non-"Of and Concerning" World, 12 COMM. LAW. 1, 20-23 (1994).

¹⁵⁴ Auvil, Plaintiffs' Memorandum, *supra* note 141, at 4.

¹⁵⁵ *Id.* at 5.

¹⁵⁶ Auvil v. CBS "60 Minutes", 836 F. Supp 740, 740 (E.D. Wash. 1993), *aff'd*, 1995 WL 574624 (9th Cir. Oct. 2, 1995).

¹⁵⁷ *Id.* at 741-43.

¹⁵⁸ *Id.* at 742.

¹⁵⁹ Auvil v. CBS "60 Minutes", 1995 WL 574624 (9th Cir. Oct. 2, 1995).

¹⁶⁰ See, e.g., ALA. CODE § 6-5-621 (1994), which makes dissemination of "false information that a . . . food product or commodity is not safe for human consumption" actionable as product disparagement. "The information shall be deemed to be false if it is not based upon reasonable and reliable scientific inquiry, facts, or data." *Id.* § 6-5-

ences Committee on Pesticides in the Diets of Infants and Children told a congressional committee that Alar was "unquestionably" a human carcinogen.¹⁶¹

C. *The Journal of Medical Primatology Article*

Even short-lived libel actions, like that involving the *Rolling Stone's* article on AIDS, can prove very expensive. Libel actions, however, may have a long and thus potentially still more expensive life. In 1983, the *Journal of Medical Primatology* published a letter from Dr. Shirley McGreal, Chairwoman of the International Primate Protection League (IPPL).¹⁶² Dr. McGreal criticized a plan by a multinational corporation to establish a facility in Sierra Leone for hepatitis research.¹⁶³ Under the plan, the research facility would use chimpanzees.¹⁶⁴

The McGreal letter complained that the plan was designed to avoid endangered species restrictions on chimpanzee importation.¹⁶⁵ She said that the capture of chimps involved killing their mothers and could decimate the wild chimp population; further, it was doubtful that experimental animals could be returned to the wild.¹⁶⁶ In any case, returning the animals to the wild could well spread hepatitis to the rest of the chimpanzee population, because of the absence of a reliable scientific method for determining if a chimp exposed to the non-A, non-B hepatitis virus was a carrier of the disease.¹⁶⁷ The editor of the *Journal* himself subsequently charged that the project was "scientific imperialism."¹⁶⁸ The corporation sued for defamation.

Most defendants in the action settled for substantial sums,¹⁶⁹ but the editor of the *Journal* continued to fight. The insurance company for Dr. McGreal settled over her vehement protests.¹⁷⁰ According to Deborah Blum in her book *Monkey Wars*, "[t]here were \$2 million in legal costs.

621(1). Compensatory and punitive damages are available. *Id.* § 6-5-622.

¹⁶¹ *Auvil*, Defendant's Memorandum, *supra* note 140, at 6-7 (citing NATIONAL ACADEMY OF SCIENCES REPORT ON PESTICIDES AND CHILDREN BEFORE THE SENATE COMM. ON AGRICULTURE, NUTRITION, AND FORESTRY, S. DOC. NO. 258, 103d Cong., 1st Sess. 57 (1993)).

¹⁶² *Immuno AG v. Moor-Jankowski*, 567 N.E.2d 1270, 1272 (N.Y. 1989), *cert. denied*, 500 U.S. 954 (1991).

¹⁶³ *Id.*

¹⁶⁴ *Id.* For a discussion of this case, see BLUM, *supra* note 78, at 170-77.

¹⁶⁵ *Immuno AG*, 567 N.E.2d at 1272.

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.* at 1273; BLUM, *supra* note 78, at 172.

¹⁶⁹ BLUM, *supra* note 78, at 173.

¹⁷⁰ *Id.*

(Moor-Jankowski [the editor of the Journal] paid \$70,000 out of his own pocket because depositions were required in Europe and his insurer didn't cover the fees of foreign lawyers.)."¹⁷¹ In 1991, eight years after the litigation began, the New York Court of Appeals ruled that the letter was not libelous.¹⁷² The court reasoned that the corporation failed to prove that the central assertions of the letter were false.¹⁷³ Further, as a matter of state constitutional law, the remainder of the letter and the editor's subsequent statement, read in context, were merely a statement of the writer's opinion as to the plans of the corporation.¹⁷⁴ The court noted "the chilling effect of protracted litigation" on scholarly journals.¹⁷⁵ Although many amicus curiae briefs were filed in the case, not one of the big science or medical societies filed in support of free speech. Remarkably, the National Association for Biomedical Research filed a brief on behalf of the plaintiff corporation and against its member.¹⁷⁶

III. CONFLICTING VALUES: FREE SPEECH, SCIENCE, AND DEFAMATION

A. *Defamation and Free Speech: The Nature of the Interests Involved*

The purposes of defamation law often conflict with the purposes of free speech and free press. Many of the complications of defamation law result from the effort to reconcile these competing interests.

The right of the individual to protect his good name reflects the essential dignity and worth of every individual.¹⁷⁷ In the United States, this right is protected by state defamation law. Defamation is broadly defined. A statement is defamatory if it "tends so to harm the reputation of another as to lower him in the estimation of the community or to deter third persons from associating or dealing with him."¹⁷⁸ Furthermore, a remark, though innocent on its face, can, under the doctrine of innuendo, have a defamatory meaning in context—like Mark Antony's reference to Brutus and the other

¹⁷¹ *Id.* at 174.

¹⁷² *Immuno AG*, 567 N.E.2d at 1273.

¹⁷³ *Id.*

¹⁷⁴ *Id.* at 1276.

¹⁷⁵ *Id.* at 1282.

¹⁷⁶ BLUM, *supra* note 78, at 175.

¹⁷⁷ *Rosenblatt v. Baer*, 383 U.S. 75, 92 (1966) (Stewart, J., concurring).

¹⁷⁸ RESTATEMENT (SECOND) OF TORTS § 559 (1977); see SMOLLA, *supra* note 112, § 1-7.

conspirators who killed Caesar as "honorable men."¹⁷⁹ The broad definition of defamation is hedged with many complicated restrictions.

The statement must be false as well as defamatory.¹⁸⁰ It must be about the plaintiff, must not be privileged, and the author of the statement must have been guilty of some degree of fault, at least if the statement involves a matter of public concern.¹⁸¹ Sometimes, when the subject of defamation is a public official or public figure, the degree of fault required is high indeed. As Leon Green noted, even before common law privileges were reinforced with constitutional privileges, "[n]o other formula of the law promises so much and delivers so little."¹⁸²

Opposing the interest in reputation is the interest in the freedom to communicate. One interest supporting free speech and press is the need of the human spirit for self-expression.¹⁸³ James Madison, the framer of the First Amendment, thought of it as protecting a natural right.¹⁸⁴ Such a right would encompass the right to discuss how the world operates and the causes of things. Another interest is human dignity—the right to pursue knowledge and make or participate in making informed and crucial decisions about one's life and future. The interest in human dignity shades seamlessly into another idea—the idea of democracy and popular sovereignty. By this theory, the people are the masters, government officials are their servants, and free speech is an essential mechanism by which people receive information, consult, and make decisions bearing on self-government.¹⁸⁵ "[F]reedom to

¹⁷⁹ WILLIAM SHAKESPEARE, *JULIUS CAESAR* act 3, sc. 2. "In determining whether speech is actionable, courts must additionally consider the impression created by the words used as well as the general tenor of the expression, from the point of view of the reasonable person." *Immuno AG*, 567 N.E.2d at 1273-74.

A survey conducted by the plaintiff in the *Koprowski* case asked a sample group of readers to answer a series of questions including whether the *Rolling Stone* article suggested or implied that the researcher "a. is responsible[,] b. is probably responsible[,] c. is probably not responsible[, or] d. is not responsible . . . for introducing AIDS to the human population." Affidavit of Ralph B. Ginsberg, Ph.D., *Koprowski v. Straight Arrow Publishers, Inc.* (E.D. Pa. 1993) (Civ. Action No. 92-CV-7431) (attached media research questionnaire). The possibility that the article suggested that an answer simply was not available was not listed as a choice. Of the total number of respondents, 3.4% of respondents chose "is responsible" and 4.3% chose "is not responsible." Sixty-five percent chose "is probably responsible" while 26.5% chose "is probably not responsible." *Id.*

¹⁸⁰ See SMOLLA, *supra* note 112, § 1-7.

¹⁸¹ *Id.* § 1-32; see also *Dun & Bradstreet, Inc. v. Greenmoss Builders, Inc.*, 472 U.S. 749 (1985); *Gertz v. Robert Welch, Inc.*, 418 U.S. 323 (1974).

¹⁸² Leon Green, *The Right to Communicate*, 35 N.Y.U. L. REV. 903, 907 (1960).

¹⁸³ *Procurier v. Martinez*, 403 U.S. 396, 427 (1974).

¹⁸⁴ Cf. 1 ANNALS OF CONG. 436-37 (Joseph Gales ed., 1834).

¹⁸⁵ In connection with a proposal to make it a federal crime for postmasters to deliver antislavery pamphlets in states where such expression was criminal, Senator Davis of

think as you will and to speak as you think," Justice Brandeis insisted, "are means indispensable to the discovery and spread of political truth."¹⁸⁶ That the self-government theory states an ideal approached and never realized does not make it less valid, nor is the theory less powerful because the ideal is often traduced.

Some have suggested that free speech protections should be limited to narrowly defined political speech. Proponents of this view include professor and later Supreme Court nominee Robert Bork. Then Professor Bork suggested, in an article written early in his career, that scientific expression should have no independent claim to free speech or free press protection.¹⁸⁷ Scientific speech would be protected only if it were also political. Because so much scientific speech is politically relevant, there may be less to the distinction than meets the eye. In any case, the suggestion is historically dubious.

Science, business, and technology often play far more active roles in changing the world than politicians.¹⁸⁸ The First Amendment generally protects expression of and access to social, scientific, political, aesthetic, moral, and other ideas.¹⁸⁹ At least where those ideas bear on self-government, they should have the First Amendment's most robust protection.

Massachusetts stated:

The press is the great organ of a free people. It is the medium through which their thoughts are communicated, through which they act upon one another, and by which they reason with, instruct, and move each other. It rouses us to vigilance, warns us of danger, rebukes the aspiring, encourages the modest, and, like the sun in the heavens, radiates its influence over the whole country. The people viewed it as vital to a republic

CONG. GLOBE, 24th Cong., 1st Sess. 348 (1836). Davis also noted that the press made it possible for the people to "see the debates in Congress and [to] know what their agents are doing and saying here." *Id.* at 1107. This ideal is often not realized, as any newspaper reader knows. See also ALEXANDER MEIKLEJOHN, *FREE SPEECH AND ITS RELATION TO SELF-GOVERNMENT* 25-27 (1948) (positing that free speech is an essential component of informing the public about the government and is critical if the public is to control the government).

¹⁸⁶ *Whitney v. California*, 274 U.S. 357, 375 (1927) (Brandeis, J., concurring).

¹⁸⁷ Robert H. Bork, *Neutral Principles and Some First Amendment Problems*, 47 IND. L.J. 1, 26-28 (1971).

¹⁸⁸ In *Krebiozen Research Foundation v. Beacon Press, Inc.*, 134 N.E.2d 1, 8 (Mass. 1956), the Foundation sought an injunction—a prior restraint—against publication of a book critical of Krebiozen, an experimental drug used in cancer research and treatment. The court noted that the discussion involved matters of public health:

Much is made [in *Near v. Minnesota*] of the importance of free discussion of office holders and of political matters. But we think that the discussion of a possible or alleged cure of one of the great scourges of mankind is substantially of the same rank as a matter for public discussion.

Id. at 8.

¹⁸⁹ See *Red Lion Broadcasting Co. v. FCC*, 395 U.S. 367, 390 (1969).

One danger of limiting First Amendment protection to political speech, narrowly defined, is that a narrow conception of political speech tends to undermine the stated purpose of protecting political speech. Speech on currently non-political subjects may be crucial for setting the future political agenda. A very limited understanding of the scope of free speech could help freeze the political agenda. Setting the agenda is often more crucial than arguing about things already on the agenda.

That free speech on matters of public concern may have a bad tendency to produce evil consequences is not ordinarily sufficient, without more, to justify punishment. Justice Brandeis suggested, for example, that except where the evil consequences are both grave and likely to occur before the opportunity for counterspeech, speech should not be punished:

[T]he path of safety lies in the opportunity to discuss freely supposed grievances and proposed remedies; and . . . the fitting remedy for evil counsels is good ones. Believing in the power of reason as applied through public discussion, [the framers] eschewed silence coerced by law—the argument of force in its worst form. . . .

. . . .
. . . To courageous, self-reliant men, with confidence in the power of free and fearless reasoning applied through the process of popular government, no danger flowing from speech can be deemed clear and present, unless the incidence of the evil apprehended is so imminent that it may befall before there is an opportunity for full discussion.¹⁹⁰

The Court recognizes counterspeech as a possible antidote to defamation, and that fact is part of the explanation for the lesser protection given to public figures.¹⁹¹ The antidote is imperfect. Readers of *Rolling Stone* may not read *Science* and readers of *Science* may not read *Medical Hypotheses*. Emotional distress alone does not strip speech about public figures of otherwise available constitutional protections.¹⁹² The primacy of free speech in our constitutional scheme justifies protecting some speech even when counterspeech cannot fully prevent the injury.

Another justification for free speech is that free speech is an essential tool in the search for truth. As John Stuart Mill noted,

¹⁹⁰ *Whitney*, 274 U.S. at 375-77 (Brandeis, J., concurring).

¹⁹¹ *See, e.g., Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 344 (1974).

¹⁹² *See Hustler Magazine v. Falwell*, 485 U.S. 46 (1988) (holding that public figure in action for emotional distress must satisfy *New York Times* standard).

the peculiar evil of silencing the expression of an opinion is that it is robbing the human race; posterity as well as the existing generation; those who dissent from the opinion, still more than those who hold it. If the opinion is right, they are deprived of the opportunity of exchanging error for truth: if wrong, they lose, what is almost as great a benefit, the clearer perception and livelier impression of truth, produced with collision with error.¹⁹³

Assuming the existence of truth, as the law of defamation does, modern psychology warns us that many things make it quite difficult for us to know the truth. Stuart Sutherland's book, *Irrationality: The Enemy Within*,¹⁹⁴ lucidly catalogues human shortcomings with a somewhat gleeful pessimism. We tend to screen out information that conflicts with our preconceptions; to judge information by the source rather than on its merits; to accept assertions from in-groups and ignore ideas from out-groups; to conform, distorting our judgment to follow our group's judgment; to succumb to the influence of financial rewards and punishments that affect judgment and constrict exploration; and to suffer from self-serving bias and a host of other problems.¹⁹⁵

Suppression of unorthodox opinion, however, only makes things worse. If it is quite difficult for us to recognize truth in any event, suppressing ideas does not help. The danger that we will suppress true ideas is great, as Mill has demonstrated. Critics insist that he failed to demonstrate that allowing free discussion won't produce even greater evils, for we may still select false as well as true ideas.¹⁹⁶

¹⁹³ JOHN S. MILL, ON LIBERTY 20 (Stefan Collini ed., 1989) (3d ed. 1870). I make this argument with some diffidence, for modern legal writers assert that the argument has been refuted by the academic consensus on the nonexistence of objective truth. See C. EDWIN BAKER, HUMAN LIBERTY AND FREEDOM OF SPEECH 12 (1989). It is unclear why academic consensus is impressive if no objective truth exists. In any case, modern libel law, and indeed all law, is posited on concepts such as truth and falsity. Nonetheless, Baker makes a strong case that we cannot expect a marketplace of ideas automatically to select the true and reject the false. *Id.* at 12-22. The same can be said for any system that allows an elite to restrict available information. Experience seems to indicate that multiple perspectives are typically better than one imposed by an elite, although that proposition, like its opposite, is difficult to prove. Even where the society which chooses to suppress some speech is ostensibly democratic, the decision to suppress will nonetheless be made by a small group, inherently an elite.

¹⁹⁴ STUART SUTHERLAND, *IRRATIONALITY: THE ENEMY WITHIN* (1992).

¹⁹⁵ *Id.*

¹⁹⁶ See BAKER, *supra* note 193, at 194. For example, discussion of public health dangers from vaccines could produce panic and adverse health consequences.

Our difficulty in recognizing truth, however, is an equally strong argument against suppression. Why should we presume that those engaged in suppression are qualified to find and enforce truth or wisdom? Many of the factors that make it difficult for us to recognize truth—bias, financial or other interests, rewards and punishments—affect the activities of those who seek to suppress. In the end, the preference for open dialogue and many perspectives may be, as Learned Hand suggested, a faith.¹⁹⁷ As this century's disastrous experiments in Nazism and Communism, as well as some contemporary experiences, have shown the performance of systems immune to public scrutiny and criticism is not encouraging.¹⁹⁸

Finally, experience suggests that the suppression of expression on matters of public concern has often worked quite badly. Consider, for example, the suppression of Galileo, the Sedition Act, and other prosecutions by those in political power against their critics, the prosecution of the critics of slavery in the South before the Civil War, the prosecution of opponents of the draft and World War I, the suppression of information about birth control, the suppression of works of literature, and the prosecution of John Scopes for teaching evolution. Censorship has not done an inspiring job of separating what should be protected from what should be suppressed.

An important corollary to the judicially accepted, though academically contested, idea that free speech is an important tool in the search for truth is the idea that the coercive power of government may not be used to establish orthodoxy. Justice Jackson expressed the principle when the State of West Virginia sought to expel children who were Jehovah's Witnesses from school because they refused to salute the flag: "If there is any fixed star in our constitutional constellation, it is that no official, high or petty, can prescribe what shall be orthodox, in politics, nationalism, religion or other matters of opinion."¹⁹⁹

Proponents of free speech need not choose a simple justification for it. Indeed, it is supported by a complex web of justifications whose strands include the search for truth, the right to self-government, the interest in personal autonomy, and the idea of basic human rights.²⁰⁰

¹⁹⁷ *International Bhd. of Elec. Workers, Local 501 v. NLRB*, 181 F.2d 34, 40 (1950), *aff'd*, 341 U.S. 694 (1951).

¹⁹⁸ See, e.g., *United States v. Stanley*, 483 U.S. 669, 678-86 (1987) (soldier given LSD without his knowledge or consent as part of government experiment to determine its effects on human beings); *Allen v. United States*, 588 F. Supp. 247 (D. Utah 1984), *rev'd*, 816 F.2d 1417 (10th Cir. 1987), *cert. denied*, 484 U.S. 1004 (1988); BARRY COMMONER, *THE CLOSING CIRCLE: NATURE, MAN, AND TECHNOLOGY* 50, 52-53 (1971) (alleging that government prevented disclosure of full extent of risks associated with nuclear weapons programs); Zimmerman, *supra* note 139, at 258 n.22 (same); *Probe Finds More Human Tests*, GREENSBORO NEWS & REC., Oct. 22, 1994, at A4 (documenting experiments on civilians).

¹⁹⁹ *West Virginia State Bd. of Educ. v. Barnette*, 319 U.S. 624, 642 (1943).

²⁰⁰ Daniel A. Farber & Philip P. Frickey, *Practical Reason and the First Amendment*,

B. *Libel versus Free Speech: Historic Battles*

The law of libel exists, and has always existed, in considerable tension with the principles of free speech. The tension is both historical and functional. As a historical matter, the relation of free speech and press to representative government has a long pedigree. *Cato's Letters* is a collection of essays on political liberty that was particularly influential in the American colonies. Cato wrote:

Freedom of speech is the great Bulwark of Liberty; they prosper and die together . . . And it is the Terror of Traytors and Oppressors, and a Barrier against them. . . . All Ministers, therefore, who were Oppressors, or intended to be Oppressors, have been loud in their Complaints against Freedom of Speech, and the License of the Press; and always restrained, or endeavored to restrain, both.²⁰¹

Although *Cato's Letters* did not fully repudiate the law of seditious libel, and fought for truth as a defense, the author recognized that libel raised problems for representative government and that vigorous punishment of libel would make innocent speaking and writing unsafe.²⁰²

James Burgh, a philosophical and political author, wrote *Political Disquisitions* in 1775.²⁰³ According to Stephen Smith, people in the founding generation, including members of the Continental Congress, admired Burgh's work.²⁰⁴ John Adams said that every American should read it, and Thomas Jefferson put Burgh on his list of recommended reading for a legal education.²⁰⁵ Burgh insisted on the right and duty of "every subject's having a watchful eye on the conduct of Kings, Ministers, and Parliament."²⁰⁶ A subject should not only be "secured, but encouraged in alarming his fellow-subjects on occasion of every attempt upon public liberty."²⁰⁷ If it were "dangerous and penal to inquire into their conduct," Burgh warned, "the state may be ruined by their blunders, or by their villainies, beyond the

34 UCLA L. REV. 1615, 1640 (1987).

²⁰¹ 1 CATO'S LETTERS: ESSAYS ON LIBERTY, CIVIL & RELIGIOUS 101 (John Trenchard & Thomas Gordon eds., Da Capo reprint 1971) (6th ed. 1755); see Stephen Smith, *Origins of the Free Speech Clause*, in 1991 FREE SPEECH YEARBOOK 48, 57.

²⁰² 1 CATO'S LETTERS, *supra* note 201, at 100-03, 246-54.

²⁰³ JAMES BURGH, POLITICAL DISQUISITIONS (3d ed. 1775).

²⁰⁴ Smith, *supra* note 201, at 67-68.

²⁰⁵ *Id.*

²⁰⁶ 3 BURGH, *supra* note 203, at 247.

²⁰⁷ 3 *id.*

possibility of redress.”²⁰⁸ The subjects’ “betters” were more likely “to conceal than detect the abuses committed by those in power.”²⁰⁹

Burgh believed that truth was not a sufficient defense, and he anticipated the rationale of the *New York Times*²¹⁰ decision handed down almost 200 years later:

No man ought to be hindered saying or writing what he please on the conduct of those who undertake the management of national affairs, in which all are concerned, and therefore have a right to inquire, and to publish their suspicions concerning them. For if you punish the slanderer, you deter the fair inquirer.²¹¹

For the founding generation, ideas of free speech and press grew in the environment of the Enlightenment. In the *Address to the Inhabitants of Quebec*, the American Continental Congress praised free press as essential to liberty and included advancement of science as an interest furthered by a free press:

The importance [of freedom of the press] consists, besides the advancement of truth, science, morality, and the arts in general, in its diffusion of liberal sentiments on the administration of Government, its ready communication of thoughts between subjects . . . whereby oppressive officers are shamed or intimidated, into more honourable and just modes of conducting affairs.²¹²

The *Address* went on to state that a free press, together with basic rights such as trial by jury and habeas corpus, “form[s] a considerable part of our mild system of government; that, sending its equitable energy through all ranks and classes of men, defends the poor from the rich, the weak from the powerful, the industrious from the rapacious, the peaceable from the violent . . . and all from their superiors.”²¹³

Thomas Jefferson, recalling the ordeal of Galileo, suggested that government should not declare scientific truth:

²⁰⁸ 3 *id.*

²⁰⁹ 3 *id.*

²¹⁰ *New York Times Co. v. Sullivan*, 376 U.S. 254 (1964).

²¹¹ *Id.* at 254; Smith, *supra* note 201, at 72.

²¹² ADDRESS TO THE INHABITANTS OF QUEBEC (1774), *reprinted in* 1 JOURNALS OF THE CONTINENTAL CONGRESS 1774, at 105, 108 (Worthington C. Ford ed., 1904).

²¹³ *Id.*

Galileo was sent to the Inquisition for affirming that the earth was a sphere; the government declared it to be flat as a trencher, and Galileo was obligated to abjure his error. This error, however, at length prevailed, the earth became a globe, and Descartes declared it whirled round its axis by a vortex. . . . The government in which [Descartes] lived was wise enough to see that this was no question of civil jurisdiction, or we should all have been involved by authority in vortices. In fact, the [vortex theory has] been exploded. . . . What has been the effect [of such interferences with scientific freedom] . . . ? To make one half the world fools, and the other half hypocrites.²¹⁴

In spite of such arguments, the courts and legislative bodies were slow to abandon rigid conceptions of libel, slander, and seditious libel inherited from England.²¹⁵

Initially, framers of the federal Constitution suggested that the Congress had no power over free speech and press,²¹⁶ but critics were not satisfied by such assurances. The addition of the Bill of Rights was designed to provide further security. Still, Congress rejected James Madison's proposal to extend press and religious freedoms to the states,²¹⁷ so states retained power over speech and press, except as limited by state constitutions. Libel law was and remains a creature of state law.

Despite earlier assurances of lack of federal power over speech in the debate over ratification of the Constitution, and in spite of the addition of a

²¹⁴ CALEB PATTERSON, *THE CONSTITUTIONAL PRINCIPLES OF THOMAS JEFFERSON* 188-89 (1953) (citing THOMAS JEFFERSON, *NOTES ON VIRGINIA* 264 (1782)); see also Delgado & Millen, *supra* note 139, at 357.

²¹⁵ LEONARD W. LEVY, *EMERGENCE OF A FREE PRESS* 16-61 (1985).

²¹⁶ See, e.g., 1 *ANNALS OF CONG.*, *supra* note 184, at 442 (quoting Jackson in debate on the Bill of Rights as saying that the press was in no danger because "[t]here is no power given to Congress to regulate this subject as they can commerce"); *THE FEDERALIST* No. 84, at 579 (Alexander Hamilton) (Jacob E. Cooke ed., 1961); JAMES MADISON, *NOTES OF DEBATES IN THE FEDERAL CONVENTION OF 1787*, at 640 (Adrienne Koch ed., 1966) (quoting Sherman as saying that protection of freedom of the press was "unnecessary" and that "[t]he power of Congress does not extend to the Press"); William W. Van Alstyne, *Congressional Power and Free Speech: Levy's Legacy Revisited*, 99 *HARV. L. REV.* 1089 (1986) (reviewing LEVY, *supra* note 215). See generally Michael Kent Curtis, *Reading the First Amendment by the Light of the Burning Flag*, in 1 *THE CONSTITUTION AND THE FLAG: THE FLAG SALUTE CASES* at xvi-xxvi (Michael Kent Curtis ed., 1993).

²¹⁷ 1 *ANNALS OF CONG.*, *supra* note 184, at 775; 2 *BILL OF RIGHTS: A DOCUMENTARY HISTORY* 1145-46 (Bernard Schwartz ed., 1971).

federal free speech and press guarantee, Congress later attempted to suppress political speech. Under the Sedition Act, the John Adams administration jailed supporters of Thomas Jefferson for political criticisms of Adams that look quite tame by modern standards. Jeffersonians said Adams was, among other things, extravagant, given to ridiculous pomp, and favored a standing army.²¹⁸ The statutory requirement that the criticisms be "false" and "malicious" proved to not be a substantial obstacle to jailing Adams' political critics.²¹⁹

The Virginia legislature passed a resolution, written by James Madison, saying the Sedition Act ought "to produce universal alarm, because it is levelled against that right of freely examining public characters and measures, and of free communication among the people thereon, which has ever been justly deemed the only effectual guardian of every other right."²²⁰ As Madison later noted, the Sedition Act interfered with exercise of the people's "electoral rights."²²¹

The controversy over the Sedition Act became moot when the Act expired and Jefferson pardoned its violators. Nevertheless, governmental suppression of seditious speech or speech with a bad tendency to produce evil results occurred again before the Civil War. Southern states, in effect, made it a crime to criticize slavery.²²² Meanwhile, the libel law continued to function at the state level, free of federal First Amendment oversight.

With the Fourteenth Amendment, ratified in 1868, Republicans in Congress attempted to require states to protect free speech, press, and religion from state suppression.²²³ The Supreme Court eventually recognized the

²¹⁸ See, e.g., *United States v. Cooper*, 25 F. Cas. 631 (C.C.D. Pa. 1800) (No. 14,865); *United States v. Callender*, 25 F. Cas. 239 (C.C.D. Va. 1800) (No. 14,709); *United States v. Lyon*, 15 F. Cas. 1183 (C.C.D. Vt. 1798) (No. 8646).

²¹⁹ *Act for the Punishment of Certain Crimes*, 1 Stat. 596 (1798). The Act did not protect the Vice President (Adams's likely opponent) from criticism and by its own terms expired on March 3, 1801, just in case the presidential election did not turn out as the Federalists hoped.

²²⁰ Virginia Resolutions (1798), reprinted in *DOCUMENTS IN AMERICAN CONSTITUTIONAL & LEGAL HISTORY* 160 (Melvin I. Urofsky ed., 1989).

²²¹ JAMES MADISON, REPORT OF THE COMMITTEE TO WHOM WERE REFERRED THE COMMUNICATIONS OF VARIOUS STATES, RELATIVE TO THE RESOLUTIONS OF THE LAST GENERAL ASSEMBLY OF THIS STATE, CONCERNING THE ALIEN AND SEDITION LAWS (1836), reprinted in *THE MIND OF THE FOUNDER* 264 (Marvin Meyer ed., 1981).

²²² See, e.g., MICHAEL KENT CURTIS, NO STATE SHALL ABRIDGE: THE FOURTEENTH AMENDMENT AND THE BILL OF RIGHTS 26-56 (1986) [hereinafter CURTIS, NO STATE SHALL ABRIDGE]; Michael Kent Curtis, *The Curious History of Attempts to Suppress Anti-Slavery Speech, Press, and Petition in 1835-37*, 89 NW. U. L. REV. 785 (1995); Michael Kent Curtis, *The 1859 Crisis over Hinton Helper's Book, The Impending Crisis: Free Speech, Slavery, and Some Light on the Meaning of the First Section of the Fourteenth Amendment*, 68 CHI.-KENT. L. REV. 1113 (1993) [hereinafter Curtis, *The 1859 Crisis*].

²²³ CURTIS, NO STATE SHALL ABRIDGE, *supra* note 222, at 57-170; Curtis, *The 1859*

amendment as protecting these values against state action.²²⁴ In spite of the early recognition by Burgh, Madison, and others of the danger of libel actions to free speech, courts only gradually recognized the problem. Legal protections developed slowly, as many courts assumed libel and slander were simply exceptions to free speech and press guarantees.²²⁵ A major collision between state libel law and the First Amendment did not occur until the Civil Rights revolution of the 1960s.

The Supreme Court confronted the tension between the law of libel and the principles of free speech in the 1964 case of *New York Times Co. v. Sullivan*.²²⁶ The libel suit, based on criticisms of Southern officials by supporters of Martin Luther King, Jr., raised the question of whether a defamation action could be used to silence criticisms of Southern governments and officials.²²⁷ Broad protection of the reputations of Southern officials would tend to stifle or "chill," in the Court's words, political dialogue.²²⁸ In some ways it was a repeat performance of the Sedition Act of 1798 and of the later suppression of anti-slavery speech in the South. The cases involved a common element: the use of governmental power, through civil (1964) or criminal (1798) defamation actions or through general criminal laws, to keep issues and discussions off the public agenda and out of the public domain.

In *New York Times*, the Supreme Court concluded that a defendant accused of libeling a public official in connection with the official's conduct was protected from damages unless the statement was intentionally false or made in reckless disregard of the truth.²²⁹ Intentional falsity or reckless disregard of the truth had to be proven with convincing clarity.²³⁰ These were matters the courts themselves could decide, and the Court in *New York Times* held that the evidence before it failed to establish the required level of culpability with the convincing clarity the Court found necessary to protect free expression:

The general proposition that freedom of expression upon public questions is secured by the First Amendment has long been settled by our decisions. The constitutional safeguard, we have said, "was fashioned to assure unfettered inter-

Crisis, *supra* note 222, at 1147-77.

²²⁴ CURTIS, NO STATE SHALL ABRIDGE, *supra* note 222, at 171-211.

²²⁵ See, e.g., *Roth v. United States*, 354 U.S. 476, 481-94 (1957); *Beauharnais v. Illinois*, 343 U.S. 250, 255-67 (1952). For a history of libel, see NORMAN L. ROSENBERG, *PROTECTING THE BEST MEN: AN INTERPRETIVE HISTORY OF THE LAW OF LIBEL* (1986).

²²⁶ 376 U.S. 254 (1964).

²²⁷ *Id.* at 256-65.

²²⁸ *Id.* at 269-72.

²²⁹ *Id.*

²³⁰ *Id.* at 283-88.

change of ideas for the bringing about of political and social changes desired by the people." . . .

. . . .

Thus we consider this case against the background of a profound national commitment to the principle that debate on public issues should be uninhibited, robust, and wide-open, and that it may well include vehement, caustic, and sometimes unpleasantly sharp attacks on government and public officials.

. . . The constitutional protection does not turn upon "the truth, popularity, or social utility of the ideas and beliefs which are offered." As Madison said, "Some degree of abuse is inseparable from the proper use of every thing; and in no instance is this more true than in that of the press."²³¹

The Court recognized a central fact. Protection for the truth requires protection for some falsehood.

Justices Black and Douglas concurred in the judgment, insisting on absolute immunity for criticisms of the way public officials do their duty and absolute immunity for discussion of public affairs.²³² They noted that "[t]he half-million-dollar verdict does give dramatic proof . . . that state libel laws threaten the very existence of an American press virile enough to publish unpopular views on public affairs and bold enough to criticize the conduct of public officials."²³³ At the time of the decision, suits were pending in Alabama for \$7,300,000 against both the *New York Times* and CBS in connection with their reporting of the integration controversy.²³⁴ A central lesson of *New York Times* was that libel actions could be used to silence dissenting views and to keep those ideas off the public agenda.

Before the *New York Times* decision, Kansas and a minority of American states extended the privilege of fair comment to defamatory criticisms of public officials.²³⁵ Malice or intentional falsity could defeat the privilege.²³⁶ In *Coleman v. MacLennan*,²³⁷ the Kansas Supreme Court quite broadly explained that its fair comment privilege "must apply to all officers and agents of government . . . ; to the management of all public institutions,

²³¹ *Id.* at 269-71 (citations omitted).

²³² *Id.* at 295 (Black & Douglas, JJ., concurring).

²³³ *Id.* at 294 (Black & Douglas, JJ., concurring).

²³⁴ *Id.* at 295 (Black & Douglas, JJ., concurring). For a full discussion of the case and its history, see ANTHONY LEWIS, *MAKE NO LAW: THE SULLIVAN CASE AND THE FIRST AMENDMENT* (1991).

²³⁵ *New York Times*, 376 U.S. at 279-83.

²³⁶ *Id.*

²³⁷ 98 P. 281, 289 (Kan. 1908).

educational, charitable, and penal; to the conduct of all corporate enterprises affected with a public interest, transportation, banking, insurance; and to innumerable other subjects involving the public welfare."²³⁸ The court cited Judge Cooley's *Treatise on Constitutional Limitations* for the proposition that "free and general discussion of public matters [is] absolutely essential to prepare the people for intelligent exercise of their rights as citizens."²³⁹ In *New York Times*, the Court cited the Kansas case with approval.²⁴⁰

The danger that legal action could stifle free speech and press has long been recognized, though the method of sanction has changed with time. In 1859, John Stuart Mill wrote:

It is a piece of idle sentimentality that truth, merely as truth, has any inherent power denied to error, of prevailing against the dungeon and the stake. Men are not more zealous for truth than they often are for error, and a sufficient application of legal or even social penalties will generally succeed in stopping the propagation of either.²⁴¹

C. Current Status of The Public Figure Test

Although the *New York Times* case seemed to suggest a progression by which speech on all matters of public concern would be given robust protection against libel actions,²⁴² in fact, after some uncertainty, the Court drew back. It refused to extend the privilege to discussion of all matters of public concern.²⁴³ As a result, where critics address scientific and technological risks in a way that impacts the reputation of a person or a product, they currently try to find protection under the public figure doctrine as developed by the Court. If the Court clearly recognizes that the public figure doctrine can be triggered by the power of a public figure in the technological or

²³⁸ *Id.* at 289.

²³⁹ *Id.* at 284 (citing THOMAS COOLEY, CONSTITUTIONAL LIMITATIONS 603, 604 (7th ed. 1972) (1903)).

²⁴⁰ *New York Times*, 376 U.S. at 280 & n.20 (citing *Coleman*, 98 P. at 285).

²⁴¹ MILL, *supra* note 193, at 31.

²⁴² Kalven, *supra* note 97, at 211, 221.

²⁴³ See, e.g., *Hutchinson v. Proxmire*, 443 U.S. 111 (1979). The Court held that a research scientist charged with performing wasteful research on a federal grant was not a public figure because he had not thrust himself into a particular controversy. *Id.* at 133-36. "Respondents have not identified such a particular controversy; at most, they point to concern of general public expenditures. But that concern is shared by most and relates to most public expenditures . . ." *Id.* at 135. For criticism of further expansion of the contours of the public figure doctrine, see Frederick Schauer, *Public Figures*, 25 WM. & MARY L. REV. 905 (1984).

scientific arena, then the doctrine may provide an essential protection for critics who discuss technological and medical risks.

In refusing to protect discussion of all matters of public concern from defamation actions, the Court attempted to reconcile the need to protect free speech with the need to protect reputation. The result is that in cases of public concern, private persons—those not public figures or public officials—can still sue for defamation without proving intentional falsity or reckless disregard for the truth.²⁴⁴ They are merely required to prove defamation, falsity, some degree of fault by the journalist, and actual injury.²⁴⁵ When a private person sues for defamation not related to matters of public concern, his burden of proof is even lower.²⁴⁶ In setting this standard, the Court in *Gertz* was concerned with protecting the reputation of “a private citizen involuntarily associated with a matter of general interest.”²⁴⁷ For some commentators, the Court was “inferring much of the rationale from *New York Times* . . . for providing such protection [for speech and press] in the first place.”²⁴⁸ They say the Court did so by setting lower protection for matters of public concern in cases involving private plaintiffs.²⁴⁹

Still, the *New York Times* privilege was extended by subsequent cases to cover not only suits brought by public officials, but also those brought by public figures as to matters of public concern.²⁵⁰ Journalists and other speakers discussing such people received protection against libel judgments unless they knew what they wrote was false or they acted in reckless disregard of the truth.²⁵¹

Even in the *Gertz* opinion, the Court has used somewhat different expressions to define public figures. One theme is assumption of the risk of critical comment by those who voluntarily enter controversies or seek fame. Sometimes the Court has defined public figures as those “who [had achieved this status] by reason of the notoriety of their achievements or the vigor and success with which they seek the public’s attention.”²⁵² This

²⁴⁴ *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 346 (1974).

²⁴⁵ *Id.*

²⁴⁶ *Dun & Bradstreet, Inc. v. Greenmoss Builders, Inc.*, 472 U.S. 749, 761 (1985); *Gertz*, 418 U.S. at 346.

²⁴⁷ *Gertz*, 418 U.S. at 337.

²⁴⁸ Logan, *supra* note 138, at 510. States can elect to give speakers more protection than the federal Constitution requires, and a few have done so. *See, e.g.*, *Chang v. Michiana Telecasting Corp.*, 900 F.2d 1085, 1087 (7th Cir. 1990) (citing *Aafco Heating & Air Conditioning Co. v. Northwest Publications*, 321 N.E.2d 580 (Ind. Ct. App. 1974) (holding that private plaintiff must prove actual malice on matter of public concern)).

²⁴⁹ Logan, *supra* note 138, at 510.

²⁵⁰ *See, e.g.*, *Curtis Publishing Co. v. Butts*, 388 U.S. 130 (1967).

²⁵¹ *Id.* at 155.

²⁵² *Gertz*, 418 U.S. at 342.

standard made it seem that public figures were distinguished not by importance, but by fame. Michael Jackson is a public figure under this test, though one might question the importance of detailed knowledge about Michael Jackson either for individual autonomy or for democratic self-government.²⁵³

Again, the Court has referred to those who have "thrust themselves to the forefront of particular public controversies" as an example of public figures.²⁵⁴ To the merely famous we may add the successfully loquacious. The test might imply that an individual qualifying for this category must enter a current ongoing public debate.²⁵⁵ Yet people may be involved in matters of the highest importance about which no existing controversy then exists.

Setting the political agenda is a free speech activity at least as important as debating things already on the agenda. A narrow reading of the public figure rule could support the status quo by limiting discussion to things that already are being talked about.²⁵⁶ Such a content-based rule would discourage critics from bringing matters of public importance to the attention of the public for fear of defamation lawsuits. It would extend greater protection to the *National Enquirer* than to *Frontline*. Surely one reason for allowing greater protection for criticisms of public officials is that such officials have

²⁵³ See Anthony Lewis, *New York Times v. Sullivan Reconsidered: Time To Return to "The Central Meaning of the First Amendment"*, 83 COLUM. L. REV. 603, 624 (1983) (suggesting that *Sullivan* should apply only to statements commenting on public affairs).

²⁵⁴ *Gertz*, 418 U.S. at 345. For application of this standard, see *McBride v. Merrell Dow Pharmaceuticals, Inc.*, 800 F.2d 1208 (D.C. Cir. 1986) (holding that where person testified at trials and before the FDA on the safety of Bendectin, he was public figure because he had "thrust" himself into existing controversy over drug's safety).

²⁵⁵ See *Madsen v. Buie*, 454 So. 2d 727 (Fla. Dist. Ct. App. 1984). In *Madsen*, a letter to the editor criticizing a psychologist's alleged child behavior modification techniques as "brainwashing" and "destructive of the human spirit" was held defamatory. *Id.* at 730. The court ruled that the psychologist "had not received such notoriety in the community resulting either from his profession or from the issue giving rise to appellee's letter, the announcement of [a free] child development program to place him within the limited public figure status." *Id.*

²⁵⁶ SMOLLA, *supra* note 112, § 2-13[2]. The better reasoned cases have rejected such an implication. As Professor Smolla notes, "[t]he proper question is not whether the plaintiff volunteered for the publicity but whether the plaintiff volunteered for an activity out of which publicity would foreseeably arise." *Id.* Otherwise, as the Third Circuit noted, "[t]he purpose of the First Amendment would be frustrated if those persons and activities that most require public scrutiny could wrap themselves in a veil of secrecy and thus remain beyond the reach of public knowledge." *Marcone v. Penthouse Int'l Magazine for Men*, 754 F.2d 1072, 1086 (3d Cir.), *cert. denied*, 474 U.S. 864 (1985); see also *Rosanova v. Playboy Enters., Inc.*, 580 F.2d 859 (5th Cir. 1978); SMOLLA, *supra* note 112, § 2-41.

a broad role in shaping society and the lives of people. In many ways, however, huge corporations,²⁵⁷ inventors, and scientists responsible for major social changes have at least as much actual or potential impact on national life and on the lives of ordinary people as do public officials or public figures.²⁵⁸ Should not the public aspects of their activities therefore be as open to scrutiny?²⁵⁹

²⁵⁷ See Patricia N. Fetzer, *The Corporate Defamation Plaintiff as First Amendment "Public Figure": Nailing the Jellyfish*, 68 IOWA L. REV. 35 (1968). Professor Fetzer notes that the corporation may be regarded as the dominant institution of the modern world. *Id.* at 64. On the treatment of corporations under the *New York Times* standard, see *id.* at 65-83. Fetzer suggests that the public figure status of the corporation should be decided on a case-by-case basis, but that the unique nature of the corporation should be acknowledged and should result in frequently finding the corporation a public figure. *Id.* at 83-86. In marketing its products, the corporation may have voluntarily thrust itself into public controversies. *Id.* at 85-86.

²⁵⁸ Courts, however, have been reluctant to hold that business leaders are public figures. SMOLLA, *supra* note 112, §§ 2-69, 2-81 to 2-87.

²⁵⁹ As Burgh noted:

no free subject ought to be under the least restraint in respect to accusing the greatest, so long as his accusation strikes only at the political conduct of the accused: his private we have no right to meddle with, but insofar as a known vicious private character indicates an unfitness for public power or trust.

3 BURGH, *supra* note 203, at 247. For recent cases relevant to this question, see cases cited in *Turf Lawn Mower Repair v. Bergen Record Co.*, 655 A.2d 417 (N.J. 1995); see also *Smith*, *supra* note 201, at 66-73. In *White v. Mobile Press Register, Inc.*, 514 So. 2d 902 (Ala. 1987), the court held that a former EPA official who became an officer at a corporation involved in hazardous waste transportation was a limited-purpose public figure. *Id.* at 904. The officer thus had to meet the higher standard of proof in his libel action brought against a newspaper that had published an article critical of how the waste was handled. The court noted that the officer's "prior association with EPA, and his choice of a career as a high level executive in an industry that is the subject of much public interest and concern show a voluntary decision to place himself in a situation where there was a likelihood of public controversy." *Id.* at 904; see also *Waldbaum v. Fairchild Publications, Inc.*, 627 F.2d 1287 (D.C. Cir. 1980). The *Waldbaum* court appeared to associate the fame-based or celebrity-based test for public figures with the determination of whether a person is a general purpose public figure:

[A] person can be a general purpose public figure only if he is a "celebrity" [whose name is] a "household word" [and] whose ideas and actions the public in fact follows with great interest. We also conclude that a person has become a public figure for limited purposes if he is attempting to have, or realistically can be expected to have, a major impact on the resolution of a specific public dispute that has foreseeable and substantial ramifications for persons beyond its immediate participants.

Id. at 1292. Thus for purposes of determining general purpose public figure status, the court in *Waldbaum* recommended looking at such factors as statistical surveys of plaintiff's name recognition and the extent of prior press coverage. *Id.* at 1295. The general purpose public figure, as a celebrity, has thrust himself into the spotlight for

Pursuit of fame and voluntarily joining controversies—assumption of the risk—are two of the reasons the Court has used to explain the public figure doctrine. Another reason the Court gave in *Gertz* was more directly related to the functioning of democratic society. Those whose activities order or change the world in significant ways must accept greater scrutiny and criticism as a necessary concomitant to greater power to shape the world.²⁶⁰ Public figures, the Court suggested, “have assumed roles of especial prominence in the affairs of society,” and have “assumed an ‘influential role in ordering society.’”²⁶¹ If people occupied positions of sufficient “power and influence,” they might be public figures for all purposes. Other less powerful individuals could be public figures as to the issues or, as the Court noted, the “controversies” into which they had thrust themselves.²⁶² “In either event, they invite attention and comment.”²⁶³ In cases subsequent to *Gertz*, however, the focus has often shifted from power and influence to notoriety or voluntary prominence in controversies.²⁶⁴

The Supreme Court applied its protective defamation tests to public figures but not to matters of public concern. Courts may be hesitant to define public figures as broadly as some language in *Gertz* suggests, for fear that the public concern doctrine, kicked out the front door, will re-enter by

himself, while the limited purpose public figure has done so not for himself but *for a cause*—he has “thrust [himself] to the forefront of particular public controversies in order to influence the resolution of the issues involved.” *Id.* at 1296 (citing *Gertz v. Robert Welch, Inc.* 418 U.S. 323, 345 (1974)). Applying this test, the court found that plaintiff was a limited purpose public figure and had to prove malice where he was the president of one of the country’s largest consumer cooperatives and a leading advocate of new industry policies. *Id.* at 1298-1300.

²⁶⁰ *Gertz*, 418 U.S. at 344.

²⁶¹ *Id.* at 345 (quoting *Curtis Publishing Co. v. Butts*, 388 U.S. 130, 164 (1967) (Warren, C.J., concurring)). The court in *Gertz* quoted *Curtis Publishing* as having held that the *New York Times* protection extends to “persons who ‘are nevertheless intimately involved in the resolution of important public questions or, by reason of their fame, shape events in areas of concern to society at large.’” *Id.* at 337 (quoting *Curtis Publishing*, 388 U.S. at 164 (Warren, C.J., concurring)). It found *Gertz* was not a general purpose public figure because of the absence of “clear evidence of general fame or notoriety in the community, and pervasive involvement in the affairs of society.” *Id.* at 352. He was not a public figure with regard to the particular police brutality question that was central to the alleged libel because “[h]e played a minimal role at the coroner’s inquest, and his participation related solely to representation of a private client. He took no part in the criminal prosecution of Officer Nuccio.” *Id.*

²⁶² *Id.* at 345.

²⁶³ *Id.*

²⁶⁴ See, e.g., *Hutchinson v. Proxmire*, 443 U.S. 111, 134-35 (1979) (ruling that Hutchinson’s receipt of a federal grant, absent personal involvement in a public controversy, did not classify him as a public figure). The result in the case is consistent with an analysis based on power.

the back.²⁶⁵ Obviously, there is overlap between the ideas. Public figures judged by a power test have chosen to undertake activities that order or change the world. Still, many involved in matters of public concern, such as a lawyer representing a client in run-of-the-mill cases, or a scientist studying jaw clenching by monkeys,²⁶⁶ or a wealthy heiress caught up in a domestic case,²⁶⁷ will not be public figures by a test that focuses on significant power to affect the world and that protects speech directly related to that exercise of power.

Even when the plaintiff is found to be a public figure, he or she may still be able to prove recklessness or intentional falsity. A serious failure to consider and evaluate crucial contrary evidence clearly and unequivocally brought to the writer's attention may establish actual malice.²⁶⁸

In addition to justifying the greater vulnerability of public figures to criticism by assumption of the risk—the fact that the person has sought notoriety or voluntarily joined the fray of public controversy—the Court has also suggested that less protection against defamation is justified because public figures have greater access to the media to respond to defamatory statements.²⁶⁹ Certainly, major corporations engaged in world-changing activities have extraordinary access to public and scientific debate. They can and do sometimes run full-page newspaper advertisements setting out their side of the story. They have public relations experts. Many have extensive financial contacts with experts and institutions in the field. They can fund friendly foundations, and get a tax deduction to boot.

Examples from the recent controversy over the Halcion sleeping pill, manufactured by Upjohn, make this point clear. The *Houston Chronicle* reported the Halcion controversy in detail.²⁷⁰ The *Chronicle* stories portray a company with financial ties, sometimes modest and sometimes extensive, to scientific experts and academic institutions. These experts included some who criticized the company's critics and some who edited scholarly journals

²⁶⁵ *Id.*

²⁶⁶ *Id.*

²⁶⁷ *Time, Inc. v. Firestone*, 424 U.S. 448, 453-55 (1976).

²⁶⁸ *Harte-Hanks Communications, Inc. v. Connaughton*, 491 U.S. 657, 660 (1989).

²⁶⁹ *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 344 (1974).

²⁷⁰ See, e.g., Steven R. Reed, *Bearer of Bad News: Even from Within, Upjohn Disregarded Halcion Warnings*, HOUSTON CHRON., Sept. 14, 1994, at A7; Steven R. Reed, *Sleep Merchants: Journal Editor Used Position to Boost Upjohn's Xanax*, HOUSTON CHRON., Sept. 14, 1994, at A7; Steven R. Reed, *Sleep Merchants, The Halcion Story: Halcion Research Called into Question*, HOUSTON CHRON., Sept. 12, 1994, at A1 [hereinafter Reed, *Halcion Research Called Into Question*]; Steven R. Reed, *Sleep Merchants, The Halcion Story: Upjohn Paid Heavily to Discredit Critics*, HOUSTON CHRON., Sept. 14, 1994, at A1 [hereinafter Reed, *Upjohn Paid Heavily to Discredit Critics*].

that could accept favorable articles or reject negative ones.²⁷¹ Such financial ties are apparently common and accepted. Indeed, all drug companies hire scientists or doctors to conduct the FDA-required trials on their drugs. A spokesman for a university that had received millions of dollars from the Upjohn Company for its sleep studies and its sleep lab explained, accurately, why one should not automatically assume that financial connections with a drug company taint research on the company's products: "[I]t doesn't [taint their research] because every drug in everybody's medicine cabinet has been researched in that fashion."²⁷² Just as clearly, the system involves potentially conflicting interests. The potential is made acute because the FDA has not yet required disclosure of financial connections between the researcher and the company beyond revealing the contract to test the drug.²⁷³

For a variety of reasons, libel actions continue to exert major influence on the system of freedom of expression. In one way, the persistence is completely understandable. People ordinarily must be responsible for their actions because responsibility helps prevent abuse. In the libel area, however, policies of responsibility run at cross-purposes. Strong libel law can help shield the powerful from examination of their actions, and make correction of simple mistakes or misbehavior more difficult. Libel law can undermine scrutiny. Reduced scrutiny then diminishes responsibility and increases the chances of misbehavior on the part of those whose conduct would otherwise be subject to examination by the press, by independent scholars, and by small journals.²⁷⁴

D. *Problems Bred by the Public Figure Test*

1. *Strategic Use of Libel Lawsuits to Chill Speech*

There seem to be several reasons for the continued and perhaps increasing use of libel suits.²⁷⁵ The reasons relate to the motives of libel plaintiffs

²⁷¹ Reed, *Halcion Research Called Into Question*, *supra* note 270, at A1.

²⁷² *Id.* (quoting Don Gibbons, a spokesman for the Stanford Medical Center).

²⁷³ *FDA May Require Testers of New Drugs to Disclose Any Stake*, WALL ST. J., Sept. 26, 1994, at B9; *see also Ethics Issue Over Doctor as Legal Consultant*, N.Y. TIMES, Dec. 13, 1994, at B10 (reporting that a Harvard professor who was the editor of a prestigious medical journal, and who wrote an article in that journal defending breast implants, "failed to mention another credit: he is a \$300-an-hour consultant to the lawyers who work for implant makers").

²⁷⁴ For discussions of the actual chilling impact of libel law, see David A. Anderson, *Libel and Press Self-Censorship*, 53 TEX. L. REV. 422 (1975); Seth Goodchild, *Media Counteractions: Restoring the Balance to Modern Libel Law*, 75 GEO. L.J. 315 (1986).

²⁷⁵ For a discussion of the reasons for the increased use of libel suits, see Goodchild, *supra* note 274, at 325-29.

and to the porous nature of protections currently enforced by the Court. Libel plaintiffs are an amorphous group with divergent motives. Many may sue to vindicate reputation. The suit—regardless of outcome—functions to announce innocence to the world. Some sue to recover damages for very real injuries to reputation. Other plaintiffs, however, may sue for more strategic purposes—to stifle present discussion or to warn people that future critical discussion of the plaintiff's activities will be risky.

Professors Canan and Pring, in important and pioneering articles, have focused on lawsuits aimed at discouraging public participation in government regulatory activities.²⁷⁶ They report the increasing use of strategic lawsuits against public participation ("SLAPPS"). These suits use defamation and other torts to stifle citizen activism and function "as a tactic to undermine the resources, commitment, and vocabulary of political opposition."²⁷⁷ They are "a creative means for ideologically warring against egalitarian principles of citizen participation."²⁷⁸ Damages sought may range from \$100,000 to \$100 million.²⁷⁹ Lawsuits like those involving Alar can have a similar function, but at an earlier stage. They can restrict, shape, or eliminate information that gives rise to citizen activism in the first place.

Regardless of motive, a defamation action or a product disparagement action may have the effect of removing critical discussion from the public agenda or of dampening public debate. One observer concluded that investigative reporting has changed "some of its targets and its tone," while journalist Fred Friendly noted that "[s]erious, probing documentaries on network television may already be an endangered species."²⁸⁰

Removing subjects from the public agenda diminishes democratic government, for under our theory "the people, not the government, possess the absolute sovereignty."²⁸¹ Therefore, the government should lack the power

²⁷⁶ Penelope A. Canan & George W. Pring, *Strategic Lawsuits Against Public Participation*, 35 SOC. PROBS. 506 (1988); see also George W. Pring & Penelope A. Canan, *SLAPPS: An Overview of the Practice*, C935 ALI-ABA 1 (1994); George W. Pring & Penelope A. Canan, "Strategic Lawsuits Against Public Participation" ("SLAPPS"): An Introduction for Bench, Bar and Bystanders, 12 BRIDGEPORT L. REV. 937 (1992).

²⁷⁷ Penelope A. Canan et al., *Using Law Ideologically: The Conflict Between Economic and Political Liberty*, 8 J.L. & POL. 539, 541 (1992).

²⁷⁸ *Id.*

²⁷⁹ *Id.*

²⁸⁰ Goodchild, *supra* note 274, at 330 n.100 (quoting Fred Friendly, *After the Westmoreland Case: How Can the People Talk Back?*, WASH. POST, Feb. 20, 1985, at A21; Jonathan Friendly, *Investigative Journalism is Found Shifting Goals*, N.Y. TIMES, Aug. 23, 1983, at A16).

²⁸¹ *New York Times Co. v. Sullivan*, 376 U.S. 254, 274 (1964) (quoting James Madison); see also MASS. CONST. OF 1780, A DECLARATION OF RIGHTS, pt. V, *reprinted in* 1 BILL OF RIGHTS, *supra* note 217, at 341 ("All power residing originally in the people, and being derived from them, the several magistrates and officers of government, vested with authority, whether legislative, executive, or judicial are their substitutes and agents,

to tell the people what matters of public concern belong on the agenda and which do not. Nor should government be able to delegate that prerogative to private interests wielding defamation and product disparagement actions.

Upton Sinclair criticized the American meat industry in his 1905 book *The Jungle*.²⁸² His discussion of unsanitary conditions in the meat packing industry caused a precipitous drop in American meat sales²⁸³ and led to passage of the Pure Food and Drug Act. Industry presented Sinclair "as an irresponsible sensation-monger."²⁸⁴ Similarly, Rachel Carson attempted "to warn and alarm the public" about the dangers of DDT.²⁸⁵ "An emotional argument . . . was essential. . . . She wrote . . . to rouse the public to what she considered a horrible danger."²⁸⁶ Some in the chemical industry attacked Carson "as an ignorant and hysterical woman who wanted to turn the earth over to insects."²⁸⁷ In spite of industry claims of public hysteria and demands that "the subject of pesticides should be . . . put back into the hands of the professionals," Carson's efforts were instrumental in achieving a ban on DDT.²⁸⁸

Defamation or disparagement actions can be more effective in limiting or shaping public debate than negative adjectives hurled at critics by a financially interested party. Under today's techniques, Sinclair and Carson might have been sued for product disparagement. Agricultural chemical interests helped the Washington farmers fund the Alar-apple product disparagement action against CBS.²⁸⁹ Spurred by agribusiness and chemical industry interests, states have passed laws to sanction those who criticize the safety of the food supply without "adequate" scientific basis.²⁹⁰

As the cases of Upton Sinclair and Rachel Carson show, issues can only become the subject of political action when the facts are available to the public. The Limited Nuclear Test Ban Treaty of 1963 passed only with the end of secrecy about the effects of nuclear fallout.²⁹¹ Storage of nerve gas directly in the flight path of planes using the Denver airport was corrected

and are at all times accountable to them.").

²⁸² UPTON SINCLAIR, *THE JUNGLE* (Signet Classics ed. 1988) (1905).

²⁸³ Robert Downs, *Afterword*, in SINCLAIR, *supra* note 282, at 348; cf. FLOYD DELL, UPTON SINCLAIR: A STUDY IN SOCIAL PROTEST 106-07 (1927).

²⁸⁴ DELL, *supra* note 283, at 106-07. This example and that of Rachel Carson are cited in *Auvil*, Defendant's Memorandum, *supra* note 140, at 3-5.

²⁸⁵ DUNLAP, *supra* note 136, at 7.

²⁸⁶ *Auvil*, Defendant's Memorandum, *supra* note 140, at 4 (citing DUNLAP, *supra* note 136, at 7).

²⁸⁷ RACHEL CARSON, *SILENT SPRING* at xii (25th anniv. ed. 1987) (1962).

²⁸⁸ *Id.*

²⁸⁹ *Auvil*, Defendant's Memorandum, *supra* note 140, at 4.

²⁹⁰ See *supra* note 160 (discussing Alabama product disparagement statute).

²⁹¹ COMMONER, *supra* note 198, at 199-200.

only when that matter was made public.²⁹² Dumping of industrial mercury in Lake Erie was corrected only when the accumulation of mercury in fish was made public.²⁹³ Libel actions can function as one technique to keep such information from the public.

Whether, in any given case, a libel action is strategically aimed to silence critics or is designed to vindicate injured reputation (or a combination of the two) is an extraordinarily difficult question. The chilling effect of the libel action is far easier to demonstrate.²⁹⁴ The Halcion controversy sheds light on how libel suits, whatever their motives, can limit public discussion and political action.

According to the *Houston Chronicle*, an Upjohn Company task force, faced with burgeoning reports about problems with Halcion, proposed a containment policy that included suing critics.²⁹⁵ "Our initiation of legal action would publicize our intent to defend Halcion against unjust action," the task force memo argued.²⁹⁶ The memo noted that there was a need to counter a public perception that "Upjohn . . . appears unwilling to defend Halcion [in the] public arena."²⁹⁷ The proposal was not acted upon at the time. When Dr. Ian Oswald, one of the world's leading sleep researchers,

²⁹² *Id.* at 200-01.

²⁹³ *Id.* at 197-205.

²⁹⁴ Broad discovery against parties to lawsuits may be a factor preventing more extensive strategic use of defamation actions. Unless discovery is shielded from public view by secrecy orders, the action can reveal information quite embarrassing to the plaintiff.

²⁹⁵ *Sleep Merchants: Halcion Chronology*, HOUSTON CHRON., Sept. 11, 1994, at A22. A government investigator, in an internal FDA document released under the Freedom of Information Act, charged:

The [Upjohn Company] conducted a continuous, on-going campaign to discredit or neutralize any individual or publication reporting adverse information about Halcion To defend Halcion the firm created a CNS Product "Defense" Committee, otherwise known as the CNS Product Support Committee This committee vigorously sought to suppress the publication of unfavorable studies, and attempted to silence Halcion critics.

D. Michael Erspamer, FDA Memorandum re Halcion Investigation, EIR, 12-9/13&23-91; 2-10&12-92; 3-3/4-92, at 6 (on file with author); see also Steven R. Reed, *Sleep Merchants: The Halcion Story: FDA Ignored Own Halcion Findings*, HOUSTON CHRON., Sept. 13, 1994, at A1. Upjohn denied that improper action on the plan actually took place. *Id.*; see also *infra* note 296. The FDA took no action against Upjohn. *Id.*

²⁹⁶ *Sleep Merchants: Upjohn's Paper Trail*, HOUSTON CHRON., Sept. 11, 1994, at A20; see also *Upjohn Co. v. Oswald*, Unrevised Judgment Nos. 1992-U-No.111, 1992-D-No.625, 1992-U-No.112 at 67 (Q.B. May 27, 1994), available in LEXIS, Enggen Library, Cases File [hereinafter *Upjohn Co.*, Unrevised Judgment] (quoting Upjohn internal memorandum of December 4, 1991, which stated: "Our initiation of legal action would publicize our intent to defend Halcion against unjust action.").

²⁹⁷ *Upjohn Co.*, Unrevised Judgment, *supra* note 296, at 61. See generally Reed, *Halcion Research Called into Question*, *supra* note 270, at A1.

made harsh new criticisms of Upjohn, the company filed a libel action against him.²⁹⁸

According to the *Houston Chronicle*, Upjohn had tried to retain Oswald's services in 1972, because of his "outstanding international reputation," as a company memo described it.²⁹⁹ Oswald declined the offer and later criticized Halcion in scientific journals and in communications to the FDA.³⁰⁰ He also appeared as an expert witness against Halcion.³⁰¹ Upjohn in turn denounced Oswald, implying that his opinion was for sale.³⁰² Eventually, in an interview in the *New York Times*, Oswald accused Upjohn of "one long fraud," a charge based on his claim that Upjohn had deliberately falsified data.³⁰³ Upjohn in turn denounced Oswald as a practitioner of "junk science."³⁰⁴ Although few copies of the *New York Times* circulated in the United Kingdom, Upjohn sued Oswald there for libel for his charge that Upjohn deliberately falsified data, and Oswald countersued.³⁰⁵ In May 1994, a judge in England found Upjohn and Oswald to have libeled each other.³⁰⁶

The finding against Oswald was facilitated by English libel laws, which are much less protective of speech than American law.³⁰⁷ The judge found that Upjohn had been "reckless" in some aspects of its conduct of drug testing, but that it did not deliberately conceal Halcion's side effects.³⁰⁸ Based on those findings, it is unlikely that Oswald would have been found liable in the United States under the *New York Times* standard.

Before litigation, Upjohn indicated that it would have been satisfied by a statement from Oswald that he was wrong and that the company's conduct was not fraudulent.³⁰⁹ Oswald apparently believed that his characterization

²⁹⁸ *Upjohn Co.*, Unrevised Judgment, *supra* note 296.

²⁹⁹ Reed, *Upjohn Paid Heavily to Discredit Critics*, *supra* note 270, at A1.

³⁰⁰ *Id.*

³⁰¹ *Id.*

³⁰² *Id.*

³⁰³ *Id.*

³⁰⁴ *Id.*

³⁰⁵ *Id.*

³⁰⁶ *Id.* Upjohn also sued the BBC and Oswald for a broadcast on the subject. See *Upjohn Co.*, Unrevised Judgment, *supra* note 296.

³⁰⁷ Periodically, advocates of weaker First Amendment protection glibly announce that England has gotten on quite well without American protections. For a thoughtful effort probing that assertion, see Russell L. Weaver & Geoffrey Bennett, *Is the New York Times "Actual Malice" Standard Really Necessary? A Comparative Perspective*, 53 LA. L. REV. 1153, 1156 (1993).

³⁰⁸ *Upjohn Co.*, Unrevised Judgment, *supra* note 296, at 99, 289; Reed, *Upjohn Paid Heavily to Discredit Critics*, *supra* note 270, at A1.

³⁰⁹ See Colin Randall, *Is It Safe?*, DAILY TELEGRAPH (London), May 28, 1994, at 4 (quoting Upjohn spokesperson as stating that "[e]ven up to the first day in court, we said an apology would be fine").

was correct and stood by it. Upjohn's interest was in influencing the public and quelling scientific controversy over its product,³¹⁰ and was not primarily in recovering damages. Upjohn sued Oswald, but not the *New York Times*, where the article had appeared.³¹¹ One obvious result was that Oswald had to pay his own legal fees as to the *New York Times* article and did not have the advantage of a corporate war chest. In addition, under the British system, if Oswald lost (as he did), he was potentially responsible for paying Upjohn's legal fees, which were, of course, quite large.³¹² One proposed legal reform in America is to eliminate damages in most libel cases and to allow trials on the issue of truth with the loser to pay the winner's attorney's fees.³¹³ In many cases, that proposed reform would further increase the power of large corporations. A public interest organization may defend a libel action for an individual, but it would likely be unwilling to pay the losing defendant's fees.³¹⁴

Regardless of its merits or motives, the Upjohn libel suit has had a chilling effect on critics. "Wary of the potential of a libel lawsuit like the one Upjohn filed against Oswald, Halcion's prominent Scottish critic [Dr. Graham Dukes, formerly vice chairman of the regulatory agency in the Nether-

³¹⁰ *Upjohn Co.*, Unrevised Judgment, *supra* note 296, at 61 (quoting an internal company memo that proposed legal action to counter public impression that Upjohn "appears unwilling to defend Halcion").

³¹¹ The named defendants in the suit were Dr. Oswald, the British Broadcasting Company, and Tom Mangold. *See id.* at 1.

³¹² *See id.* at 293 (statement of damages by judge); Reed, *Upjohn Paid Heavily to Discredit Critics*, *supra* note 270, at A1.

³¹³ *See* Rodney A. Smolla & Michael J. Gaertner, *The Annenberg Libel Reform Proposal: The Case for Enactment*, 31 WM. & MARY L. REV. 25, 32-35 (1989).

³¹⁴ *Id.* A remedy limited to a right to reply would not raise these problems. The risks of legal fees to large companies and to scholars are entirely different. For scholars, small journals, and independent journalists, the legal fees could easily consume their entire assets. As a tactical matter, the corporation—or better yet a surrogate—could sue its critic and leave the wealthier media defendant out of the case altogether. The critic could then either retract, reinforcing what she might see as the false position of the corporation, or risk all her assets on a decision on truth.

In such a battle, money would also be telling in hiring expert witnesses and doing studies. Under a "loser pays" regime, the legal system could well operate to advance the orthodoxy of powerful interests.

Some suggest that free speech protections such as requiring proof of falsity should apply to media defendants but not to others. *See, e.g.*, Irving R. Kaufman, *Press Privacy and Malice: Reflections on New York Times Co. v. Sullivan*, 5 CARDOZO L. REV. 867, 875 (1983); David W. Robertson, *Defamation and the First Amendment: In Praise of Gertz v. Robert Welch, Inc.*, 54 TEX. L. REV. 199, 215-20 (1976). This suggestion would protect large institutions with substantial budgets, while leaving scholars, scientists, whistleblowers, and other sources unprotected. It could dry up many news stories at their source. Plaintiffs could simply sue the source, bypassing the cumbersome and expensive task of battling the publisher, another corporate giant.

lands], pointed [the *Chronicle*] to the testimony he gave in Oswald's trial in London earlier [in 1994]" instead of discussing his views directly with the paper.³¹⁵ Because court testimony is absolutely privileged, Dr. Dukes was safer from a libel action if the *Chronicle* cited court testimony. The *Houston Chronicle* story demonstrates the chilling effect of a powerful company wielding libel actions and the threat such actions can have on scientific discussion of matters of public concern.

2. *Continued Influence of the Chilling Effect*

The Court in *New York Times v. Sullivan* and in subsequent cases has expressed concern over libel rules that chill free speech and tend to eliminate statements that are true but financially dangerous to make. The Court has found it necessary to protect some falsity in order to protect truth.³¹⁶ Functionally, however, a half-million dollar legal bill may be almost as effective as a half-million dollar judgment. Judge Bork noted the problem succinctly when he stated that expenses associated with defamation actions threaten imposition of "a self-censorship on the press which can as effectively inhibit debate and criticism as would overt governmental regulation that the [F]irst [A]mendment most certainly would not permit."³¹⁷

The present rules do not adequately guard against the strategic use and chilling effect of defamation actions. As Judge Oakes of the Second Circuit wrote in 1980, "[d]efamation actions are . . . for summary judgment, to be treated no differently from other actions; any 'chilling effect' caused by the defense of a lawsuit itself . . . is simply to be disregarded, to have no force and effect."³¹⁸ Some other courts continue to adhere to the policy that avoiding chilling speech justifies vigorous application of summary judgment to bring an early end to many defamation actions that involve matters of public concern.³¹⁹

There are limits to what a doctrine can achieve if courts are unsympathetic to its objectives. Conversely, if courts see the suppression of scientific and critical discussion as a serious problem affecting free speech and democracy, they are more likely to afford doctrinal protection to safeguard such discussion.

³¹⁵ Steven R. Reed, *Sleep Merchants: The Halcion Story: Hidden Nightmares*, HOUSTON CHRON., Sept. 11, 1994, at A1.

³¹⁶ On problems with relying on truth in political speech cases, see Logan, *supra* note 138, at 542.

³¹⁷ *Ollman v. Evans*, 750 F.2d 970, 996 (D.C. Cir. 1984) (Bork, J., concurring), *cert. denied*, 471 U.S. 1127 (1985). For a discussion of the problem, see Anderson, *supra* note 274, at 422.

³¹⁸ *Yiamouyiannis v. Consumers Union of United States, Inc.*, 619 F.2d 932, 940 (2d Cir.), *cert. denied*, 449 U.S. 839 (1980) (citations omitted).

³¹⁹ SMOLLA, *supra* note 112, § 12.07(2)(b).

Increasingly, book publishers demand that authors indemnify them for legal costs in the event of suit, regardless of outcome. Clearer tests are needed that promise to bring certain kinds of libel litigation to a very early end. Such rules are particularly necessary because libel suit targets may not be media giants with high-priced legal talent, but independent scientists, researchers, scholars, free lance journalists, and contributors to small journals who lack the financial capacity for drawn-out libel wars—wars that can devastate combatants regardless of who “wins.”

3. *Lack of Bright-Line Rules Breeds Litigation*

The complexity of current Supreme Court doctrine also helps powerful interest groups to use libel actions to chill discussion of matters of public concern. Protection against the chilling of free speech requires both clear rules and rules that can be applied early in litigation before immense legal bills pile up. The *Journal of Medical Primatology* may think long and hard before publishing another letter critical of the plans of a multinational corporation for chimpanzees. *Rolling Stone* may prove equally wary.

Though protection from the chilling effect requires simplicity and clarity, defamation law is extraordinarily complex.³²⁰ The Court requires public figures to prove actual malice or reckless disregard of the truth.³²¹ Yet current rules, like the public figure test, lack the clarity necessary to protect free speech effectively. Lower court opinions have reflected the diverse interpretation enfolded in the *Gertz* opinion. Some courts have defined public figures more narrowly, with various multi-part tests, and some more broadly.³²² Defining a public figure has become, as one lower court lamented, “like trying to nail a jellyfish to the wall.”³²³ The result is to en-

³²⁰ As Professor David Logan has noted, “[t]he complexity of the common law in this area is noteworthy. The chaos that has resulted from the addition of the Supreme Court’s constitutional decisions boggles the mind.” Logan, *supra* note 138, at 495. Likewise, Professor William Van Alstyne has described the situation as “bewilderingly complicated.” William Van Alstyne, *First Amendment Limitations on Recovery from the Press—An Extended Comment on “The Anderson Solution”*, 25 WM. & MARY L. REV. 793, 816 (1984). The problem of confusion may be even greater for scientists confronted with lawsuits than for other speakers. “Although the courts have actively defined journalists’ rights under the First Amendment over the course of many years, judges have not provided the confused scientist with comparable direction.” Zimmerman, *supra* note 139, at 257. Scientists’ speech rights are thus consigned to “guesswork and the cost of a wrong guess is usually the inhibition of socially valuable speech.” *Id.*

³²¹ *New York Times Co. v. Sullivan*, 376 U.S. 254, 279 (1964).

³²² *Compare* *Fitzgerald v. Penthouse Int’l, Ltd.*, 691 F.2d 666, 668 (4th Cir. 1982), *cert. denied*, 460 U.S. 1024 (1983) *with* *Mobile Press Register, Inc. v. Faulkner*, 372 So. 2d 1282 (Ala. 1979).

³²³ *Rosanova v. Playboy Enters., Inc.*, 411 F. Supp. 440, 443 (S.D. Ga. 1976), *aff’d*,

courage litigation. Even those prominent people whose actions shape society can hope that under the existing vague rules they will be found to be a private figure. Vague rules also encourage ad hoc decision making, in which the judge's political biases affect outcomes, undermining the idea of fair and neutral application of the rules.

It is easier to see the perils of the present trend of suppression than it is to formulate a test that fairly balances the need to protect reputation with the need to protect speech. Any test adequately protective of speech will diminish protection of reputation. In an effort to respond to some problems inherent in the present system, I suggest two reforms. The first simply involves a clarification of the public figure doctrine, so that extraordinary power makes a person a public figure. The second proposes a stronger and clearer test for protection of discussion of what I call "complex criticism"—ideas like scientific hypotheses. First, the public figure test should be satisfied not only by proof that the libel plaintiff is famous or prominently involved in a controversy, but also by proof that she or he has significant power to shape the world. Such a test turns on factors more functionally related to the policy reasons for protecting free speech. Second, complex criticism about matters of public concern should be protected from attack if there is a rational basis supporting the criticism, at least when the complex criticism reflects on those with extraordinary power to shape the world.

IV. PROPOSED REFORMS

A. *Extraordinary Power or Influence Should Make a Person a Public Figure*

The researcher discussed and allegedly libelled by the *Rolling Stone* article was a famous scientist who had made and was known for making substantial contributions to the battle against polio. As such he was probably a public figure even under the "fame" test. The proposed first test to protect speech and press is that people like the researcher should be public figures in the areas of their influence. The test should not be based solely on fame, but instead the power of people to order and influence events should alone be sufficient to make a person a limited purpose public figure. Further, once established, that status should continue, just as the effects of power continue.³²⁴

580 F.2d 859 (5th Cir. 1978).

³²⁴ Under the current test, some lower courts have suggested a rule of staleness by which a person or corporation found to be a public figure can sink back into sheltered obscurity if the matter that made them a public figure ceases to be hot news. See *Fitzgerald*, 691 F.2d at 669 (finding public figure status where controversy was "continuing"). This approach has curious aspects, which perhaps explains why it is rarely ap-

The researcher inoculated more than 300,000 people in the Belgian Congo with history's first mass-tested live oral polio vaccine. The battle against polio affected the lives of many people, entirely for the better, according to the prevailing view. Such laudable activities invite and should invite attention and comment, including critical scrutiny of the potential dangers of the activity. A premise of democratic self-government, as well as science in an open society, should be that such extraordinary power and influence in the world carries with it maximum exposure to critical scrutiny. The same should be true for the makers of Alar, of the Dalkon Shield, of Halcion, of DDT, of Agent Orange, and of seemingly benign products like antibiotics and Bovine Growth Hormone. Those people, generally unknown and uncognizable under a fame-based test, who are in charge of making crucial decisions about product safety could be exposed to more critical scrutiny under this formulation. Though not famous, they should be subject to criticism because of their real-world influence.³²⁵ "As the experience of the past half-century shows, scientific information is profoundly important to members of the larger society."³²⁶ As Chief Justice Warren noted, there has been "a rapid fusion of economic and political power, a merging of science, industry, and government, and a high degree of interaction between the intellectual, governmental, and business worlds."³²⁷

If special power and influence in the world make one a public figure, how is such power to be defined? The power that makes a person or organization a public figure should be defined to include the power to shift significant or widespread costs to others or to society. Examples would include air pollution from cars or water pollution from industrial activity, together with activities that arguably impose widespread risks and benefits. Examples would also include useful products and defective products that produce broad injury. Finally, the category would include activities that seem entirely beneficial but that arguably involve significant and widespread social ef-

plied. First, such an approach can make it more difficult to bring matters back onto the public agenda. Second, it makes bringing historical perspective to present controversies more dangerous.

³²⁵ Chief Justice Warren observed:

many who do not hold public office at the moment are nevertheless intimately involved in the resolution of important public questions. . . . The fact that they are not amenable to the restraints of the political process only underscores the legitimate and substantial nature of the interest [in protecting critical scrutiny of their conduct], since it means that public opinion may be the only instrument by which society can attempt to influence their conduct.

Curtis Publishing Co. v. Butts, 388 U.S. 130, 164 (1967) (Warren, C.J., concurring). This statement was later cited with approval in *Gertz*. See *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 336-37 (1974).

³²⁶ Zimmerman, *supra* note 139, at 263.

³²⁷ *Curtis Publishing*, 388 U.S. at 163 (Warren, C.J., concurring).

fects. Of course, these effects can include costs as well as benefits. Those with special power would also include those with power to order the lives of substantial numbers of people, or to influence such ordering, such as leaders of large business and labor organizations.

Mistakes can be prevented only if they can be detected and discussed. The same is true for intentional misconduct, such as continuing dangerous activity after discovering facts showing that it involves unreasonable risks. Substantial immunity from discussion of possible mistakes or misconduct confers irresponsible power, and lack of accountability leads to abuse. Under the broader public figure standard proposed here, accountability would be ensured, while a critic who engages in intentional falsity or recklessness could still be punished.³²⁸

Making a person a public figure based on power and potential ability to affect matters related to community welfare is similar to suggestions that the strongest First Amendment protection should apply to core political speech. To the extent that corporations, captains of industry, labor leaders, or scientists make decisions that affect the public welfare, discussion of their conduct in relation to those matters is core political speech. After all, laws bearing on product safety, the safety of drugs, minimum wage, safety on the job, labor relations, and environmental protection, to mention only a few, are all matters in which democratic self-government acts to limit private power. Any proposal that denies protection to free speech concerning such non-governmental acts provides the shell of democracy, but not the kernel—the form of democracy, but not its substance.

Treating powerful and world-shaping defamation plaintiffs as public figures could increase the chances that the defendant would win the case, but might not alone typically bring cases to an early end. For certain types of speech, that function would be served by a proposed rule for complex ideas.

B. *Additional Protection for Hypotheses That Prove False and for Similar Complex Criticism*

1. *The Court Currently Grants No Separate Constitutional Protection for Opinion*

In *Gertz*, the Court observed that “there is no such thing as a false idea.”³²⁹ Following this suggestion, lower courts developed an often elusive and complex distinction between fact and opinion, and held that opinion was constitutionally protected.³³⁰ The advantage of the doctrine was

³²⁸ Additional protection for complex criticism found to be supported by a rational basis is discussed *infra* part IV.B.5.

³²⁹ *Gertz*, 418 U.S. at 339.

³³⁰ See, e.g., *Ollman v. Evans*, 750 F.2d 970, 975 (D.C. Cir. 1984), *cert. denied*, 471

that when the court found the alleged defamatory statement to be an "opinion," the lawsuit ended, often at an early stage.

In *Milkovich v. Lorain Journal Co.*,³³¹ however, the Court rejected the idea that any separate constitutional protection existed for opinion.³³² Rather, the First Amendment required the libel plaintiff to prove that statements made about him on a matter of public concern were false.³³³ The Court reasoned that some statements of opinion such as, "in my opinion, Jones is a liar," imply a knowledge of facts.³³⁴ Similarly, a statement like "the hypothesis that Jones is a bank robber may be true," could be found by many courts to be defamatory, at least if the "hypothesis" proved false and if the facts on which it was based were not disclosed. "Even if the speaker states the facts upon which he bases his opinion," the Court warned in *Milkovich*, "if those facts are either incorrect or incomplete, or if his assessment of them is erroneous, the statement may still imply a false assertion of fact."³³⁵

2. *Additional Protection Is Needed for Some Ideas that May Prove False In Discussion of Complex Questions*

Milkovich involved an article that implied that a wrestling coach had lied under oath at an investigatory hearing. It is far from clear that the Court would mechanically apply tests from that context to a scientific hypothesis that incidentally injures reputation. Discussing the dangers of Alar or the possibility that polio vaccine contaminated with monkey viruses may have spawned an AIDS epidemic are significantly different from discussing the possibility that a private person is a thief.

A hypothesis is a statement about the natural or social world. It attempts to explain the relation between facts. It seeks to forge connections between observations, evidence, and understandings. Like all complex criticism, it is linked to a coherent framework for understanding the world. Like all complex criticism, its value lies in its potential to expand, modify, or challenge this framework. The theory might prove false because the facts it implies are false or because the facts that gave rise to it are incomplete. Unlike the statement that a private person is a thief, however, even a hypothesis that proves false is often a fruitful source of new knowledge and insight.

A hypothesis is a flashlight—it shines light in a dark corner of the world to see if what we expect to see is what actually appears. It is a crucial

U.S. 1127 (1985).

³³¹ 497 U.S. 1 (1990).

³³² *Id.* at 18.

³³³ *Id.* at 20.

³³⁴ *Id.* at 18.

³³⁵ *Id.* at 18-19.

means by which expansion of knowledge occurs. If the law inflicts harsh verdicts if the hypothesis proves false, it may extinguish many lights and suppress much knowledge.

In the final analysis, any rule selected will depend on how interests are balanced. Suppressing speculation that a private person is a thief has little impact on the growth of knowledge or on decisions about major public policy questions, yet the statement has a substantial impact on reputation. Suppressing discussion or speculation about causes of disease or dangers of products is different. The benefits of such scientific and public scrutiny are much greater than the benefit from a statement about whether an ordinary individual is a thief.³³⁶

Decisions about whether speech involves more than a "slight social value in a step toward truth" have been explicit in the Court's decisions about obscenity, fighting words, and libel.³³⁷ Indeed, the Court finds that material that would otherwise meet the test of obscenity may not be banned as obscene if it has serious scientific and political value.³³⁸ Similarly, scientific and political value should be a factor in deciding to "redeem" what otherwise might be held libelous.

Can a theory, hypothesis, or other complex criticism be the basis for libel under *Milkovich* because the facts are either incorrect or incomplete, or because the theorist errs in assessing them? As is so often the case, rules that work well in one context may work very badly when transplanted to another. A test that works well for an accusation that a person has lied under oath may function poorly in the more complex world of hypothesis and critical discussion. In simple statements about crimes, incompleteness may show defamation, but "[a]ll scientific work is incomplete—whether it is observational or experimental. All scientific work is liable to be upset or modified by advancing knowledge."³³⁹

³³⁶ Some insist on the contrary, that such statements do much harm by distorting allocation of resources that should be devoted to more pressing problems. They say that such distortion occurs as a result of the statements' effect of alarming an ignorant and unreasonably risk-averse public. See David Shaw, "Cry Wolf" *Stories Permeate Coverage of Health Hazards*, GREENSBORO NEWS & REC., Sept. 25, 1994, at F1. For a response, see Michael Kent Curtis, *Society Takes a Big Gamble by Ignoring Risks*, GREENSBORO NEWS & REC., Oct. 30, 1994, at F1.

³³⁷ *Chaplinsky v. New Hampshire*, 315 U.S. 568, 572 (1942).

³³⁸ *Miller v. California*, 413 U.S. 15, 24 (1973) (identifying guidelines for the trier of fact, including whether work appeals to the prurient interest, whether the work depicts in a patently offensive way sexual conduct defined by statute, and whether as a whole the work "lacks serious literary, artistic, political or scientific value"); *Roth v. United States*, 354 U.S. 476, 487 (1957) (noting that "[t]he portrayal of sex, e.g., in art, literature, and scientific works, is not itself sufficient reason to deny material the constitutional protection of freedom of speech and press").

³³⁹ Sir Austin Bradford Hill, *The Environment and Disease: Association or Causation?*, 58 PROC. OF THE ROYAL SOC. OF MED. 295, 299 (1965); see also *Daubert v.*

There is little consensus on the nature of the scientific process. Furthermore, there may be a difference between descriptive and normative accounts of the scientific method. Scientists sometimes falsify data, ignore important work because it comes from those thought to be unimportant people, and fail to test important ideas—instead rejecting them out of hand.³⁴⁰ Understanding such shortcomings is an important part of the sociology and psychology of science, but few would suggest that these practices represent the scientific approach at its best.

For science at its best there is little doubt that the hypothesis, communication of ideas, and criticism play a central role. By at least some accounts, the hypothesis is a creative act that often far outruns the data. The hypothesis jumps to conclusions. The conclusions in turn are tested and criticized. Though their role is disputed, testing and criticism are an important part of the process.³⁴¹ Communication is central to the scientific and political process because it is the way that ideas are advanced and evaluated.³⁴²

As Justice Frankfurter noted in *Sweezy v. New Hampshire*:³⁴³

Progress in the natural sciences is not remotely confined to findings made in the laboratory. Insights into the mysteries of nature are born of hypothesis and speculation. . . . For society's good—if understanding be an essential need of society—inquiries into these problems, speculations about them, stimulation in others of reflection upon them, must be left as unfettered as possible.³⁴⁴

Merrell Dow Pharmaceuticals, Inc., 113 S. Ct. 2786, 2798 (1993) ("Scientific conclusions are subject to perpetual revision.").

³⁴⁰ WILLIAM BROAD & NICHOLAS WADE, *BETRAYERS OF THE TRUTH* (1982). For a discussion of two different understandings of scientific methods, see Margaret G. Farrell, *Daubert v. Merrell Dow Pharmaceuticals, Inc.: Epistemology and Legal Process*, 15 CARDOZO L. REV. 2183, 2189-98 (1994).

³⁴¹ See generally *Daubert*, 113 S. Ct. at 2796 (citing CARL GUSTAV HEMPEL, *PHILOSOPHY OF NATURAL SCIENCE* 49 (1966) for the assertion that scientific explanation statements must be able to be empirically proven); POPPER, *supra* note 84, at 37 (stating that a theory's scientific status is tested by "its falsifiability, or refutability, or testability"). Sir Karl Popper was on the advisory board of *Medical Hypotheses* when it published the Elswood-Stricker hypothesis. See 42 *MEDICAL HYPOTHESES* 347 (1994); *THE STRUCTURE OF SCIENTIFIC THEORIES* 15 (Frederick Suppe ed., 1977).

³⁴² "The progress of science presupposes the possibility of unrestricted communication of all results and judgments—freedom of expression and instruction in all realms of intellectual endeavor." Zimmerman, *supra* note 139, at 254 (quoting ALBERT EINSTEIN, *OUT OF MY LATER YEARS* (1950)).

³⁴³ 354 U.S. 234 (1957).

³⁴⁴ *Id.* at 261-62 (Frankfurter, J., concurring).

Because the hypothesis is by nature tentative, one might argue that it cannot be false. Yet a hypothesis makes statements, however tentative, about reality. The predictions it implies and the facts it asserts may be found to be false. For that reason, and in spite of powerful arguments to the contrary, I assume for the sake of discussion that a hypothesis may be found to be false in the sense that term "false" is used in defamation law. That assumption gives rise to a question. Should formulation of a hypothesis be a high-risk endeavor, subjecting the formulator to damages when the hypothesis reflects on reputation and is ultimately discovered to be false? The answer to that question may turn on the value of hypotheses that prove false.

3. *The Value of the Hypothesis that Proves False*

According to the Supreme Court, false statements of fact have no substantial value as a step toward truth.³⁴⁵ When the Court made this pronouncement, however, it was not contemplating complex statements like scientific hypotheses. This does not suggest that expression about scientific questions should be protected by different rules than those that apply to complex criticism in general. It suggests instead that certain kinds of discourse require different rules. Complex criticism, as a whole, requires different, more protective rules than other kinds of discourse. The nature of hypotheses indicates the problems that flow from an excessively broad application of the tenet that false statements of fact lack value.

The late Sir Karl Popper, a philosopher of science, saw substantial value in theories that later prove false. His ideas seem equally applicable to hypotheses:

[F]alsificationists like myself much prefer an attempt to solve an interesting problem by a bold conjecture, *even (and especially) if it soon turns out to be false*, to any recital of a sequence of irrelevant truisms. We prefer this because we believe that this is the way in which we can learn from our mistakes; and that in finding that our conjecture was false, we shall have learnt much about the truth, and shall have got nearer to the truth.

....

Even Newton's theory was in the end refuted; and indeed, we hope that we shall in this way succeed in refuting, and improving upon, every new theory. And if it is refuted in the end, why not in the beginning? One might well say that it is

³⁴⁵ *Milkovich v. Lorain Journal Co.*, 497 U.S. 1, 17-18 (1990); *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 339-40 (1974).

merely a historical accident if a theory is refuted after six months rather than after six years, or six hundred years.

. . . .

Even if a new theory . . . should meet an early death, it should not be forgotten; rather its beauty should be remembered, and history should record our gratitude to it—for bequeathing to us new and perhaps still unexplained experimental facts and, with them, new problems; and for the services it has thus rendered to the progress of science during its successful but short life.³⁴⁶

“Scientific conclusions,” as the Supreme Court noted in *Daubert v. Merrell Dow Pharmaceutical, Inc.*,³⁴⁷ “are subject to perpetual revision. . . . The scientific project is advanced by broad and wide-ranging consideration of a multitude of hypotheses, for those that are incorrect will eventually be shown to be so, and that in itself is an advance.”³⁴⁸

John Stuart Mill also noted the uses of false opinions. When the received opinion is true,

a conflict with the opposite error is essential to a clear apprehension and deep feeling of its truth. But, there is a commoner case than either of these; when the conflicting doctrines, instead of being one true and the other false, share the truth between them; and the nonconforming opinion is needed to supply the remainder of the truth, of which the received doctrine embodies only a part.³⁴⁹

It is hard to evaluate the legal effect of those theories that deny the existence of objective truth. Professor Edwin Baker writes:

which theory provides the most insight or knowledge depends on how we value what each does, not on any objective measurement. The choice between theories is not a matter of objective truth but of pragmatic or ‘value’ considerations. . . . [V]alue-oriented criteria—interests, desires, or

³⁴⁶ POPPER, *supra* note 84, at 243.

³⁴⁷ 113 S. Ct. 2786 (1993).

³⁴⁸ *Id.* at 2798. For two discussions of *Daubert*, see Bert Black et al., *supra* note 142, and Farrell, *supra* note 340.

³⁴⁹ MILL, *supra* note 193, at 47.

aesthetics—which guide the development of perceptions, appear . . . incapable of objective demonstration.³⁵⁰

Such analysis could raise insurmountable obstacles to defamation plaintiffs because of the impossibility of proving a theory or hypothesis false. The legal system is unlikely to adopt such an analysis. The argument of the nonexistence of objective truth might instead simply lead us to treat as truth the dominant opinion at the moment. That approach would enshrine orthodoxy and would be inconsistent with First Amendment theory.

If it is ever tested, the AIDS/polio vaccine theory may prove false with reference to the origin of the African AIDS epidemic. Even if it should prove false in the end, exploring the hypothesis has already spotlighted the dangers of cross-species tissue transfers between simians and people, a problem that may deserve far more attention than it has received. The AIDS/polio vaccine theory also suggests a need for new observations, experiments, and studies. In that way too, it contributes to the growth of knowledge. It suggests the need for further studies of diseases that may have been transferred by vaccine made from monkey kidneys such as the early polio vaccine that was contaminated with SV-40. This is so regardless of the truth about the AIDS/polio vaccine hypothesis.

The Wistar Committee found the AIDS/polio vaccine theory highly improbable, but its report did not conclude that the theory could be ignored for that reason,³⁵¹ and the committee suggested limited testing.³⁵² Further, the theory as reported in *Rolling Stone* led the Committee to make important scientific and public policy recommendations as to worldwide changes in the manufacture of polio vaccines.³⁵³ Even if the theory is eventually found to be false, it will not have been without value, for it has led to important observations, and it points to suggested tests and other observations that should increase the fund of knowledge and may be crucial to the safety and health of humankind. In response to the theory, critics focused attention on the case of the man from Manchester, then believed to be history's first documented AIDS case, a case the Wistar Committee thought proved that the theory was at least highly improbable. As attention focused on that case, it also focused on the strange alleged nature of the genetic make-up of the Manchester man's AIDS virus—a make-up that seemed to fit HIV-1 of the 1990s and not its ancestors of the 1950s. In the end, examination of the case of the Manchester man seems to have shown he did not have AIDS. If so,

³⁵⁰ BAKER, *supra* note 193, at 12-13.

³⁵¹ One Committee member, however, said at a news conference that the theory could be ignored. Kolata, *supra* note 17, at A16.

³⁵² COMMITTEE REPORT, *supra* note 5, at 6.

³⁵³ *Id.* at 7-8; see Dommann, *supra* note 31, at 388-92.

the renewed interest in the case of the Manchester man provided us with important new information on the history and origin of AIDS.

Because of the passage of time and the apparent failure to keep a large number of samples, the AIDS/polio vaccine theory may now be difficult to test. One might test more monkeys and chimps for SIVs, searching for one that is highly similar to HIV-1. One might focus more attention on Gerald Meyer's work on the evolution of variants of HIV-1 and when they began to diverge from a common ancestor. One also might make polio vaccine from an infected monkey using the procedures followed at the times in question and then check the vaccine for contamination. Certainly, if samples of vaccines had been saved and records had been available to follow-up those who received the vaccine, the AIDS/polio vaccine hypothesis would have been investigated more easily.³⁵⁴ The theory, therefore, makes an important implicit suggestion about the need to preserve samples so that long-term effects of medical intervention may be analyzed. In that way as well, this theory—which most medical experts think is probably false—nonetheless makes an important contribution.

To summarize then, the benefits produced by the discussion of the AIDS/polio vaccine theory, even if it ultimately proves false, include: (1) highlighting the danger of trans-species tissue and virus exchanges; (2) prompting public statements by eminent scientists on that danger; (3) highlighting the danger of making polio vaccines using monkey kidneys, as has been the case in the United States and most of the world; (4) producing public discussion by leading scientists of that danger; (5) highlighting the possible injury to the health of those who received early lots of polio vaccine before SV-40 was removed; (6) highlighting the need for additional follow-up studies to learn the health effects of SV-40; (7) prompting statements by an eminent polio scientist that such follow-up studies should be done; (8) highlighting the failure of the government to encourage comprehensive follow-up studies; (9) re-telling the sad history of the pioneering woman scientist who first discovered that something in the medium used to make early polio vaccines caused cancer in hamsters; (10) focusing attention on the supposed AIDS case of the man from Manchester, leading to its apparent falsification and so deepening our understanding of the origin of AIDS; and (11) revealing the apparent unwillingness of the U.S. government to allow a researcher to examine some of the limited supply of early sam-

³⁵⁴ According to Elswood and Stricker, political chaos and civil war that broke out in the Belgian Congo in 1960 prevented follow-up of the mass inoculation. Elswood & Stricker, *supra* note 5, at 352. The idea of making polio vaccine from an infected monkey and then checking the vaccine for contamination was suggested by Cecil Fox. Letter from Cecil Fox to author, *supra* note 5, at 1.

ples of polio vaccines for retroviruses.³⁵⁵ All of these values flowed from the AIDS/polio hypothesis, even if it should prove false.

At a minimum, problems of transmissions of simian, monkey, and animal viruses to people deserve further exploration. Doctors have attempted to put baboon livers in people. An expert on simian viruses "thought [that use of baboon livers] was far more than a simple liver transplant. He thought it could easily be a virus transplant, that the baboon would be donating not only its liver to the patient but a host of microscopic organisms as well. He . . . considered it almost too real."³⁵⁶ Another simian virus expert observed, "[y]ou could not design a better experiment of cross-species transmission of a virus than to transplant an organ from a baboon to a human, and then immunosuppress the hell out of the human to keep it from rejecting the organ."³⁵⁷ Meanwhile, a business plans to sell pig organs for similar uses. These activities and proposals carry great potential benefits, but may also involve great risks.³⁵⁸ At least until the *Rolling Stone* article was published and the Wistar Committee recommendation, polio vaccines continued to be made using monkey kidneys. The Wistar report pointed out that other viruses may exist in monkey kidneys about which we are ignorant and, consequently, are unable to test.

³⁵⁵ The reason given was the very limited supply of such samples. Curtis, *supra* note 102, at A1.

³⁵⁶ BLUM, *supra* note 78, at 223; see also *supra* note 86. Transferring tissues from one species to another is accelerating. See *AIDS Patient to Be Given Bone Marrow From Baboon*, CHI. TRIB., Feb. 23, 1995, at C7; Philip J. Hilts, *Success in Tests of Pigs' Hearts in Baboons*, N.Y. TIMES, May 1, 1995, at A13; *Pig Tissue Is Tried to Cure Parkinson's*, N.Y. TIMES, Apr. 20, 1995, at A15. Press coverage of possible risks has been extremely rare. For an exception, see Jonathan S. Allan, *We Shouldn't Monkey Around with Viruses*, NEWSDAY, Mar. 10, 1995, at A32. The FDA is considering strict guidelines, but it remains to be seen whether the agency's resolve will survive the current hostility to regulation. See *FDA Concerned About Safety of Xenografting Trials; May Issue Strict Guidelines*, 5 TRANSPLANT NEWS, Feb. 28, 1995, § 4. The FDA eventually approved the transplant of baboon marrow to an AIDS patient:

[T]he questions the FDA asked the 22-member advisory panel to address focused on public health. The issues were whether the animal tissue might introduce dangerous known and unknown infectious agents in humans and whether the dangers outweighed the potential benefits of the transplants. The panelists said that there was no way to guarantee against such a risk. . . . Some experts have raised the specter of a theoretical risk that such experiments might unleash another epidemic like AIDS, which many experts believe originated in primates in Africa.

Lawrence K. Altman, *AIDS Test Involving Baboon is Approved*, N.Y. TIMES, July 15, 1995, at A9.

³⁵⁷ BLUM, *supra* note 78, at 225 (quoting virologist Dick Lerche).

³⁵⁸ *Id.* Lentiviruses related to HIV-1 have now been isolated "from sheep, goats, horses, cattle, cats, monkeys and humans." Desrosiers, *supra* note 24, at 288.

The AIDS/polio vaccine hypothesis is a cautionary tale that needs to be told, and that is so whether it is ultimately found to be true or false. Popper emphasized the importance of learning from our mistakes. If we are unwilling to tolerate hypotheses that turn out false, much investigation will be discouraged.

Can we afford a legal system that suppresses discussion and warnings on matters of the highest public importance? Judge Bork has noted wisely that the framers have given us crucial values of freedom of speech and press, values that are effectuated by "a judicial tradition of continuing evolution of doctrine to serve the central purpose of the first amendment."³⁵⁹ The need for such evolution is urgent.

The government-industrial-scientific complex may be hesitant to look too closely at its mistakes. The reluctance to explore the possibility that we may have even unintentionally and non-negligently caused harm only reflects human nature. In the same situation, most of us might have similar reactions. If we punish those who dare to speculate on possible industrial, governmental, and medical mistakes, an already unpopular and unlikely activity will become even more scarce.³⁶⁰ Application of defamation suits to such speculation then will rob us of important knowledge, for knowledge begins with speculation, communication, criticism, and testing.

4. *Dangers of the Judicially Decreed Falsity of Hypotheses*

We should not assume that the conventional wisdom of the day on any scientific subject represents ultimate truth. Hypotheses challenging conventional scientific wisdom and established orthodoxies often drive scientific progress. The 19th century physician Ignaz Semmelweis discovered that childbed fever, which caused from a ten to thirty percent mortality rate in European maternity hospitals, could be virtually eliminated by having the doctors first wash their hands in a chlorine solution.³⁶¹ In his division of the obstetric clinic in Vienna, the mortality rate dropped from eighteen to one percent.³⁶² Semmelweis continued his studies and published his conclusions in a book that he sent to medical societies and major obstetricians in Germany, France, and England.³⁶³ According to William Broad and

³⁵⁹ *Ollman v. Evans*, 750 F.2d 970, 995 (D.C. Cir. 1984) (Bork, J., concurring), *cert. denied*, 471 U.S. 1127 (1985).

³⁶⁰ The need for strong First Amendment protection is heightened by the fact that scientific speech may also be chilled by the threat of governmental assertion of national security claims as well as the withholding of government and corporate grants to unpopular researchers. See Zimmerman, *supra* note 139, at 255.

³⁶¹ BROAD & WADE, *supra* note 340, at 136-37.

³⁶² *Id.*

³⁶³ *Id.*

Nicholas Wade, "the book was almost universally ignored by the medical profession" in spite of the continued ravages of childbed fever. If the medical community continued to ignore his method, Semmelweis threatened to warn the public that "to summon an obstetrician or a midwife . . . is as much as to expose your wife and your yet unborn child to the danger of death."³⁶⁴ "Perhaps," Broad and Wade speculated, physicians "found it hard to cope with the consequences of an idea which meant that each, with his own unwashed hands, had unwittingly sent many patients to their deaths."³⁶⁵

As the size of the group defamed grows, the protection of the law of libel shrinks, and no action is typically available for the defamation of very large groups of people. That explains, for example, why people can say the things they say about lawyers as a group, with little fear of defamation action. If Semmelweis had published his letter or even the theory in his book in such a way as to reflect on a small number of doctors, the letter could have been treated as defamatory. The theory suggested that doctors inadvertently had caused death. The same could be true if the law of the jurisdiction considered the warning actionable despite the number problem.

Of course, the Semmelweis theory was true, but the medical community at the time believed it to be false. Perhaps by sheer weight of numbers, those experts could have convinced a judge or jury. Should the fate of a Semmelweis hang on his ability to convince a judge or jury of the truth of his assertions? If so, litigation would be substituted for criticism, tests, and controlled experiments. The outcome would likely turn on the community consensus at the time of the lawsuit. If the *Rolling Stone* case had gone to trial, one of the plaintiff's most powerful arguments to prove the theory false would have been the case of the Manchester man. Now, with further scientific work, it seems that the evidence that the seaman had AIDS may have been mistaken.

At first, many new scientific theories, which were later accepted, have been treated with contempt, ridicule, and rejection by the great weight of scientific opinion. The now-accepted theory of plate tectonics and the consequent validation of continental drift was initially and vehemently rejected.³⁶⁶ The theory of catastrophic extinction of the dinosaurs had a similar history. "When Alvarez and company first proposed their radical hypothesis of catastrophic extinction, paleontologists almost to a person rejected the

³⁶⁴ *Id.* at 137. In the United States, Semmelweis's methods got a better reception and were advocated by Dr. Oliver Wendell Holmes, father of the future Supreme Court Justice. SHELDON NOVICK, *HONORABLE JUSTICE: THE LIFE OF OLIVER WENDELL HOLMES, JR.* 18-19 (1989).

³⁶⁵ BROAD & WADE, *supra* note 340, at 137.

³⁶⁶ WILLIAM GLEN, *THE ROAD TO JARAMILLO* 310, 312-15 (1982). For a different view, see Black et al., *supra* note 142, at 779-82.

idea with ridicule and vehemence."³⁶⁷ Today, however, their theory is more widely accepted.

5. *A Rational Basis Test Proposed*

A test that makes a person a public figure based on that person's power to shape the world is a beginning, and one which finds some support in the existing cases. Still, that test alone is not sufficient in cases of complex criticism. Instead, a test is required with the potential to end such lawsuits at a very early stage.

The hypothesis should be protected even though we consider it wrong or very improbable, so long as it has a rational basis—that is if it could be entertained by reasonable people. Protection should exist even if the hypothesis is based on incomplete facts and should continue even if it later turns out to be false. The hypothesis should be protected because of its potential contribution to knowledge and to public understanding. Such discussion seeks answers to complex questions about the world. Much of it occurs at the level of ideas, though discussion of ideas may also involve discussion of human behavior. Complex scientific hypotheses have as one of their primary focuses ideas, patterns, processes, or products, not individuals; though of course individuals may be affected.

That rational people find the hypothesis plausible or possible should provide sufficient proof of a rational basis. Disagreement among knowledgeable people as to the possibility or plausibility of a theory would be sufficient to establish a rational basis. This is a tough rule for those basing defamation actions on complex criticism. It is justified, however, because of the importance of such hypotheses to society. This proposed rule also recognizes the extraordinary access to the media and power of counterspeech which the advocates of conventional wisdom and the proponents of widely used products and processes typically enjoy.

Because a primary purpose of the proposed rational basis test is to avoid litigation, if the hypothesis can be supported with rational arguments, it should be protected, regardless of the state of mind of the person making the criticism or suggesting the hypothesis. Tests based on recklessness or knowledge of falsity turn on the state of mind of the critic, a matter that often requires a full trial. The rational basis test, by contrast, is more objec-

³⁶⁷ Stephen J. Gould, *Jove's Thunderbolts*, NAT. HIST., Oct. 1994, at 6, 9. When the Nobel Prize winning work on the threat to the ozone layer was first published, "some industry scientists called the hypothesis nonsense. According to The Los Angeles Times, the president of one aerosol manufacturing company suggested that criticism of CFC's [sic] was 'orchestrated by the ministry of disinformation of the K.G.B.'" William K. Stevens, *3 Win Nobel Prize for Work on Threat to Ozone*, N.Y. TIMES, Oct. 12, 1995, at A1.

tive. If rational arguments can be advanced in favor of the theory, that ends the matter.³⁶⁸ This rule is justified by the overriding public interest in free discussion, an interest reflected in the First Amendment and similar state constitutional guarantees.

In substantive due process cases and equal protection cases, the rational basis test dramatically reduces judicial scrutiny of legislation, and consequently leaves matters so scrutinized largely to the political process.³⁶⁹ As proposed here, the rational basis test for complex criticism would limit state tort laws of defamation and product disparagement, limiting legislative power. In that way, the function of the test would differ from traditional rational basis analysis. At a deeper level, however, the function would be similar—to protect the sphere of the democratic process.

The practical purpose of the rational basis standard for complex criticism is to dramatically reduce the chances that complex criticism will produce litigation and to make it much more difficult for such a defamation suit to survive summary judgment. The present proposal will only work in practice if the penumbra of uncertainty that surrounds any bright line rule is sharply shifted, so that the writer of complex criticism can be assured not only that she or he stands on the right side of the line, but also stands free of the penumbra. A protective standard founded on a rational basis is necessary to deter litigation that will chill free speech. Powerful persons and interest groups will not be deterred from bringing suit by the certainty that their claim will lose in court in the end, so long as that claim can be kept alive long enough to trigger media reporting, affect public perceptions, drain the opponent's resources, and deter other speakers.

Finally, when a Court reviews the rational basis of a regulation, it is weighing that law's basis as rationalized on various public policy grounds.³⁷⁰ One justification for more deferential review in this context is that the Court does not have the expertise of the legislature to make complex public policy choices. Yet complex criticism is also an area in which the court has limited experience and expertise. The tentative, dialectical, and continually unfolding nature of our understanding of complex questions counsels against any judicial attempt finally to resolve such questions. The imperative for judicial deference is heightened.

For these reasons, the rational basis should be supportable both by facts known to the speaker at the time, and by facts which the speaker did not

³⁶⁸ See JOHN E. NOWAK ET AL., CONSTITUTIONAL LAW § 11.4, at 378-80 (4th ed. 1991).

³⁶⁹ See *FCC v. Beach Communications, Inc.*, 113 S. Ct. 2096 (1993); *Williamson v. Lee Optical of Okla., Inc.*, 348 U.S. 483 (1955). See generally NOWAK ET AL., *supra* note 368, § 11.4, at 379.

³⁷⁰ NOWAK ET AL., *supra* note 368, § 1.4, at 379 (explaining that a court will uphold laws under a rationality test as long as they are "rationally related to a legitimate end of government").

know but which are later discovered. The value of the statement is enhanced by later corroboration. Depriving the speaker of the benefit of later corroboration would punish intuitive flashes of insight, even if later shown to have a rational basis, because the speaker could not point to facts providing the rational basis at the time that he spoke. If later facts make the statement more probable, the speaker should be able to take advantage of them. The standard is designed to protect statements that, objectively considered, a rational person could believe to be true. Likewise, a theory that is later proven false should be protected provided that the facts known at the time it was expounded provided a rational basis for it at that time. The history of science and of ideas has been a history of creative destruction of previously held theories. Later destruction does not show the irrationality of previously held ideas at the time they were expounded.

Omissions of facts available at the time and mistakes are both common in complex criticism. Such omissions and mistakes should deprive complex criticism of protection only if the plaintiff can meet the *New York Times* intentional falsity or recklessness standard and if, considering the omitted facts and responses to them, no rational person could have considered the complex criticism to be plausible.

Furthermore, in cases of complex criticism, as in other cases, courts should determine as a matter of law that the alleged implied meaning of the statement is a reasonable one, and should be skeptical of attempts to stretch statements far beyond their plain meaning.³⁷¹ In the *Rolling Stone* litigation, the plaintiff construed a statement that said the event *could* have happened as meaning it actually *had happened*. Where an implied defamatory meaning of a statement is accepted by the court as a reasonable meaning of it, if the implied statement is complex criticism and is supported by a rational basis, it should be protected speech. At the least, this should be so for those plaintiffs who are criticized for exercise of extraordinary power to shape the world.

The tentative nature of a hypothesis typically makes it easier to establish a rational basis for suggesting it. An unequivocal statement, a statement that a researcher infected some people in Africa with AIDS as a result of a vaccine trial, or a statement that Alar is a human carcinogen—is not a hypothesis. The underlying question, however, is the same: Could a rational person believe the statement to be true?

³⁷¹ See Thomas Dienes & Lee Levine, *Implied Libel, Defamatory Meaning and State of Mind: The Promise of New York Times Co. v. Sullivan*, 78 IOWA L. REV. 237 (1993). The authors suggest that when a defamatory statement about a public figure is not intended to carry a defamatory meaning but does carry both a defamatory and a non-defamatory one, the publisher should be liable only if he or she knew the defamatory meaning to be false. *Id.* at 325. On complexities of determining meaning, see Marc A. Franklin & Daniel J. Bussel, *The Plaintiff's Burden in Defamation: Awareness and Falsity*, 25 WM. & MARY L. REV. 825, 828 (1984).

These are questions that a judge should often resolve in the first instance at summary judgment. If the defendant survived summary judgment, the question could become one for the jury, though the standard is frankly designed to end most cases at summary judgment. Affidavits, such as those in the *Rolling Stone* case, and facts such as those supplied in the Alar case, would establish a rational basis.

Finally, entirely baseless speculation would not establish a rational basis. The simple statement that the Holocaust did not occur, though evil and baseless, would not be defamatory and under current United States law is probably protected speech. Consider a second statement, made without rational support: the Holocaust did not occur and historian X who reported it lied intentionally because he was bribed by an international Jewish conspiracy. That would be the sort of defamatory statement the court could find lacking a rational basis.

The tests proposed here—power or influence as one clear way of transforming a person or corporation into a limited purpose public figure, and rational basis as a way to protect complex criticism—have their shortcomings. Some will see them as offering insufficient protection to reputation. Why protect malicious hypotheses and criticism? Some will point out, quite rightly, that the dimensions of the tests have not been fully explored. How much power to shape the world is enough? How are complex criticisms including scientific hypotheses, theories of the dangers of Alar, critiques of corporate plans for chimpanzees, or critiques of economic theories to be distinguished from simple statements of the “John is a thief” variety? These are questions that deserve careful additional attention. All concepts are vague on the margins. But in many cases, the central concepts here will be easily recognized.

A test somewhat similar to the rational basis test suggested here was adopted recently by the United States Court of Appeals for the District of Columbia.³⁷² A book reviewer asserted that a book contained too much sloppy journalism, and the author sued the reviewer for libel.³⁷³ In the context of a book review, the court held that “supportable interpretations” were protected by the First Amendment.³⁷⁴ The court stated:

even if the review’s assertion that the book contains “too much sloppy journalism” is verifiable, that assessment is supported by revealed premises that we cannot hold to be false in the context of a book review. . . . “Because the reader understands that such supported opinions represent the

³⁷² See *Moldea v. New York Times Co.*, 22 F.3d 310, 317 (D.C. Cir.), *cert. denied*, 115 S. Ct. 202 (1994).

³⁷³ *Id.* at 316.

³⁷⁴ *Id.*

writer's interpretation of the facts presented, and because the reader is free to draw his or her own conclusions based upon those facts, this type of statement is not actionable in defamation."³⁷⁵

Similarly, in *Bose Corp. v. Consumers Union*,³⁷⁶ Consumers Union had said that instruments heard through Bose audio speakers "seemed to grow to gigantic proportions and tended to wander about the room."³⁷⁷ Bose contended the statement was false. The Court found the statement not so obviously false as to sustain a finding of "actual malice," defined as knowledge of falsity or reckless disregard of the truth.³⁷⁸ As the Court explained in *Masson v. New Yorker Magazine, Inc.*:³⁷⁹

the result was not an assessment of events that speak for themselves, but "one of a number of possible rational interpretations' of an event 'that bristled with ambiguities' and descriptive challenges for the writer." We refused to permit recovery for choice of language which, though perhaps reflecting a misconception, represented "the sort of inaccuracy that is commonplace in the forum of robust debate to which the *New York Times* rule applies."³⁸⁰

Robust debate on health risks is certainly at least as crucial to society as is debate on the quality of audio speakers. *Moldea*, however, speaks of the book review as a rational interpretation of revealed facts. In the case of those theorists propounding unorthodox hypotheses, as well as their critics, crucial facts may not be revealed, because such facts have been overlooked or misunderstood. In that respect, the test proposed here goes beyond *Moldea*, because the present test would still protect rationally based hypotheses in that situation.

At least defamation suits based on complex criticism should be subject to the rational basis rule when brought by those with special power to shape the world or special prominence in the affairs of society.³⁸¹ In a case in

³⁷⁵ *Id.* (quoting *Moldea v. New York Times Co.*, 15 F.3d 1137, 1144-45 (D.C. Cir.), modified, 22 F.3d 310 (D.C. Cir.), cert. denied, 115 S. Ct. 202 (1994)).

³⁷⁶ 466 U.S. 485 (1984).

³⁷⁷ *Id.* at 488.

³⁷⁸ *Id.* at 511.

³⁷⁹ 501 U.S. 496 (1991).

³⁸⁰ *Id.* at 519 (quoting *Bose Corp.*, 466 U.S. at 512, 513) (citation omitted).

³⁸¹ *Compare Time, Inc. v. Firestone*, 424 U.S. 448, 459 (1976) (asserting that "petitioner must be able to establish not merely that the item reported was a conceivable or plausible interpretation of the decree, but that the item was factually correct") with

which the press inaccurately reported that a divorce had been granted against a private person based on adultery, the Court in *Time, Inc. v. Firestone*³⁸² explicitly rejected granting protection to a "conceivable or plausible interpretation of the decree."³⁸³ On the conceivable or plausible interpretation point, the Court distinguished *Time, Inc. v. Pape*³⁸⁴ as a case where the *New York Times* test was applicable because the plaintiff was a public official.³⁸⁵ In *Pape*, *Time* magazine had quoted a complaint by an alleged victim of police misconduct that was contained in a Civil Rights Commission report as though the complaint represented the finding of the Civil Rights Commission itself.³⁸⁶ *Time* failed to say that the statements came from the plaintiff's complaint.³⁸⁷ The Court applied the *New York Times* standard (knowledge of falsity or recklessness) to the public official who sued, and as a result, protected *Time*'s conceivable or plausible interpretation of a report by the Civil Rights Commission. The Court noted:

Time's omission of the word "alleged" amounted to the adoption of one of a number of possible rational interpretations of a document that bristled with ambiguities. The deliberate choice of such an interpretation, though arguably reflecting a misconception, was not enough to create a jury issue of "malice" under *New York Times*.³⁸⁸

Considering *Pape*, *Firestone*, and *Bose* together, they afford support for the proposition that, under existing case law, a rational (or conceivable) basis test should apply at least where questions of complex criticism occur in suits by plaintiffs who satisfy the *New York Times* standard for public figures.

An inaccurate report that a private person has been found an adulterer, like an allegation of lying under oath, is factually a simpler matter than complex criticism. Furthermore, knowledge about alleged adultery is of little value in the pursuit of political or scientific truth. As the Court noted, "[t]he details of many, if not most, courtroom battles would add almost nothing toward advancing the uninhibited debate on public issues thought to provide

Time, Inc. v. Pape, 401 U.S. 279, 292 (1971) (noting that "it can hardly be said that *Time* acted in reckless disregard of the truth. . . . *Time*'s conduct reflected at most an error in judgment.").

³⁸² 424 U.S. 448 (1976).

³⁸³ *Id.* at 459. *But see id.* at 490-91 (Marshall, J., dissenting).

³⁸⁴ 401 U.S. 279 (1971).

³⁸⁵ *Firestone*, 424 U.S. at 456 (distinguishing *Pape*, 401 U.S. at 280-81).

³⁸⁶ *Pape*, 401 U.S. at 281-82.

³⁸⁷ *Id.* at 282.

³⁸⁸ *Id.* at 290; *cf. Pope v. Illinois*, 481 U.S. 497, 501 n.3 (1987).

principal support for the decision in *New York Times*.³⁸⁹ The Court also quoted the *Gertz* test on power and influence and concluded that the plaintiff, who had reportedly been found to have committed adultery, had not assumed "any role of especial prominence in the affairs of society."³⁹⁰

Of course, there are disadvantages to any system more protective of speech. Some false theories will be protected, and they may have bad consequences. Progressives will find that the protective rules do not assure progress. Intellectual suppression will continue in its many forms.³⁹¹ Powerful interests may continue to denounce and defame those who raise embarrassing scientific questions as "junk scientists," and use their formidable public relations machinery to spread their views. Meanwhile, those interests can continue to attempt to win friends and influence people by strategic research grants and funding friendly foundations. They can continue considering and sometimes attempting to prevent publication of ideas which they find threatening. For example, when a Dutch researcher published an early criticism of the prescription drug Halcion in a medical journal, an Upjohn Company memo announced: "We must stop further publication by van der Kroef in major journals."³⁹² That such a plan was advanced in a company memo, does not, of course, prove that the plan was executed. Nor is corporate consideration of such tactics in the case of Halcion unique. "When doctors first began reporting side-effects from thalidomide, such as deadening of sensation in fingers, the producer of the drug . . . not only denied the findings but also tried to discredit the doctors and prevent their articles from being published in the medical literature."³⁹³ As history shows, that drug eventually produced severe birth defects.³⁹⁴

³⁸⁹ *Firestone*, 424 U.S. at 457.

³⁹⁰ *Id.* at 453.

³⁹¹ See, e.g., Brian Martin, *Intellectual Suppression: Why Environmental Scientists Are Afraid to Speak Out*, 20 HABITAT AUSTRALIA 6, 11 (1992); Brian Martin, *Science Policy: Dissent and Its Difficulties*, PHIL. & SOC. ACTION, Jan.-Mar. 1986, at 5 [hereinafter Martin, *Science Policy*].

³⁹² *Upjohn Co.*, Unrevised Judgment, *supra* note 296, at 168. The court further noted "a reference in a manuscript report of the Brussels meeting dated 10.12.79 . . . trying to stop a publication by Dr. van der Kroef in the Journal of Modern Medicine." *Id.*

³⁹³ Martin, *Science Policy*, *supra* note 391, at 5; see also HENNING SJOSTROM & ROBERT NILSSON, THALIDOMIDE AND THE POWER OF THE DRUG COMPANIES 57-58 (1972) (noting attempts by drug manufacturer to dissuade doctors from submitting unfavorable reports regarding thalidomide for publication, and to influence editorial boards of journals from accepting such reports for publication); SUFFER THE CHILDREN: THE STORY OF THALIDOMIDE 34-35 (1979) (noting manufacturer's attempts to suppress publication; quoting drug manufacturer employee as warning his associates, during early stages of thalidomide controversy, that "[s]ooner or later we will not be able to stop publication of the side effects of Contergan [brand name for thalidomide product]").

³⁹⁴ HARVEY TEFF & COLIN R. MUNRO, THALIDOMIDE: THE LEGAL AFTERMATH 4 (1976).

Under a rational basis test, powerful interests would find it much harder to use libel laws as a weapon in the contest. Conversely, it would also be harder for the critics of established views and interests to receive the protection of libel law, although the law does not seem to provide very robust protection for such people in any case.

In defamation and perhaps other actions, the rational basis test would also protect scientists whose hypotheses or studies suggest that dangerous products are in fact safe. It would provide increased protection from defamation, for example, based on criticism of another's research, for scientists employed by tobacco companies whose studies discounted the health risks of tobacco. It should not protect false and deceptive statements made to induce commercial transactions.³⁹⁵

6. *Application of the Rational Basis Test*

The versions of the AIDS/polio vaccine hypothesis advanced in the Elswood-Stricker article in *Medical Hypotheses* and in the *Rolling Stone* piece were rationally possible, though perhaps mistaken, interpretations of complex events that bristle with uncertainty. The thoughtful evaluation of essentially the same hypothesis in the *Journal of Medical Ethics* clearly

³⁹⁵ A company's false and deceptive statements to the public and to consumers about the safety of its products, by contrast, are statements that directly encourage commercial transactions. These statements would still be subject to liability. Such exposure is less objectionable, because such speech seems particularly difficult to chill. See *Cipollone v. Liggett Group, Inc.*, 505 U.S. 504, 530-31 (1992) (permitting suits against cigarette companies for deceiving the public about the dangers of smoking); see also Alix M. Freedman & Laurie P. Cohen, *Smoke and Mirrors: How Tobacco Firms Keep Health Issue "Open" Year After Year*, WALL ST. J., Feb. 11, 1993, at A1. Brannigan and Ensor suggested that product critiques be judged by the actual malice standard and that the same standard apply to vendors, but that statements by competitors disparaging a product should receive lesser protection. Brannigan & Ensor, *supra* note 112, at 601 (citing *Perma-Maid Co. v. FTC*, 121 F.2d 282 (6th Cir. 1941) (enjoining false advertising claims by a steel pot maker that aluminum pots caused cancer)). Similar claims made in a book were held protected by the First Amendment in *Scientific Manufacturing Co. v. FTC*, 124 F.2d 640 (3d Cir. 1941). Should a corporation that negligently proclaims product safety and induces consumer injury in reliance be permitted to defend on the grounds of ignorance of the true facts or lack of recklessness? To allow the defense may discourage safety measures and investigations by the organization best able to do them. Speech proposing commercial transactions has traditionally been accorded less First Amendment protection precisely because of such concerns. Though the tests proposed here are discussed in connection with federal constitutional protections, they could also, of course, be implemented under state constitutional or common law guarantees.

treats the hypothesis as a rationally possible one that deserves investigation.³⁹⁶

Polio Hall of Fame member Joseph Melnick reached similar conclusions about the *Rolling Stone* article. Melnick had conducted extensive research and written several articles on the problems associated with the existence of simian viruses in monkey tissue cultures used in the production of polio vaccines.³⁹⁷ He had been a member of the World Health Organization's Committee on Polio Vaccine since 1972.³⁹⁸ Recently he researched and wrote on issues related to AIDS and HIV.³⁹⁹ Melnick expressed his views in a affidavit submitted in the *Rolling Stone* litigation:

4. I have reviewed the *Rolling Stone* article by Tom Curtis, entitled "The Origin of AIDS: A Startling New Theory Attempts to Answer the Question Was It an Act of God or An Act of Man?" The article raises the theoretical question of whether an AIDS-like simian virus might possibly have been present in monkey kidney tissues used in polio vaccines that were administered to hundreds of thousands of people in the Belgian Congo in the late 1950s. I find this theory both plausible and one of several possible explanations for the still unsolved mystery of how the modern AIDS epidemic originated.

5. We in the scientific community simply do not know how the AIDS virus originated in man. One prevalent hypothesis is that a simian AIDS-like virus, known as Simian Immunodeficiency Virus ("SIV"), was transmitted from African monkeys to humans in Africa, and thereafter evolved into the Human Immunodeficiency viruses ("HIV") commonly referred to as AIDS. The question of how this cross-species transfer took place remains an unsolved mystery and has led to several theories.

6. In the late 1950s (as well as today), live attenuated polio vaccines were made in monkey kidney tissue cultures. Those tissue cultures often contained small amounts of lymphocytes and macrophages. Such cells are now known to support the replication of SIV in culture and when taken from SIV-infected monkeys to harbor SIV in vivo. Moreover a recent report (e.g., Khabbaz et al., *Lancet* 340: 271-273,

³⁹⁶ See Gillon, *supra* note 47.

³⁹⁷ Affidavit of Joseph Melnick, Ph.D. at 1-2, *Koprowski v. Straight Arrow Publishers, Inc.* (E.D. Pa. 1995) (Civ. Action No. 92-CV-7431) [hereinafter *Melnick Affidavit*].

³⁹⁸ *Id.* at 2.

³⁹⁹ *Id.* at 1-2.

1992) has shown that SIV has accidentally infected at least one laboratory worker, consistent with laboratory observations that SIV will grow in human cells. It is thus plausible to hypothecate that SIV might have been present in monkey kidney cultures used in the polio vaccines in the Congo and that it might have infected human recipients.⁴⁰⁰

Melnick noted that because SIV was not identified until 1985, no tests were available to ascertain its possible existence in the tissue cultures used in polio vaccines until that time.⁴⁰¹

Other famous scientists reached very different conclusions. Robert C. Gallo, the AIDS researcher, and others submitted detailed and apparently impressive affidavits indicating their opinion that the theory was false.⁴⁰² A doctor of veterinary medicine who was also an AIDS researcher noted that neither African green or rhesus monkeys were natural hosts for HIV-1 and that they had not been successfully infected with HIV-1 in the laboratory.⁴⁰³ The researcher concluded that "a primate immunodeficiency virus from African chimpanzees . . . was the original link in the emergence of HIV-1 in humans."⁴⁰⁴ The expert said that "[a]ccording to all present scientific knowledge, HIV-1 could not have been introduced to the human population by the administration of [the researcher's] polio vaccine."⁴⁰⁵ Elswood and Stricker countered that "[i]t is now known that HIV can infect at least 1 species of macaque monkey, and HIV antibodies have been detected in captive African green monkeys."⁴⁰⁶ The discovery of wild chimpanzees with a strain of SIV that is 75-84% identical to HIV-1, Elswood and Stricker asserted, "gave no comfort to those who disputed the vaccination theory, since chimpanzees had been used to attenuate and test viruses for potential use in vaccines and were often kept in captivity by vaccine laboratories. Chimpanzees, therefore, could be a source of vaccine contamination and infection of other captive monkeys."⁴⁰⁷ The Wistar Committee found

⁴⁰⁰ *Id.* at 2-3.

⁴⁰¹ *Id.* at 3.

⁴⁰² See, e.g., Affidavit of Robert C. Gallo, M.D., *Koprowski* (Civ. Action No. 92-CV-7431) [hereinafter *Gallo Affidavit*].

⁴⁰³ Allan Affidavit, *supra* note 22, at 1.

⁴⁰⁴ *Id.* at 2.

⁴⁰⁵ *Id.*

⁴⁰⁶ Elswood & Stricker, *supra* note 5, at 351 (citing M.B. Agy et al., *Infection of Macaca nemestrina by Human Immunodeficiency Virus Type 1*, 257 *SCIENCE* 103, 103-06 (1992)); G. Lektasas & J.J. Alexander, *supra* note 33, at 1427. They did not claim to know whether chimpanzees were used in the Congo trials discussed by them and *Rolling Stone*.

⁴⁰⁷ Elswood & Stricker, *supra* note 5, at 351 (citation omitted).

the hypotheses possible but highly improbable.⁴⁰⁸ These facts simply show a dispute, and the dispute shows that the Elswood-Stricker interpretation is rationally possible. Such facts and disputes should produce early dismissal of a libel claim.

Early dismissal should occur even if the articles in question, as will likely be the case, omit some arguments against the theory. The *Rolling Stone* article reported many arguments against the theory in detail. Nevertheless, the article omitted what later seemed a salient argument, because of a misunderstanding by both the source and the writer about the case of the man from Manchester. Critics of the theory, in turn, omitted arguments that raised questions about the case of the man from Manchester. The significance of the problems with the claim that the Manchester man had been infected with HIV-1 were simply not apparent at the time. These concerns eventually led to powerful evidence that the Manchester man never had AIDS. Other arguments omitted in the *Rolling Stone* piece surfaced during litigation.⁴⁰⁹

These conjectures, criticisms, and refutations show why criticism is such an important endeavor. So long as a hypothesis or similar complex assertion remains a rationally possible interpretation, at the time it is asserted or by the wisdom of hindsight, it should be protected. Overlooked and omitted anomalous facts should not strip the hypothesis of protection. Such omissions are a typical basis for criticism of a hypothesis. In turn, the criticism itself may include omissions, as happened in the case of the Wistar Committee Report. Indeed, science often holds to theories in spite of anomalies,⁴¹⁰ although the anomalous facts should be noted when they are recognized.⁴¹¹

The response of the powerful and of those working in matters of public concern to such criticism must be counterspeech. They and their allies often

⁴⁰⁸ COMMITTEE REPORT, *supra* note 5, at 3-4.

⁴⁰⁹ See Gallo Affidavit, *supra* note 402, at 1. During litigation, Dr. Gallo was told that the vaccine used in the Congo was prepared in monolayer of monkey kidney cells. "CD4 T cells and macrophages are the target cells for HIV-1 infection. Monolayer of monkey kidney cells do not contain CD4 lymphocytes or macrophage," Dr. Gallo observed, "as far as I know. Therefore, HIV-1 should not survive in such a culture." *Id.* at 1. Allan also noted that "[i]f Curtis' [sic] theory were correct, AIDS should have emerged as an epidemic of children in remote villages, but that is not what occurred." Allan Affidavit, *supra* note 22, at 2. Allan concluded that "[a]ccording to all present scientific knowledge, HIV-1 could not have been introduced to the human population by the administration of [the researcher's] polio vaccine." *Id.*

⁴¹⁰ THOMAS S. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* 52-65 (2d ed. 1970) (1962).

⁴¹¹ The CBS report on Alar easily meets a rational basis test. Indeed, there was very substantial evidence supporting the CBS claim of cancer risks from Alar. One aspect of treating people with dignity is allowing them to have and evaluate such information for themselves. That some found the report misleading and exaggerated simply indicates the sort of political dispute that the First Amendment was designed to protect.

have truly extraordinary access to the debate in any case. The researcher who was criticized by the AIDS/polio vaccine story in *Rolling Stone* made a detailed response in *Science* magazine. That magazine devoted much space to attacks on the theory, and little to its defense. When members of the governmental and scientific establishment condemned the theory, they found no shortage of sources to publish their counterspeech.

From the researcher's point of view, counterspeech as a response to perceived attacks on reputation is far from a perfect tool. If anything, however, the orthodox view had found far more access to the media than the AIDS/polio vaccine hypothesis, which before the *Rolling Stone* article had encountered broad resistance and rejection.⁴¹² Since publication, the *Rolling Stone* theory has been alternatively dismissed out of hand, ridiculed, and berated. It has also received a more balanced consideration.⁴¹³ What it apparently has not received is any testing.

7. *The Ideal Meets the Real World*

Brian Martin reaches the following unhappy conclusion after reviewing the effort of Louis Pascal to publish his work on the AIDS/polio vaccine hypothesis:

Unfortunately, the standard view that science is objective and open to new ideas—a view that is taught to science students in high school and university and to the general public through many popular treatments—is flawed. The reality is that being taken seriously by the scientific research establishment depends sensitively on who the writer is, what their institutional affiliation is, how they write their paper and, not least, what they have to say. To be taken seriously, it is a great advantage to be an eminent scientist, to write from a prestigious address, to write precisely in the standard journal style, and to say something that is just marginally original and not threatening to any powerful interest group.⁴¹⁴

While Martin has accurately highlighted one aspect of the reality of the AIDS/polio vaccine controversy, there is another aspect. For the ideal view of science which he describes—science as objective and open to new ideas—has had its effect also. Some scientists have responded to the hypotheses, not by ridicule, but by saying that testing should be done. This was so

⁴¹² Martin, *supra* note 41, at 624.

⁴¹³ Jared Diamond, *The Mysterious Origin of AIDS*, 101 NAT. HIST. 24 (1992).

⁴¹⁴ Martin, *supra* note 41, at 625.

even though some of those scientists thought that finding corroboration from tests would be unlikely. A few leading AIDS researchers took this view, as well as Joseph Melnick, the pioneering virologist in the fight against polio.⁴¹⁵ Melnick has also said that long-term epidemiological follow-ups should be done to learn the human health effects on those early recipients of polio vaccine contaminated with SV-40.⁴¹⁶ Brian Martin, an academic, assisted Pascal in publishing his theory as a working paper.⁴¹⁷ In addition, W.D. Hamilton, the prize-winning evolutionary biologist at Oxford, attempted, without success, to publish a letter in *Science* magazine addressing why the hypothesis, though perhaps false, deserves a serious hearing.⁴¹⁸ Hamilton also addressed the implications of suppression of scientific discussion though libel actions.⁴¹⁹ Finally, members of the Wistar Committee carefully noted the possibility, even as they insisted on the great improbability, of many of the things the theory had asserted.⁴²⁰ Dr. David Ho, a member of the Wistar Committee, later performed tests indicating that the Manchester man apparently did not have AIDS after all, implicitly showing that the Committee's heavy reliance on his case probably had been mistaken.⁴²¹ Dr. Gerald Myers noted anomalies that the genetic information reported about the HIV-1 of the Manchester man, and pushed for further investigation.⁴²²

C. *Should We Protect Science from Discussion of Unorthodox Ideas in the Lay Press?*

There is an important additional argument for suppression of scientific speech directed to the general public. On topics such as cancer and the food supply, the argument runs, the public tends to become hysterical. Because the public generally lacks the ability to understand these technical questions, this argument claims, defamation or product disparagement actions are particularly appropriate to discourage inflammatory criticism.

One possible solution to the problem would be to impose different standards for speech by scientists directed toward other scientists, as opposed to speech directed toward the general public. Although difficult, such a solution would not be unprecedented. According to John Stuart Mill, at one time the Catholic Church allowed clergy to read heretical books so that they

⁴¹⁵ See Melnick Affidavit, *supra* note 397, at 3-4 (stating that "samples of the polio vaccine used in the Congo should be tested for the possible presence of SIV").

⁴¹⁶ *Id.*

⁴¹⁷ See PASCAL, *supra* note 3.

⁴¹⁸ Letter from W.D. Hamilton to *Science* magazine, *supra* note 59.

⁴¹⁹ *Id.*

⁴²⁰ COMMITTEE REPORT, *supra* note 5, at 3-4.

⁴²¹ Connor, *supra* note 67, at 2-3.

⁴²² *Id.*

might be prepared to criticize them, a privilege denied to the laity who were expected to rely on the church to judge such matters.⁴²³ If discussing scientific matters in the popular press were valueless, some might be tempted to embrace that approach.

In fact, however, discussion in the popular press is important in diffusing scientific thought. A study by sociologist David Phillips

examined the contents of *The New York Times* to see which scientific articles were reported. These articles were then scored to see how frequently they were cited in the scientific literature in the decade following the popular article, as compared to appropriate controls not noticed in the popular press. Those science articles discussed in *The New York Times* received a disproportionate share of attention within the biomedical community. . . .

It could be argued that discussion in *The New York Times* only means that the article chosen was especially important and newsworthy, and that is why it was cited more frequently afterward. This explanation fails The newspaper went on strike in 1978, and although an "edition of record" was prepared daily during the strike, none was ever circulated. Articles written up during this time did not show the increased citation level⁴²⁴

As noted, the *Rolling Stone* article prompted a suggestion by the Wistar Committee that monkey cells not be used in making polio vaccines because of the danger of cross-species disease jumps by latent or unidentified monkey viruses. A second article by Tom Curtis, about other AIDS/polio vaccine theories that also discussed the earlier history of polio vaccines, possible transmission of another monkey virus to vaccine recipients, and the danger of cross-species tissue exchange, was submitted to and bought by *Rolling Stone*, but was not published after the settlement of the suit over the first Curtis article.⁴²⁵ If the decision not to publish was influenced by the suit over *The Origin of AIDS* . . . ?, then it simply shows, once again, the chilling effect at work.

In any case, there are reasons to be skeptical of the "hysterical public" argument. Historically, critics of activities of powerful interests typically have been denounced as hysterical, as the attacks on Upton Sinclair and Rachel Carson have shown. Industry insisted that the matters should be

⁴²³ MILL, *supra* note 193, at 40.

⁴²⁴ *Science Notes*, NOETIC SCI. REV., Summer 1992, at 28.

⁴²⁵ Tom Curtis, Personal Communication (Sept. 1995) (unpublished manuscript on file with author).

decided by "experts." So the argument to silence or discourage advocacy or discussion of such matters because of their technical nature is in reality an argument for limiting the democratic process. The discussions by Carson and Sinclair led directly to governmental action—action that continues to this day.

By contrast, as the Alar controversy shows, experts, including government experts, are often painfully slow to act. As long as the subject is kept off the public agenda, it can be turned over to experts who then often lack the resources and the public support necessary to conduct essential tests or to take actions displeasing to powerful and politically well-connected interests. In the case of Alar, consumers boycotted the apples, the apples are now produced without Alar, and many scientists and doctors suggest that the conventional wisdom may well have understated the dangers to children of pesticides in the food supply.⁴²⁶ Meanwhile, the government, deprived of resources for independent tests and arguably much influenced by the very interests it is supposed to regulate, is years behind in testing to evaluate food safety concerns.⁴²⁷ Suggestions that consumers should be denied information stifles change, limits research, undermines the democratic process, and limits market choice.⁴²⁸

The entire subject can benefit from careful sociological study of the relations between science, government, and industry.⁴²⁹ For it might be the case that because of funding, revolving doors shuffling regulators between government and industry, and other factors, government tends to be excessively deferential to industry and some scientists tend to be quite cautious about lines of investigation that threaten established interests. If this perception is correct, there would be particular benefit in allowing outsiders to raise troubling issues.

Finally, the "hysterical public" argument for strong defamation remedies to deter "false" scientific speculation and reporting in the popular press is extremely curious. The public, it suggests, is unable properly to evaluate discussions of scientific matters. One proposed solution to this dilemma is to have a jury of lay people decide the issue of truth or falsity, and so decree scientific truth. As Justice Harlan suggested in *Time, Inc. v. Hill*, "[a]ny nation which counts the *Scopes* trial as part of its heritage cannot so readily

⁴²⁶ See NATIONAL RESEARCH COUNCIL, PESTICIDES IN THE DIETS OF INFANTS AND CHILDREN (1993).

⁴²⁷ *Frontline*: "In Our Children's Food" (PBS Television Broadcast, Mar. 30, 1993).

⁴²⁸ *Dairy Stores, Inc. v. Sentinel Publishing Corp.*, 465 A.2d 953, 959 (N.J. Super. Ct. Law Div. 1983) (suggesting that consumer information about spring water was comparable in importance to political information), *aff'd*, 486 A.2d 344 (N.J. Super. Ct. App. Div. 1985), *aff'd*, 516 A.2d 220 (N.J. 1986); see also Branigan & Ensor, *supra* note 112, at 592.

⁴²⁹ See, e.g., DICKSON, *supra* note 136.

expose ideas to sanctions on a jury finding of falsity.”⁴³⁰ Further, giving judges the sole power to decide such matters could be even worse, because of loss of the advantages of multiple perspectives.

V. CONCLUSION

A second monkey trial, over the origin of AIDS, is no better than the *Scopes* trial, which decided against the theory of evolution.⁴³¹ By deciding the falsity of hypotheses, a court “could preempt future scientific inquiry.”⁴³² Dr. Melnick noted in his affidavit that the origin of AIDS is presently unknown:

[T]here are many theories, all of which have strengths and weaknesses, all of which have supporters and detractors. The appropriate forum to debate and test those theories is the laboratory environs, not the courtroom. Indeed, I am troubled that if this libel suit were allowed to proceed, then any researcher or scientist could be subjected to litigation simply by setting forth a theory that was unpopular or that might later be proven to be incorrect.⁴³³

Of course, to run the risk of libel litigation, such a theory would have to bear on the reputation of a person, product, or commercial process—but a great many do.

Scientific controversies, writes Judge Frank Easterbrook, “must be settled by the methods of science rather than by the methods of litigation. More papers, more discussion, better data, and more satisfactory models—not larger awards of damages—mark the path toward superior understanding of the world around us.”⁴³⁴ To Judge Easterbrook’s admirable list, one might add, “more testing.”

⁴³⁰ 385 U.S. 374, 406 (1967) (Harlan, J., concurring in part and dissenting in part).

⁴³¹ For a discussion of the *Scopes* trial, see RAY GINGER, *SIX DAYS OR FOREVER? TENNESSEE V. JOHN THOMAS SCOPES* (1974). For the decision on appeal, see *Scopes v. State*, 289 S.W. 363 (Tenn. 1927).

⁴³² Jonathan Groner, *Burden Shifting as Activism*, A.B.A. J., June 1993, at 100 (quoting RICHARD H. GASKINS, *BURDENS OF PROOF IN MODERN DISCLOSURE* (1993)).

⁴³³ Melnick Affidavit, *supra* note 397, at 4.

⁴³⁴ *Underwager v. Salter*, 22 F.3d 730, 736 (7th Cir.), *cert. denied*, 115 S. Ct. 351 (1994) (citation omitted).