

## **From Philco, Mitsumi to RCA: Trichloroethylene and Female Electronic Workers' Occupational Diseases**

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In the early 1970s, many international electronic companies moved to Taiwan searching for cheap labors. Many Taiwanese young female workers, at the same time, left their rural homes to work in the factories. These young female workers manufactured cheap electronic devices and created the “economic miracles” in Taiwan. Unfortunately, they also suffered from acute and chronic occupational diseases.

I reviewed two cases of female electronic workers' occupational diseases, Philco and RCA (Radio Corporation of America), in Taiwan. Other than following the rise of young female workers in the early 1970s, I also paid attention to how organic solvents were used in the electronic industry, and how occupational diseases were recognized in the international scientific community.

The Philco case involved several cases of liver disease and sudden death of young female workers in October, 1972. Philco-Ford was an American electronic factory manufacturing small black-and-white televisions in northern Taiwan. A month later, similar cases were reported in some Japanese electronic factories in southern Taiwan. It was believed that these young female workers suffered from the acute intoxication of trichloroethylene (TCE) from their worksites. In June, 1974, TCE was banned in Taiwan, and the government promulgated a law to protect workers' health and to regulate solvent usages.

Twenty years later, in 1994, the RCA factory in Taiwan was impeached for polluting groundwater with TCE, perchloroethylene (PCE), and other industrial solvents. Subsequently, former RCA workers, who had been diagnosed with cancers, organized to voice their health concerns and potential exposure to the environmental and

occupational hazards. In 1998, the government responded by initiating research in animal experiment, environmental health risk assessment, environmental epidemiology, and occupational epidemiology. However, these public health studies did not sufficiently verify correlation between industrial pollution and health. Up until 2012, the RCA toxic tort remained unsettled.

I examined the toxicological and epidemiological research of TCE with a critical feminist perspective. It revealed that there were gender, class and racial inequalities in the production of scientific evidence. Many toxicological studies only used male rats and mice in the experiments. Most occupational diseases of TCE were reported in male workers since the 1930s' in Europe and America. Though TCE was classified as "possibly carcinogenic to humans" by the International Agency for Research on Cancer (IARC), breast, ovary and uterus were not listed as its target organs. Further, there were some case reports of TCE exposure and Stevens-Johnson syndrome in young Asian workers after the Philco case in Taiwan. Most of these case reports were published in non-English journals. The acute toxicity of TCE has never been clarified. I conclude that there was "undone science" in female workers' occupational diseases.