# An electron microscope reveals asbestos fibrils found in the air of an asbestos worker's home.

...kers meaningless." Then, in 1928 ...1929, the chief medical inspector ... British Home Office's factory de... ment examined 383 asbestos-textile ...kers and found that more than 25 ... cent of them showed evidence of ...ring from asbestosis. In 1931, on ...sis of the inspector's findings, Par... ...ent made the disease compensable ... among other measures, instituted ...dical checkups for workers engaged ...particularly hazardous processes in ...industry. Next, in 1955, Dr. Rich... S. Doll, director of the Statistical ...search Unit of the British Medical ...search Council, completed a study ...113 consecutive autopsies of men ... had been occupationally exposed ...sbestos for more than twenty years. ...ll's study showed that the extent to ...ich they had risked lung cancer over ...whole period was eleven times as ...at as that of men in the general pop...tion of England and Wales. Brodeur ...serves in his pioneering article on ...subject: "From then on, many doc... were convinced that a causal re...onship between asbestos exposure ...lung cancer had been demonstrat... although almost no part of the vast ...sbestos industry either acknowledged ...relationship or found it advisable to ...the independent researchers who ...e investigating it."

The health hazard posed by asbestos ...e home to Manville in 1963, when ... Maxwell Borow, a local physician, ...d that seventeen townsmen had ...d mesothelioma within the span ...three years. Four years later Borow ...d Johns-Manville for $3,000 to ...e a display to educate both work... and the medical profession at large ...asbestos-related diseases; his re... was turned down. Borow subs...ently approached the workers' ..., Local 800 of the United Paper... ers and Paperworkers; the union ...nized the collection of the needed ...ey.

...hy had Johns-Manville declined to ...out? "It was our opinion," Jack ..., the corporation's vice-president ...anager of environmental affairs, ex...ed to me, "that in 1967 there was ...ot to learn more about mesotheli... before a relationship with asbestos ...d be affirmed or denied." Beskles, ...added, since 1970 the company ...already spent some $2 to $3 million

on new dust-control equipment and, as a result, considered the Manville plant a safe place to work in. Men and women who worked at the plant in the Fifties and Sixties, however, failed to notice that the new equipment made any appreciable difference. "There were times when the air was so thick with asbestos dust in some places that you couldn't even see," I was told by a textile division worker who has been with the company for thirty-two years. "Sometimes it was even impossible to breathe with a respirator because the filters would get so clogged with asbestos." (Respirators are generally unpopular among asbestos workers. The wearer sweats and his eyes smart. For workers who have cardiac or pulmonary problems, breathing through an ordinary respirator adds to the strain on their lungs and heart. Air-cooled respirators that supply air to the wearer are bulky and costly.)

Even outside the factory the air was frequently full of the potentially deadly fibers. In the East Valley section of town—an area downwind from the factory—the fiber fallout would get so thick that homeowners had to hose the stuff off their houses. Directly in front of the plant conditions were even worse. "When I'd direct traffic there," Sgt. George Kalman of the Manville police recalled, "there were days when it was like we were having snow flurries in July. I'd take off my hat, and it would be covered with this white dust."

Meanwhile, examinations by company doctors were carried out only once every two years—a schedule that was increased to once a year in 1970. Such infrequent checkups may have been sufficient to monitor a slowly developing case of asbestosis, but they were less useful as a means of catching a victim of a swiftly developing cancer, particularly mesothelioma, a disease that normally proves fatal six months to a year after the cancer shows up in X-ray pictures. (To jump from past decades to an illustration from the recent past: in December 1971 Danny Macliborski a forty-nine-year old ex-marine who had worked for Johns-Manville for thirty years, checked in at the company dispensary for his biennial physical and was given a clean bill of health. A few weeks later, however, he felt a strange sensation in his abdomen—as if his stomach were "getting bigger," as he put it—and went to see a private physician, who in turn sent him to Dr. Borow. Borow's tests showed that Macliborski had a malignant tumor of the membrane that lines the abdominal cavity—in other words, mesothelioma. "I knew what it was because everybody at the plant knows about asbestosis and mesothelioma now," Macliborski told a reporter for the *New York Post*. "I wasn't surprised or shocked about it . . . . I just asked [Dr. Borow], 'How long have I got?'" Macliborski died last September. He lasted as long as he did because he was willing to go to the doctor every two weeks to have up to eight quarts of fluid pumped out of his abdomen. Johns-Manville paid Macliborski's medical expenses, and, as provided by New Jersey state compensation laws, it is paying his widow $70 a week—a sum that will drop to $72 this June, when her eldest son will turn eighteen.)

Why, throughout the Fifties and Sixties, did men and women continue to work in the plant if conditions were so hazardous? The answer would seem to have as much to do with psychology as with economics. "It's funny," says Chester Ruczkowski, a forty-one-year-old machinist and union shop steward at the plant, "but the only people who seem scared of this stuff come from outside the community." To Ruczkowski, who has worked at the plant since he was eighteen, his job is a way of life that he is not about to give up just because of a few "scare stories" in the press. "You and I can work in a place for thirty-five years, and maybe you get