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Stirring up the Debate in Rhode Island: Should Lead Paint Manufacturers Be Held Liable for the Harm Caused by Lead Paint?

On October 12, 1999, Rhode Island (the State) became the first state in the nation to sue lead paint manufacturers¹ (the lead industry) for the harmful effects of lead poisoning.² Rhode Island health officials claim that dust and flakes from lead-based paints have poisoned thousands of children and have cost Rhode Islanders millions of dollars for health care, special education programs and building repairs.³ In fact, there are so many poorly maintained houses in Providence that some activists have dubbed it "the lead paint capital of the country."⁴ In its complaint against the lead industry, the State alleges an extensive history of defendants' conduct, consisting of misrepresentations and concealment of evidence regarding the hazards of lead.⁵

The parties do not dispute the fact that lead paint has harmful effects. Rather, the controversy centers around who is to blame for the lead poisoning problem in Rhode Island. The lead industry contends that the main causes of the lead poisoning problem are the State's weak and poorly enforced lead paint laws and the negli-

1. The named defendants include: Lead Industry Ass'n, Inc., American Cyanamid Co., Atlantic Richfield Co., E.I. Dupont DeNemours Co., The O'Brien Co., Conagra Grocery Products Co., The Glidden Co., NL Industry, Inc., SCM Chemicals, The Sherwin-Williams Co. and John Doe Corps.

2. See *State v. Lead Indus. Ass'n, Inc.*, No. 99-5226, 2001 WL 345830, at *1 (R.I. Super. Ct. Apr. 2, 2001).

3. Peter B. Lord, *Are Lead Paint Firms Liable For Damages?*, *Prov. J. Bull.*, June 18, 1999, at A-1.

4. *Id.*

5. The State claims that it has been damaged because it has incurred, and continues to incur, substantial costs related to discovering and abating lead, detecting lead poisoning, providing (i) medical care for lead-poisoned residents, providing, (ii) education programs for children suffering injuries as a result of lead exposure and providing (iii) education programs for state residents.

Lead Indus. Ass'n, Inc., 2001 WL 345830, at *1.

gence of Rhode Island landlords in repairing peeling paint when necessary.⁶ According to the Environmental Protection Agency (EPA), most lead poisoning in young children today occurs from the ingestion of lead paint chips and the handling of contaminated dust and soil via hand-to-mouth behavior.⁷ Furthermore, the EPA claims that lead paint in good condition typically is not a hazard.⁸ Defendants ultimately conclude that if landlords had maintained their properties properly, lead poisoning in Rhode Island would not have reached such alarming levels. Thus, the question begs: In Rhode Island, should lead paint manufactures be held liable for the harm that lead paint has caused or is the State simply jumping on the tobacco settlement bandwagon?⁹

The State's original complaint listed ten causes of action for which it sought relief, however, the State's chances for victory essentially rested on two theories: strict products liability and public nuisance.¹⁰ On April 2, 2001, the State suffered a serious setback when the Rhode Island Superior Court dismissed the State's strict liability claim and eight of the nine remaining tort claims.¹¹ Only the public nuisance claim survived and it currently remains the State's last hope to be compensated for the detrimental effects of lead poisoning.

6. Peter B. Lord, *Lead Paint Makers Draw Landlords into Legal Fray*, *Prov. J. Bull.*, June 26, 2001, at A-1.

7. Office of Pollution Prevention & Toxics, U.S. EPA, Pub. No. 747-R-97-006, *Risk Analysis to Support Standards For Lead in Paint, Dust, and Soil 3-10 (1998)* [hereinafter *Risk Analysis*].

8. U.S. EPA, *Protect Your Family from Lead In Your Home 5 (1999)*.

9. Defs.'s Mot. to Dismiss the Pl.'s Compl. at 3, *Lead Indus. Ass'n, Inc.*, 2001 WL 345830, at *1.

10. The ten causes of action pleaded in the State's complaint include: (i) public nuisance; (ii) violation of the Rhode Island Unfair Trade Practice and Consumer Protection Act; (iii) strict liability; (iv) negligence; (v) negligent misrepresentations and omissions; (vi) fraudulent misrepresentations and omissions; (vii) civil conspiracy; (viii) unjust enrichment; (ix) indemnity and (x) equitable relief to protect children. *Lead Indus. Ass'n, Inc.*, 2001 WL 345830, at *1.

11. The court based its decision on the remoteness doctrine ruling that "because the State's claims were derived from damages to others [the State's citizens], the claims were too remote to be recoverable by the State." *Id.* at *14. The court explained that "the doctrine of remoteness bars recovery in tort for indirect harm suffered as a result of injuries directly sustained by another person." *Id.* The court also ruled that the State is unable to recover for injuries to its residents allegedly caused by lead paint and unable to recover for lead related special education costs. *Id.* The State's other tort claims that were dismissed include negligence, negligent misrepresentations and omissions, fraudulent misrepresentations and omissions. *Id.*

In dismissing the strict products liability claim, the court did not answer the question of whether the lead industry should be held strictly liable for the harm caused by lead paint. In fact, no U.S. court has ever decided this issue. Consequently, this Comment will focus on whether, under Rhode Island law, lead paint manufacturers should be held strictly liable for the defective design of lead paint and for the failure to warn of the dangers of lead paint. The State's remaining public nuisance claim will also be discussed.

Part I of this Comment discusses the medical effects of lead exposure on our health. Part II analyzes the doctrine of strict liability and the rationales behind imposing strict liability on product manufacturers. Part III discusses the history of lead paint litigation in the United States. Whether lead paint is unreasonably dangerous as a result of a defective design and whether lead paint is unreasonably dangerous as a result of the manufacturers' failure to warn of the dangers of lead paint will be discussed in parts IV and V respectively. Part VI analyzes the State's public nuisance claim. Part VII addresses two other reasons why the lead industry may not be liable for the harm caused by lead paint. Finally, this Comment will conclude that in Rhode Island, holding the lead industry accountable for the harm caused by lead paint is unlikely to occur.

I. THE EFFECTS OF EXPOSURE TO LEAD

Effects of Lead on Adults

Lead is a toxic metal with no known function in the human body.¹² In fact, all recorded effects of lead on living organisms are detrimental.¹³ Lead is a particularly dangerous health threat because people exposed to harmful levels of lead usually do not show immediate or clear symptoms of such exposure.¹⁴ Exposure to lead in adults can damage the peripheral nervous system, affecting memory, vision, muscle coordination, and can cause weakness in the fingers, wrists or ankles.¹⁵ High levels of lead can damage kid-

12. U.S. EPA, Technological Information Packages: Lead Phase-Out (2001), available at <http://www.epa.gov/oia/tips/lead2.htm> [hereinafter Lead Phase Out].

13. *Id.*

14. *Id.*

15. *Id.*

neys, resulting in anemia and miscarriage, and can decrease fertility in both men and women.¹⁶

Effects of Lead on Children

Lead poisoning in children is a major health problem in the United States, yet it is one of the most common preventable pediatric health problems.¹⁷ According to the Centers for Disease Control (CDC), as many as one in eleven U.S. children under the age of six might have elevated levels of lead in their blood.¹⁸ Because children differ physiologically from adults, the effects of exposure to lead differ accordingly.¹⁹ Children are more vulnerable than adults to the hazards of lead exposure because of their small body size and their rapid development.²⁰ In fact, children between one and two years of age absorb forty to fifty percent of ingested lead, whereas adults absorb only ten to fifteen percent of ingested lead.²¹ Because of the continuing problem of lead poisoning in children, the CDC has lowered the acceptable blood lead level three times over the past twenty years, setting the current standard at ten micrograms of lead per deciliter of blood (ten ug/dL) in 1991.²²

How Are Humans Exposed to Lead?

There are a variety of environmental sources and reservoirs of lead that can contribute to overall lead exposure in a child.²³ These sources are both natural, such as crustal weathering, and resulting from human activity, such as auto and industrial emissions, paint and industrial dusts, solder and lead glazes.²⁴ Because this Comment focuses on the hazards caused by lead paint, this section will only discuss how humans are exposed to lead through lead paint and through dust and soil.²⁵

16. *Id.*

17. *Id.*

18. *Id.*

19. *Id.*

20. *Id.*

21. *Id.*

22. *Id.*

23. Risk Analysis, *supra* note 7, at 3-4.

24. *Id.*

25. The other sources of lead exposure are: (1) Airborne Lead; (2) Lead in Drinking and Cooking Water; and (3) Lead in Food. *See id.*

(1) *Airborne Lead*

Lead in Paint

While there are many sources of lead in the human environment, lead-based paint hazards in residential housing are consid-

Major contributions to airborne lead levels have been attributed to emissions from lead smelters, battery manufacturing plants, solid waste incinerators and automobiles. *Id.* Historically, leaded gasoline was a major source of lead exposure in the United States, however, leaded gasoline has been phased out dramatically over the last twenty years, leading to a ninety percent reduction in emissions of lead. Lead Phase Out, *supra* note 12. While leaded gasoline is still used in most countries, amendments to the U.S. Clean Air Act of 1990 called for a ban on the manufacturing, sale or introduction of engines that required leaded gasoline after 1992, and for the prohibition of all leaded gasoline for highway use after 1995. *Id.* This reduction in lead-consumed gasoline has corresponded to a dramatic decrease in the average lead concentration in children's blood. *Id.* Lead concentrations in gasoline range from 0.1 grams of lead per gallon (0.1 g/gal) of gasoline in the United States to 0.84 g/L of gasoline in economically developing nations, particularly in Africa. *Id.*

(2) Lead in Drinking and Cooking Water

Detectable levels of lead are rarely found in surface and ground water that serve as sources of drinking water in this country. Risk Analysis, *supra* note 7, at 3-6. Rather, lead contamination of drinking water occurs after water leaves the treatment plant and travels within service lines and household plumbing coming into contact with lead pipes, connectors and solder. *Id.* Water can also become contaminated at a residence by the lead or brass components of water fountains, coolers, faucets and other fixtures. *Id.* at 3-6-7. "The EPA has estimated that twenty to forty percent of the average blood lead in U.S. children may come from lead in drinking water." Lead Phase Out, *supra* note 12. By enacting The Safe Water Drinking Act, 42 U.S.C. § 300 j-21 (1996), Congress banned the use of lead materials and solders in new plumbing and plumbing repairs and, as a result, drinking and cooking water from municipal and other large drinking water distribution systems are generally not a predominant source of lead exposure among lead poisoned children. Risk Analysis, *supra* note 7, at 3-7. However, because of the high absorption rate of lead in drinking water, lead in drinking water is still considered an important exposure source when it is present. *Id.*

(3) Lead in Food

Lead particles can enter the food supply through a number of routes by being deposited onto fruits and vegetables during harvesting, processing and distribution. Lead Phase Out, *supra* note 12. There are some agricultural pesticides that contain lead-based compounds which might remain as residue on crops. *Id.* Lead solder in canned goods can also result in food contamination, however the phase-out of these types of cans in 1989, along with public education on proper food storage and cooking techniques, have made large contributions to reducing the amount of lead ingested with food. Risk Analysis, *supra* note 7, at 3-7. However, the largest source of lead in food in the United States is lead-glazed ceramics such as mugs, plates and bowls. Lead Phase Out, *supra* note 12. Thus, while lead exposure through food ingestion has declined considerably in recent years, these exposures can still be a problem if proper precautions are not taken. Risk Analysis, *supra* note 7, at 3-7.

ered the primary source of lead exposure for children.²⁶ Exposure to lead from air, food and drinking water have declined in the United States, however, the exposure to lead paint has increased.²⁷ Lead paint is widely viewed as the main cause for elevated lead blood levels over the limit of ten ug/dL.²⁸ While lead paint has not been sold in the United States for more than twenty years, peeling paint and lead contaminated dust in older homes exposes children to the dangers of lead.²⁹ Those children who are at the greatest risk are typically from low-income families who live in dilapidated housing or those children from families who are renovating older homes.³⁰

Lead in Dust and Soil

The fallout of atmospheric lead over time has resulted in a continued exposure route through soil even though the enforcement of national air quality standards continues to reduce the threat of lead exposure via air from point sources.³¹ Also, soil can become contaminated by deteriorated lead paint or improper removal of lead-based paint.³² Once exterior lead paint chips have contaminated the soil, the soil can then be tracked indoors, exposing children to lead during typical hand-to-mouth activities.³³ Indoors, normal activity where friction occurs, particularly around windows and doors, can contaminate interior dust.³⁴

26. Several lead exposure studies have concluded that the pathway of lead contaminated soil and dust to children's blood is a significant means by which young children are exposed to lead from lead-based paint hazards. Risk Analysis, *supra* note 7, at 3-1. The Baltimore Repair and Maintenance Study and the Rochester Lead in Dust Study conclude that elevated lead levels in paint, dust and soil continue to exist in residential environments, particularly in older homes. *Id.* Even at low to moderate levels, lead in residential dust can effect children's blood-lead concentration. *Id.*

27. Lead Phase Out, *supra* note 12.

28. *Id.*

29. *Id.*

30. *Id.*

31. Risk Analysis, *supra* note 7, at 3-8.

32. *Id.*

33. *Id.*

34. *Id.* at 3-8-9.

The Financial Effects of Lead Exposure

In addition to adversely affecting the health of our children, the presence of lead paint often leads to substantial financial burdens on property owners.³⁵ These financial burdens include both the cost of discovering lead paint through property inspections, as well as the substantial maintenance cost in reducing lead paint exposure. The two most common methods for reducing lead poisoning in children are abatement and encapsulation.³⁶ Abatement is defined as a "set of measures designed to permanently eliminate lead-based paint hazards or lead-based paint,"³⁷ while encapsulation, often referred to as containment, is "any covering or coating that acts as a barrier between lead-based paint and the environment."³⁸ Several states such as Massachusetts and Maryland require abatement or containment procedures throughout any residence where a child under six is permanently on the premises.³⁹ The costs of abatement can be between \$7,500 and \$15,000 for one house.⁴⁰ One Rhode Island realtor estimates that 30,000 homes in Rhode Island pose a high risk for children.⁴¹ Accordingly, the Rhode Island Housing and Mortgage Finance Corporation recently announced a \$3,000,000 program to help combat lead problems.⁴² While the cost of encapsulating lead is less burdensome than the cost of abatement, the presence of lead in paint has

35. The State claims, in its complaint, that it has suffered substantial damages as a result of the presence of lead paint including the costs of discovering and abating lead, the expenditure of state funds to detect lead poisoning and provide medical and/or other care of lead poisoned residents of Rhode Island, the costs of education programs for children of Rhode Island due to the dangers present as a result of lead in Rhode Island, and the costs of education programs for residents of Rhode Island due to the dangers present as a result of lead in Rhode Island.

State v. Lead Indus. Ass'n, Inc., No. 99-5226, 2001 WL 345830, at *1 (R.I. Super. Ct. Apr. 2, 2001).

36. Amy E. Souchuns, *Old Paint, New Laws: Achieving Effective Compliance With the Residential Lead-Based Paint Hazard Reduction Act*, 47 Cath. U. L. Rev. 1411, 1430 (1998).

37. *Id.*

38. *Id.*

39. *Id.*

40. Peter B. Lord, *Are Lead Paint Firms Liable For Damages?*, Prov. J. Bull., June 18, 1999, at A-1.

41. *Id.*

42. *Id.*

forced property owners to repair peeling paint more frequently and more extensively than if the paint were lead free.

A second financial effect of lead paint is the increasing exposure of landlords to negligence lawsuits by tenants who suffer from lead poisoning as a result of exposure to lead paint in rental property.⁴³ In a lead paint poisoning claim based on negligence, a plaintiff must prove that: (1) the landlord had actual knowledge or reason to know of chipping, peeling and flaking lead paint on the premises and that such a condition was hazardous; and (2) the landlord was given a reasonable opportunity to correct the hazard.⁴⁴ While a landlord may reduce his chances of being sued by timely maintenance of his property, his exposure to lawsuits is clearly greater than those landlords who own lead-free property.

Lastly, under the Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X),⁴⁵ property owners may be subject to civil and/or criminal penalties for failure to disclose the existence of lead paint. Title X requires the mandatory disclosure of lead hazards in essentially all dwellings built prior to 1978. As a result, the EPA and the Office of Housing and Urban Development have developed guidelines to enforce Title X, and the government may impose criminal and civil penalties of a \$10,000 fine per violation for those who knowingly violate the statute.⁴⁶

II. THE HISTORY OF LEAD PAINT LITIGATION IN THE UNITED STATES

Both private individuals⁴⁷ and public entities⁴⁸ have sued the lead industry, however the lead industry has yet to lose or settle a single case.⁴⁹ Private individuals who have sued the lead industry claim to suffer from lead poisoning as a result of exposure to lead

43. See, e.g., *Brown v. Wheeler*, 675 A.2d 1032 (Md. Ct. Spec. App. 1996).

44. *Id.* at 1035.

45. 15 U.S.C. §§ 2601-90 (1992).

46. Souchuns, *supra* note 36, at 1425.

47. See, e.g., *Jefferson v. Lead Indus. Ass'n, Inc.*, 106 F.3d 1245 (5th Cir. 1997); *Brenner v. Am. Cyanamid Co.*, 699 N.Y.S.2d 848 (N.Y. App. Div. 1999); *Skipworth v. Lead Indus. Ass'n, Inc.*, 690 A.2d 169 (Pa. 1996); *Swartzbauer v. Lead Indus. Ass'n, Inc.*, 794 F. Supp. 142 (E.D. Pa. 1992).

48. See, e.g., *City of Philadelphia v. Lead Indus. Ass'n, Inc.*, 994 F.2d 112 (3d Cir. 1993); *City v. Lead Indus. Ass'n*, 222 A.D.2d 119 (N.Y. App. Div. 1996).

49. Understanding Lead Pigment Litigation, at http://www.leadlawsuits.com/bckgrnd_former.htm (last visited June 8, 2002).

paint from three general exposure pathways: (1) living in dwellings where lead paint existed;⁵⁰ (2) working with lead pigments in an industrial setting;⁵¹ and (3) working with lead paint.⁵² Typically, plaintiffs claiming injuries from lead exposure allege disabilities such as cognitive defects, speech problems, learning disabilities and lowered IQ.⁵³ Public entities such as Philadelphia and New York have also brought suit against the lead industry.⁵⁴ These plaintiffs claimed damages similar to those that Rhode Island claimed in its complaint, seeking relief for costs related to discovering and abating lead, detecting lead poisoning, providing medical care for lead-poisoned residents and providing lead poisoning education programs.

The Theory of Market Share Liability

Products liability lawsuits against the lead industry have failed for a variety of reasons, the most common of which is the plaintiffs' inability to identify the defendants who supplied the lead products that caused the alleged injuries.⁵⁵ Many jurisdictions, including Rhode Island, have refused to relax the causation element by recognizing the theory of market share liability, a controversial concept that attempts to hold a group of manufacturers responsible for harm caused by their products even though the plaintiff cannot identify the individual manufacturer who supplied the product that caused the harm.⁵⁶ The concept of market share liability was first developed in *Sindell v. Abbot Laboratories*, a case dealing with the harmful effects of the miscarriage prevention

50. See, e.g., *Skipworth v. Lead Indus. Ass'n, Inc.*, 690 A.2d 169 (Pa. 1996).

51. See, e.g., *Whitehead v. St. Joe Lead Co., Inc.*, 729 F.2d 238 (3d Cir. 1984).

52. See, e.g., *Swartzbauer v. Lead Indus. Ass'n, Inc.*, 794 F. Supp. 142 (E.D. Pa. 1992).

53. Jennifer Wriggins, *Genetics, IQ, Determinism, and Torts: The Example of Discovery in Lead Exposure Litigation*, 77 B.U. L. Rev. 1025, 1057 (1997).

54. *City of Philadelphia v. Lead Indus. Ass'n, Inc.*, 994 F.2d 112 (3d Cir. 1993); *City v. Lead Indus. Ass'n, Inc.*, 644 N.Y.S.2d 919 (N.Y. App. Div. 1996).

55. See *Hurt v. Philadelphia Hous. Auth.*, 806 F. Supp. 515 (E.D. Pa. 1992) (rejecting market share liability under Pennsylvania law); *Jefferson v. Lead Indus. Ass'n, Inc.*, 106 F.3d 1245 (5th Cir. 1997) (rejecting market share liability under Louisiana law); *Brenner v. Am. Cyanamid Co.*, 699 N.Y.S.2d 848 (N.Y. App. Div. 1999) (rejecting market share liability under New York law).

56. See *Gorman v. Abbot Labs.*, 599 A.2d 1364 (R.I. 1991) (rejecting market share liability under Rhode Island law).

drug DES.⁵⁷ While the theory of market share liability may apply well to cases involving drugs such as DES, there are two reasons why the adoption of market share liability in the context of lead pigment cases would unacceptably distort liability.⁵⁸

First, the relevant time period in question is far more extensive than the relevant time period in a DES case.⁵⁹ In lead paint cases, the plaintiffs can rarely identify any particular application, or applications of lead paint which caused the plaintiff's injuries.⁶⁰ For example, in *Skipworth v. Lead Industries Ass'n, Inc.*,⁶¹ the plaintiffs were only able to "pinpoint" a more than one hundred year period, from the date the house was built until the lead paint

57. 607 P.2d 924 (Cal. 1980). In *Sindell*, the plaintiff Judith Sindell brought an action against eleven drug companies who manufactured the drug diethylstilbesterol (DES), which is a synthetic compound of the female hormone estrogen. DES was administered to pregnant women for the purpose of preventing miscarriage. In her complaint, Mrs. Sindell claimed that she suffered from a form of cancer as a result of her exposure to DES when her mother was pregnant with her. The form of cancer that the plaintiff suffered from had a latency period of ten to twelve years. From 1941 to 1971, the defendants manufactured DES. In 1971, the Food and Drug Administration ordered defendants to cease marketing and promoting DES for the purpose of preventing miscarriages, and to warn physicians and the public that pregnant women, because of the danger to their unborn children, should not use the drug. Because the plaintiff in *Sindell* could not identify the specific defendant who manufactured the DES that her mother took while pregnant, she could not prove that the defendant's product caused her injury under traditional tort liability theory. The court ruled that because DES was produced from an identical formula, the plaintiff could prove liability upon a showing that the manufacturers produced a substantial percentage of the drug in question, with each manufacturer being held liable for the proportion of the judgment represented by its share of the drug market unless it demonstrated that it could not have made the product which caused the plaintiff's injuries. *Id.* at 936. In other words, each defendant will be held liable for the proportion of the judgment represented by its share of that market unless it demonstrates that it could not have made the product that caused plaintiff's injuries. *Id.* at 937. The justification for the court's ruling was based on the notion that "in an era of mass production and complex marketing methods the traditional standard of negligence was insufficient to govern the obligations of manufacturer to consumer, so should we acknowledge that some adaptation of the rules of causation and liability may be appropriate in these recurring circumstances." *Id.* Restatement (Second) Torts § 402A sets out the public policy view that the manufacturer is in the best position to discover and guard against defects in its products and to warn of harmful effects; thus, holding it liable for defects and failure to warn of harmful effects will provide an incentive to product safety. Restatement (Second) Torts § 402A, 349-50 (1965).

58. *Skipworth*, 690 A.2d at 172.

59. *Id.*

60. *Id.*

61. *Id.*

ceased being sold for residential purposes, as the relevant time period.⁶² In contrast, the relevant time period in a DES case is necessarily limited to the nine months that the patient ingesting the product was pregnant.⁶³ The problem with such an expansive time period is that several of the lead pigment manufacturers could have entered and left the paint market.⁶⁴

Thus, application of the market share liability to this situation would virtually ensure that certain pigment manufacturers would be held liable where they could not possibly have been a potential tortfeasor.⁶⁵ The second reason that the adoption of market share liability is inappropriate to lead paint litigation is because lead paint, as opposed to DES, is not a fungible product.⁶⁶ All of the DES used to treat pregnant women was manufactured with an identical formula and presented an identical risk of harm.⁶⁷ In contrast, it is undisputed that lead pigments had different chemical formulations, contained different amounts of lead and differed in toxicity.⁶⁸ Thus, differing formulae of lead paint have a direct bearing on how much damage a lead paint manufacturer's product would cause.⁶⁹ In such a scenario, holding each manufacturer liable for damages in proportion to the amount that each sold would distort liability.⁷⁰

City of Philadelphia v. Lead Industries Ass'n, Inc.

Public entities like the City of Philadelphia have not fared much better than individuals in holding the lead industry liable for the harm that lead paint has caused. In *City of Philadelphia v. Lead Industries Ass'n, Inc.*,⁷¹ the City of Philadelphia and the Phil-

62. *Id.* at 173.

63. *Id.*

64. *Skipworth*, 690 A.2d at 173.

65. *Id.*

66. *Id.*

67. *Id.*

68. *Id.*

69. *Id.* Lead, mercury, cadmium and chromium were commonly used in paint as pigments and preservatives and are now found in paint on older buildings. Wash. State Dep't of Ecology, Hazardous Waste and Toxic Reductions Program: Demolition Debris Res.-Paint & Coatings (2002) [hereinafter *Paint & Coatings*], available at <http://www.ecy.wa.gov/programs/hwtr/demodebris/pages2/demopaint.html>. The amount of lead in pigment may be very high, up to forty percent (or 400,000 parts per million) of dry old paint (prior to the 1960s), is composed of white lead. *Id.*

70. *Skipworth*, 690 A.2d at 173.

71. 994 F.2d 112 (3d Cir. 1993).

Philadelphia Housing Authority (PHA) brought an action against lead pigment manufacturers and their trade association to recover the costs of abating hazardous lead-based paint in public housing which plaintiffs must incur pursuant to newly promulgated federal regulations.⁷² The abatement was ordered by the U.S. Department of Housing and Urban Development pursuant to regulations promulgated under the Lead-Based Paint Poisoning Prevention Act.⁷³ The lower court granted the defendants' motion to dismiss pursuant to Fed. R. Civ. P. 12(b)(6). On appeal, the court affirmed the order of dismissal, holding that the city's action was time-barred.⁷⁴ The court also affirmed the dismissal of PHA's complaint because the State of Pennsylvania did not recognize any of the theories advocated for recovery, such as market share liability.⁷⁵

City of New York v. Lead Industries Ass'n, Inc.

In *City of New York v. Lead Industries Ass'n, Inc.*,⁷⁶ plaintiffs City of New York, New York Housing Authority and New York City Health and Hospitals Corporation sought damages against lead pigment manufacturers and their trade association for injuries incurred by plaintiffs because of the presence of poisonous lead in buildings throughout the city. The court granted the defendants' motion to dismiss the negligence claims because the statute of limitations had lapsed.⁷⁷ The court agreed with the defendants' argument that a cause of action accrues from the time

72. *City of Philadelphia v. Lead Indus. Ass'n, Inc.*, 994 F.2d 112, 115 (3d Cir. 1993).

73. 42 U.S.C. §§ 4821-48 (1988 & Supp. II 1990).

74. *City of Philadelphia*, 994 F.2d at 114.

75. *Id.* at 115. As to plaintiff housing authority, the statute of limitations did not run against it, because it was a commonwealth entity, and thus, was exempt from the statute of limitations under the doctrine of *nullum tempus*. *Id.* Under the doctrine of *nullum tempus*, statutes of limitations are not applicable to actions brought by the Commonwealth or its agencies unless a statute expressly so provides. *Id.* at 118. Therefore, by establishing that the statute of limitations only applies to the city of Philadelphia and does not apply to the state of Pennsylvania or its accompanying entities, the court has established that the City of Philadelphia may not bring suits against lead paint manufacturers. *Id.* at 114. The court further reasoned that a federal court sitting in diversity was not the proper venue to significantly expand state law without a clear indication that the Pennsylvania Supreme Court would do the same. *Id.*

76. 644 N.Y.S.2d 919 (N.Y. App. Div. 1996).

77. *City v. Lead Indus. Ass'n, Inc.*, No. 89-14365, 1991 WL 284454, at *1 (N.Y. Sup. Ct. Dec. 23, 1991).

of the injury.⁷⁸ In this case, the injury occurred when the paint was applied, or alternatively, when the plaintiffs learned of the hazards associated with lead paint, which the court ruled was evidenced by the city's promulgation of certain regulations in 1959 proscribing the use of lead paint.⁷⁹

III. THE DOCTRINE OF STRICT LIABILITY

Prior to the twentieth century, a plaintiff who was injured from using a defective product was not entitled to recovery unless he was in contractual privity with the manufacturer.⁸⁰ This privity requirement continued to protect negligent manufacturers until well into the twentieth century.⁸¹ In 1916, *MacPherson v. Buick Motor Co.*⁸² essentially abolished the privity requirement.⁸³ In *MacPherson*, the plaintiff was injured when a tire fell off of the new car he had just purchased. The plaintiff bought the car from a retailer and therefore, was not in privity with the manufacturer. Ordinarily, the plaintiff would have been precluded from recovery, but Judge Cardozo permitted the claim against the manufacturer to proceed. The court ruled that "[i]f [the manufacturer] is negligent where danger is to be foreseen, a liability will follow."⁸⁴

After *MacPherson*, injured plaintiffs could recover against manufacturers for negligence, but this became difficult to prove. In *Greenman v. Yuba Power Products*,⁸⁵ the court held that strict liability would be imposed upon manufacturers of defective products. Strict liability was to be imposed as a matter of tort law and not by implied warranty as a matter of contract law; therefore, privity was not required.

In 1965, the Restatement Second of Torts officially adopted the ideas from *Greenman* and incorporated them into the newly created § 402A. Section 402A provides that if a product is defective and the defect causes harm, liability will be imposed upon the manufacturer and distributors, regardless of fault or privity with the plaintiff.

78. *Id.*

79. *Id.*

80. Dan B. Dobbs, *The Law of Torts* 973 (West Group 2000).

81. *Id.*

82. 111 N.E. 1050 (N.Y. 1916).

83. Dobbs, *supra* note 80, at 973.

84. *MacPherson*, 111 N.E. at 1051.

85. 59 Cal. 2d 57 (Cal. 1963).

Rationales For Imposing Strict Liability

One of the reasons for imposing strict liability on manufacturers is that they are in a better position to bear losses. For example, manufacturers can pass the losses on through insurance and increased prices.⁸⁶ Perhaps a better argument for strict liability is that manufacturers will tend to make safer products if strict liability is imposed. The underlying theory is that strict liability serves an essential regulatory function in the marketplace because manufacturers will be deterred from making unsafe products out of a fear of financial liability.⁸⁷

IV. IS LEAD PAINT DEFECTIVE AND UNREASONABLY DANGEROUS BECAUSE OF A DESIGN DEFECT?

Although some writers have argued that product manufacturers should be liable for harms caused even by perfectly made and designed products,⁸⁸ section 402A imposes strict liability only for

86. Perhaps the court's decision in *Nesselrode v. Executive Beechcraft, Inc.*, 707 S.W.2d 371 (Mo. 1986), best summarizes the reasons for imposing strict liability:

Strict tort liability recognizes that in today's world consumers can do little to protect themselves from risk of serious injury caused by defects in the products they purchase. And, the more complex the product, the less opportunity there is for the consumer to guard against deleterious defects. To this extent, the consumer must rely upon the integrity and competency of the business community. History, however, has taught us that negligence liability alone provides an inadequate tort remedy for injured consumers and does little to stimulate greater care in the manufacturing process. Strict tort liability is rooted in these realities.

The imposition of strict tort liability is justified on the grounds that the manufacturer or seller is almost always better equipped than the consumer to endure the economic consequences of accidents caused by defective products. Everything in the marketplace has a price, including profits. Economic responsibility for the debilitating consequences of injuries caused by defective products is but one of the many costs associated with doing business and earning profits. All things considered, we find no unfairness in holding manufacturers and sellers economically and socially responsible for injuries actually caused by the products they place for profit in the stream of commerce.

Id. at 383.

87. See generally Carl T. Bogus, *Why Lawsuits Are Good For America: Disciplined Democracy, Big Business, and Common Law* (N.Y. Univ. Press 2001).

88. See Virginia E. Nolan & Edmund Ursin, *Understanding Enterprise Liability* 168 (1995) (stating that a common law of enterprise liability should dispense with the defect requirement and limit recoverable damages).

harm caused by products that are defective and unreasonably dangerous.⁸⁹

There are three types of product defects: (1) manufacturing defects; (2) design defects; and (3) information or warning defects, also called marketing defects.⁹⁰ A design defect occurs when the intended design of the product line itself is inadequate and needlessly dangerous.⁹¹ Defective designs can include entire product lines such as in the production of automobiles and chemical formulations such as asbestos and drugs.⁹² However, a design that is harmful is not necessarily defective.

Courts have adopted two tests in analyzing whether a harmful design is also defective: the risk-utility test and the consumer expectation test. Although Rhode Island employs the consumer expectation test, it has also indicated that, in some instances, a risk-utility analysis is appropriate.⁹³

The Consumer Expectation Test

The consumer expectation test seeks to protect the consumer or user who was unaware of the danger involved in using a product in a way it was intended to be used.⁹⁴ If some aspect of the product was more dangerous than the consumer contemplated, then it is defective regarding that particular aspect.⁹⁵ There are several criticisms of the consumer expectation test. First, the victim cannot recover for harm suffered as a result of a design hazard that was open or obvious, or one with respect to which the purchaser was adequately informed, because under these conditions, he could not have been deceived about what he was buying.⁹⁶ Second, this test can result in the identification of products as being defectively dangerous which clearly are not, particularly where the product is a drug.⁹⁷ Third, sometimes the consumer has no definite expecta-

89. Restatement (Second) of Torts § 402A (1965).

90. Dobbs, *supra* note 80, at 979.

91. *Id.* at 980.

92. *Id.*

93. Guilbeault v. R.J. Reynolds Tobacco Co., No. 98-035L, 1999 WL 362985, at *15 (D.R.I. June 8, 1999).

94. Dobbs, *supra* note 80, at 979.

95. W. Page Keeton, *The Meaning of Defect in Products Liability Law- A Review of Basic Principles*, 45 Mo. L. Rev. 579, 589 (1980).

96. *Id.*

97. *Id.* at 590. There are often unknown side effects to new drugs when they enter the market. However, because the benefits of some drugs are so substantial,

tions regarding the safety or danger about what he is purchasing. Instead, his decision to purchase is based on other values such as price, beauty or function. Fourth, the test also fails to take into account the cost of additional safety features.

The term "unreasonably dangerous" means that the defect in the product establishes a strong likelihood of injury to the user or consumer, where the likelihood of injury takes into account the consumer's or user's knowledge of danger.⁹⁸ In *Jackson v. Corning Glass Works*,⁹⁹ the court ruled that the consumer expectation test "does not protect the consumer who uses the product in a different way than that intended nor does it protect the consumer or user when he uses a product in a way in which he knows requires certain precautions be taken to make the product safe in such a use."¹⁰⁰

In *Jackson*, the plaintiff Kenneth Jackson lost the sight in his right eye as a result of being struck by a shard of glass from a shattered glass bowl cover manufactured by the defendant, Corning Glass Works. The plaintiff's wife had stacked eleven glass bowls and lids on the second shelf of the plaintiff's kitchen cupboard. When the plaintiff closed the cupboard door, the stack of bowls fell to the ground and shattered resulting in the plaintiff's injury. A jury awarded damages in favor of the plaintiff, however, the Supreme Court of Rhode Island reversed holding that the cooking ware, as delivered to the plaintiff, was not unreasonably dangerous. The court precluded imposition of strict liability based on the consumer expectation test stating:

We consider it even more obvious that a consumer or user should be aware of the potential hazards of stacking glass or cookware objects in a pyramid as described in the case at bar. Such a hazard ought to be well known to the average consumer, who would be aware of the patent dangers of such a stacking operation and would therefore be charged with the necessity of taking suitable precautions to ensure

consumers are willing to assume the risk of a potential hazard. Penicillin is an example of drug that was not a defective product even though some were victimized by it. *Id.* at 590-91.

98. *Ritter v. Narragansett Elec. Co.*, 283 A.2d 255, 263 (R.I. 1971) (citing *Drummond v. Gen. Motors Corp.*, No. 771098 (Cal. Super. Ct. filed July 29, 1966)).

99. 583 A.2d 666 (R.I. 1988).

100. *Jackson v. Corning Glass Works*, 583 A.2d 666, 668 (R.I. 1988) (quoting *Ritter v. Narragansett Elec. Co.*, 283 A.2d 255, 263 (R.I. 1971)).

the stability of the pyramid and to guard against the application of lateral force. There is, in the case at bar, no evidence that would support the proposition that a manufacturer of cookware and Pyrex glass lids could have anticipated such a use and guarded against it in any manner that would have been either feasible or practicable.¹⁰¹

Another case that is factually similar to *Jackson* and which also precluded imposition of strict liability based on the consumer expectation test is *Metal Window Products Co. v. Magnusen*.¹⁰² In *Magnusen*, the plaintiff suffered a personal injury when she collided with a sliding glass door while running into her house under the perception that the sliding glass door was open. The plaintiff claimed that failure to place decals on the door rendered it invisible and therefore defective. The court ruled that the door was not defective and unreasonably dangerous stating:

In light of the extensive use of glass doors and common knowledge as to the possibility and frequent occurrence of collisions with them, a reasonable user must be held to appreciate the risk inherent in them. The danger posed is not a hidden or latent one but on the contrary, is perceptible. The fact that glass can be invisible is itself the clue to the public that glass doors are a potential hazard.¹⁰³

Sometimes, courts do not agree that the dangers of using a certain product are common knowledge to the consumer. Ironically, this is the scenario that pertains to cigarettes.¹⁰⁴

101. *Id.* at 669.

102. 485 S.W.2d 355 (Tex. Civ. App. 1972).

103. *Jackson*, 583 A.2d at 669 (quoting *Metal Window Prods. Co. v. Magnusen*, 485 S.W.2d 355, 358 (Tex. Civ. App. 1972)).

104. For example, in *Paugh v. R.J. Reynolds Tobacco Co.*, 834 F. Supp. 228 (N.D. Ohio 1993) and *Roysdon v. R.J. Reynolds Tobacco Co.*, 849 F.2d 230 (6th Cir. 1988), plaintiffs brought defective design claims against R.J. Reynolds claiming that cigarettes were unreasonably dangerous. The *Roysdon* court held that cigarettes were not defective and unreasonably dangerous because "the knowledge that cigarette smoking is harmful to health is widespread and can be considered part of the common knowledge of the community." *Roysdon*, 849 F.2d at 236. The court limited its holding by stating that the dangers of smoking were common knowledge during the time period following 1974. *Id.* The *Paugh* court agreed with the *Roysdon* decision, but expanded its holding by finding that "knowledge of the dangers of smoking may have been common for a much longer time." *Paugh*, 834 F. Supp. at 231. However, in Rhode Island, the question of whether the dangers of cigarettes are unreasonably dangerous remains open. In *Guilbeault v. R.J. Reynolds Tobacco Co.*, No. 98-035L, 1999 WL 362985, at *1 (D.R.I. June 8, 1999), the U.S. District Court for the District of Rhode Island refused to dismiss the de-

Applying the Consumer Expectation Test to Lead Paint

The primary question in applying the consumer expectation test to lead paint is whether the defect, which is the presence of lead in paint, establishes a strong likelihood of injury to the user or consumer taking into account the consumer or user's knowledge of the dangers of lead. Furthermore, we must consider whether lead paint is used in a different way than that intended and whether the user or consumer used the product in a way in which he knows requires certain precautions be taken in order to make the product safe.

Under this analysis, it is important to differentiate between three types of injured plaintiffs: (1) house painters and factory workers who were injured while mixing or applying lead pigments; (2) home improvement contractors who were injured by lead contaminated dust from coming into contact with lead paint; and (3) children who were injured by exposure to lead paint from living in dwellings where lead paint exists.

A strong argument may be made that lead paint is defective and unreasonably dangerous for those house painters and factory workers who suffered injuries as a result of working with lead pigments. But first, it is important to understand how paint technology evolved, and how it has changed.¹⁰⁵ Clearly, a painter who

fective design claim on the grounds that cigarettes are not unreasonably dangerous due to the common knowledge of the dangers of cigarette smoking. *Id.* at *10. The court reviewed the cases cited by the defendant, none of which were binding on the court, and held that "there has been no consensus on whether the dangers of cigarette smoking are common knowledge of if they are, when such dangers became common knowledge." *Id.* at *9.

105. According to an article in the *Northeast Journal*:

The original protective coatings found on most buildings up until the late 1960's were all based on a Dutch lead process that started with hand-mixed paints before 1800. These paints eventually developed into the mass-produced canned paints that gradually became popular starting in the mid-19th century. The basic ingredients were: (1) white lead - a powdered oxidized metal; (2) linseed oil - a vegetable oil; (3) a 'drier' - a chemical agent that caused the oil to harden on exposure to air; and (4) pigments to color the paint base. What resulted was a tinted 'cladding,' a coating of metal (lead), held in place by a stabilized, water-resistant carrier medium - the linseed oil. These coatings required periodic refreshing or replacement, but they were very durable and worked well to protect wood surfaces from damage by water, excessive drying, fungus and molds, insects and ultraviolet light. . . . buildings from the mid-19th century whose oil paint, though checked and oxidized, was still clinging to the walls with a beautifully mellow patina.

mixed, poured and applied the paint he purchased was using the product for its intended purpose. Consequently, if the manufacturer failed to provide an adequate warning regarding the dangers of lead, lead paint was more dangerous than the consumer contemplated and therefore, defective and unreasonably dangerous.¹⁰⁶ Unfortunately, since approximately fifty years have passed since painters last applied lead paint, it is likely that the statute of limitations in most states precludes these claims.¹⁰⁷ Also, workers who were injured while handling lead pigments are likely to be limited to workers' compensation remedies.¹⁰⁸

Home improvement contractors who were injured from scraping, sanding or burning dried lead paint may have more difficulty proving that lead paint is defective and unreasonably dangerous. As stated previously, the term "unreasonably dangerous" means that the defect in the product establishes a strong likelihood of injury to the user or consumer, where the likelihood of injury takes into account the consumer's or user's knowledge of danger. If the consumer or user was aware of the danger or hazard inherent in a product and failed to take the proper precaution to eliminate the danger, then the product is not unreasonably dangerous. Glass

Starting in the 1960s, a growing understanding of the dangers of lead in the environment - and particularly the risk lead in paint posed to children- as well as to painters - led to the eventual withdrawal of this time-tested formula from the market.

The paint industry struggled to find a replacement that would offer similar characteristics. Many chemical combinations were tried, and a whole new series of coating options was developed, including titanium dioxide and oil as well as water-borne polymer resins.

Ned Depew, *The Northeast Journal*, *The Right Paint-Selecting the Best for 19th Century Homes* (Apr. 2001), available at www.northeastjournal.com/LeadingStories/April2001/therightpaintApril2001.htm.

106. The lead industry admits that it did not warn of the dangers of lead. Rather, the lead industry argues that it was unaware of the dangers of lead because of the lack of available medical technology at the time. See Part V of this Comment for a discussion of the state of the art defense.

107. In Rhode Island, the statute of limitations for products liability claims is three years beginning from the time the injury is discovered. "R.I. Gen. Laws § 9-1-14(b) (1985 Reenactment) governs all suits to recover damages for personal injuries, whether the action sounds in negligence, strict products liability, failure to warn, or any other theory of liability." *Napels v. Acer Am. Corp.*, 970 F. Supp. 89, 95 (D.R.I. 1997) (citing *Pirri v. Toledo Scale Corp.*, 619 A.2d 429, 431 (R.I. 1993)).

108. See *Whitehead v. St. Joe Lead Co.*, 729 F.2d 238 (3d Cir. 1984) (holding that New Jersey Workers' Compensation Act bars third party recovery for injured worker in a strict liability claim against manufacturer).

cook ware¹⁰⁹ and sliding glass doors¹¹⁰ are examples of products that courts have held not to be defectively designed because of the consumers' failure to take proper precaution to eliminate the danger. Therefore, the pertinent issue to consider is whether the dangers of working with lead are common knowledge to home improvement contractors.

Clearly, there is an abundance of information available to consumers regarding the hazards of working with lead paint and how to avoid injury when working with lead. This information is available on EPA websites¹¹¹ and has been available in medical journals¹¹² for quite some time. However, the availability of this information does not necessarily translate to the conclusion that the hazards of working with lead paint are common knowledge to consumers. For example, in *Guilbeault v. R.J. Reynolds Tobacco Co.*,¹¹³ the court refused to accept the defendant's argument that cigarettes are not defectively designed because the dangers of cigarette smoking are common knowledge. The court based its decision on the fact that there was no general consensus on the matter among other courts.¹¹⁴ Statistics show that injuries from cigarette smoking are much more severe and prevalent than are injuries from exposure to lead paint.¹¹⁵ If there is no general consensus among the courts regarding whether the dangers of cigarette smoking are common knowledge, then it is foreseeable that courts will not agree that the dangers of lead paint are common knowl-

109. See, e.g., *Jackson v. Corning Glass Works*, 583 A.2d 666 (R.I. 1988).

110. See, e.g., *Metal Window Prods. Co. v. Magnusen*, 485 S.W.2d 355 (Tex. Civ. App. 1972).

111. See, e.g., EPA/Office of Pollution, Prevention and Toxics, Lead in Paint, Dust and Soil, at <http://www.epa.gov/lead> (last visited May 18, 2002).

112. See Gerald Markowitz & David Rosner, *Cater to the Children: The Role of the Lead Industry in a Public Health Tragedy, 1900-1955*, in *American Journal of Public Health* No.99-1 (Jan. 2000), available at www.mindfully.org/Health/Lead-Industry-Public-Health.htm (discussing the availability, in the early twentieth century, of medical information regarding the hazards of lead paint).

113. No. 98-035L, 1999 WL 362985, at *1 (D.R.I. June 8, 1999).

114. *Id.* at *8.

115. For example, more than 500,000 North Americans die every year from smoking related illnesses such as lung cancer, heart disease and emphysema, while lead encephalopathy and death from lead poisoning have virtually been eliminated over the past 20 years. Compare *Nicotinekills.com* at <http://www.nicotinekills.com/deathstat.htm> (last visited June 2, 2002), with N.Y. State Dept. of Health, *Physicians' Handbook on Childhood Lead Poisoning Prevention* Ch. One (2002), available at <http://www.health.state.ny.us/nysdoh/lead/handbook/phc1.htm>.

edge. However, a strong argument can be made that home improvement contractors, by virtue of their occupation, have a duty to discover all potential hazards when working on a project, and that the dangers of working with lead paint should be common knowledge to them.

The next issue to address is whether the danger of lead poisoning is common knowledge to those who live in dwellings where lead paint exists. A strong argument can be made that children who ingest or handle lead paint chips or who chew on surfaces covered with lead paint have misused the product for its intended purpose, which is to provide a protective coating for a surface, not a source of food or a toy. The idea that strict liability for defective design does not apply when the user misuses the product for its intended purpose was first developed in *Ritter v. Narragansett Electric Co.*,¹¹⁶ the landmark Rhode Island products liability case. In *Ritter*, two minor children were injured when an electric range toppled onto them scalding them with boiling water. While the children were playing in the kitchen, one of them attempted to look into a pot of boiling water atop the range in order to ascertain what they were going to have for dinner. In order to get a closer look at the pot of boiling water, one of the children opened the oven door and stood on it using it as a platform. The child's weight caused the range to topple over resulting in injuries to both children.¹¹⁷ The children's parents brought suit against the manufacturer claiming that they were strictly liable for defective design because the range should have been bolted down. Although a verdict was returned in favor of the plaintiff, the Supreme Court of Rhode Island reversed, holding that it was error to refuse to instruct the jury that the improper or abnormal use of an electric range or use not intended by its manufacturer would result in a verdict that the product was not defectively designed.¹¹⁸

Clearly, almost any type of commercial or chemical product would be harmful to children if it were ingested or handled by them. Lead paint is no different in that lead paint manufacturers never intended for their products to be ingested, chewed or handled by children. Therefore, lead paint manufacturers can successfully argue under the consumer expectation test that lead paint is

116. 283 A.2d 255 (R.I. 1971).

117. *Id.* at 257.

118. *Id.* at 260.

not defectively designed. A stronger argument, and consequently the topic of the next section, is whether lead paint is defective because manufacturers failed to warn of the dangers of lead paint.

The Risk Utility Test

The theory behind the risk utility test is that virtually all products have risks and benefits.¹¹⁹ Under this test, courts attempt to balance the risks of the product as designed against the costs of making the product safer.¹²⁰ If a large reduction in risk can be achieved at a relatively small cost, then courts will find the product to be defective.¹²¹ However, if a product's utility, as designed, outweighs its risk, then the product's design is not defective. Courts often refer to six factors for guidance in the application of the risk-utility test: (1) the usefulness and desirability of the product; (2) the probability and magnitude of potential injury; (3) the availability of substitutes; (4) the manufacturer's ability to eliminate the unsafe character; (5) the user's ability to avoid danger; and (6) the user's probable awareness of the danger.¹²²

Applying the Risk-Utility Test to Lead Paint

In order to find that lead paint is defectively designed under the risk utility test, a court must find that a user's risk of suffering from lead poisoning outweighs the benefits he gains from using lead paint. There is evidence to suggest that lead paint had substantial benefits. According to the *Northeast Journal*, lead paint coatings were "very durable and worked well to protect wood surfaces from damage by water, excessive drying, fungus and molds, insects and ultraviolet light."¹²³

The Usefulness and Desirability of the Product

The evaluation of the utility of a product also involves the relative need for that product; some products are essentials, while

119. See Dobbs, *supra* note 80, at 985.

120. *Id.*

121. *Id.*

122. *Id.* at 985-86.

123. Depew, *supra* note 105.

others are luxuries.¹²⁴ A product that fills a critical need and can be designed in only one way should be viewed differently from a luxury item.¹²⁵ Still, other products, including some for which no alternative exists, are so dangerous and of such little use that under the risk-utility analysis, a manufacturer would bear the cost of liability of harm to others.¹²⁶ That cost might dissuade a manufacturer from placing the product on the market, even if the product has been made as safely as possible.¹²⁷

For centuries, lead paint was an ingredient in numerous consumer products such as cosmetics, food cans, water pipes, gasoline and house paint.¹²⁸ Early in the twentieth century, the lead industry began advertising lead paint's beneficial aspects such as its durability, its cost and ironically, its "healthful" qualities.¹²⁹ Furthermore, because of its durability, lead-based paint was the preferred product for both interior and exterior house painting from colonial times until well into the twentieth century.¹³⁰ Clearly, manufacturers who produced a more durable paint coating than their competitors provided a substantial benefit to their customers by reducing the frequency of re-painting, thereby saving them money. Similarly, homeowners, landlords and property management companies, eager to lower their maintenance costs, fueled the demand for lead paint. In fact, National Lead Industry's¹³¹ advertisements in *The Modern Hospital* assured readers that walls covered with National Lead paint "do not chip, peel or scale."¹³²

In addition to promoting lead paint's durability, the lead industry also promoted lead paint's "healthful" qualities.¹³³ As stated, one of lead paint's attractive features was its durability. This characteristic made lead paint very washable and highly re-

124. Jerry J. Phillips, *Products Liability in a Nutshell 194-95* (West Group 1998) (1974).

125. *Id.*

126. *Id.*

127. *Id.*

128. *Understanding Lead Pigment Litigation at* http://www.leadlawsuits.com/bckgrnd_former.htm (last visited June 8, 2002).

129. Markowitz & Rosner, *supra* note 112.

130. *Understanding Lead Pigment Litigation at* http://www.leadlawsuits.com/bckgrnd_former.htm (last visited June 8, 2002).

131. National Lead Industries is referred to as NL Industries in the State's complaint.

132. Markowitz & Rosner, *supra* note 112.

133. *Id.*

sistant to chipping, thus making lead paint ideal for interior, high traffic areas such as kitchen cabinets, doors, windowsills and baseboards. As a result, lead paint was recommended for use in schools and hospitals.¹³⁴ A 1930 advertisement for lead paint suggested, "Every room in a modern hospital deserves a [lead-based paint] quality paint job."¹³⁵ As early as 1923, National Lead advertisements in *National Geographic Magazine* promoted the idea that "lead helps to guard your health."¹³⁶ Another National Lead advertisement appeared in *The Modern Hospital* referring to their tinted lead paint as "the doctor's assistant" because of its cheerful color and the fact that it could be washed with soap and water.¹³⁷

Another consumer benefit to lead paint was its low cost. In a 1938 article, the Lead Industry Association's (LIA) head magazine promoted an economic rationale for using lead paint for the low-cost construction of residential housing.¹³⁸ In its July, 1939 issue, the magazine continued to promote white lead for interiors of low-cost homes.¹³⁹

Lastly, lead paint had the ability to "level" to an attractive, smooth, glass-like finish.¹⁴⁰ These superior leveling characteristics made lead paint desirable for applying to interior walls and to

134. *Id.*

135. *Id.*

136. *Id.*

137. *Id.*

138. *Id.*

139. *Id.*

140. According to an article written by Sara B. Chase for the National Park Service on how to paint historic interiors:

Brush Marks. Early paints did not dry out to a flat, level surface. Leveling, in fact, was a property of paint that was much sought after later, but until well into the 19th century, oil paints and whitewashes showed the signs of brush marks. Application, therefore was a matter of stroking the brush in the right direction for the best appearance. The rule of thumb was to draw the brush in its final strokes in the direction of the grain of the wood. Raisedfield paneling, then, required that the painter first cover the surface with paint and afterward draw the brush carefully along the vertical areas from bottom to top and along the top and bottom bevels of the panel horizontally from one side to the other.

In the 19th and early 20th centuries, for very fine finishes, several coats were applied with each coat being rubbed down with rotten stone or pumice after drying. A four to five coat application was typical; however nine coats were not uncommon at the end of the century for finishes in some of the grand mansions. Generally, they were given a final glaze finish. Though expensive, this type of finish would last for decades and give a rich, smooth appearance.

porch floors and stairs. Consequently, a strong argument can be made that lead paint was a useful and desirable product when it was produced.¹⁴¹

The Probability and Magnitude of Potential Injury

According to the EPA, most lead poisoning in young children today occurs from the ingestion of lead paint chips and the handling of contaminated dust and soil via hand-to-mouth behavior.¹⁴² However, the EPA also claims that lead paint that is in good condition is typically not a hazard.¹⁴³ The issue then becomes whether it is more likely that children will come into contact with lead paint chips, lead contaminated soil or lead contaminated dust before peeling lead paint can be repaired, abated or encapsulated. EPA studies have concluded that a high percentage of children with lead poisoning reside in environments such as urban centers, older housing or within low-income households.¹⁴⁴ In these areas, the risk of exposure to lead paint hazards increases.

One of the reasons that peeling lead paint is a hazard in rental properties and in low-income housing is because there is usually no urgency to repair peeling lead paint in these properties because aesthetic appearance is not often a high priority for landlords and housing authorities. Therefore, children who reside in rental property or low-income housing will have a greater chance of suffering from lead poisoning than those children who do not reside in these properties. Conversely, peeling lead paint in medium to high-income properties is more likely to be repaired in a timely manner. It stands to reason that these properties tend to be owner-occupied, where owners usually have a greater interest in maintaining the cosmetic appearance of their properties. Therefore, lead paint does not pose a high probability and magnitude for harm on all consumers. The unfortunate reality is that the probability and magnitude for harm is greater for those who live in low-income properties.

Sara B. Chase, Nat'l Park Serv., Preservation Briefs: Painting Historic Interiors Ch. 28 (1992), available at <http://www2.cr.nps.gov/tps/briefs/brief28.htm>.

141. Of course, this conclusion assumes that lead paint's benefits, which the lead industry attempted to promote, were based on truthfulness.

142. Risk Analysis, *supra* note 7, at 3-10.

143. U.S. EPA, Protect Your Family from Lead In Your Home 5 (1999).

144. Risk Analysis, *supra* note 7, ES 12-16.

Another difficult issue to consider is whether it is reasonable to expect a parent to be able to reduce her child's exposure to lead paint by preventing the child from putting paint chips in her mouth or her fingers in her mouth, or by keeping the child from chewing on lead painted surfaces. Most parents will agree that it is difficult, if not impossible, to follow a child from room to room in an effort to prevent hand-to-mouth activity or to prevent a child from chewing on surfaces. Furthermore, it is probably easier to prevent the ingestion of lead paint chips either by repairing the peeling paint or by sweeping up the paint chips. Nonetheless, even the most responsible and caring parents may not be able to protect their child entirely from the dangers of lead exposure.

The Availability of Substitutes

An enormous growth of the paint industry began in the 1860's, stimulated by the invention of the paint can.¹⁴⁵ Prior to this time, painters were forced to mix dry colors with lead and oil.¹⁴⁶ In the 1960s, the growing understanding of the dangers that lead paint posed to children, as well as to painters, led to the eventual withdrawal of this time-tested formula from the market.¹⁴⁷ The paint industry struggled to find a replacement that would offer similar characteristics that lead offered.¹⁴⁸ Many chemical combinations were tried, and a whole new series of coating options was developed, including titanium dioxide and oil, as well as water-borne polymer resins.¹⁴⁹ Today, leadless latex-based paints provide a su-

145. Chase, *supra* note 140.

146. According to excerpts from *A New Look at an Old Neighborhood: Historic Homes of Buffalo's Linwood Avenue Preservation District 1820-1982*:

The growing railroad network help to speed this process. It connected large urban manufacturers with distant markets. In addition to these more sophisticated architectural books, new developments in the printing field flooded America with colorful paint advertisements.

Tempered by post-Civil War technological innovations which were sweeping the nation, pigment and containers in which to ship the ready-made product were developed.

A New Look at an Old Neighborhood: Historic Homes of Buffalo's Linwood Avenue Preservation District 1820-1982 (Susan M. Pollack, ed., Linwood-Oxford Ass'n 1992).

147. Depew, *supra* note 105.

148. *Id.*

149. *Id.*

terior paint coating for almost any type of surface.¹⁵⁰ The central issue, however, is whether or not there was a suitable substitute to lead paint *at the time* that lead paint was manufactured.

Lead paint litigants can make a very persuasive argument that safer alternatives to lead paint existed at the time that lead paint was manufactured. For example, as early as 1914, the director of the scientific section of the Paint Manufacturers' Association approved of the development of "sanitary leadless" paints, predicting that lead poisoning would be done away with entirely.¹⁵¹ In 1933, an article appeared in the *Journal of the American Medical Association* entitled, *Lead [sic] Poisoning in Children*.¹⁵² In this article, Robert Kehoe, one of the nation's leading experts on lead poisoning, concluded that "strenuous efforts must be devoted to eliminating lead from [children's] environment, especially since safer alternatives to lead, specifically titanium and zinc based paints, existed throughout the late nineteenth and early twentieth centuries."¹⁵³ Further proof that there were safer alternatives to lead paint could be made by showing that many European countries enacted bans or restrictions on the use of white lead for interior paint.¹⁵⁴ After banning lead paint for interior use, common sense dictates that these countries must have used something to meet consumers' painting needs, namely leadless paint. Therefore, there is strong evidence that a substitute to lead paint was available when lead paint was manufactured.

The Manufacturer's Ability to Eliminate the Unsafe Character

In theory, the lead industry could have eliminated the unsafe character of lead paint simply by removing the lead from the paint. However, removing the lead from lead paint would have diminished lead paint's chief benefits mentioned earlier.¹⁵⁵ It is also un-

150. The Sherwin Williams corporate website at <http://www.sherwinwilliams.com> (last visited May 24, 2002).

151. Markowitz & Rosner, *supra* note 112.

152. *Id.*

153. *Id.*

154. France, Belgium and Austria in 1909; Tunisia and Greece in 1922; Czechoslovakia in 1924; Great Britain and Sweden in 1926; Poland in 1927; Spain and Yugoslavia in 1931; and Cuba in 1934; *Id.*

155. Lead paint's chief benefits were its durability and its ability to protect wood surfaces from damage by water, excessive drying, fungus and molds, insects and ultraviolet light. Depew, *supra* note 105.

clear whether consumers, who perceived lead paint to be a quality product, would have embraced the removal of lead from lead paint. Furthermore, there is no guarantee that had U.S. lead paint manufacturers removed lead from paint, foreign paint manufacturers would have refrained from selling lead paint in the United States in order to meet consumers' demands.

The User's Ability to Avoid Danger

Once again, it is important to differentiate between three types of users who were exposed to the dangers of lead paint: (1) house painters or factory workers who were injured while mixing or applying lead pigments; (2) home improvement contractors who were injured from lead contaminated dust while repairing or removing dried lead paint; and (3) children who were injured by exposure to lead paint from living in dwellings where lead paint exists.

If the dangers of lead were not common knowledge at the time of the activity, and the lead industry failed to provide an adequate warning of the dangers of working with lead pigments, it may have been impossible for house painters who were injured while mixing or applying lead paint to avoid the dangers of lead paint. Similarly, home improvement contractors who were injured from lead contaminated dust while repairing or removing dried lead paint may not have had the ability to avoid danger depending upon when their activity occurred. If their activity occurred before the dangers of lead were common knowledge, then it was impossible for these users to avoid danger. On the other hand, if their activity occurred after the dangers of lead were common knowledge, then they could have avoided the danger. However, the issue of whether the dangers of lead are common knowledge has yet to be decided. Today, the availability of modern safety equipment gives home improvement contractors a greater ability to avoid danger than in the past. Also, it can be argued that home improvement contractors, by virtue of their trade, have a greater responsibility to avoid lead safety hazards.

Adults who live in dwellings where lead paint exists may have the ability to avoid danger to their children, although not en-

tirely.¹⁵⁶ The lead industry contends that the main cause of the lead poisoning problem in the United States is the negligence of property owners in failing to repair deteriorating paint when necessary.¹⁵⁷ "Human exposure to lead from lead-based paint is believed to be higher when the paint is in a deteriorated state or is found on accessible, chewable, impact or friction surfaces."¹⁵⁸ If this deteriorating paint is repaired in a timely manner, it will reduce the chances of children ingesting or handling lead paint chips, though not completely.¹⁵⁹

The User's Probable Awareness of the Danger

The issue of whether the danger of lead paint exposure is common knowledge has yet to be decided by any U.S. court. A strong argument may be made that house painters and factory workers, who handled lead pigments, were not aware of the dangers of lead at the time because of the failure of the lead industry to provide an adequate warning.¹⁶⁰ The same argument may be made for parents and children residing in dwellings where lead paint exists. However, home improvement contractors, particularly those who were injured after 1978 when Congress prohibited the use of lead in paint,¹⁶¹ probably have a weaker argument since the demands of their trade should alert them to acknowledge developments in the industry, as well as to follow certain safety precautions.¹⁶²

156. The most severely affected children with lead poisoning have consumed paint chips, but that can be avoided through proper hygiene, home maintenance (including re-painting) and other abatement (like drywall application). Michael I. Krauss, *Painting the Town . . . with Lawsuits*, The Independent Institute (Jan. 30, 2001), available at <http://www.independent.org/tii/news/010130Krauss.html>.

157. Peter B. Lord, *Lead Paint Makers Draw Landlords into Legal Fray*, *Prov. J. Bull.*, June 26, 2001, at A-1.

158. Risk Analysis, *supra* note 7, at 3-8.

159. Krauss, *supra* note 156.

160. Despite the medical evidence concerning the dangers to children of lead-based paint, the reports from Baltimore and other cities of lead poisoning of children, occasional articles in the popular press concerning the dangers of lead-based paint, and internal correspondence from leading lead authorities around the country acknowledging that lead paint was a serious hazard, the industry neither removed lead from paint nor warned consumers of its danger until very late in the game. Markowitz & Rosner, *supra* note 112.

161. See Lead-Based Paint Poisoning Prevention Act of 1971, 42 U.S.C. § 4851(7) (1994).

162.

Before undertaking any project involving paint removal, applicable State and Federal laws on lead paint abatement and disposal must be

The risk-utility test provides a valuable tool in determining whether lead paint is defective and unreasonably dangerous because of a defective design. Painters who were injured using lead paint have the strongest argument that lead paint is defective and unreasonably dangerous because of their inability to avoid the danger, since evidence shows that the lead industry did not warn them of the dangers of lead. Those who were exposed to lead paint from living in dwellings where lead paint exists also have a strong argument that lead paint is defective and unreasonably dangerous because of their inability to completely avoid danger. Their inability to avoid danger is based on the fact that it is difficult to keep children from handling lead contaminated dust, soil and lead paint chips. Conversely, home improvement contractors who were injured from exposure to lead paint have the weakest argument that lead paint is defective and unreasonably dangerous because the dangers of lead paint should be common knowledge to those who work with it on a regular basis.

taken into account and carefully followed. State and Federal requirements may affect options available to owners on both paint removal and repainting. These laws, as well as any requirements prohibiting volatile organic compounds (VOCs), should be requested from the State Historic Preservation Officer in each State. Work to remove lead paint such as scraping and dry sanding releases the lead—a highly damaging heavy metal—in dust. Lead dust then enters the human system through pores of the skin and through the lungs. The use of heat for stripping also creates toxic lead fumes which can be inhaled.

To mitigate the hazards of lead paint ingestion, inhalation, or contact, it is extremely important to prevent the dust from circulating by masking room openings and removing all curtains, carpeting, and upholstered furniture. Drop cloths and masking containing lead dust should be carefully enclosed in tight plastic bags before removal. Workers and others in the room should wear High Efficiency Particulate Air (HEPA) filters for lead dust (fume filters if heat stripping is being used), change clothing just outside the room leaving the work clothes inside, and avoid any contact between bare skin (hands) and the paint being removed. Workers should also not eat, drink, or smoke where lead dust is present. Finally, anyone involved in lead paint removal should undergo periodic blood testing. After work, ordinary vacuuming is not enough to remove lead dust; special HEPA vacuums are essential. The surfaces of the room must also be given a final wash with a solution of trisodium phosphate and water, changing the washing solution often and rinsing well.

Chase, *supra* note 140.

V. IS LEAD PAINT DEFECTIVE AND UNREASONABLY DANGEROUS
BECAUSE OF A FAILURE TO WARN?

A product that is not defectively designed may still be defective as marketed because of a failure to adequately warn, or a failure to use proper means to warn about a risk or hazard related to the way the product was designed.¹⁶³ Under this view, the product is allegedly defective as marketed because of the failure to properly present it to purchasers and users. In other words, the seller may be required to give directions or a warning in order to prevent the product from being unreasonably dangerous.

The lead industry does not dispute the claim that they failed to warn of the dangers of lead paint during the time their products were marketed.¹⁶⁴ Rather, the lead industry argues that it did not warn of the dangers of lead paint because it was unaware that exposure to lead paint was a major cause of lead poisoning in the United States until 1955.¹⁶⁵ According to the lead industry, once the harmful nature of its products was discovered, it voluntarily removed lead paint from the market.¹⁶⁶ Furthermore, the lead industry contends that its ability to discover the cause of lead poisoning prior to 1955 was limited by the medical technology available at the time.¹⁶⁷ Because of the limits of medical technology available at the time, the lead industry argues that it did not know, nor reasonably could it have known of the dangers of lead paint. In essence, the lead industry is asserting the "state of the art" defense. State of the art is a term that is used often in products liability and the term is used to mean different things at different times.¹⁶⁸ When state of the art is defined as that which is feasible in light of the technology, which existed at the time the product was designed, consideration must be given to what was reasonably

163. Keeton, *supra* note 95, at 586.

164. Understanding Lead Pigment Litigation at http://www.leadlawsuits.com/bckgrnd_former.htm (last visited June 8, 2002).

165. *Id.*

166. *Id.*

167. *Id.*

168. There are three different usages for the term state of the art: (1) the customary practices employed in designing a product; (2) that which is feasible in light of the technology which existed at the time the product was designed or (3) the technological capability of an industry to discover a risk or hazard in a product. Keeton, *supra* note 95, at 594-95. For the purpose of this analysis, only the second and third usages will be discussed.

capable of being done technologically and economically to reduce the risk of hazard. A defendant's compliance with what was technologically and economically feasible does not necessarily mean that his product is not defective. Rather, a product's design should normally be measured in terms of whether it was feasible to do a better job in light of the technology that was available at the time. In failure to warn cases, the courts are divided over whether the state of the art defense should be allowed when state of the art is defined to mean the technological capability of an industry to discover a risk or hazard in a product.¹⁶⁹ The leading case on the state of the art defense is *Beshada v. Johns-Manville Products Corp.*¹⁷⁰ A majority of courts, however, have rejected the princi-

169. See *Bernier v. Raymark Indus.*, 516 A.2d 534 (Me. 1986) (allowing the state of the art defense under Maine law); *Anderson v. Owens-Illinois, Inc.*, 799 F.2d 1 (1st Cir. 1986) (allowing the state of the art defense under Massachusetts law); cf. *Beshada v. Johns-Manville Prods. Corp.*, 447 A.2d 539 (N.J. Sup. Ct. 1982) (rejecting state of the art defense under New Jersey law); *Anderson v. Owens-Corning Corp.*, 266 Cal. Rptr. 204 (Cal. Ct. App. 1990) (rejecting state of the art defense under California law). The commentary to section 402A makes it clear that in determining whether a product is defective because of a failure to warn, the manufacturer is only required to warn of dangers about which he knew or should have known. Restatement (Second) Torts § 402A (1965). However, several courts have refused to adopt the Restatement's position. See *Beshada v. Johns-Manville Prods. Corp.*, 447 A.2d 539 (N.J. Sup. Ct. 1982) (rejecting state of the art defense under New Jersey law); *Anderson v. Owens-Corning Corp.*, 266 Cal. Rptr. 204 (Cal. Ct. App. 1990) (rejecting state of the art defense under California law).

170. 447 A.2d 539 (N.J. Sup. Ct. 1982). In *Beshada*, the plaintiffs were workers, or survivors of deceased workers, who claim to have been exposed to asbestos for varying periods of time. *Beshada v. Johns-Manville Prods. Corp.*, 447 A.2d 539 (N.J. Sup. Ct. 1982). The plaintiffs alleged that as a result of exposure to asbestos, they contracted asbestos-related illnesses. The plaintiffs claimed that the asbestos manufacturer was strictly liable for failure to warn. Prior to the 1960's, defendants' products allegedly contained no warning of their hazardous nature. The defendants asserted the state of the art defense, alleging that no one knew or could have known that asbestos was dangerous when it was marketed. The main issue was whether the medical community's presumed unawareness of the dangers of asbestos was a defense to the plaintiffs' claims. The court held that the state of the art defense should not be allowed in a failure to warn case. *Id.* at 546. The main point that *Beshada* stands for is that in strict liability cases, culpability is irrelevant. *Id.* The court explained its decision as follows:

Essentially, state-of-the-art is a negligence defense. It seeks to explain why defendants are not culpable for failing to provide a warning. They assert, in effect, that because they could not have known the product was dangerous, they acted reasonably in marketing it without a warning. But in strict liability cases, culpability is irrelevant. The product was unsafe. That it was unsafe because of the state of technology does not change the fact that it was unsafe. Strict liability focuses on the product,

ples set forth in *Beshada*, instead relying on commentary j of Section 402A.¹⁷¹ While these cases all involved asbestos products, the question of whether the state of the art defense should be allowed in lead paint cases has yet to be decided in the United States. In

not the fault of the manufacturer. If the conduct is unreasonably dangerous, then there should be strict liability without reference to what excuse defendant might give for being unaware of the danger.

When the defendants argue that it is unreasonable to impose a duty on them to warn of the unknowable, they misconstrue both the purpose and effect of strict liability. By imposing strict liability, we are not requiring defendants to have done something that is impossible. In the sense, the phrase "duty to warn" is misleading. It implies negligence concepts with their attendant focus on the reasonableness of defendant's behavior. However, a major concern of strict liability—ignored by defendants—is the conclusion that if a product was in fact defective, the distributor of the product should compensate its victims for the misfortune that it inflicted on them.

Id.

171. See, e.g., *Jackson v. Johns-Manville Sales Corp.*, 727 F.2d 1314 (5th Cir. 1985) (applying Mississippi law); *Hardy v. Johns-Manville Sales Corp.*, 681 F.2d 334 (5th Cir. 1982) (applying Texas law); *Karjala v. Johns-Manville Sales Corp.*, 523 F.2d 155 (8th Cir. 1975) (applying Minnesota law); *Borel v. Fireboard Paper Prods. Corp.*, 493 F.2d 1076 (5th Cir. 1973) (applying Texas law); *Bernier v. Raymark Indus., Inc.*, 516 A.2d 534 (applying Maine law); Commentary j to Section 402A states:

Directions or warning. In order to prevent the product from being unreasonably dangerous, the seller may be required to give directions or warning, on the container, as to its use. The seller may reasonably assume that those with common allergies, as for example to eggs or strawberries, will be aware of them, and he is not required to warn against them. Where, however, the product contains an ingredient to which a substantial number of the population are allergic, and the ingredient is one whose danger is not generally known, or if known is one which the consumer would reasonably not expect to find in the product, the seller is required to give warning against it, if he has knowledge, or application of reasonable, developed human skill and foresight should have knowledge, of the presence of the ingredient and the danger. Likewise, in the case of poisonous drugs, or those unduly dangerous for other reasons, warning as to use may be required. But a seller is not required to warn with respect to products, or ingredients in them, which are only dangerous, or potentially so, when consumed in excessive quantity, or over a long period of time, when the danger, or potentiality of the danger, is generally known and recognized. Again, the dangers of alcoholic beverages are an example, as are also those of foods containing such substances as saturated fats, which may over a period of time have a deleterious effect upon the human heart. Where warning is given, the seller may reasonably assume that it will be read and heeded; and a product bearing such a warning, which is safe for use if it is followed, is not in defective condition, nor is it unreasonably dangerous.

Restatement (Second) Torts § 402A (1965).

fact, Rhode Island has yet to decide whether the state of the art defense should be allowed in strict liability failure to warn claims. Because Rhode Island has adopted Section 402A, Rhode Island is unlikely to allow the state of the art defense. However, Rhode Island's neighbor, the State of Massachusetts, allows the state of the art defense.¹⁷² This may influence how Rhode Island decides this issue. Even if Rhode Island were ultimately to recognize the state of the art defense, the lead industry may still have difficulty convincing a jury that limits in medical technology made it impossible to learn of the dangers of lead paint until 1955. Evidence available to plaintiffs suggests that the lead industry had both constructive and actual knowledge of the dangers of lead-based paint. According to some researchers, the knowledge of the dangers of lead poisoning to workers and children can be traced back into the nineteenth century, and that in the first third of the twentieth century, a broad scientific literature on the subject accumulated in Australia, England and the United States.¹⁷³ In 1908, lead hazards were documented among American workers in the pigment manufacturing, battery, painting, plumbing, ceramics, pottery and other industries.¹⁷⁴ In 1921, the President of the National Lead Company wrote to the Dean of Harvard Medical School, stating:

. . . [L]ead manufacturers, as a result of fifty to sixty years experience, agreed that lead is a poison when it enters the stomach of man—whether it comes directly from the ores and mines and smelting works or from the ordinary forms of carbonate of lead, lead oxides, and sulfate and sulfide of lead.¹⁷⁵

Clearly, there are strong arguments that both support and undermine the state of the art defense. The State must eventually choose between public policy considerations and economic realities by balancing consumers' needs with manufacturers' needs. Perhaps this decision is best left for the State legislature.

172. See, e.g., *In re Massachusetts Asbestos Cases*, 639 F. Supp 1 (D. Mass. 1985) (adopting the state of the art defense).

173. Markowitz & Rosner, *supra* note 112.

174. See *id.* (citing Alice Hamilton, *Industrial Diseases, With Special Reference to the Trades in Which Women Are Employed*, 20 *Charities and the Commons* 655-58 (1908)).

175. Markowitz & Rosner, *supra* note 112.

VI. DOES THE PRESENCE OF LEAD PAINT CREATE A PUBLIC NUISANCE?

The State's last chance for relief against the lead industry lies in proving that the presence of lead paint in properties throughout the state has created a public nuisance.¹⁷⁶ Rhode Island case law defines a public nuisance as "an unreasonable interference with a right common to the general public: it is behavior that unreasonably interferes with the health, safety, peace, comfort or convenience of the general community."¹⁷⁷ Unlike the nine dismissed tort claims, it is virtually undisputed that the State has standing to bring an action to abate a public nuisance under Rhode Island General Laws § 10-1-1.¹⁷⁸ In fact, "[t]he Rhode Island Supreme Court has recognized for almost a century that public nuisance provides a cause of action in environmental contamination and pollution cases."¹⁷⁹

The Rhode Island Superior Court denied the lead industry's motion to dismiss the public nuisance claim, stating that the State adequately asserted an action for public nuisance.¹⁸⁰ In determin-

176. The State alleges that the lead industry has created an environmental hazard that continues and will continue to unreasonably interfere with the health, safety, peace, comfort or convenience of the residents of the State, thereby constituting a public nuisance. Compl. at 16, *State v. Lead Indus. Ass'n, Inc.*, No. 99-5226, 2001 WL 345830, at *1 (R.I. Super. Ct. Apr. 2, 2001). The State seeks relief ordering the lead industry to detect and abate lead in all residences, schools, hospitals, and private and public buildings within the State accessible to children. *Id.* at 25.

177. *Citizens for Preservation of Waterman Lake v. Davis*, 420 A.2d 53, 59 (R.I. 1980) (quoting *Copart Indus., Inc. v. Consol. Edison Co. of New York*, 362 N.E.2d 968, 971 (N.Y. 1977)).

178. R.I. Gen. Laws § 10-1-1 (1956) provides that:

Whenever a nuisance is alleged to exist, the attorney general or any citizen of the state may bring an action in the name of the state, upon the relation of the attorney general or of an individual citizen, to abate the nuisance and to perpetually enjoin the person or persons maintaining the nuisance and any or all persons owning any legal or equitable interest in the place from further maintaining or permitting the nuisance either directly or indirectly. The complaint shall be duly sworn to by the complaining party, unless brought by the attorney general, and shall set forth the names of the parties, the object of the action, a description of the place complained of, and a statement of the facts constituting the alleged nuisance.

179. See Pl.'s Mem. in Opp'n to Def.'s Mot. to Dismiss the Compl. at 39, *Lead Indus. Ass'n, Inc.*, 2001 WL 345830, at *1 (quoting *Payne & Butler v. Providence Gas Co.*, 77 A. 145 (R.I. 1910)).

180. *Lead Indus. Ass'n, Inc.*, 2001 WL 345830, at *8.

ing whether the defendants had unreasonably interfered with the health, safety, peace, comfort or convenience of the general community, the court held that reasonableness was a question of fact.¹⁸¹ Accordingly, there are several important questions that must be answered: (1) whether the defendant must have control over the properties upon which the nuisance is alleged to exist; (2) whether the manufacture and sale of products may give rise to a nuisance claim; and (3) whether the presence of lead paints in individual private properties interferes with a public right.

The lead industry argues that it should not be held liable for creating a public nuisance because it does not control the properties upon which the nuisance is alleged to exist, and therefore, the lead industry does not have the power to abate the nuisance.¹⁸² The lead industry further contends that "[t]he paramount question is whether the defendant was in control of the instrumentality alleged to have created the nuisance *when the damage occurred*."¹⁸³ Conversely, the State argues that individuals or entities who either created or contributed to the creation of a public nuisance may be liable for that nuisance despite the fact that they are not in physical control of the real property in question.¹⁸⁴

While the State makes a strong argument that there need be no physical control over the property in order to create a public nuisance, the State fails to take into account that there must be some control over the *instrumentality* alleged to have created the nuisance.¹⁸⁵ In the present case, the lead industry cannot be held liable for a public nuisance because they gave up control over the instrumentality, the lead paint, when it was sold.

181. *Id.*

182. Def.'s Mot. to Dismiss the Pl.'s Compl. at 24-25, *Lead Indus. Ass'n, Inc.*, 2001 WL 345830, at *1.

183. *Id.* at 25 (quoting *Friends of the Sakonnet v. Dutra*, 738 F. Supp. 623, 633-34 (D.R.I. 1990)).

184. Pl.'s Mem. in Opp'n to Def.'s Mot. to Dismiss the Compl. at 41, *Lead Indus. Ass'n, Inc.*, 2001 WL 345830, at *1 (quoting *Payne & Butler v. Providence Gas Co.*, 77 A. 145 (R.I. 1910)).

185. Most public nuisance cases brought against landowners usually involve some type of environmental contamination. *See id.* at 42. For example, one who dumps toxic waste onto land that causes groundwater to become contaminated has created a public nuisance even though they controlled neither the land nor the groundwater that was contaminated. *See id.* In such a case, the party exercised control over the instrumentality, the hazardous substance, that created the public nuisance. *See id.*

Next, the lead industry argues that public nuisance law does not apply to product manufacturers because "to hold manufacturers, sellers or installers of products liable in nuisance 'would significantly expand, with unpredictable consequences, the remedies already available to persons injured by products.'"¹⁸⁶ Furthermore, a public nuisance claim is based on the wrongful use of property, not products.¹⁸⁷ The State contends that a public nuisance involves *behavior* that unreasonably interferes with the health, safety, peace, comfort or convenience of the general community."¹⁸⁸ The State claims that this behavior consists of the defendants' misconduct, which was calculated to mislead the public concerning the hazards of lead and to promote the use of lead paint on thousands of homes and buildings throughout Rhode Island.¹⁸⁹ The State's position is consistent with case law from around the country showing that courts have found manufacturers of hazardous products liable under nuisance law for injuries caused by their products when the manufacturers' conduct created a public nuisance.¹⁹⁰ The State correctly points out that if its claim were based on the inherent dangerous nature of lead paint, then products liability law, not public nuisance, would apply to lead paint. However, the State has alleged the defendants' wrongful conduct constitutes behavior that "unreasonably interferes with the health, safety, peace, comfort or convenience of the general community."¹⁹¹ Therefore,

186. Def.'s Mot. to Dismiss the Pl.'s Compl. at 27-28, *Lead Indus. Ass'n, Inc.*, 2001 WL 345830, at *1 (quoting *Detroit Bd. of Educ. v. Celotex Corp.*, 493 N.W.2d 513, 521 (Mich. Ct. App. 1992)).

187. *Id.* at 28.

188. *Citizens for Preservation of Waterman Lake v. Davis*, 420 A.2d 53, 59 (R.I. 1980) (quoting *Copart Indus., Inc. v. Consol. Edison Co. of New York*, 362 N.E.2d 968, 971 (N.Y. 1977)).

189. Pl.'s Mem. in Opp'n to Def.'s Mot. to Dismiss the Compl. at 49, *Lead Indus. Ass'n, Inc.*, 2001 WL 345830, at *1.

190. *Id.* at 46; *see, e.g.*, *Chase Manhattan Bank, N.A. v. T&N PLC*, 905 F. Supp. 107 (S.D.N.Y. 1995) (finding that the manufacturer of an asbestos fire-proofing spray could be held liable under public nuisance); *New York v. Fermenta ASC Corp.*, 616 N.Y.S.2d 702 (N.Y. Sup. Ct. 1994) (finding that the manufacturer of a pesticide could be liable under public nuisance for contamination of groundwater caused by the product); *Page County Appliance Center, Inc. v. Honeywell, Inc.*, 347 N.W.2d 171, 177 (Iowa 1984) (finding the manufacturer of a computer system that emitted radiation materially participated in the creation of the nuisance and could be liable).

191. *Citizens for Preservation of Waterman Lake v. Davis*, 420 A.2d 53, 59 (R.I. 1980) (quoting *Copart Indus., Inc. v. Consol. Edison Co. of New York*, 362 N.E.2d 968, 971 (N.Y. 1977)).

the State is not barred from asserting a public nuisance claim because the defendants are product manufacturers.

Lastly, the lead industry claims that the presence of lead paint in individual properties does not interfere with a public right because the existence of lead paint in individual homes and buildings, if it affects anyone, affects persons on the premises and not the general public.¹⁹² Defendants argue that in typical public nuisance cases such as air, water and noise pollution, there must be some interference with a right common to the general public. Conduct that interferes with the rights of only a large number of persons does not constitute a public nuisance.¹⁹³ However, in *Pine v. Kalian*,¹⁹⁴ the Rhode Island Supreme Court ruled that the presence of lead paint in a rental property was a public nuisance "constitut[ing] a continuing, persistent hazard of lead poisoning to members of the public who occupy such premises, especially to children of tender years."¹⁹⁵ Furthermore, the State claims that lead poisoning affects almost twenty percent of kindergartners in Rhode Island and up to thirty percent in some urban areas.¹⁹⁶

Although the State suggests that the presence of lead paint interferes with a public right, *Kalian* is distinguishable from the present case for two reasons. First, the defendants in *Kalian* were landlords who exercised control over the instrumentality, the lead paint that created the nuisance. Once again, since the lead industry does not control the properties upon which the nuisance is alleged to exist, it does not have the power to abate the nuisance. Second, and more importantly, the defendants in *Kalian* knowingly and deliberately refused to comply with court orders. In fact, the trial justice at the lower level described the defendants as "obstructive" and "noncompliant. . .to the point of outright defiance."¹⁹⁷ This defiant behavior may have contributed to the court's ruling in the form of a punishment. In the present case,

192. Def.'s Mot. to Dismiss the Pl.'s Compl. at 29, *Lead Indus. Ass'n, Inc.*, 2001 WL 345830, at *1.

193. *State v. Waterloo Stock Car Raceway, Inc.*, 409 N.Y.S.2d 40, 43-44 (N.Y. Sup. Ct. 1978).

194. No. 96-2673 (R.I. Super. Ct. Feb. 1998); *aff'd* 723 A.2d 804 (R.I. 1998).

195. Pl.'s Mem. in Opp'n to Def.'s Mot. to Dismiss the Compl. at 50, *Lead Indus. Ass'n, Inc.*, 2001 WL 345830, at *1 (quoting *Pine v. Kalian*, No. 96-2673 (R.I. Super. Ct. Feb. 1998)).

196. *Id.* at 50 (quoting 2000 R.I. Kids Count Fact Book, Apr. 2000).

197. *Pine v. Kalian*, 723 A.2d 804, 805 (R.I. 1998).

despite the State's accusations that the lead industry intentionally misled the public as to the hazards of lead paint, an argument can be made that the lead industry voluntarily banned lead paint once its harmful effects were discovered.

VII. OTHER REASONS WHY THE LEAD INDUSTRY MAY NOT BE LIABLE

There are two other arguments that the lead industry may raise, both of which allege that a plaintiff has failed to establish that the defendants' products were the proximate cause of his injuries. First, the lead industry may argue that because there are alternative exposure pathways by which children can be exposed to lead other than lead paint, the State has failed to prove that lead paint was the proximate cause of its citizens' injuries.¹⁹⁸ While it is true that exposure to lead paint contributes to lead poisoning in children, it is not the only source of lead exposure to children. For example, the EPA has estimated that twenty to forty percent of the average blood lead in U.S. children may come from lead in drinking water alone.¹⁹⁹ Since lead in its purest form is not changed by exposure to sunlight, air or water, once it becomes embedded in something, such as in soil or in plumbing, it stays there forever, unless intentionally removed by humans.²⁰⁰ Similarly, lead comes into contact with soil from a variety of sources, such as lead dust created during home improvement renovations, from deteriorated lead paint chips and from airborne lead from leaded gasoline emissions.²⁰¹ While lead exposure from leaded gasoline emissions has essentially been eliminated in the United States today, lead exposure from this source was a significant problem in the past.²⁰² In fact, it has been estimated that twice as much lead was used in leaded gasoline from 1940 to 1989 than was used in white lead pig-

198. Part I of this Comment discusses in detail how humans are exposed to lead.

199. Lead Phase Out, *supra* note 12.

200. *Id.*

201. See generally Risk Analysis, *supra* note 7; see Part I of this Comment.

202. Historically, leaded gasoline was a major source of lead exposure in the United States, however, leaded gasoline has been phased out dramatically over the last twenty years leading to a ninety percent reduction in emissions of lead. Lead Phase Out, *supra* note 12.

mented paints from 1910 to 1989.²⁰³ Seventy-five percent of lead from gasoline went into the environment and settled in soil and on buildings.²⁰⁴ Therefore, soil that was contaminated twenty years ago by leaded gasoline emissions can still be harmful to children today. As a result, a plaintiff who suffers from lead poisoning may have difficulty pinpointing which source of lead has actually caused his injury.

Second, the lead industry may argue that a plaintiff's injuries such as cognitive defects, speech problems, learning disabilities, and lowered IQ may not be injuries caused by exposure to lead. Rather, these defects may be attributable to genetics and environment and may have little to do with lead exposure. For example, the defendants in *Campbell v. Bonner*,²⁰⁵ a lead exposure case, argued that IQ is genetically inherited and that children's IQ's tend to correlate with their mother's IQ through child rearing practices that are IQ related.²⁰⁶ The defendants argued that a child's IQ may be deficient either because his mother had a deficient IQ herself or because his mother's child rearing activity contributed to his deficient IQ. The defendants' expert witness stated in her affidavit that:

. . . [T]he relative contribution of genetic and child rearing factors to IQ is not material What matters is that parent IQ is a major determinant of child IQ whether for genetic or child-rearing reasons. Information about parent IQ is thus necessary to make a meaningful judgment about the purported causation of observed deficits in child IQ.²⁰⁷

In *Campbell*, the judge ordered the non-party relatives of a lead-exposed child to submit to IQ tests and clinical interviews. Critics claim that this expansion of discovery broadens the scope of litigation and is unnecessarily intrusive to the injured plaintiff's family.²⁰⁸ However, while there are privacy issues and racial overtones to this defense, defendants may still argue that the plaintiff's

203. Paint & Coatings, *supra* note 69 (quoting Journal of Coatings Technology, *Lead Based Paint and the Lead Abatement Issue in the United States*, July 1994).

204. *Id.*

205. No. 92-7771 (D.C. Super. Ct. Jan. 7, 1994).

206. Wriggins, *supra* note 53, at 1042.

207. *Id.* at 1043.

208. *Id.* at 1060.

defects are not the result of lead exposure, but due to either her genetic or environmental heritage.²⁰⁹

VIII. CONCLUSION

In Rhode Island, the chances of holding the lead industry accountable for the harm caused by lead paint seem bleak. Without market share liability to use as a weapon, a plaintiff will be unable to identify the manufacturer who caused his injury, an essential element of any tort claim. Therefore, the same proximate cause issues will arise whether the claim is one for strict products liability or one for public nuisance. Also, proving that lead paint is defective and unreasonably dangerous will be a difficult task because there are many intervening factors that can contribute to lead poisoning. These factors include the negligence of landlords in maintaining their property and the negligence of home improvement contractors in creating dust when working with lead paint. Furthermore, a majority of U.S. courts have allowed the state of the art defense, thus giving the lead industry greater maneuverability in escaping liability. On the other hand, some courts have ruled that the dangers of cigarette smoking are not common knowledge, improving the likelihood that a court may rule that the dangers of lead exposure are not common knowledge. Essentially, a ruling that the dangers of lead exposure are not common knowledge would preclude an assumption of the risk defense by the lead industry. This would also strengthen the argument under the risk utility test that lead paint is defectively designed because users cannot avoid dangers of a product if the dangers are not common knowledge.

Perhaps a plaintiff's best chance for relief of a lead paint related injury is in a negligence lawsuit against a landlord. In a lead paint poisoning claim based on negligence, a plaintiff must prove that: (1) the landlord had actual knowledge or reason to know of chipping, peeling and flaking lead paint on the premises and that

209. According to a study of lead poisoning in children in the Washington area and Charlottesville, Va., elevated lead levels are found mainly among urban children. Facts About Lead at <http://www.leadinfo.com/FACTS/facts1.html> (last visited May 12, 2002).

The CDC report identifies children aged 1-5 years more likely to have elevated blood levels as "those who were poor, non-Hispanic black, living in metropolitan areas, or living in older housing." *Id.*

such a condition was hazardous; and (2) the landlord was given a reasonable opportunity to correct the hazard.²¹⁰ Meeting the burden of proof on this claim should be a much easier road to travel.

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210. *Brown v. Wheeler*, 675 A.2d 1032, 1035 (Md. Ct. Spec. App. 1996).