

who are affected by toxic pollution. Their practice is referred to as standpoint theory and their use of lived experience of community members forms the basis “to ask research questions, develop theoretical concepts, design research, collect data, and interpret findings.”⁴ Standpoint advocates argue for studies generated within the social and political context of the health problem. Such studies have the potential to be more objective in the sense that they include local knowledge and can therefore potentially reduce the biases in studies conducted by government or corporate scientists. In contrast, official government- and corporate-sponsored science tends to ignore local perspectives and instead views the relationship as a one-way street, that is, “as getting *more* science to the public rather than assessing the *kinds* of science that might be made available.”⁵

After examining the various feminist or citizen-centered methods that scientists have used for establishing health claims in the corridor, I will propose some additional approaches that strengthen a democratic science agenda, specifically the importance of a community-situated science. All of these approaches move beyond the stale dichotomy of knowledgeable scientists on one side and the ignorant public on the other. The methodologies used by the women in the corridor negotiate various forms of knowledge and privilege in both the context and the content of the health concerns of the citizens. Thus, the feminist methodologies used by scientists in this region could be viewed as examples of what Sandra Harding calls the “strong objectivity” paradigm, a powerful and empowering hybrid of situated knowledge and traditional scientific practices. I will interpret strong objectivity to mean that the inclusion of local knowledge, minority perspectives, and laypeople’s viewpoints in the design of epistemological studies can potentially reduce biases and produce studies that more accurately capture the health problems faced by citizens in their daily lives.

Florence Robinson, Participatory Science, and Zip Code Studies

Florence Robinson is a professor of biology at Southern University in Baton Rouge. An African-American scientist and educator, she was one of the first people in the corridor to devise a systematic method of documenting health claims. Her involvement with environmental issues began in 1989 when Rollins, a hazardous waste processor near her house

in Alsen, applied for a permit to expand its operations.⁶ Her neighbors and family had experienced many illnesses, such as her son's migraine headaches and her own respiratory problems, and they began to suspect that the strange odors emitted from Rollins could be the culprit.⁷ The Rollins expansion prompted her to get involved with the Louisiana Environmental Action Network to learn more about the impact of chemicals in her community.

Like many residents of the corridor, Robinson prefaces her current concerns for her community with a historic narrative:

Alsen is a very old community. Before the Civil War, Mount Pleasant plantation sprawled along the river just north of what is now Alsen. Following the Civil War, newly freed slaves from the plantation and other near-by areas settled in Alsen. . . . The people of Alsen were very close to the land. They grew vegetables and fruits in their gardens, and hunted and fished in the bountiful swamp. . . . Then in 1964 Tim Alexander came to town and Alsen has never been the same. He opened a pit for the dumping of toxic chemicals by near-by industries (Dow,



Figure 5.1
Scientist, professor, and activist Florence Robinson. Photo by W. A. Fontenot.

Ethyl, Exxon, Co Polymer, Uniroyal, Allied Chemical, American Hoechst, Rubican Chemical, Shell Chemical, and U.S.S. Chemical). . . . Now the swamp is posted as contaminated with hazardous waste . . . and many residents become sick after eating vegetables from their garden.⁸

After the polluted area was labeled a Superfund site, the owners proposed to build a hazardous waste incinerator to clean it up. She realized that if the people of Alsen were going to have a voice in environmental permitting and decision making in order to stop the expansion of polluting industries, they needed to be educated. She explains: "In my community most of the people that are my age have less than a grade school education because there was no school out here when they were growing up. You're not going to turn people like this into scientists overnight. What they have is something priceless, and scientists would do a lot to pay attention to it, as they have got incredible common sense."⁹

What was more important to her than making the citizens into scientists was teaching them how science operates. If they understand how science works, they are better able to "debunk a lot of the nonsense that is out there in the name of science," says Robinson.¹⁰ "What I try to do is just teach them the basic process of science, the scientific method," and explain it in everyday language. This way when the companies make assertions or health claims the community members are better equipped to ask the right questions about the data and the methodologies used.¹¹

One of Robinson's methods for determining the effects of chemicals in her neighborhood was to establish a health registry.¹² Health registries, or the consistent collection of community health data over time, are considered to be one of the most thorough forms of community health research.¹³ This method gives the community access to a history of health problems often necessary in initiating government-sponsored research or policy changes. She uses what she calls a citizen survey method of collecting data, noting that while these informal methods of collecting data are not scientific, they are the first step of the scientific method—making observations. Next, following the scientific method, "you raise questions about what is causing the problem, given all the [hazardous waste] sites in your neighborhood." And last, you hypothesize that some of the illnesses may be caused by these sites.¹⁴ It is at the point of hypothesis in the scientific method that communities go to government agencies hopeful that they will be able to investigate officially and test the illness

THE COMMUNITY OF ALSEN
 Four and one-half miles along U.S. 61

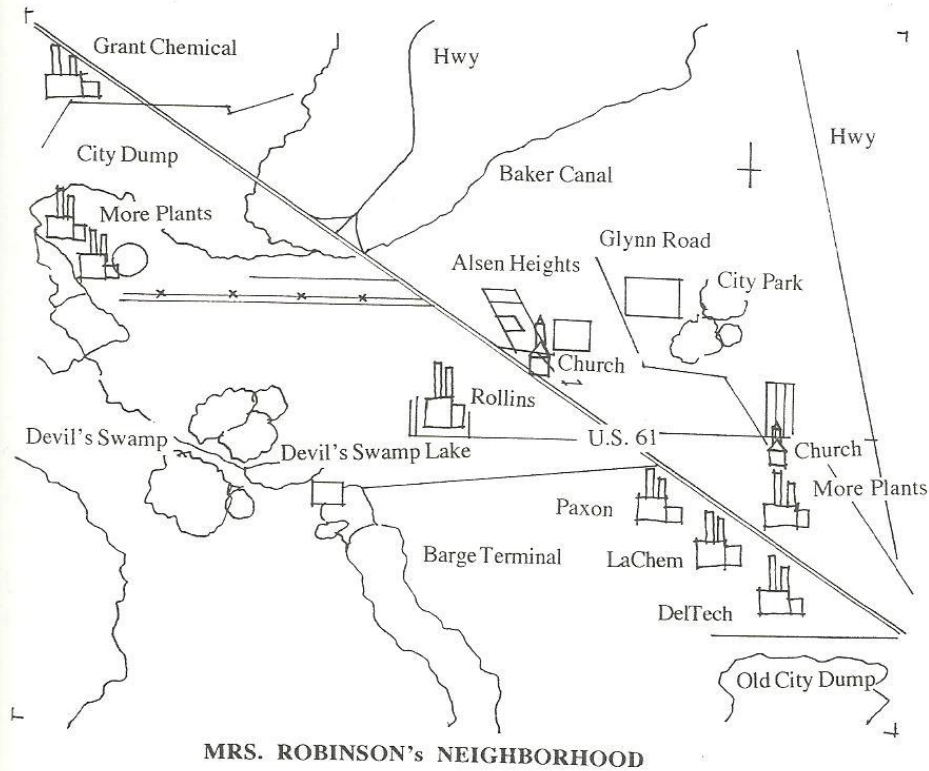


Figure 5.2
 This is a general survey of the Alsen community. It is similar to the maps that Florence Robinson has drawn showing the location of hazardous facilities in her community.

theories of the residents. In Robinson's framework, this is the fourth and last phase of the scientific method, which consists of observations, followed by classification of observations, leading to a hypothesis, and finally testing that hypothesis.

But, according to Robinson, traditional science is often insular and unresponsive, much too slow for the people in the communities being exposed on a daily basis to chemical emissions. She uses other, more heterodox, scientific methods to gain access quickly to information in her community. One of her many methods is the map survey (see figures 5.2 and 5.3). The map is one of the primary visual tools used by industry when applying for permits to locate a new facility in the corridor. Maps

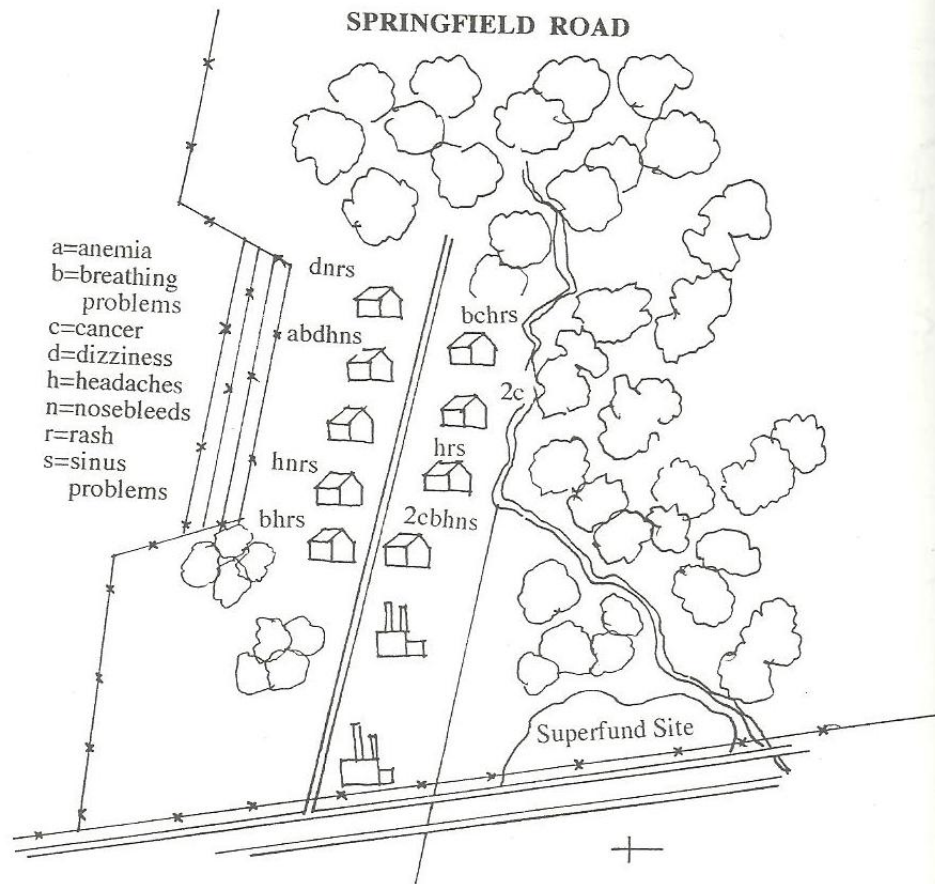


Figure 5.3
 Compilation of one of the neighborhood self-studies that Robinson has done for her community. It documents the variety of health problems along one street in Alsen, Louisiana.

have been used to present industry's plans to regulatory officials often in an effort to show the absence of potential problems with their site location. Robinson believed that this same strategy, map making, could be used for community purposes as well. She distributed the map survey materials in her neighborhood and the neighbors marked illnesses, suspicious smells, and dump sites on the maps and turned them back in. She also went door-to-door, met people in the community, and took down information about health and environmental problems they had experienced. In this way she collected information about both exposure and illness as viewed from the perspective of people in the community.

She says about the informal information-gathering process: "I consider it as legitimate as anything that companies can come up with . . . it may even be more legitimate, as industry is biased, the government and the health department is biased, [and] it seems to be their role to alleviate the fears of the public."¹⁵

Robinson uses her maps to track various illnesses as well as their proximity to Superfund sites and industry. These visual tools can be easily updated and used in public education lectures as well in hearings before permitting bodies and the state legislature. She further pursued her interest in what she terms "environmental racism" by showing a relationship between pollution and race in a series of zip code studies.¹⁶ She shows, via these studies, that there appeared to be a relationship between race and toxic releases in her parish; the "blacker" the zip code area, the higher the quantity of toxic releases (see figure 5.4).¹⁷ This work has produced empirical evidence of the disproportionate proximity of hazardous waste to minority communities. This study, coupled with her studies on the poor health of those residents living near hazardous industries, forms the basis of her claim of environmental injustice.

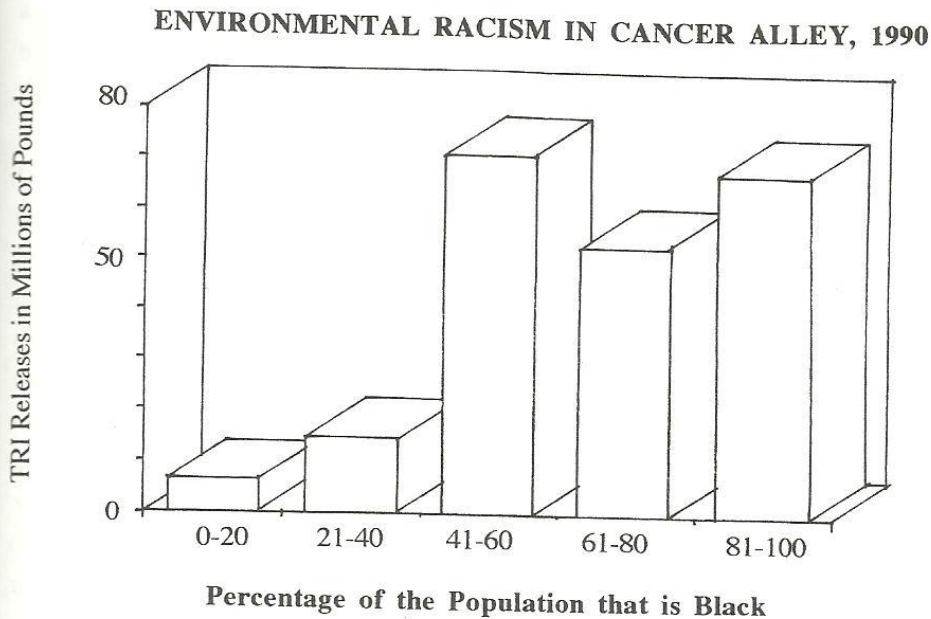


Figure 5.4
 Compilation of TRI data done by Robinson showing the relationship between hazardous waste and race in the corridor.