

NO. 4-10-0463

IN THE APPELLATE COURT

OF ILLINOIS

FOURTH DISTRICT

JUANITA RODARMEL and BAXTER RODARMEL,	)	Appeal from
Plaintiffs-Appellees,	)	Circuit Court of
v.	)	McLean County
PNEUMO ABEX, L.L.C., Sued as Its Predecessor	)	No. 08L132
PNEUMO ABEX CORPORATION; and HONEYWELL	)	
INTERNATIONAL, INC.,	)	Honorable
Defendants-Appellants.	)	Scott Drazewski,
	)	Judge Presiding.

JUSTICE APPLETON delivered the judgment of the court, with opinion.  
Justice McCullough concurred in the judgment and opinion.  
Justice Turner specially concurred, with opinion.

**OPINION**

¶ 1 This tort action has two plaintiffs: Juanita Rodarmel and her spouse, Baxter Rodarmel. Juanita Rodarmel suffers from mesothelioma, for which she seeks compensation, and Baxter Rodarmel seeks compensation for injury to the spousal relationship and for the medical expenses of treating his wife's mesothelioma.

¶ 2 It is undisputed that Juanita Rodarmel contracted the mesothelioma from breathing asbestos fibers that her first husband, Leslie Corry, carried home on his person and clothing from 1953 through 1956. During that period, he was employed at Union Rubber & Asbestos Company (UNARCO) in Bloomington, Illinois, which used asbestos in its manufacturing processes. Former UNARCO employees testified that they never received any warning from UNARCO about the toxicity of asbestos and that UNARCO did little or nothing to protect them from the asbestos.

¶ 3 UNARCO, however, is not one of the defendants in this case. Instead, this appeal has two defendants, neither of which ever employed Corry and neither of which supplied any of the asbestos that made Juanita Rodarmel sick: Honeywell International, Inc., which is the successor, by merger, of The Bendix Corporation; and Pneumo Abex, L.L.C., the successor of Pneumo Abex Corporation, which in turn is a successor of American Brake Shoe Company.

¶ 4 Plaintiffs sued defendants, Honeywell and Abex, on a theory of civil conspiracy. According to the complaint, defendants conspired with UNARCO, Johns-Manville Corporation, Owens Corning, and other companies to do two things: (1) falsely assert it was safe for people to be exposed to asbestos and (2) withhold information about the harmful effects of asbestos. The jury was convinced by this theory of a conspiracy. It awarded plaintiffs \$2 million in compensatory damages against defendants as well as \$400,000 in punitive damages against Honeywell and \$100,000 in punitive damages against Abex.

¶ 5 Defendants appeal, and their first argument—the only argument it is necessary for us to address—is that the trial court erred in denying their motions for a judgment notwithstanding the verdict. For two reasons, we hold that defendants were entitled to a judgment notwithstanding the verdict. First, UNARCO owed Juanita Rodarmel no duty, in the period of 1953 to 1956, to warn her against the danger of asbestos carried home on clothing (in contrast to the danger of intensive exposure to asbestos in factories). Our reason for so holding is that in 1953 through 1956, the infliction of illness merely from asbestos carried home on clothing was not reasonably foreseeable, given what was known during that period. If UNARCO would incur no liability to plaintiffs for failing to warn, in the 1950s, against the danger posed to family members by asbestos carried home on employees' clothing, UNARCO's alleged coconspirators, Honeywell and Abex, should incur no

liability on that basis, either. Second, even if, *arguendo*, UNARCO owed Juanita Rodarmel a duty, the record appears to contain no evidence that in the period of 1953 to 1956 or prior thereto, either of the defendants actually *entered into an agreement* with any other corporation to falsely assert that asbestos was safe or to keep quiet about the dangers of asbestos, although the record contains evidence that defendants, on their own account and on their own individual initiative, did those things. Therefore, we reverse the trial court's judgment.

¶ 6

## I. BACKGROUND

¶ 7

### A. Parallel Conduct By Defendants

¶ 8

The jury trial occurred in April 2009 and lasted 14 days. It appears that most of the evidence in plaintiffs' case was of "parallel conduct" by defendants, "evidence intended to demonstrate that defendants' actions paralleled those of the other alleged conspirators," such as Johns-Manville. *McClure v. Owens Corning Fiberglas Corp.*, 188 Ill. 2d 102, 112 (1999). Plaintiffs set out to prove that defendants hid the dangers of asbestos from their employees and that at times, defendants even fraudulently represented that the asbestos-infused air inside their factories was safe, and that in so doing, defendants acted in conformity with a conspiratorial agreement they had with other companies that were financially interested in promoting asbestos and in preventing state statutes from being amended so as to provide workers' compensation for diseases caused by asbestos. Recounting all this evidence would be impracticable. All we can do is provide representative examples, chosen at random, to give some idea of the detailed evidence that plaintiffs presented regarding the internal operations of defendants' factories during roughly the second half of the 20th century.

¶ 9

For days on end, the jury received a prodigious amount of information about what

went on inside manufacturing plants owned by defendants. For example, the jury learned that a railroad siding led to a factory that Bendix owned in Troy, New York, and that *via* this siding, raw asbestos arrived at the factory in burlap bags from Johns-Manville (later, Johns-Manville switched to plastic airtight bags). A forklift carried these bags on wooden pallets from the railroad siding to the mix room, and because the forklift could not fit through the doorway of the mix room, workers had to carry the bags from the forklift to the mixer, where they slit open the bags and dumped the asbestos into the mixer, raising clouds of asbestos dust—a problem that was exacerbated by dry-sweeping the dust.

¶ 10           The jury learned that in 1976, Chrysler complained to Bendix that boxes of brake shoes it had received from Bendix's plant in St. Joseph, Michigan, were "contaminated with excessive asbestos dust." Various "dust counts" in Bendix's factories, or measurements of airborne dust, often exceeded the maximum permissible levels allowed by the Occupational Health and Safety Administration (OSHA). According to a company newsletter, Bendix tried to "turn the dust into dollars" by selling asbestos dust as filler for bowling balls.

¶ 11           The jury learned that according to a letter from Johns-Manville dated June 1973, some 300,000 bags of asbestos—a total of 30 million pounds—went into the Bendix plants at Troy and at Cleveland, Tennessee, each year. Despite the ubiquity of asbestos dust in its factories and the accumulating evidence in its files that asbestos scarred the lungs (evidence that plaintiffs presented, document by document, at trial), decades passed without Bendix's warning its employees or devoting any of its considerable financial resources to exploring the nature and extent of the danger. Bendix spent \$20 million on a Dynanometer, a machine for testing the stopping power of brakes, but no money at all on studying the health effects of asbestos. Although Bendix took chest X-rays of its

employees, it had a policy of keeping the X-rays confidential—even from the employees.

¶ 12 Plaintiffs spent a couple of days on Abex factories, too. The jury learned, for example, that 1926 was the year in which Abex first sold a product containing asbestos.

¶ 13 The jury learned that on November 1, 1977, the medical director at Abex, F.W. Knoch, wrote a memorandum to the manager of Abex's plant in Winchester, Virginia, Earl F. Potts, commenting on his visit to the Winchester plant on October 27, 1977. In the memorandum, Knoch wrote: "There is no doubt in any of our minds that asbestos is a carcinogen," and he explained that smoking in areas of the plant "where asbestos [was] present in excess of the Threshold Limit Value" should be discouraged because it increased the hazard of asbestos. Knoch complimented Potts on "prevent[ing] any eating or drinking in 'regulated' areas of the plant." From this compliment, the jury could have inferred that asbestos was floating around in the air inside the factory, or else there would have been no need to worry about ingesting it with food or drink.

¶ 14 The jury learned that the rafters in an Abex plant were dusty and that this dust likely included asbestos fibers, considering that the plant used nine tons of asbestos per month.

¶ 15 The jury learned that on August 1, 1973, C.C. Blackwell, Jr., who was the medical director of Abex, wrote a memorandum to the company's "industrial nurse," M.C. Rauch, urging her to keep "industrial hygiene survey reports" confidential if an employee happened to seek her advice on whether he was suffering from an occupational illness. "Industrial hygiene surveys" were air samples that Abex periodically took at its factories.

¶ 16 The jury learned that on May 20, 1975, some inspectors from OSHA visited the Winchester plant and that according to a follow-up memorandum by C.L. Curtis, who was the division project engineer, one of these inspectors, Kip Hartman, was "a very clever individual," who,

"at every opening," "would mingle with Cooper in a corner." ("D. Cooper" was the union chairman, who accompanied the OSHA inspectors and the company representatives in the walk-through inspection.) Curtis believed Hartman "required more following than did Pauley," another of the OSHA inspectors. Curtis wrote that "Hartman would gather a group of employees, usually near the central aisles or drinking fountains, and question them on their knowledge of asbestos hazards. He was told by most employees that, 'One day they came to work and found mix boxes labeled, "Asbestos Is Hazardous To Your Health, Do Not Breathe," and no one ever informed the employees why the labels were installed or what the hazard was.' "

¶ 17 Perhaps these examples, selected at random from the record of the trial, give an idea of the great mass of minutiae the jury heard, over several days, regarding factories in which Leslie Corry never set foot and which never supplied any of the asbestos that was carried into Juanita Rodarmel's home. Presumably, the justification for these detailed historical accounts of defendants' factories was the supreme court's holding in *McClure* that "parallel conduct may serve as circumstantial evidence of a civil conspiracy among manufacturers of the same or similar products"—although, as the supreme court also held, parallel conduct is "insufficient proof, by itself, of the agreement element of this tort." *McClure*, 188 Ill. 2d at 135.

¶ 18 B. Johns-Manville's Warning Label, Followed, a Few Months Later,  
by a More Enlightening Position Paper

¶ 19 On October 1, 1968, N.W. Hendry, the general sales manager in the asbestos fiber division of Johns-Manville, notified Bendix by letter that henceforth each bag of asbestos from Johns-Manville would arrive with a warning label affixed to it. Hendry wrote:

"You will notice that beginning shortly each bag of chrysotile

asbestos fibre shipped by this Company will carry a label reading as follows—

CAUTION

'This bag contains chrysotile asbestos fibre.

Persons exposed to this material should use adequate protective devices as inhalation of this material over long periods may be harmful.'

This label is intended to remind all industrial users of asbestos that proper handling will contribute to improved conditions in work areas.

Physical protection for employees is provided through the use of safety hats, shoes, glasses, and other devices when circumstances warrant. Health protection is just as important and should include appropriate practices and equipment such as collectors, ventilators, masks, etc., to prevent inhalation of fumes and particulate matter."

¶ 20 On October 17, 1968, a person named D.K. Beanie, evidently someone in Bendix management, wrote a letter, marked "*Personal*," to the medical director of Bendix, C.C. Blackwell (plaintiffs' exhibit No. 187). Beanie wrote:

"Attached hereto please find a copy of Johns-Manville Asbestos, Ltd.'s letter of October 1, 1968, pointing out that each bag of asbestos fibre will soon contain a caution label.

This could give us some repercussions at Winchester if our

people working with asbestos get concerned about the hazard to their health.

Any comments you might give us in rebuttal to questions the employees might raise would be appreciated."

¶ 21 Obviously, Johns-Manville's warning label was quite vague ("inhalation of this material over long periods may be harmful"). About three months later, however, in January 1969, Johns-Manville sent Bendix a position paper entitled "Asbestos and Human Health" (plaintiffs' exhibit No. 818A) that was considerably more specific about the nature of the hazards that asbestos posed. Under the heading "Known and Suspected Occupational Risks," the position paper explained that the hazards of asbestos were threefold: (1) asbestosis, (2) lung cancer, and (3) mesothelioma.

¶ 22 C. A Shared Director and Membership in the Same Trade Organization

¶ 23 In 1934, Arthur L. Humphrey was on the board of directors of American Brake Shoe and Foundry Company (the predecessor of Abex), and that same year, he also was on the board of directors of Bendix. Both of those companies made brake shoes, and they were competitors.

¶ 24 From 1959 to 1963, John D. Biggers was on the board of directors of Bendix, and during that same period, he also was on the board of directors of Johns-Manville, another manufacturer of brake shoes.

¶ 25 Bendix, Abex, Johns-Manville, and indeed all brake-lining manufacturers were members of the Friction Materials Standards Institute (FMSI), a trade organization.

¶ 26 D. The Dusting Experiments at Saranac Laboratory

¶ 27 1. *A Proposal To Finance Dusting Experiments, the Results of Which Were To Be the Property of the Financing Corporations*



¶28 Vandiver Brown was general counsel of Johns-Manville, and because Johns-Manville not only used asbestos in its own brake linings but also mined asbestos and sold it to other manufacturers, Johns-Manville was interested in finding out more about an occupational disease, asbestosis. To that end, Brown contacted LeRoy U. Gardner, a pathologist and the director of The Saranac Laboratory for the Study of Tuberculosis, located in the village of Saranac Lake, New York. On November 20, 1936, Brown wrote Gardner a letter (plaintiffs' exhibit No. 309) urging him to "commence the contemplated experiments with asbestos dust for the purpose of determining the cause and effects of asbestosis."

¶29 "Asbestosis" is "a pneumoconiosis due to asbestos particles." Merriam-Webster's Collegiate Dictionary 66 (10th ed. 2000). "Pneumoconiosis" is "a disease of the lungs due to inhalation of dust, characterized by inflammation, coughing, and fibrosis." The New Oxford American Dictionary 1307 (2d ed. 2005). "Fibrosis" is "the thickening and scarring of connective tissue, usually as a result of injury" (The New Oxford American Dictionary 623 (2d ed. 2005)), or, as another dictionary defines it, "a condition marked by the increase of interstitial fibrous tissue" (Merriam-Webster's Collegiate Dictionary 431 (10th ed. 2000)). In short, asbestosis is a form of pneumoconiosis, a lung-scarring caused by inhaling asbestos fibers. Obviously, since the word "asbestosis" had been coined at the time Brown wrote his letter to Gardner, it was known in the 1930s that breathing asbestos fibers caused this inflammatory, fibrous disease of the lungs. Brown and Gardner thought, however, that the subject of asbestosis merited further exploration.

¶30 It appears from Brown's letter that he and Gardner had previously discussed using the "dusting chambers" of Saranac Laboratory "for further experimentation with asbestos dust"—that is, experimentation on animals—and that the only question had been how the experiments would be

financed. In his letter of November 20, 1936, Brown laid the money question to rest. He informed Gardner that in a meeting the day before, not less than 8 and possibly 10 or more corporations expressed a willingness to finance the proposed experiments. It was understood, Brown wrote, that the experiments would take approximately 3 years and that they would cost \$5,000 a year.

¶ 31 As Brown stated in his letter, he anticipated that these experiments would shed light on "the cause and effects of asbestosis." Specifically, he anticipated that the experiments would answer the following questions:

(1) What concentration of dust is necessary to produce the fibrosis of the lungs which is designated as asbestosis.

(2) Whether exposure to asbestos dust will produce asbestosis without the existence of previous infection and whether the X-ray changes found in advanced human asbestosis can be reproduced in animals without infection.

(3) Whether the fibrosis produced by asbestos is of the progressive type, that is, will the fibrosis increase (once it is started) after exposure to the dust has ceased.

(4) Whether the fibrosis resulting from the exposure to asbestos dust is occasioned by the silicon content of the asbestos or by its fibrous structure.

(5) Whether the presence of 'asbestos bodies' has any diagnostic significance."

So, the purpose of the dusting experiments would be to answer various questions about asbestosis,

including the mechanics of its causation and under what conditions it progressed.

¶ 32 Brown and Gardner had previously agreed that whatever the answers to these questions turned out to be, the answers would be the sole property of the companies that had paid for the experiments. The results of the experiments would belong exclusively to the financing corporations, which would decide whether and to what extent to publicize the results. Brown wrote:

"It is our further understanding that the results obtained will be considered the property of those who are advancing the required funds, who will determine whether, to what extent and in what manner they shall be public. In the event it is deemed desirable that the results be made public, the manuscript of your study will be submitted to us for approval prior to publication.

I shall appreciate your advising me if the foregoing accurately expresses the proposition you had in mind."

¶ 33 Those terms were acceptable to Gardner. On November 23, 1936, he wrote back to Brown (plaintiffs' exhibit No. 310): "The Saranac Laboratory agrees that the results of these studies shall become the property of the contributors and that the manuscripts of any reports shall be submitted for approval of the contributors before publication."

¶ 34 2. *The "Memorandum of Agreement," Signed By the Financing Corporations*

¶ 35 On November 20, 1936, nine corporations in the asbestos business signed a "Memorandum of Agreement" (plaintiffs' exhibit No. 100), in which they promised to underwrite the experiments with asbestos dust to be performed by Gardner at Saranac Laboratory. The signatories were American Brakeblok, a division of American Brake Shoe Company (now known

as Abex); Asbestos Manufacturing Company; Gatke Corporation; Johns-Manville Corporation; Keasbey & Mattison; Raybestos-Manhattan, Incorporated; Russell Manufacturing Company; UNARCO; and United States Gypsum Company.

¶ 36 In correspondence dated February 27, 1937 (Abex exhibit No. 606), Brown sent each of the nine corporations a copy of the "Memorandum of Agreement"; a copy of his letter of November 20, 1936, to Gardner; and a copy of Gardner's reply of November 23, 1936.

¶ 37 3. *Gardner's "Outline of Proposed Monograph on Asbestosis"*

¶ 38 On February 24, 1943, Gardner wrote Brown a letter (plaintiffs' exhibit No. 400A), announcing that he had "at last succeeded in analyzing most of [the] voluminous experimental data and assessing the results." (In the interim between 1936 and 1943, he had sent Brown several progress reports.) Gardner explained, apologetically, that the task of "preparing microscopic sections and chemically analyzing the tissues on more than 800 animals" had proved so daunting that he had not yet had time to write a full report of his experiments. For the benefit of the contributors, however, he had written an annotated outline of a proposed monograph, which was enclosed. It was entitled "Outline of Proposed Monograph on Asbestosis" (plaintiffs' exhibit No. 400A (enclosure of the cover letter)).

¶ 39 Part I of the outline was entitled "Human Asbestosis," and item 3 of part I discussed, in a tentative and qualified way, some possible complications of asbestosis, including lung cancer. Item 3 read as follows:

*"3. Complication of Asbestosis*

(a) Susceptibility to Infection

(i) Tuberculous-High

incidence in English experience not duplicated in surveys of American Plants.

Available autopsy statistics deceiving because of selection of material.

(ii) Non-Tuberculous—The same reason probably applies should be checked by analysis of absenteeism among asbestos workers.

(iii) Cancer of Lung Ditto, but there are now on record 10 cases of lung cancer in asbestos workers. Compared to the total number of autopsies on asbestosis, this incidence is excessive. No such frequency has been discovered in silicosis or other forms of pneumoconiosis except in the Schneeberg miners of radioactive ores. The evidence is suggestive but not conclusive that asbestosis may precipitate the development of cancer in susceptible individuals."

¶ 40 By "ditto," in his annotation on lung cancer, Gardner appeared to refer back to item 3(a)(i), in which he commented on the "deceiving" selectivity of material in the human autopsy statistics. Thus, although the "10 cases of lung cancer in asbestos workers" were "suggestive" because 10 cases seemed high compared to other occupations in which workers contracted pneumoconiosis, this statistical evidence was, in Gardner's view, problematic because of its possible selectivity and also because the high incidence of supposedly asbestos-related cancer in the United Kingdom had not been found among asbestos workers in the United States.

¶ 41 All the same, Gardner's curiosity was piqued by his discovery of "malignant tumors" in the lungs of 8 of the 11 mice that he had exposed to asbestos fibers for 15 to 24 months in the dusting experiments. Nevertheless, he considered his cancer results with mice to be "suggestive but not conclusive." In Part II of his outline, entitled "Experimental Asbestosis," he pointed out the flaws in his unintentional cancer experiment, including the use of different strains of mice that were not of the same age. He wrote:

"(iii) *Cancer of Lungs*

No experiments were particularly designed to elucidate this point but certain evidence suggests that asbestosis may actually favor development of tumors in susceptible species.

(1) In guinea pigs, rabbits, rats, cats and dogs  
lung tumors are rare.

(2) When these species were subjected to 2 to  
3 years inhalation of asbestos dust, the incidence of  
lung tumor was not increased.

(3) Some strains of white mice do develop tumors without apparent cause.

(4) Such a strain of white mice was unintentionally used in three inhalation experiments with asbestos.

(5) Of 11 mice inhaling *long fibre* asbestos for 15 to 24 months 8 developed malignant tumors in their lungs and 8 of them had tumors in other organs. *The incidence rate 81.8% is excessive.*

(6) Of 22 mice inhaling *short fibre* asbestos for not longer than 12 months only 3 developed lung tumors. *Rate 13.8%.*

(7) As controls, we have only the experience with mice in other dust experiments.

*For short periods*, there were 51 mice exposed to 4 other kinds of dust for 10 to 12 months. Incidence of lung tumor 1.9%.

*For long periods*, there were 143 mice exposed to 4 different kinds of dust, including pure quartz, 23 to 31 months. For all this group of mice the average incidence of lung tumor was 18.8%: the highest rate (25%) was in a subgroup exposed to flint

dust.

Thus the incidence of lung cancer in the *long* fibre asbestos mice was over 16 times the average for mice inhaling other dusts for comparable periods and over 3 times the maximum for any other group. Mice exposed to the practically inert *short* fibre asbestos showed fewer lung tumors although 7 times more than those in short exposures to other dusts.

These observations are suggestive but not conclusive evidence of a cancer stimulating action by asbestos dust. They are open to several criticisms. The strain of mice was not the same in the asbestos experiment as in many of the other cited; apparently the former were unusually susceptible. Not enough animals survived in the dust for longer than 15 months apparently necessary to produce many tumors. There were no unexposed controls of the same strain and age and no similar controls exposed to other dusts. It is hoped that this experiment can be repeated under properly controlled conditions to determine whether asbestos actually favors cancer of the lung." (Emphases in original.)

Item iii(5) is a little puzzling because if 8 out of 11 mice developed cancer, the incidence rate would have been 72.7%, not 81.8%. (If 9 of the 11 mice had developed cancer, the incidence rate would have been 81.8%.) In any event, as Gardner explained, in order for the experiment to have any validity as evidence of a relationship between cancer and asbestos, the exposed mice and the



unexposed mice would have had to be of the same genetic strain and the same age. Such controls were absent—because none of the experiments had been designed to study carcinogenic effects.

¶ 42 This was not to say that Gardner considered the suggested relationship between cancer and asbestos to be unworthy of further attention. He merely thought that the question needed further study before he put the subject in a published scientific report. He wrote to Brown: "The question of cancer susceptibility now seems more significant than I had previously imagined. I believe I can obtain support for repeating it from the cancer research group. As it will take two or three years to complete such a study, I believe it would better be omitted from the present report." Consequently, Gardner advised Brown that "the present report," that is, his report on the dusting experiments financed by the corporations, should not try to take up the question of a relationship between asbestos and cancer, because two or three years of further experiments, specifically designed for cancer, would shed better light on that question.

¶ 43 4. *Gardner's Application to the National Cancer Institute*

¶ 44 On March 15, 1943, Gardner wrote to Dr. Ludwig Hektoen, the chairman of the Committee on Cancer Research at the National Cancer Institute in Bethesda, Maryland, requesting funds for research. In his letter (Abex exhibit No. 641), Gardner applied for a grant to conduct dusting experiments at Saranac Laboratory to determine whether asbestos fibers caused cancer.

¶ 45 In the first paragraph of his letter to Hektoen, Gardner summarized the bases of his application, namely, (1) his discovery of lung cancer in 81.2% of a group of 11 mice that he had exposed to asbestos dust and (2) the 10 reports of pulmonary cancer in the United Kingdom. He wrote:

"In analyzing the results of a recently completed inhalation

experiment on asbestosis, I was startled to discover that a small group of 11 white mice that had been inhaling asbestos dust from 15 to 24 months showed an excessive incidence (81.2%) of pulmonary cancer. This experience was quite at variance with the results in all our previous long-term dust exposures which were summarized and published by Vorwald and Karr in the American Journal of Pathology, January 1938. I would have attached little significance to this recent finding because of the small number of animals involved, but for the fact that the literature now contains some 10 reports of pulmonary cancer in cases of human asbestosis. Even these I have heretofore attributed to selection of material as we have found no cases of pulmonary tumor in surveys of employed asbestos workers. However, Gloyne, Merewether and other English observers contend that asbestos has a specific carcinogenic action on the lungs. The question is of considerable importance in industrial medicine because of the associated compensation aspects and from a scientific point of view, it interests me a great deal."

¶46 The quoted paragraph seems to amplify the "ditto" in Gardner's outline of a proposed monograph: although researchers in the United Kingdom had reported 10 cases of lung cancer among people afflicted with asbestosis, no such cases were known among asbestos workers in the United States, leading Gardner to wonder if the 10 cases from the United Kingdom represented the selective use of statistics. On the other hand, the nine tumorous mice in his dusting experiments led

him to take the reports from United Kingdom more seriously than he otherwise might have been inclined to do, and he argued that further experiments, designed specifically for cancer, would be worthwhile.

¶ 47 Gardner frankly admitted that for a number of reasons, the experiments he had conducted thus far were unenlightening with respect to cancer—as he put it, "the results with asbestos mean[t] nothing." None of the experiments had been designed to study the carcinogenic effects of asbestos, 11 mice were too small of a group to be meaningful, and "the strain of mice kept in the laboratory \*\*\* [had] changed from time to time by importation of new stock," some of which was especially susceptible to cancer. All the same, he believed that "[a] decisive answer to this question would be of real practical value," and he was confident that the answer could be discovered at Saranac Laboratory.

¶ 48 To verify his "accidental discovery of possible carcinogenic action of fibrous asbestos," Gardner wanted "to repeat the mouse inhalation experiments under properly controlled conditions." He proposed conducting the experiments in this manner:

"I would breed a large number of cancer susceptible mice, splitting each litter into three groups and keep a record of the ages of each. One third of the offspring would be kept in a normal atmosphere as a control; another third would be exposed to quartz dust as a second control and the other third would be exposed to asbestos dust. We would attempt to obtain 500 mice for each group. The exposures would apparently have to be continued for 15 to 24 months. Our routine in such experiments provides for dusting 8 hours a day, 6 days

a week."

Considering that the asbestos companies had already financed his experiments with asbestos dust for 7 years at a total cost of \$30,000, Gardner did not feel he could ask them for more money. Therefore, he was applying to the National Cancer Institute for a grant of \$10,000 to cover the cost of two years of experiments on the possible carcinogenic effect of asbestos fiber.

¶ 49 On January 8, 1944, the National Cancer Institute held a meeting, in which the Committee on Cooperation in Cancer Research considered Gardner's application. The record contains a transcript of the meeting (Abex exhibit No. 652). All of the persons speaking in the transcript are doctors. (They are identified in the transcript only by last name, with a "Dr." preceding their names.)

¶ 50 The committee agreed that one of its members, Dr. Murphy, had "more experience with pulmonary cancer in mice than any other laboratory," and so the committee asked him what he thought of Gardner's application. Murphy thought that \$10,000 was "bringing a very big gun to bear on a subject that probably [would] be settled in a very short time with a very slight expenditure of money"—say, \$20 or \$30. Some strains of mice, Murphy explained, were so susceptible to cancer that no great sum would be required to make them cancerous. He remarked: "I think it is quite likely that you can induce cancer of the lung in mice in the strains that have genetic tendency for cancer of the lung. It is very easy to do."

¶ 51 The lack of controls, genetic and otherwise, caused the committee to look askance on Gardner's application. A "control" is "a group or individual used as a standard of comparison for checking the results of a survey or experiment." The New Oxford American Dictionary 370 (2d ed. 2005). Because the tumorous mice lacked any standard of comparison, the committee balked at the

suggestion that Gardner's results were any evidence whatsoever of a relationship between asbestos and cancer—not even evidence to merit further research, at least by Saranac Laboratory.

¶ 52 For the tumors to have any significance at all, it would have been necessary to compare dusted mice with undusted mice of the same genetic strain. Murphy commented:

"DR. MURPHY: But they were not using genetically controlled animals, as far as I know.

DR. RHOADS: Doesn't it boil down to this very pertinent comment of Dr. Murphy's? What are the facts regarding the control of these animals reported by Gardner as the basis for his request?

DR. MURPHY: You notice he calls it an *uncontrolled* experiment, so I doubt if he knows the normal lung tumor rate for his animals. He gives 18 per cent in 143 animals. It is very hard to get a strain of mice that gives much lower than 3 or 4 percent, and we have some strains that give as high as 50 to 80 percent normally. I wouldn't consider that figure, uncontrolled, as of any significance whatever, unless I knew the strain of the animals, knew it was a low strain; and of course that is the whole danger in having a project of this kind carried on in an institution where they have absolutely no experience with animals in planning cancer experiments. It may be well worth doing, but I doubt if this is quite the way to do it.

DR. SPENCER: After you establish cancer in certain strains of inbred mice, and maybe others are more resistant or less resistant,

you still can't reason from that to human beings, from such an experiment to human beings. Isn't that true?

DR. MURPHY: I think so." (Emphasis in original.)

In other words, some genetic strains of mice developed cancer as much as 80% of the time in normal conditions, and Gardner admitted using some cancer-susceptible mice, a circumstance that made it even more problematic to extrapolate his results to humans. Thus, it was Dr. Murphy's opinion—and the other members of the committee agreed with him—that in Gardner's uncontrolled experiment, finding tumors in 8 out of 11 mice was utterly devoid of significance.

¶ 53 Another problem, in addition to the lack of controls, was the smallness of the group of mice in question (and in his application, Gardner admitted this problem as well). One of the committee members said:

"DR. DYER: A comment from someone who knows very little about this field: Eleven white mice are not very impressive in other lines of experimentation.

DR. MURPHY: You see, he uses the larger number, 143.

DR. DYER: That was on the silicosis control. He reports that 'Among 143 mice exposed to similar periods to 4 different kinds of free silica dust the incidence of such tumors averaged 18.8 per cent.'

DR. MURPHY: I see. I misread that. I thought that was still asbestosis, but apparently not. But he speaks of uncontrolled experiment.

DR. DYER: An incidence of 81.8 per cent in 11 white mice

is not very impressive.

DR. MURPHY: It doesn't mean anything.

DR. DYER: Any other comments on this?

DR. MOORE: Speaking from a clinical point of view, from contact with a number of cases of pulmonary carcinoma, it must be a very minute factor that asbestos would have in producing this disease, very small. That is a clinical observation.

DR. MURPHY: I think it is evident on the surface that asbestos workers should be protected from exposure to dust.

DR. HEKTOEN: On general principles.

DR. MURPHY: On general principles. You know you can produce a fibrosis, and the possibility of occasional cancer must also come into the picture. But I don't believe that this information would be of any tremendous value."

Accordingly, the committee voted to deny Gardner's application for a grant, because finding tumors in 81.8% of 11 mice, in uncontrolled conditions, meant nothing.

¶ 54           5. *Gardner's Request To Review the X-Ray Films of Johns-Manville*

¶ 55           On April 8, 1946, Gardner wrote a letter (Abex exhibit No. 670) to J.P. Woodard of Johns-Manville Corporation, returning an article that Woodard had lent him, "the copy of Dr. Heuper's paper on Cancer in its Relation to Occupation and Environment." Evidently, Woodard had requested Gardner's opinion as to whether there were any relationship between asbestos and cancer. In his letter in reply, Gardner expressed doubt that there was any such relationship, despite his

unintentional cancer experiment.

¶ 56 Gardner still believed, however, that the question deserved looking into, and he suggested to Woodard that one way of doing so would be to review all the X-ray films that Johns-Manville had taken of its employees. Gardner wrote:

"It is well known that asbestosis has been mentioned as one of the causes of pulmonary cancer because of the fact that there are now on record some twenty-three cases of coincidence of the two conditions. I am not at all sure that selection has not played a large part in these publications. Everybody is looking for a cause of cancer, and whenever even a suspicious occupational history is obtained, the doctor is likely to publish his case with suggestions that some dust or fume has been the cause. However, the number in the case of asbestosis is sufficiently great to be impressive. I, myself, have felt that this notion is erroneous, since examination of films of persons *employed* in the asbestos industry has, to my knowledge, not shown any excess of carcinoma of the lung. Dr. Vestal concurs in this idea; nevertheless, the notion prevails in medical circles.

It is to collect and publish more reliable information on this and other little appreciated phases of the asbestos problem that I hope we may have opportunity to review all films of Johns-Manville employees. Somebody should do this for the asbestos industry in the United States. I believe that 'somebody' should be outside of the



industry, as obviously it would then carry more weight. I hope, before I die, the opportunity may be afforded us.

There is one other phase of the subject, however, that I believe deserves consideration. In one of my reports to your group, I noted that there was an unusually high incidence of cancer of the lung in white mice which had been exposed to asbestos dust. This species of animal does not develop asbestosis, largely, I think, because of the air passages too small to permit inhaling of fibrous asbestos. Nevertheless, we did find over 80% of mice exposed to asbestos showing tumors of the lung, and only some 15% or 20% of those exposed to other dusts showed tumors of this nature. These findings represented a summary of all our experience with mice in asbestos dust. Experiments were not done with the purpose of demonstrating cancer. No attempt was made to control the observation. No care was taken to select a strain of mice that was or was not susceptible to tumor. Cancer has not developed in any other species of animal used in the experiment." (Emphasis in original.)

The record does not appear to reveal Johns-Manville's response, if any, to Gardner's request to review its X-ray films.

¶ 57 Gardner died in October 1946.

¶ 58 6. *Saranac Laboratory's Final Report on the Dusting Experiments*

¶ 59 On September 30, 1948, some two years after Gardner's death, Saranac Laboratory

issued to Johns-Manville a 42-page typewritten report of his dusting experiments, a report entitled "Asbestosis: Experimental Studies" (plaintiffs' exhibit No. 320A). Basically, the report reached four conclusions, as stated in its abstract. First, asbestosis was caused by the structure of asbestos fibers instead of by their chemical composition, as evidenced by two facts: (a) long asbestos fibers caused damage to animal tissue whereas short fibers (of the same chemical composition) were relatively inert, and (b) "[a] characteristic tissue response [could] be produced by non-siliceous as well as siliceous fibrous materials." Second, inhaling asbestos fibers did not significantly alter the course of experimentally induced tuberculosis in animals. Third, once an asbestos body formed around an inhaled asbestos fiber, the asbestos body prevented any further damage to the tissue by that fiber, limiting the progression of the reaction once exposure to asbestos ceased. Fourth, aluminum did not prevent the irritation of tissues by asbestos fibers, the way it prevented irritation by quartz particles.

¶ 60 In addition, in part X, under the heading of "Inhalation Experiments," the report mentioned the tumorous mice—nine of them, according to this account. The report said that 9 of the 11 white mice that Gardner used in his dusting experiments developed tumors in their lungs and that the tumors "usually" were "adenomatous," or benign. (There appears to be a contrast here with (1) Gardner's "Outline of a Proposed Monograph," in which he spoke only of "malignant tumors," and (2) his application to the National Cancer Institute, in which he spoke only of "pulmonary cancer.")

This final report by Saranac Laboratory stated:

"74. *Mice.* Out of 20 white mice used in this experiment, 11 lived a year or more in dust and died or were killed without showing an appreciable degree of pulmonary infection.

75. *Rate and Type of Reaction.* Reaction was limited to

phagocytosis by mononuclear cells. Usually these were widely scattered through the air spaces; a limited number were grouped about the terminal bronchioles producing some thickening of their walls. There was no suggestion of fibrosis. The striking feature of the experiment was that 9 out of the 11 mice (82 per cent) exposed to dust for a year or more showed pulmonary tumors, usually adanomaous [*sic*] in type. These lesions did not contain dust or asbestosis bodies.

Numerous asbestosis bodies were observed in animals killed late in the experiment. Thus, these animals exhibited asbestosis bodies without fibrosis."

"Phagocytosis" is the process by which a cell engulfs or incorporates a solid particle. The New Oxford American Dictionary 1274 (2d ed. 2005). Hence, the Saranac report appears to be saying that mononuclear lung cells, that is, lung cells with a single nucleus, engulfed some of the asbestos fibers that the mice had inhaled, forming asbestos bodies. The report further observes that 82% of the mice (9 out of 11) developed lung tumors, which "usually" were benign (resembling an "adenoma," a benign tumor of a glandular structure (The New Oxford American Dictionary 19 (2d ed. 2005)).

¶ 61 The adverb "usually" might be understood as implying that a minority of the tumors were malignant (as opposed to "adenomatous"), but as we learn later on in the report, in section 92, it actually is unclear that any of the tumors were malignant, *i.e.*, cancerous. Section 92, entitled "Neoplasm" ("a new growth of tissue serving no physiological function" (Merriam-Webster's

Collegiate Dictionary 777 (10th ed. 2000)), reads as follows:

"92. *Neoplasm.*

No specific experiment was conducted to determine whether the inhalation of asbestos favors the development of neoplastic disease but certain observations on this subject were recorded in the outline of the proposed monograph on asbestos submitted by the late Dr. L. U. Gardner in February 1943. In it he called attention to the high incidence of lung cancer among mice inhaling long-fiber asbestos. In his experimental notes, however, he referred to these lesions as adenomas.

There is an important distinction between adenoma and cancer which should be made clear. A cancer is a tumor, or neoplasm, capable of local invasion and destruction of tissue, which can distribute cells through the lymphatic or blood stream to produce isolated foci, from which new tumors develop. This phenomenon of dissemination is known as metastasis and any tumor which exhibits it is a malignant growth, of which cancer is one type. An adenoma, on the other hand, is a so-called benign or non-malignant tumor (neoplasm) which may or may not be capable of local invasion but which does not metastasize.

In order to clarify the exact nature of these lesions the pathological material is being carefully examined. Since it is felt

desirable to have the benefit of Dr. Vorwald's judgment, a review of the data on this subject is being postponed until after his return from Europe. Rather than delay the entire report, further discussion will be reserved for a supplement to be issued later."

¶ 62 The record appears to contain no such supplement to the Saranac report of September 30, 1948, and we are aware of no evidence that such a supplement ever was written. So, Gardner's cancer findings remain shrouded in ambiguity. According to section 92, which we have just quoted, there is a material contradiction between Gardner's outline of a proposed monograph (plaintiffs' exhibit No. 400A) and his "experimental notes," that is, the notes in which he recorded his experimental observations. On the one hand, in his outline of a proposed monograph (and also in his application to the National Cancer Institute), Gardner referred to the tumors as cancer. On the other hand, in his experimental notes, he referred to them as adenomas. Given this contradiction, Saranac Laboratory saw the need to "carefully examine[]" the "pathological material" (the slides of animal tissue) in order to "clarify the exact nature of the lesions" that Gardner had observed. This clarification was to appear in a supplement—which does not appear to be in the record, if the supplement ever were written.

¶ 63 In a deposition on May 22, 1996 (in a different case), Philip C. Pratt, a pathologist, testified that he was the one who wrote section 92, in which the supplement was promised, but in the deposition, he never was asked what ever came of this supplement. He testified, however, that he did review the pathology slides of Gardner's mice in the 1940s, when he was employed at Saranac Laboratory and was awaiting the return of its director, Edward J. Vorwald, from service in World War II. Although Pratt was not asked what he had found in his review of the pathology slides, he

testified that from a scientific point of view, omitting the discussion of cancer from the published version of the Saranac report, in 1951, was the correct thing to do.

¶ 64

*7. An Invitation to a Luncheon*

¶ 65 On October 27, 1948, Brown wrote a letter (plaintiffs' exhibit No. 360) to the financing corporations, including Abex (*i.e.*, American Brakeblok), and with his letter, he enclosed part I of a report from Saranac Laboratory entitled "Asbestos Pneumoconiosis." Brown wrote: "With the request that you treat it with the utmost confidence and make it available to no one outside your organization, I am enclosing what purports to be 'Part I' of a report by the Saranac Laboratory entitled 'Asbestos Pneumoconiosis.'"

¶ 66

The record does not appear to contain a copy of "Asbestos Pneumoconiosis," part I or otherwise. This report appears to be distinct from the other two reports in the record. Part I of Gardner's outline of a proposed monograph (plaintiffs' exhibit No. 400A) has a different title, "Human Asbestosis"--so, "Asbestos Pneumoconiosis" must be a different report from Gardner's outline. Also, the report that Saranac issued on September 30, 1948 (plaintiffs' exhibit No. 320A), has a different title, "Asbestosis: Experimental Studies"--so, "Asbestos Pneumoconiosis" must be a different report from that one, too. It seems unlikely that "Asbestos Pneumoconiosis" was an earlier version of "Asbestosis: Experimental Studies," because Saranac issued "Asbestosis: Experimental Studies" on September 30, 1948, and it would make no sense for Brown to discuss an earlier draft on October 27, 1948; surely it was the final draft, not an earlier draft, that was being considered for publication.

¶ 67

In his letter, Brown anticipated that Saranac Laboratory would want to publish "Asbestos Pneumoconiosis," and he said "it would likewise appear desirable from the point of view

of the industry that the report be published provided some of the speculative comments are omitted." It is unclear what these "speculative comments" were, and it is unclear why Brown was not discussing, instead, the potential publication of "Asbestosis: Experimental Studies" (plaintiffs' exhibit No. 320A). In any event, Brown recommended that, "preliminary to a discussion with representatives of Saranac," representatives of the financing corporations meet for a luncheon on November 11, 1948, in Johns-Manville's boardroom, to discuss whether "Asbestos Pneumoconiosis" should be revised before publication, presumably to remove the "speculative comments," whatever they were. Brown wrote: "If you are unable to have a representative attend, it would be desirable for you to designate some representative of another company to act for you in connection with decisions that will have to be made."

¶ 68 On November 8, 1948, W.T. Kelly, Jr., executive vice-president of American Brakeblok (now Abex), replied by letter to Brown (plaintiffs' exhibit No. 360A). Kelly wrote that although Dr. L.E. Hamlin of the company's medical department would like to attend the luncheon, prior commitments prevented him from doing so. Therefore, with Hamlin's concurrence, Kelly requested Brown to act for American Brakeblok in connection with any decisions that had to be made in the luncheon meeting.

¶ 69 While authorizing Brown to act in American Brakeblok's behalf, Kelly did not leave him wholly without guidance. Kelly enclosed Hamlin's typewritten comments on part I of "Asbestos Pneumoconiosis." In his comments, Hamlin opined that, contrary to the undercurrent of anxiety that he detected in Brown's letter, part I of "Asbestos Pneumoconiosis" posed no danger of legal liability. Hamlin wrote:

"I gain the impression from Mr. Brown's letter that he is

concerned with possible repercussions from the legal point of view but I must confess I do not see anything in the report in its present form which need cause undue concern. Similar reports are frequent in the literature not only in this country but also from abroad [*sic*].

Certain implications have been made in the report such as that referring to the high incidence of pneumonia among the experimental animals and the suggestion that asbestos dust might have some degree of responsibility for such a development, but these are explained and discounted in the succeeding part [*sic*]. Perhaps these implications might be modified somewhat pending further factual data.

I feel that since most of the basic facts with the exception of the more detailed studies mentioned in the report are already known and have been published in other studies on asbestos, no unfavorable reaction need be anticipated. I think the idea of reviewing the manuscript prior to publication is a good one in order to achieve mutual understanding with Saranac, but I feel that this can be accomplished quite satisfactorily without my presence."

¶70 Because "Asbestos Pneumoconiosis" does not appear to be in the record and because, in his letter of October 27, 1948, Brown does not specify what he regards as the "speculative comments" in the report, it is unclear what Hamlin meant when he remarked that "[s]imilar reports are frequent in the literature not only in this country but also from [abroad]." The immediate context, though, of the "similar reports" comment is "the high incidence of pneumonia among the



experimental animals and the suggestion that asbestos dust might have some degree of responsibility for such a development." In any event, by "similar reports," Hamlin could not have meant the eight or nine tumorous mice, because in 1948, there apparently were no published reports of asbestos-induced cancer in laboratory animals, judging by what Gardner had been saying in his correspondence and judging by the testimony of plaintiffs' own expert, Barry Castleman.

¶ 71 Castleman was an expert in the history of American and European medical research on asbestos, and one of the attorneys for plaintiffs, James Wylder, asked him:

"Q. Now, in terms of continuing articles about asbestos, there continue to be articles about asbestos and cancer going into the forties, right?

A. Sure.

Q. Were there some, some articles that said asbestos was a cause of cancer?

A. Yes.

Q. Were there some people who were writing in the forties that asbestos, you know, might not be a cause of cancer?

A. There were a few, but most—by the forties, most of the articles tended to be positive in making an association.

Q. And in terms of any of the articles that had appeared, by the mid forties, had any of them involved long, lengthy animals experiments sponsored by the industry.

A. No."

As Gardner had written in his correspondence in the 1940s, the human statistics (which he thought might have been deceiving in their selectivity) were not yet corroborated by animal experimentation. See Philip E. Enterline, *Asbestos and Cancer*, in *Epidemiology and Health Risk Assessment* 82-83 (Leon Gordis ed., 1988) ("Animal studies using asbestos date back to the 1930s, but, for the most part, they were considered to be negative for cancer." It was not until 1967 that "the first positive animal experiment was reported.").

¶ 72            8. *The Decision by the Financing Corporations To Omit All References to Cancer in "Asbestos Pneumoconiosis," Should the Report Be Published*

¶ 73            On November 12, 1948, Brown wrote a letter (plaintiffs' exhibit No. 361) to Kelly summarizing the decision the financing corporations had reached in the luncheon on November 11, 1948. According to Brown, they had agreed with Hamlin's typewritten comments regarding pneumonia. Brown said: "[I]t was the consensus that his judgment was correct concerning the references to pneumonia among the experimental animals. Accordingly, we will not request that this be deleted but merely that it be modified somewhat with the view of placing more emphasis on the factors which made it doubtful whether the disease developed as a result of dust exposure."

¶ 74            It emerges in Brown's letter, however, that pneumonia was not the only concern of the financing companies. Brown wrote:

"It was the unanimous opinion, however, that the reference to cancer and tumors should be deleted and this is a point we will insist upon for the following reasons:

(1) The experiments were not directed towards determining the incidence, if any, of cancer as a result

of asbestos dust exposure.

(2) Dr. Gardner indicated prior to his death that he believed this aspect should be made the subject of a separate study, which would take from two to three years.

(3) Dr. Gardner also indicated that he believed the question of cancer susceptibility should be omitted from the report. This statement is contained in his letter to me of February 24, 1943 with which he enclosed his outline of a proposed monograph on asbestosis.

(4) It also appears from Dr. Gardner's outline that certain strains of white mice develop tumors without apparent cause and that 'such a strain of white mice was unintentionally used in three inhalation experiments with asbestos.'"

Thus, although the record does not appear to contain a copy of "Asbestos Pneumoconiosis," one can infer, from Brown's letter of November 12, 1948, that "Asbestos Pneumoconiosis" discussed not only pneumonia in experimental animals but also the tumorous mice. The financing corporations chose to follow Gardner's advice by not publishing the references to cancer or tumors found in the mice—and as their stated rationale for doing so, they cited the reasons Gardner had given.

¶75 After informing Kelly of this collective decision by the financing corporations, Brown

noted that he had retrieved all the copies of "this tentative and confidential report," *i.e.*, part I of "Asbestos Pneumoconiosis," except for the copy he had sent American Brakeblok. Although Brown realized that Hamlin preferred to keep his copy, Brown wished that Kelly "would prevail upon him to return it." Brown explained: "Everyone felt it would be most unwise to have any copies of the draft report outstanding if the final report is to be different in any substantial respect. The feeling of the representatives of the various companies was very emphatic on this point."

¶ 76            On November 16, 1948, Kelly replied to Brown (plaintiffs' exhibit No. 362): "Since we have the only stray copy of the tentative report I am asking Dr. Hamlin to return it directly to you." The record does not appear to reveal whether Hamlin ever did so.

¶ 77            9. *The Published Version of "Asbestosis: Experimental Studies"*

¶ 78            The Saranac report of Gardner's asbestos experiments, "Asbestosis: Experimental Studies" (plaintiffs' exhibit No. 320A), was published in the January 1951 edition of the American Medical Association Archives of Industrial Hygiene and Occupational Medicine (plaintiffs' exhibit No. 105). The published version of the report was entitled "Experimental Studies of Asbestosis," and it had three authors, listed in this order: Vorwald, a pathologist and the director of Saranac Laboratory, Thomas M. Durkan, a laboratory technician; and Pratt, who, as we have said, also was a pathologist. According to a footnote on the first page, "this paper present[ed] for the first time a complete survey of the entire experimental investigation [by Gardner]."

¶ 79            This published report omitted all references to tumors and malignancies in mice, and it also omitted section 92 of the typewritten report (plaintiffs' exhibit No. 320A), the section entitled "Neoplasms." Otherwise, the published report appears to be identical to the typewritten report.

¶ 80            10. *Castleman's Estimation of the Significance of the Tumorous Mice*

¶ 81 As we have noted, plaintiffs called Castleman as an expert witness. He described himself as "an independent consultant on toxic substances control." He had a bachelor's degree in chemical engineering, a master's degree in air-pollution control and environmental engineering, and a doctor of science degree in occupational and environmental health policy.

¶ 82 Wylder asked Castleman whether the article by Vorwald, Durkan, and Pratt would have had a catastrophic effect on the asbestos industry if it had included Gardner's observation of tumors in the mice. Wylder wanted to know if the eight or nine tumorous mice would have been "dynamite." He asked Castleman:

"Q. In a study funded by the industry at this point in time in [ ]47, that would have reported on cancer, excessive incidence of cancer from a reputable lab that the industry had sent money to and the fiber to, in your opinion, would that have been dynamite?

A. From the standpoint of establishing that, from the standpoint of confirming the human reports of asbestosis and lung cancer, I think it would have gone a long way to really sealing the acceptance of asbestos as a cancer causing substance in compensation of readers [*sic*] among other places."

So, in this testimony, Castleman appears to take the position that if the eight or nine tumorous mice had been disclosed in the January 1951 article in the American Medical Association Archives of Industrial Hygiene and Occupational Medicine, they would have been widely regarded as legitimate and persuasive evidence of a relationship between asbestos and cancer.

¶ 83 Later in his testimony, however, when explaining the benefits of animal

experimentation, Castleman mentioned the necessity of having adequate controls, including animals of the same genetic strain. Wylder asked him: "Why are animal experiments of benefit?"

Castleman answered:

"Well because you can—first of all you can see the pure effects of a single agent. You can expose the animals to this dust you want to test and you can have other animals from the same strain, in the same laboratory eating the same food, drinking the same water, and not having any confounding exposures to something else, you can control the conditions and you can see what the single risk factor does in terms of causing harm to a group of animals that you're testing."

¶ 84 Castleman did not explain how, in the absence of the controls he described, the tumorous mice "would have gone a long way to really sealing the acceptance of asbestos as a cancer causing substance." Nor did he explain how the representations of cancer would have been publishable with the apparent contradiction between Gardner's experimental notes and his reputed cancer findings unresolved. More to the point, perhaps, it was unclear what qualifications, if any, that Castleman had in the field of pathology and, more specifically, in cancer experimentation with mice. He apparently was not a medical doctor or a veterinarian.

¶ 85 E. Awareness of the Danger of Asbestos Carried Home on Clothing

¶ 86 According to Castleman, writers of books on industrial hygiene had long warned against carrying toxic dust from the workplace into the home. For example, in 1913, a book entitled *Safety* warned that toxic dust could be carried home on the clothing of workers. See William H. Tolman & Leonard B. Kendall, *Safety: Methods for Preventing Occupational and Other Accidents*

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[http://books.google.com/books?id=UIUaAAAAMAAJ&printsec=frontcover&dq=methods+for+preventing+occupational+and+other+accidents&hl=en&ei=n-odTp2-GYTFsQLY9PScCA&sa=X&oi=book\\_result&ct=result&resnum=1&ved=0CCkQ6AEwAA#v=onepage&q&f=false](http://books.google.com/books?id=UIUaAAAAMAAJ&printsec=frontcover&dq=methods+for+preventing+occupational+and+other+accidents&hl=en&ei=n-odTp2-GYTFsQLY9PScCA&sa=X&oi=book_result&ct=result&resnum=1&ved=0CCkQ6AEwAA#v=onepage&q&f=false).

¶ 87            To take another example, Castleman quoted a book from 1924 stating it was "desirable in all dusty occupations that the workmen should take off their street clothing before beginning work" and that "this [was] absolutely essential when the work involve[d] exposure to poisonous dust." The book discussed the necessity of equipping the workplace with dressing rooms, washing facilities, brushes, soap, and individual towels, remarking that "[i]n most of the civilized countries statutory provisions have been made for these sanitary requisites, in all establishments in which poisonous [dusts] [were] manufactured or used." See George M. Kober, *Etiology & Prophylaxis of Occupational Diseases*, in *Diseases of Occupation and Vocational Hygiene* 415, 443 (George M. Kober & William C. Hanson eds., 1916) (in which the quoted text was earlier p u b l i s h e d ) ,    a v a i l a b l e    a t  
[http://books.google.com/books?id=I8pKAAAAMAAJ&pg=PA443&dq=desirable+in+all+dusty+occupations&hl=en&ei=VGzVTfiOJZKutweXn6z2Cw&sa=X&oi=book\\_result&ct=result&resnum=1&ved=0CEEQ6AEwAA#v=onepage&q=desirable%20in%20all%20dusty%20occupations&f=false](http://books.google.com/books?id=I8pKAAAAMAAJ&pg=PA443&dq=desirable+in+all+dusty+occupations&hl=en&ei=VGzVTfiOJZKutweXn6z2Cw&sa=X&oi=book_result&ct=result&resnum=1&ved=0CEEQ6AEwAA#v=onepage&q=desirable%20in%20all%20dusty%20occupations&f=false).

¶ 88            Of course, it is now known that asbestos fibers are a highly toxic dust that, even in minuscule quantities, can damage the lungs and cause cancer, including mesothelioma. Pleural mesothelioma is a cancer of the pleura, a thin membrane that lines the inside of the chest and that wraps around the lungs. It is a signature asbestos disease.

¶ 89 Castleman testified that the first reported case of mesothelioma from household exposure to asbestos was in 1960 and that "by 1964 there was little reason to doubt that asbestos was a cause of mesothelioma." Before 1960, according to Castleman, there were plenty of reports of lung cancer and pleural cancer among people exposed to asbestos, but those were industrial exposures (one case, from 1952, was an "office work exposure," *i.e.*, the treasurer of Asbestos Corporation).

¶ 90 Castleman admitted that "it wasn't until mesothelioma was starting to be widely recognized as an asbestos disease that there was even the possibility of really being able to see from a case or two that this problem [was] coming home." An attorney for Abex, Reagan W. Simpson, asked him:

"Q. Would you also agree that back in the 1950s there were very few and scattered reports of mesothelioma and that it wasn't widely recognized as an asbestos disease by people in the field of industrial medicine at that time?

A. Well it was recognized by some people in the field of industrial medicine, but not nearly as widely as it came to be in the 1960s.

Q. It wasn't widely recognized at that time, is that correct?

A. I guess you could use that expression. But again, these words mean different things to different people.

Q. Have you used those words?

A. Probably, especially in court.

Q. Would you agree with the statement that lung cancer which



was widely recognized as an asbestos disease was too nonspecific to enable the observation of a case or two to lead someone to think that this was something that had been brought home from the workplace as dust in the household and could cause someone to get cancer?

A. Yes.

Q. And would you agree that so until we had a signal tumor for asbestos disease that was sufficiently widely recognized as an asbestos disease, there wasn't really the possibility for these kinds of things to be documented in terms of actual cases reported in literature?

A. Right. People like Hueper had written about there probably being environmental cases of cancer from asbestos, but proving it up was hard until people started to realize that there was this one type of cancer that could be used to very nicely track the risk into the homes of the workers and into the community in a scientific way."

¶91 Castleman noted that in 1950 and 1955, Hueper wrote that "environmental exposure to asbestos air pollution in cities [could have been] a factor in the increasing rates of lung cancer in the general population." Reagan then asked Castleman:

"Q. And in his 1955 article he said that epidemiologically, asbestosis is required for lung cancer, didn't he?

A. He said that the epidemiological studies up to this time

have established that if people have asbestosis, they are candidates for occupational lung cancer. But the question was an open question as to what the risks were for people with less asbestosis exposure than sufficient to cause asbestosis."

¶ 92 In summary, then, Castleman conceded the following three points in his testimony. First, it was not until mesothelioma was widely recognized as a disease distinctively related to asbestos that it became possible to scientifically track the risk of asbestos into the homes of workers through the occurrence of mesothelioma among family members. Lung cancer was too nonspecific for that purpose. Second, in the 1950s, mesothelioma was not yet widely recognized as an asbestos disease, that is, a disease distinctive to, or specific to, asbestos. Third, in 1955, it was still an open question whether a person could suffer harm from breathing asbestos in quantities insufficient to cause asbestosis.

¶ 93

## II. ANALYSIS

¶ 94

### A. Standard of Review

¶ 95

#### 1. *The Existence of a Duty*

¶ 96 Whether the defendant owed the plaintiff a duty is a threshold question of law for the court to decide *de novo*. *Forsythe v. Clark USA, Inc.*, 224 Ill. 2d 274, 280 (2007); *Arnett v. Environmental Science & Engineering, Inc.*, 275 Ill. App. 3d 938, 940-41 (1995). Specifically, we ask whether the plaintiff and the defendant stood in such a relationship with one another that the law imposed upon the defendant an obligation to act reasonably for the sake of the plaintiff. *Forsythe*, 224 Ill. 2d at 280-81. Four considerations inform this inquiry: "(1) the reasonable foreseeability of injury, (2) the likelihood of injury, (3) the magnitude of the burden of guarding against the injury,

and (4) the consequences of placing the burden upon the defendant." *Forsythe*, 224 Ill. 2d at 281.

¶ 97                                    2. *Motion for a Judgment Notwithstanding the Verdict*

¶ 98                                    We review *de novo* the trial court's denial of a motion for a judgment notwithstanding the verdict. *McClure*, 188 Ill. 2d at 132. That means we apply the same standard that a trial court should apply, the *Pedrick* standard: "[V]erdicts ought to be directed and judgments *n.o.v.* entered only in those cases in which all of the evidence, when viewed in its aspect most favorable to the opponent, so overwhelmingly favors [the] movant that no contrary verdict based on that evidence could ever stand." *Pedrick v. Peoria & Eastern R.R. Co.*, 37 Ill. 2d 494, 510 (1967).

¶ 99                                    The supreme court has held that a ruling on a motion for a directed verdict " 'necessarily implicates the substantive evidentiary standard of proof that would apply at the trial on the merits.' " *Reed v. Northwestern Publishing Co.*, 124 Ill. 2d 495, 512 (1988) (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 252 (1986)). See also *Williams v. Chicago Osteopathic Health Systems*, 274 Ill. App. 3d 1039, 1047 (1995); *Ray Dancer, Inc. v. DMC Corp.*, 230 Ill. App. 3d 40, 50 (1992). Because the analysis under *Pedrick* is the same for a judgment notwithstanding the verdict as for a directed verdict (*Pedrick*, 37 Ill. 2d at 510), it must follow that the ruling on a judgment notwithstanding the verdict likewise implicates the applicable evidentiary standard of proof, such as proof by clear and convincing evidence.

¶ 100                                    As the supreme court has held, the evidence must be clear and convincing if a conspiracy is to be proved solely by circumstantial evidence. See *McClure*, 188 Ill. 2d at 140; *Tribune Co. v. Thompson*, 342 Ill. 503, 529 (1930). We will take this demanding standard of proof into account when reviewing the trial court's denial of defendants' motions for directed verdicts. See *Reed*, 124 Ill. 2d at 512.

¶ 101

## B. Duty

¶ 102 This court recently issued an opinion in *In re Estate of Holmes*, No. 4–10–0462, slip op. at 8 (Ill. App. June 22, 2011), in which this court held that in the period of 1962 to 1963, UNARCO owed no duty to warn of the danger of asbestos fibers carried home on an employee's clothing. The reason for our holding in *Holmes* is that in 1962 to 1963, it was not reasonably foreseeable that asbestos dust on a worker's clothes would be carried home and released into the air in quantities great enough to cause a household member to contract an asbestos-related disease. *Holmes*, slip op. at 8-9. The first epidemiological study showing an association between disease and asbestos fibers brought home from the workplace was published by Gerald Newhouse and Hilda Thompson in October 1964. *Holmes*, slip op. at 9. It follows, from *Holmes*, that UNARCO owed Juanita Rodarmel no duty during an earlier period, 1953 to 1956, to warn of the dangers of asbestos carried home on clothing.

¶ 103 In opposition to our holding in *Holmes*, plaintiffs perhaps would argue it has been well known, for over a century, that bringing "poisonous dust" from the workplace into the home is an unhealthy practice. As Kober put it in 1916, "in most of the civilized countries," statutory law required the employer to provide dressing rooms and washing facilities "when the occupation involve[d] exposure to poisonous dust," so that the "workmen" could wash away the dust and change from work clothing into street clothing before going home. Kober, *supra*, at 443.

¶ 104 What did Kober and similar authors mean, though, by "poisonous dust"? Many kinds of dust, breathed long enough and in sufficient quantity, can be poisonous, whereas in lesser quantities, they are innocuous—sand, for example. According to the Oxford English Dictionary, the first known use of the word "silicosis" was in 1891 (9 Oxford English Dictionary 45 (1970)), but

Kober, in 1916, surely did not mean to suggest that workers should be provided facilities for removing the sand from their persons before going home. By "poisonous dust," Kober and Tolman probably meant dust, such as arsenic, lead, or nitroglycerine powder, which was known to be poisonous in the amount that was carried home on workers' clothing or hands. See Thomas M. Legge, *Arsenic Poisoning, in Diseases of Occupation and Vocational Hygiene*, 3, 5 (George M. Kober & William C. Hanson eds., 1916), available at [http://books.google.com/books?id=I8pKAAAAMAAJ&printsec=frontcover&dq=Diseases+of+Occupation+and+Vocational+Hygiene&hl=en&ei=DaocTozyB8vFsQL4nLjECA&sa=X&oi=book\\_result&ct=result&resnum=1&ved=0CCsQ6AEwAA#v=onepage&q&f=false](http://books.google.com/books?id=I8pKAAAAMAAJ&printsec=frontcover&dq=Diseases+of+Occupation+and+Vocational+Hygiene&hl=en&ei=DaocTozyB8vFsQL4nLjECA&sa=X&oi=book_result&ct=result&resnum=1&ved=0CCsQ6AEwAA#v=onepage&q&f=false); Tolman, *supra*, at 250; George M. Kober, *Processes Involving Exposure to Poisoning From Chemicals, Including Benzol and Naphtha, in Diseases of Occupation and Vocational Hygiene*, 535, 559 (George M. Kober & William C. Hanson, eds., 1916), [http://books.google.com/books?id=I8pKAAAAMAAJ&printsec=frontcover&dq=Diseases+of+Occupation+and+Vocational+Hygiene&hl=en&ei=DaocTozyB8vFsQL4nLjECA&sa=X&oi=book\\_result&ct=result&resnum=1&ved=0CCsQ6AEwAA#v=onepage&q&f=false](http://books.google.com/books?id=I8pKAAAAMAAJ&printsec=frontcover&dq=Diseases+of+Occupation+and+Vocational+Hygiene&hl=en&ei=DaocTozyB8vFsQL4nLjECA&sa=X&oi=book_result&ct=result&resnum=1&ved=0CCsQ6AEwAA#v=onepage&q&f=false). It was unknown, during the period of 1953 to 1956, that a thin coating of asbestos dust on a worker's clothing met the description of "poisonous dust"—although we now know it does.

¶ 105 *C. McClure on Parallel Conduct*

¶ 106 In *McClure*, the plaintiffs presented evidence, and the jury was entitled to find, that four asbestos companies (Owens Corning Fiberglas Corporation, Owens-Illinois, UNARCO, and Johns-Manville) all had engaged in the same sorts of wrongful conduct, *i.e.*, they "(1) knew that asbestos could cause disease at the time they sold asbestos-containing products; (2) sold these

products without warning of these diseases; (3) failed to warn employees and consumers of these diseases; and (4) failed to adequately protect their employees from exposure to asbestos dust"—in short, pretty much the same conduct of which plaintiffs accuse defendants in this case. *McClure*, 188 Ill. 2d at 146. The threshold issue before the supreme court was whether such parallel conduct was sufficient, by itself, to prove that the four companies had entered into an agreement among themselves to do the wrongful things that they all had been doing. In other words, would parallel conduct alone suffice as proof—by clear and convincing evidence—of an agreement for purposes of the tort of civil conspiracy? *McClure*, 188 Ill. 2d at 135.

¶ 107 The supreme court answered no (*McClure*, 188 Ill. 2d at 135) and accordingly held that the trial court should have granted the defendants' motion for judgment notwithstanding the verdict (*McClure*, 188 Ill. 2d at 151). Although parallel conduct was relevant in that it could serve as circumstantial evidence of a civil conspiracy among manufacturers of the same or similar products, it was insufficient proof, by itself, of the agreement element of a civil conspiracy (*McClure*, 188 Ill. 2d at 135)—especially considering that if the agreement element were to be proved by circumstantial evidence instead of direct evidence, the proof had to be clear and convincing (*McClure*, 188 Ill. 2d at 140, 142).

¶ 108 This is not to say that parallel conduct was the only evidence the plaintiffs presented in *McClure*. The plaintiffs also presented evidence, for example, that employees of both Owens Corning and Johns-Manville were members of the same trade organization, the National Insulation Manufacturers Association (NIMA). *McClure*, 188 Ill. 2d at 126. Nevertheless, that evidence, added to the parallel conduct, still was insufficient as a matter of law. The supreme court cited two federal cases for the proposition that membership in trade organizations did not support an inference



circumstantial evidence as amounting to these four points: (1) Bendix did not warn its employees about asbestos; (2) Bendix bought asbestos from Johns-Manville, and Johns-Manville sent Bendix position papers and other communications regarding asbestos; (3) Bendix, like all other brake manufacturers, belonged to a trade organization, FMSI; and (4) in 1934 and from 1959 to 1963, Bendix shared a board of director with another alleged coconspirator.

¶ 113 Honeywell disputes the first point, insisting that Bendix did warn its employees about asbestos. In any event, though, Honeywell argues that the first point relies on parallel conduct, which, under *McClure*, is insufficient, by itself, to prove the agreement element of a civil conspiracy. See *McClure*, 188 Ill. 2d at 135. Honeywell points out that permitting a company to be liable under a theory of conspiracy solely because it acted like another company would, as the *McClure* court observed, push liability for civil conspiracy "beyond a rational or fair limit" *McClure*, 188 Ill. 2d at 142 (quoting *Rastelli v. Goodyear Tire & Rubber Co.*, 591 N.E.2d 222, 224 (N.Y. 1992)).

¶ 114 As for the second point, *i.e.*, the purchase of asbestos from Johns-Manville and the receipt of communications from Johns-Manville regarding asbestos, Honeywell argues that these circumstances have no tendency to prove that Bendix ever entered into an agreement with Johns-Manville to falsely assert that asbestos was safe and to conceal the dangers of asbestos. In support of that argument, Honeywell points out that in *McClure*, Owens Corning bought the factory in Bloomington from UNARCO (*McClure*, 188 Ill. 2d at 127) and also received information from Johns-Manville and other companies about their handling of asbestos workers (*McClure*, 188 Ill. 2d at 128) and yet the supreme court disagreed that this evidence reasonably led to an inference that Owens Corning had entered into an agreement with UNARCO and Johns-Manville to conceal the dangers of asbestos (*McClure*, 188 Ill. 2d at 147, 150).



¶ 115 As for the third point, membership in FMSI, Honeywell observes that in *McClure*, 188 Ill. 2d at 147, the supreme court rejected the argument that membership in a similar trade organization, NIMA, supported an inference of a conspiratorial agreement, even though Owens Corning and Johns-Manville actually had participated in drafting a NIMA pamphlet that purportedly failed to disclose the specific health hazards of asbestos (*McClure*, 188 Ill. 2d at 126-27).

¶ 116 As for the fourth point, sharing a director, Honeywell quotes this court's holding in *Dukes v. Pneumo Abex Corp.*, 386 Ill. App. 3d 425, 439 (2008), that a common director between Bendix and Johns-Manville did "not constitute independent proof of a conspiracy." Honeywell also cites cases from other jurisdictions to the same effect. *Borough of Ellwood City v. Pennsylvania Power Co.*, 570 F. Supp. 553, 561 (W.D. Pa. 1983) ("The mere fact that Penn Power and its parent corporation share some common directors \*\*\* is not sufficient evidence to show the necessary concerted action."); *American Telephone & Telegraph Co. v. Delta Communications Corp.*, 408 F. Supp. 1075, 1110 (S.D. Miss. 1976), *aff'd*, 579 F.2d 972 (5th Cir. 1978) ("[T]he fact that the stations shared a common director is insufficient to raise any inference of improper action").

¶ 117 Plaintiffs argue, on the other hand, that all of the evidence which Honeywell discusses in its brief was present in *Dukes* and that on the basis of that very evidence, we concluded the trial court was correct in denying Honeywell's motion for judgment notwithstanding the verdict. In *Dukes*, 386 Ill. App. 3d at 440, we acknowledged the supreme court's holding in *McClure* that more than parallel conduct was needed to prove a conspiracy, and then we discussed four items of evidence that the plaintiff presented over and above parallel conduct, holding that this additional evidence satisfied *McClure* (*Dukes*, 386 Ill. App. 3d at 445-46). Let us take another look, though, at those four items of additional evidence in *Dukes*.

¶ 118 First, we noted that Johns-Manville "was the exclusive supplier of asbestos fiber to Bendix for many decades." *Dukes*, 386 Ill. App. 3d at 445. In *McClure*, however, Owens Corning bought an entire asbestos factory from UNARCO (and in so doing, negotiated a provision whereby UNARCO promised to indemnify Owens Corning for claims based on asbestos disease resulting from employees' exposure to UNARCO products before Owen Corning's purchase of the factory). *McClure*, 188 Ill. 2d at 127. And by an "asbestos factory," we mean a factory that used large quantities of asbestos in its manufacturing processes. If, as the supreme court held, Owens Corning's purchase of an entire asbestos factory from UNARCO (subject to the indemnity clause) did not reasonably support an inference that Owens Corning and UNARCO had agreed to conceal the dangers of asbestos (*McClure*, 188 Ill. 2d at 150), one cannot convincingly argue that Bendix's purchase of bags of asbestos from Johns-Manville supports an inference that Bendix and Johns-Manville entered into such an agreement, either.

¶ 119 Besides, buying bags of asbestos already was inherent in the parallel conduct. The parallel conduct was, *inter alia*, failing to warn employees that the asbestos they were using to make insulation, brake linings, and other products was dangerous to breathe. Obviously, to make such products, the manufacturers had to buy raw asbestos from someone, and that someone probably was Johns-Manville, "the biggest United States asbestos company and the leading miner of asbestos." *Dukes*, 386 Ill. App. 3d at 428. Buying asbestos from Johns-Manville cannot logically serve as evidence in addition to the parallel conduct, because buying asbestos already is presupposed in the parallel conduct.

¶ 120 The second item of additional evidence in *Dukes* is that Johns-Manville "assisted Bendix with a position paper on asbestos in the late 1960s." *Dukes*, 386 Ill. App. 3d at 445. This

was the January 1969 paper entitled "Asbestos and Human Health" (plaintiffs' exhibit No. 818A in the present case), in which Johns-Manville informed Bendix that occupational exposure to asbestos could cause asbestosis, lung cancer, and mesothelioma. Johns-Manville was the author of the paper, not Bendix. By this paper, Johns-Manville "assisted" Bendix only by providing Bendix information on the adverse health effects of asbestos. If this paper is evidence of a conspiracy, so is the New England Journal of Medicine.

¶ 121 In *McClure*, the supreme court held that a conspiracy could not be inferred from the sharing of information about asbestos. The supreme court said:

"Much of plaintiffs' additional evidence of the alleged agreement between defendants and Unarco or Johns-Manville demonstrated only a sharing of information among these companies. Plaintiff showed that Owens-Illinois lent Owens Corning two published articles about the health effects of asbestos, that Owens Corning received information from Johns-Manville about its labeling decision, that Owens Corning sought information from other asbestos product manufacturers about their responses to the Califano announcement, and that asbestos product manufacturers held meetings in 1979 and 1983 to discuss litigation strategy, bankruptcy, insurance, and the impact of the Califano announcement. The mere exchange of information by manufacturers of the same or similar products is a common practice, however, and does not support an inference of an agreement." *McClure*, 188 Ill. 2d at 147.

"The Califano announcement" was a broadly publicized statement in April 1978 by Joseph Califano, the then Secretary of the United States Department of Health, Education, and Welfare, that exposure to asbestos could lead to death many years after the exposure had ceased and that exposed workers should stop smoking cigarettes (which greatly enhanced their susceptibility to asbestos disease) and obtain a physical examination by a physician. *McClure*, 188 Ill. 2d at 122. Owens Corning actively sought input from other asbestos manufacturers regarding the Califano announcement, and the supreme court held that just because asbestos manufacturers conferred together on that matter—just because they shared with one another their views and reactions—it did not follow that they were in a conspiracy with one other.

¶ 122           If companies reacted differently to the growing evidence against asbestos, this fact cuts against a theory of conspiracy. Companies in the asbestos business did not all start issuing warnings at the same time. Like Bendix, Owens Corning received word from Johns-Manville that Johns-Manville intended to start putting warning labels on its asbestos-containing products. *McClure*, 188 Ill. 2d at 125-26. And like Bendix, Owens Corning reacted to this news with concern, wondering if Johns-Manville were setting a trend that would make Owens Corning look bad by comparison. *McClure*, 188 Ill. 2d at 126. Because Owens Corning did not start putting warning labels on its asbestos products until a couple of years after Johns-Manville did so, one could not reasonably infer that the two companies had a conspiratorial agreement or that they were of the same mind about warnings. *McClure*, 188 Ill. 2d at 148.

¶ 123           Similarly, in the present case, although Johns-Manville notified Bendix in late 1968 that henceforth it would put a (vague) warning label on its bags of asbestos, Bendix, for its part, did not start putting warning labels on its boxes of brake linings until 1973, according to the testimony

of Edward Koss, an asbestos litigation consultant for Bendix. Evidence that Bendix acted differently from Johns-Manville "prohibits an inference of agreement." *McClure*, 188 Ill. 2d at 148.

¶ 124 Perhaps the argument might be made, though, that Bendix and Johns-Manville had an agreement predating the decision by Johns-Manville in October 1968 to start attaching a warning label to its bags of asbestos. We are aware of no such evidence—at least no clear and convincing evidence. For example, we are aware of no evidence that when Bendix received notification from Johns-Manville that it would start putting a warning label on its bags, Bendix responded by saying, "Wait a minute, we had an agreement to keep quiet about the dangers of asbestos," or words to that effect.

¶ 125 The third item of additional evidence in *Dukes* was that Bendix, Johns-Manville, Raybestos-Manhattan, and Abex were members of the same trade organizations, the Brake Lining Manufacturers Association and FMSI. *Dukes*, 386 Ill. App. 3d at 445. The supreme court held in *McClure*, 188 Ill. 2d at 147, 149, however, that a conspiratorial agreement could not be inferred from membership in a trade organization. Joining a trade organization was just as consistent with innocence as with guilt. Membership in industry-wide trade organizations was common in most industries. *McClure*, 188 Ill. 2d at 147. An activity that was just as consistent with innocence as with guilt was not proof by clear and convincing evidence of an implied conspiratorial agreement. See *McClure*, 188 Ill. 2d at 140-41.

¶ 126 The fourth item of additional evidence in *Dukes* was that Johns-Manville and Bendix "shared a common director." *Dukes*, 386 Ill. App. 3d at 445. Granted, in *McClure*, the supreme court did not address the situation in which two asbestos companies share a director. It is apparent, however, from the supreme court's remarks about NIMA, that a conspiratorial agreement cannot be

inferred from the sharing of a director.

¶ 127 In *McClure*, Owens Corning and Johns-Manville were members of NIMA, a trade organization, and employees of those two companies participated in writing a pamphlet entitled "Recommended Health Safety Practices For Handling and Applying Thermal Insulation Products Containing Asbestos," which NIMA published in 1969 or 1970. *McClure*, 188 Ill. 2d at 126. This pamphlet was blameworthy in that while it stated generally that there were "health risks" associated with asbestos insulation, it did not identify the risks, such as asbestosis, lung cancer, and mesothelioma. *McClure*, 188 Ill. 2d at 126-27. In other words, the pamphlet seemed to have a calculated vagueness, like Johns-Manville's warning label from the late 1960s. The plaintiffs contended that Owen Corning's participation in the drafting of this artfully vague pamphlet was evidence of a conspiratorial agreement with Johns-Manville to conceal the dangers of asbestos—evidence over and above parallel conduct. *McClure*, 188 Ill. 2d at 149.

¶ 128 The supreme court disagreed because Owens Corning and Johns-Manville were only two members of NIMA and one could only speculate as to the amount of influence they actually exerted over the contents of the pamphlet. The supreme court reasoned:

"In this case, inference of an agreement is improper because, even though Owens Corning and Johns-Manville employees may have participated in drafting the pamphlet, there is no evidence indicating to what extent these companies controlled the content of the pamphlet. To conclude that the content of the pamphlet demonstrates an agreement between these companies, therefore, is unreasonable."

*McClure*, 188 Ill. 2d at 149-50.

¶ 129 By analogy, in the present case, Bendix shared only one director with Abex and with Johns-Manville. A board of directors of a corporation consists of multiple directors just as a trade organization consists of multiple members. Although "[b]oards of directors for companies plan long-term strategy and have responsibility for important decisions affecting corporations" and although the shared director presumably participated in this decision making, the record appears to contain no evidence of the extent to which the shared director actually controlled the decision making—including decisions on what to say to the public about asbestos. *Dukes*, 386 Ill. App. 3d at 445. Implying a conspiratorial agreement from a shared director would be speculation, and "[l]iability based on such speculation is contrary to tort principles in Illinois [citation] and to the clear and convincing standard of proof applicable in civil conspiracy cases." *McClure*, 188 Ill. 2d at 152. See also *Ellwood City*, 570 F. Supp. at 561 ("The mere fact that Penn Power and its parent corporation share some common directors \*\*\* is not sufficient evidence to show the necessary concerted action. \*\*\* Plaintiffs' argument is akin to the argument that mere active membership in a trade association constitutes an agreement."); *Myers v. Union National Bank of Fremont*, 211 N.W. 343, 346 (Neb. 1926) ("The mere fact that a majority of the directors were common to both companies does not in itself prove a conspiracy.").

¶ 130 Therefore, we conclude that *Duke* was incorrect in holding that the four items of additional evidence, over and above parallel conduct, justified the denial of Honeywell's motion for a judgment notwithstanding the verdict in that case. In that respect, *Duke* is overruled. And because plaintiffs point to no additional evidence other than that which we have discussed in connection with *Duke*, we hold that Honeywell likewise was entitled a judgment notwithstanding the verdict in the present case. As to Honeywell, this is an additional reason for reversal, over and above the lack of

duty.

¶ 131

## 2. *Abex*

¶ 132

Other than parallel conduct and the sharing of a director (topics we already have discussed in connection with Bendix/Honeywell), plaintiffs point to the suppression of the tumorous mice as evidence that Abex entered into an agreement with Johns-Manville and UNARCO to conceal the carcinogenic effects of asbestos. As we have discussed, Abex, Johns-Manville, and UNARCO were sponsors of Gardner's dusting experiments at Saranac Laboratory, and through its appointed proxy, Vandiver Brown, Abex agreed with the other financing corporations that the finding of tumors in eight or nine mice would not be published. Although the deletion was to be made in the apparently now-lost "Asbestos Pneumoconiosis," one can reasonably infer that the same policy would have applied to Saranac's final report of September 30, 1948, "Asbestos: Experimental Studies," which ultimately was published in January 1951 without the cancer references. Plaintiffs contend that this agreement to suppress the cancer references was a conspiratorial agreement, an agreement to perform an unlawful act. See *Adcock*, 164 Ill. 2d at 64; *Scott*, 301 Ill. App. 3d at 462.

¶ 133

Abex insists, on the other hand, that owing to the lack of controls, the tumorous mice were not scientifically valid evidence of a causal relationship between asbestos and cancer and that the decision to omit any reference to them in a report published in a scientific journal was therefore lawful and proper.

¶ 134

Plaintiffs counter that it would be naive to suppose that Abex agreed to the suppression of the tumorous mice purely out of a disinterested love of science. Plaintiffs write:

"Under Abex's view of Saranac, the results from the experiments were not scientifically valid. If the conspirators' activity was just



'good scientific revision' of poor science, the question arises as to why such concern was expressed that only a limited number of members in each organization ever know of the information. Why did numbered copies have to be returned? Were the companies just interested in maintaining Saranac's reputation as a preeminent research facility?"

¶ 135 Probably not, one might answer to the latter question. One can readily infer that the financing corporations, including Abex, had self-serving reasons for omitting any mention of the tumorous mice from the published report and for keeping the tumor findings confidential. The question, though, is not whether Abex's motives were pure. Instead, the question is whether Abex agreed "to commit an unlawful act or a lawful act in an unlawful manner." *Adcock*, 188 Ill. 2d at 64. As far as we can see, it was not against the law, and it was not tortious, for the financing corporations to conceal the occurrence of tumors in a small group of mice if (1) the tumors were not scientific evidence of a relationship between asbestos and cancer and (2) it was unclear that any of the tumors were in fact cancerous. Granted, from the vantage of hindsight, we now know it is a scientific fact that asbestos causes cancer in humans. But it does not necessarily follow that asbestos caused the tumors (benign or malignant) in the eight or nine mice at Saranac Laboratory, some of which were genetically prone to develop tumors under any conditions. Unless Abex had notice that the tumorous mice were scientific evidence that asbestos caused cancer, Abex did not enter into a conspiratorial agreement by agreeing to conceal information about the tumorous mice—because concealing the information was not an unlawful or tortious act. It cannot be unlawful to hide information that is devoid of significance: information that, as Murphy put it, was "not of any tremendous value." See

*In re Angotti*, 812 S.W.2d 742, 749 (Mo. Ct. App. 1991) ("The desire to keep [a medical advisor's] observations and evaluation confidential does not show actual knowledge of a health hazard to an individual working as an insulator.").

¶ 136 Nevertheless, plaintiffs dispute that the eight or nine tumorous mice were devoid of scientific significance. Plaintiffs insist that Abex cannot deny the scientific validity of the cancer findings without entangling itself in a contradiction. Plaintiffs argue:

"If the results were so flawed, then why did Abex's medical director, Hamlin, believe that the report could be published with the cancer observations? Abex cannot have it both ways. Abex wishes to benefit from its medical director's belief that the report was publishable (including the cancer observations) while at the same time defending the actions of Abex's management which returned the report and gave Johns-Manville Abex's 'proxy' to make decisions. A reasonable conclusion to be drawn from the evidence is that Abex, although aware the information contained in the report was valid, nevertheless agreed the information should be suppressed."

¶ 137 True, one can infer, from Brown's letter of November 12, 1948 (plaintiffs' exhibit No. 361), that "Asbestos Pneumoconiosis" discussed the tumorous mice, and it also is true that in his typewritten comments (plaintiffs' exhibit No. 360A), Hamlin suggested that the publication of "Asbestos Pneumoconiosis" nevertheless would be a nonevent. Plaintiffs read too much into Hamlin's comments, however, when they interpret him as opining that the tumorous mice were valid scientific evidence of a causal relation between asbestos and cancer. In his comments, Hamlin

nowhere mentions the cancer findings, let alone pronounces on their scientific validity. It does not even appear that he had any expertise in animal experimentation. When discussing the publishability of "Asbestos Pneumoconiosis," the only criterion Hamlin appears to have in mind is "possible repercussions from the legal point of view": he merely addresses Brown's concern, or what he perceives to be Brown's concern. The text of Hamlin's comments cannot reasonably support an interpretation whereby he opines that eight or nine mice with neoplasms are scientific evidence, publishable as such, that asbestos causes lung cancer. His comments are too frail a structure to hold up such a vast weight of implication, especially considering that at the end of his comments, he favors "reviewing the manuscript prior to publication."

¶ 138           So, that leaves no one—that is, no one with relevant expertise—opining that the eight or nine tumorous mice, in an uncontrolled experiment, are valid scientific evidence that asbestos causes cancer. In fact, all the opinions seem to go the other way (*i.e.*, Gardner, the National Cancer Institute, and Pratt). Pratt seemed to think it would be downright misleading to represent the mice as cancerous unless the discrepancy between Gardner's representations and his experimental notes were resolved. For our part, we certainly are not qualified to opine that the tumorous mice meet scientific standards. We are not qualified to opine that, in the absence of controls, tumors in 8 or 9 out of 11 mice—tumors that might or might not have been malignant (no one seems to know for sure)—were scientific evidence of a causal relationship between asbestos and cancer in humans. And the jury was no more qualified than we are in that respect.

¶ 139           The only expert who asserted the scientific value of the tumorous mice was Castleman. Or at least he appeared to assert their scientific value by testifying: "[F]rom the standpoint of confirming the human reports of asbestosis and lung cancer, I think it would have gone

a long way to really sealing the acceptance of asbestos as a cancer causing substance \*\*\*." Nevertheless, it is unclear how Castleman's background qualified him to render that opinion. We are unaware that he had any expertise in pathology. It also is unclear what bases, if any, he had for his opinion, especially in light of his later remarks on the importance of controls. "An expert's opinion is only as valid as the bases and reasons for that opinion." *McClure*, 188 Ill. 2d at 151.

¶ 140 In short, absent a qualified expert opinion that the tumorous mice were scientific evidence of a relationship between asbestos and cancer—and, indeed, all the qualified experts appear to have opined to the contrary—Abex's agreement to conceal information about the tumorous mice was not an agreement to perform an unlawful act and hence was not a conspiratorial agreement. It cannot be unlawful to suppress information that apparently is devoid of significance.

¶ 141 The agreement to suppress the tumorous mice really does not match up with the conspiracy allegations in the complaint. According to the complaint, defendants entered into a conspiracy with UNARCO and other companies to withhold information about the harmful effects of asbestos. The record appears to contain no expert opinion, however, that Gardner's finding of tumors in the eight or nine mice really was information about the harmful effects of asbestos.

¶ 142 Besides, in agreeing to suppress the eight or nine tumorous mice, the financing corporations did not agree, generally and perpetually, to withhold any and all information about the carcinogenic effects of asbestos. Rather, as part of the collective rationale for deleting the references to cancer and tumors, Brown cited Gardner's belief that "this aspect should be made the subject of a separate study, which would take from two to three years." The record appears to contain no evidence that Abex agreed to the suppression of the results of this proposed future study.

¶ 143 Admittedly, in *Burgess v. Abex Corp.*, 311 Ill. App. 3d 900, 903 (2000), we held that

having "all references to cancers and tumors deleted" from the published Saranac report "clearly was evidence here, other than evidence of parallel conduct, which was sufficient to establish the existence of an agreement between Abex and Johns-Manville to suppress or misrepresent information regarding the health hazards of asbestos." In that respect, *Burgess* is overruled.

¶ 144 In summary, we find no evidence in the present case that Abex agreed with other companies to suppress or misrepresent the health hazards of asbestos (although there is evidence that Abex did so on its own initiative). Therefore, we hold that Abex, like Honeywell, was entitled to a judgment notwithstanding the verdict, not only because of a lack of duty but also because of a lack of evidence on the agreement element of a civil conspiracy.

¶ 145 III. CONCLUSION

¶ 146 For the foregoing reasons, we reverse the trial court's judgment.

¶ 147 Reversed.

¶ 148 JUSTICE TURNER, specially concurring:

¶ 149 Although I concur in the result reached by the majority, I find this court's opinion in *Holmes* dispositive of the outcome. In *Holmes*, we determined defendants owed no duty to the decedent because the dangers of take-home exposure were not reasonably foreseeable until after the decedent's husband worked at UNARCO. *Holmes*, slip op. at 8-9. Similarly here, I agree with the majority neither Honeywell nor Abex had any duty to warn Juanita Rodarmel during the time period of her exposure. Thus, I would reverse the trial court's judgment based upon the absence of duty, and I find unnecessary the majority's analysis on whether the evidence was sufficient to find Honeywell and Abex guilty of the tort of civil conspiracy.