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THE GOOD-NEIGHBOR CAMPAIGN: A COMMUNICATION INTERVENTION TO REDUCE ENVIRONMENTAL HEALTH DISPARITIES

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The environmental health and environmental justice movements seek recognition of the health effects of pollution and the health disparities that result from the often discriminatory siting of industrial toxins (Brown, 2007; Bullard & Wright, 1990; Gibbs, 2002). This form of health activism among community members, advocacy organizations, scholars, and scientists is a significant means of resisting and transforming the political roots of health disparities by targeting industrial practices (Zoller, 2009). Both public-health scholars and practitioners are paying more attention to the use of communication campaigns to change health-threatening corporate behavior (Freudenberg, Bradley, & Serrano, 2009). In this chapter, we describe the good-neighbor campaign as a community-based communication intervention that seeks to reduce health disparities resulting from exposure to environmental toxins (Heiman, 1997; Lewis, 1997). Groups across the US, Canada (http://www.goodneighbourcampaign.ca /about_gnc), and Europe (Global Community Monitor, 2006) have used the good-neighbor model to work directly with corporations in their neighborhoods to reduce or eliminate their exposure to harmful chemicals. Among the multiple communication processes involved in health activism (Zoller, 2005), this chapter focuses on methods of organizing and campaign tactics, providing details of two cases.

We describe two campaigns by the community-based organizer, Ohio Citizen Action (OCA)—the Eramet campaign in Marietta, OH, and the Lanxess campaign in Addyston, OH. The Eramet (a metallurgical manufacturing company) campaign achieved a commitment from company executives to invest $150 million to improve the plant's environmental and operational performance. The combined furnace and baghouse projects alone are expected to reduce emissions by 54% in the No. 1 furnace, and provide an overall 20% emissions reduction for the entire facility (Cooley, 2008). The

good-neighbor campaign targeting Lanxess (a producer of plastic resins that may be associated with cancer and other health risks), resulted in corporate investments of well over two million dollars to reduce leaks and malfunctions, and a Notice of Violation Findings and Orders (Klepal, 2005; Klepal & Smith Amos, 2005) by the U.S. EPA that led to a settlement agreement predicted to reduce 360 tons of butadiene emissions, 1 ton of acrylonitrile, and an additional 59 tons in hazardous air pollution per year under the Clean Air Act (U.S. EPA, 2009).

After a brief description of environmental hazards as a significant source of health disparities, we detail the steps involved in a good-neighbor campaign. We discuss the common communication challenges in this process, and the resources that citizens can use to overcome them. We follow this with specific discussion of the two OCA campaigns.

Environmental Pollution and/or Toxins as a Source of Health Disparities

Health disparities are differences that occur by gender, race and ethnicity, education level, income level, disability, and geographic location. Some health disparities are unavoidable, such as health problems that are related to a person's genetic structure (Association of Public Health Association, 2004), but most can be attributed to social causes and effects (Frank, Mustard, & Fraser, 1994). Policy-makers and government organizations have prioritized the health disparities as a key area for concern. For example, Healthy People 2020 includes specific initiatives to eliminate health disparities.

As a specific subarea, environmental health disparities are the result of a complex consideration of social and economic disparities (such as income level, race, literacy rates), combined with environmental exposures tied to a specific geographic region (Comacho, 1998; Morello-Frosch & Lopez, 2006; Payne-Sturges & Gee, 2006). Although the effect is often difficult to measure, toxins in the air and soil contribute to birth defects, developmental delays, asthma, cancer, and other illnesses (Brown, 2007). These pollutants often can be directly connected to a local industry. Researchers and policy-makers have made persuasive cases that many environmental health disparities affect racial and ethnic minorities and the poor at a higher frequency (Institute of Medicine, 1999; Pamies &

Nsiah-Kumi, 2009, p. 18; O'Neill, et al., 2003), and that pollution-siting decisions often target these groups explicitly (Bullard & Wright, 1990). The Commission for Racial Justice of the United Church of Christ reported in 1987 that race was the most significant variable associated with the siting of hazardous waste facilities: "Most industries seek to locate in communities that are economically depressed, politically disenfranchised, and therefore subject to economic blackmail" (Head & Leon-Guerrero, 1997, p. 323).

To reduce environmental health disparities requires a comprehensive and multilayered approach that considers both social factors and environmental hazards. Researchers have proposed various theoretical approaches to reduce environmental health disparities (Gee & Payne-Sturges, 2004; Hornberg & Pauli, 2007; Payne-Sturges, Zenick, Wells, & Sanders, 2006). Because of the undue burden that many poor and minority communities face, academics, policy-makers, and public-health practitioners alike cannot overlook the power and potential of an engaged community working toward reducing environmental health disparities in their own communities. One method for engagement is activism through the good-neighbor campaign.

The Good-Neighbor Campaign as a Communication Intervention

The good-neighbor campaign is an innovative model for grassroots environmental activism. The organizing model, attributed to Sanford Lewis, promotes the development of win-win relationships among neighbors, workers, and a corporate polluter (Heiman, 1997; Lewis, 1997). The model encourages cooperation and relationship building, offering corporations the opportunity to bolster their reputation by improving their environmental performance (Den Hond & De Bakker, 2007). Despite this approach, most companies do not engage willingly in negotiations, but "can be pressured during contract negotiations, at times of license renewal, when an accident has already occurred leading people to question the operation of the plant, and through the threat of regulation or product liability suits" (Heiman, 1997, p. 637). Neighbors may apply pressure by building awareness, organizing neighbors, gaining media exposure, or involving regulators (Ryder, 2006). Often, companies will not engage in *binding* agreements with neighbor

groups, unless the community can affect production or profitability through threats to reputation or regulatory permits (Della Porta & Diani, 1999; Heiman, 1997). Good-neighbor campaigns empower local residents by encouraging them to talk with their neighbors, meet directly with management, learn to perform their own chemical sampling, and build coalitions with other community groups.

Communication Processes in Organizing a Good-Neighbor Campaign

As a grassroots activism tool, the good-neighbor campaign is a communication intervention aimed at changing corporate behavior. As we describe below, the campaign gives neighbors a model for communicating with corporate managers, regulators, and community members to collaboratively find ways to reduce or eliminate toxic exposures and other problems. Campaigns involve multiple methods, but generally, the goal is to achieve a serious commitment from management to solve the company's environmental problems (a Good-Neighbor Agreement). Although we acknowledge that every community-based intervention unfolds somewhat uniquely, we describe below communication processes involved in conducting most campaigns. The information provided here is based primarily on the Good-Neighbor Campaign Handbook produced by OCA (Ryder, 2006).

OCA is an environmental advocacy nonprofit that provides the tools and/or support to help communities focus their concerns and organize citizens to take action. OCA promotes citizen involvement toward the goal of reducing environmental harms, and toward environmentally protective policies at the political level. The organization usually becomes involved in communities when local residents request assistance with efforts to reduce pollution in their neighborhood. Initially, much of the communication work involves organizing neighbors. Rachael Belz recommends starting with a core group of at least five dedicated neighbors and ideally growing that number to several hundred. OCA builds awareness, and promotes neighbor participation by knocking on doors to survey neighbors about problems they experience resulting from their corporate neighbor. These "walk and talks," along with flyers and posters, encourage residents to become a member of the neighbor organization or to attend organizing meetings.

The good-neighbor model encourages residents to meet directly with management to ask questions and clearly state their desired outcomes, following the "Getting to Yes" method recommended by the Harvard Negotiation Project (Fisher & Ury, 1981). OCA (Ryder, 2006) suggests that neighbors speak with management as equals (for instance, calling for a meeting rather than requesting one). Ryder (2006) reminded readers that managers are people, too, and that neighbors should first make them aware of the problems, and, second, appeal to their conscience. When pointing out the problems, neighbors should avoid calling for specific changes, such as installing a filter or reducing emissions by 75%. Discussing specific community interests, such as "I want clean air so my child does not have asthma attacks," allows for creative solutions that may achieve even better results and simultaneously improve the company's efficiency. OCA's handbook recommends that neighbors remain calm when they communicate with managers, regulators, and others involved in the campaign, because angry people are easy to dismiss.

Because most managers and corporate polluters will initially not cooperate, neighbors should be prepared to raise the stakes. One of OCA's most significant influence tactics is the letter-writing campaign. OCA hires staff to campaign throughout the state of Ohio. Staff members knock on doors and tell residents about what is happening in the current campaign. They provide residents with brief talking points, and ask them to write even a short letter to management asking the company to cooperate with the neighbors (and include drawings from children, if possible). Residents tape the letters outside their door and canvassers pick them up within a few hours. Ryder (2006) estimated that half to three-quarters of those who agree actually produce the letter. Management begins to feel pressure when thousands of letters begin arriving in the mail. If managers do not respond, OCA will send letters to the board of directors. Most neighbors do not have the resources for a statewide canvass on their own, but they can conduct letter-writing campaigns in their communities by knocking on doors, talking with neighbors about the problems, and asking them to spend five minutes expressing their thoughts about the problems the company is causing, right away—before they forget about it.

Neighbors should be creative in raising their campaign's profile. For instance, community members may hang white flags outside, which communicate how dirty the air is when the flags quickly become gray or black. Residents may initiate a petition calling for a particular step that will forward the campaign, such as removing a plant manager or CEO who is not cooperating. Speaking with the press can raise a campaign's profile, as long as campaigners have significant news to share.

Communication Challenges and Resources for Addressing Them

Good-neighbor campaigns are not easy. Corporations would prefer that neighbors not interfere with their operations, and many residents become hostile because they see environmental campaigns as a threat to the town's economic base or to their own jobs. Campaigns can go on for years before achieving acceptable results. In this section, we discuss some of the major communication challenges involved in good-neighbor interventions and resources for managing these challenges.

First, even though neighbors have direct experience with problems caused by a plant—odors, watering eyes, chemical smells, loud trucks, alarm bells going off during the night—they also need to understand what the target company produces and how it produces it. Residents need information about the plant's financial standing, particularly because many companies will claim they do not have enough money to invest in improvements. At this stage, campaigners need to conduct research into these issues so that they are better informed and therefore less likely to be dismissed by the company. Campaigners can begin with the company's website (if at least one member of the group has Internet access or there are library resources). Librarians can help residents search press accounts of the company. Information about the plant's emissions is available through the Toxics Release Inventory (TRI) (http://www.epa.gov/tri/). Neighbors can request that state or city environmental and health regulators provide them with permit descriptions and other public information.

Neighbors should seek input from similar companies, particularly those that have implemented solutions to the problems neighbors are experiencing. Neighbors may keep a log of their experiences, including chemical smells, noises, or other problems caused by the company. Pooling these logs helps neighbors to un-

derstand what chemicals are released and when, as well as how the plant operates (e.g., when supply trucks arrive).

Second, neighbors struggle with the technical language used by the company, regulators, or scientists. OCA's campaign organizers tell neighbors to insist that the people they encounter speak in clear language, and continue to ask questions until they are answered satisfactorily. Residents should seek out neighbors who work in similar industries so that they can help explain some of the technical processes. Neighbors can also reach out to scientists or researchers who are willing to help them interpret scientific data and health research.

Third, campaigners face barriers when they seek to understand the relationship between toxic exposures and health problems. Proving causal links is very difficult because humans are exposed to multiple potential agents of disease, preventing isolation of causes. Moreover, we lack understanding of the toxic effects (and interaction effects) of thousands of chemicals, and research methods are sometimes biased against establishing positive results (Brown, 1992; Wing, 2005). To avoid this difficulty, neighbors may call for companies to reduce exposure based on more immediate physical effects such as bad smells and watering eyes, or nuisances such as dirt and grime on cars that plants are responsible for addressing. Additionally, the environmental health and justice movements developed innovative methods that empower citizens to understand their exposure without a lot of money or expertise. For instance, neighbors may form a "bucket brigade" to measure air quality. Neighbors can sample air with inexpensive home-made canisters containing a vacuum pump at the moment they smell chemicals, rather than wait hours or days for environmental agencies to investigate. The canisters are U.S. EPA-approved, and take legitimate samples that can be analyzed by labs scientifically. Effective campaigns should continue organizing activities to maintain momentum if they explore partnerships with scientists and regulators that may provide scientific data.

Fourth, good-neighbor campaigns have to address corporate issue management tactics of co-optation, denial, and delay. Management may attempt to co-opt outspoken neighbors by inviting them to join the company's public-advisory group, where management largely controls the agenda. This keeps activists busy and out of the public spotlight. Companies frequently deny exposure, or that exposures are harmful. Managers also delay solutions by slowly investigating alternatives, or waiting for scientific research into alternatives. OCA generally recommends against joining the public-advisory group, at least initially. Neighbors should take the initiative and avoid responding to each new move on the company's part. Using multiple methods maintains momentum by encouraging flexibility. Campaigners may need to change tactics or influence targets. If one method is not working, move to another. Neighbors may decide to shift from dealing with plant managers to CEOs, or from CEOs to the board of directors. In addition, management often builds support by suggesting that good-neighbor campaigns are a threat to a town's economic base. It is important for residents to understand that investments to improve environmental performance can increase corporate efficiency. Indeed, such investments often result in modernizing plants that otherwise would have been abandoned by the company (Kazis & Grossman, 1991; Mann, 1993).

Fifth, another potential problem is that these campaigns may be lengthy, from a year or two upward to ten years, and neighbors can suffer from fatigue. It is very important, in the opening stages of the campaign, to discuss the time commitment that may be involved. The key group of community organizers will bear the brunt of maintaining momentum, which means that the leaders of a campaign need to be the most committed. A potential solution is to create one or more subcampaigns that focus on smaller, winnable goals that show campaigners that real progress is being made. For instance, Ryder (2006) described a subcampaign in Middletown, Ohio, pressing AK Steel to build a fence keeping children out of a polluted creek. Campaigns are also more sustainable when neighbors support one another and make sure that organizing meetings and events are fun. Even small victories, such as reaching a certain number of letters submitted to the polluting company, should be celebrated. By marking internal milestones, campaigners can remain focused and motivated on the larger task at hand.

Cases

Marietta

Many Appalachian communities bear an undue burden of environmental health disparities from industries (Hendryx, 2011; Haynes et al., 2010; Hendryx, 2011). Marietta, Ohio is a relatively

isolated Appalachian community with a median family income of $36,042, where 13.6% of families are below the poverty level (U.S. Census Bureau, 2000). As part of the Mid-Ohio River Valley, the town is also home to an industrial corridor with more than 20 industrial plants along the river, including Eramet, a ferromanganese refinery. Until recently, it was the only ferromanganese plant in the United States, releasing thousands of pounds of manganese (Mn) into the Marietta airshed (U.S. E.P.A. TRI Database, 2009).

In 2000, a group of community members began sharing their experiences about the pervasive odors in their community. From 2000–2006, this group of "Stink Friends" tracked odors that were emanating from the Eramet refinery at all hours. One particular community member kept a "Stink Diary" in which she logged every occurrence of smells and the effects they had on her and her family. Community members also collected dust swipes and samples, used Tedlar bags for air sampling, and personally paid for analysis of these materials. Neighbors contacted government agencies and officials at all levels, and sent letters to the then CEO of Eramet, who refused to meet with them or acknowledge their concerns.

Distressed by the poor air quality and concerned for the potential health effects associated with their exposure, the "Stink Friends" called a community meeting on the subject of air pollution and Eramet, which was identified as the main company polluter. Approximately 50 people attended the meeting in March, 2006. Most of the attendees complained of the extreme odors from the plant, a metallic taste in the air, and the visible, brown pollution coming from the facility. Many in attendance also expressed frustration with the local company, the Ohio EPA, and the Ohio Department of Health. They felt that it was up to the citizens themselves to do something about the problem. At this meeting, the "Stink Friends" became a nonprofit, citizen-action group, Neighbors for Clean Air (NCA), and they officially partnered with OCA to launch a good-neighbor campaign.

Following OCA's template of strategic steps, NCA members wrote letters and encouraged their friends and neighbors to write letters to the company polluter. In four months, the community had written 3,000 letters. Other actions undertaken by NCA's good-neighbor campaign included door-to-door canvassing to convey information and to increase the letter-writing campaign, researching files at the Ohio EPA, and printing and placing over 200 yard signs that read, "Eramet, let's clear the air." From September, 2006 to February 2007, NCA walked the picket line with locked out workers, and held a food drive for workers and their families over Thanksgiving.

During this same period, NCA was working to complete a "Citizens' Audit." As recommended by OCA, an audit helps to compile all the research and information that community members have gathered, secures credibility that the community has done the necessary research and legwork, gives clarity to the goals of the campaign, and acts as a ready resource that can be offered to reporters. NCA's citizens' audit included a recommendation:

> We commend Eramet for the reductions of emissions they have made thus far in Marietta. We believe that further significant reductions are necessary and feasible. We recommend that the decision makers at Eramet Marietta work with citizens, agencies and the Eramet corporate headquarters to make the changes necessary to be a good neighbor. (NCA, 2006, p. 1)

NCA and OCA continued the letter-writing campaign. OCA asked Ohio citizens to write letters to the corporate headquarters in France, and an OCA member hand-delivered a set of letters to the corporate headquarters in Paris, France. NCA members sent letters to the editors of local papers to maintain interest in the company; they canvassed neighborhoods surrounding the plant; they organized "walk and talk" events downtown; and they had a presence at local fairs and events, such as Earth Day.

In Marietta, neighbors used citizen science by measuring air-pollution levels using portable gas analyzers, and collected "swipe" samples to be sent off and analyzed. This type of participation can be key to instigating community-based change.

Two interdependent goals have always been present for the campaign in Marietta: to reduce the amount of air emissions, particularly manganese, from local industry, and to understand the health effects, if any, of the continued exposure to emissions. These goals were realized at the June 2006 press conference organized to release and present the Citizen's Audit. There, NCA met Dr. Erin Haynes[i] from the University of Cincinnati, who had been invited by OCA organizers. In the conversations that ensued, Dr. Haynes was moved by the NCA's stories and their frustrations.

She committed to trying to find answers to address their concerns about the potential health effects associated with their exposure.

The year 2008 was a watershed year. The management of Eramet finally agreed to meet with NCA. Conversations took place over a series of months in the first part of the year. In April 2008, Dr. Haynes was awarded a $2.6 million grant from the National Institutes of Environmental Health Science, which is known in the local community as CARES (Communities Actively Researching Exposure Study). In September, 2008, after 28 months and over 44,000 letters, the pressure portion of the good-neighbor campaign was officially halted (Shawver, 2008). Ongoing follow-up suggests that the good-neighbor campaign was successful in addressing both goals of NCA. First, it was able to achieve positive results to reduce the amount of air emissions. The good-neighbor campaign resulted in a $150 million commitment by Eramet to replace the most problem-plagued furnace with a new state-of-the-art model, use odor-abatement technology, and construct a new baghouse to prevent particulate stack emissions from their largest furnace by 54% (Cooley, 2008).

Second, the good-neighbor campaign achieved the goal of finding a way to get answers concerning the health effects of air pollution. Local resident and NCA member, Dr. Richard Wittberg, always believed that "science can give the answers" to the community's concerns about air pollution (http://www.eh.uc.edu/cares/study/profiles/erin.html). The bidirectional partnership that NCA formed with the University of Cincinnati and Marietta College is premised on the research framework known as community-based participatory research (CBPR) (Minkler & Wallerstein, 1997, 2003). CBPR is changing the scientific research paradigm so that scientific research is done *with* rather than *on* a community. The bidirectional partnership has worked, in large part, because of the continued commitment of NCA. At the time of writing, the scientific research study is still recruiting participants, but it has exceeded the anticipated enrollment numbers in its first year. This case illustrates how university-based CBPR can aid health activists by giving them relevant, understandable, and timely data to understand how toxic exposure affects their health. NCA followed OCA's template for conducting a good-neighbor campaign, which was a key attribute to the campaign's success.

The Lanxess Campaign

In Addyston, OCA initiated a good-neighbor campaign in 2004 targeting the Bayer Chemical plant in Addyston, Ohio. (The plant spun off into Lanxess Corporation in 2004, and was absorbed by the English INEOS Group in 2006). The plant used acrylonitrile, butadiene, and styrene (ABS) to make plastic resins. The state of Ohio does not regulate these chemicals, so the company operated under a county permit agreement that approved certain levels of air and water emissions. The organizer, Sara (a pseudonym used in Heather's research), chose Lanxess because TRI data showed increased chemical emissions and plant malfunctions above permitted levels. In addition, a community canvass showed that neighbors had concerns about odors, health effects, and the safety of children in the preschool-through-first-grade school directly across from the plant.

Addyston is a historically White, working-class neighborhood on the Ohio River, with an increasing number of minority and poor residents, surrounded by several middle-class communities. Sara organized concerned citizens in the Westside Action Group (WAG) to achieve decreased plant accidents and pollution. Despite worries from minority residents who lived near the plant, the roughly 40 men and women who participated were mostly White residents with a mix of working- and middle-class backgrounds. The core 12 participants were women.

Neighbors were surprised that managers agreed to meet with Sara, which she credited to the statewide letter-writing campaign that sent hundreds of letters to the plant manager. In response, managers arranged multiple meetings to answer questions about the plant. They spoke openly about their products and production processes, but avoided health questions and denied that neighbors were exposed to plant chemicals.

WAG members chose not to participate in the company's public-advisory group, but met directly with management to discuss emissions. The meetings were long, and managers used technical language to describe changes they were implementing to reduce smells. Neighbors talked with managers and the press about their frustration with smells, headaches, and nosebleeds that they associated with emissions. They expressed fears about the high incidence of cancer in the area and the possible health effects for children and pregnant women. During this time, three chemical

releases over permitted levels in October, November, and December of 2004 led to local press coverage of the campaign. As a result, the mayor and a local state representative created the Addyston Task Force to address the controversy. The company denied that the exposure could lead to health problems.

The good-neighbor campaign used citizen science to promote neighbor participation in discussions about chemical exposure. Sara encouraged neighbors to keep an Odor Log to track when the company was emitting chemicals or noxious odors, and call local and state regulatory agencies with odor complaints. WAG members also learned from OCA and activists from Texas's "cancer alley" to do "bucket" sampling and use handheld Cerex monitors. These methods found consistent chemical readings above levels permitted in states with ABS standards.

In addition to citizen science, the WAG developed a "community standard" for the plant's performance, going beyond permit requirements to demand zero air and water emissions. Concerned residents also began a petition calling on the German CEO to replace the plant manager. A neighbor traveling to Germany hand-delivered a letter to the CEO asking for plant improvements. By April, Ohio citizens sent over 1,300 citizen letters to Lanxess, and the WAG mailed their petition to remove the plant manager to German headquarters with 500 signatures. Some neighbors dropped out as the smells began to fade in response to sewage projects, but the core WAG members grew more confident, demanding "answers at meetings and not slides," and noting that "We can demand things—they need us, it is expensive to move."

The WAG also criticized the local regulatory agency for its failure to adequately regulate the company and monitor exposure. After tough neighbor questioning during a town meeting focused on possible health effects, particularly for children, the environmental agency began ambient air monitoring every six days, and eventually installed a real-time monitor.

On July 15, 2005, the company announced a reorganization that included the retirement of the Plant Manager and the removal of the Head of North American Operations. The company publicly attributed the change to a lack of plant profits (Klepal, 2005). Yet Lanxess also announced a $1.5 million investment in manufacturing-process controls, as requested by OCA. After continued organizing throughout the summer, Lanxess announced an additional $1 million investment in September. OCA posted on their website on September 26, 2005:

> In a direct response to Ohio Citizen Action's good neighbor campaign, Lanxess Plant Manager...announced on Thursday that Lanxess will invest $1 million to reduce butadiene emissions that go into the air. They also will seek to reduce accidents and call on external experts to evaluate its performance.

Sara announced that she would end the pressure phase of the good-neighbor campaign, satisfied with the commitments the company made to its neighbors. The campaign moved to the cooperation and implementation phase. Some WAG members worked through the task force to monitor changes and request health-effects research.

In this case, neighbors did not build alliances with environmental scientists or epidemiologists, having found no local experts on ABS. Two environmental health researchers who volunteered their time to talk with residents acknowledged the potential risks from the plant, but provided conflicting advice about the possibility of establishing health effects. Instead, an environmental agency legitimized neighbor concerns.

On December 5, 2005, the Ohio EPA released its first report of the Air Toxic Study with a press release, and issued a Notice of Violation Findings and Orders to Lanxess. The plant was found to be in violation of its Emulsion Polymerization permit and classified as a "public nuisance," because carcinogens were measured off-site. The report suggested that continued exposure (20–30 years) to the chemicals would raise the risk of cancer by an additional 5 cases out of 10,000 in the area, which they characterized as exceeding acceptable levels by 6 times, and noted that children may be at greater risk (Klepal & Smith Amos, 2005).

WAG members felt that the report legitimized their concerns. The company and plant supporters disputed the findings, but managers worked with Ohio EPA to reduce emissions. Thus, the regulatory agency helped to negotiate additional environmental upgrades and monitored implementation. During this process, the plant dedicated an additional million dollars in environmental upgrades ("Plant going beyond compliance," 2005).

At the same time, though, the report (along with pressure from the task force) spurred a health study of cancer in Addyston. The

study was designed and conducted by scientists at the county health department without participation from neighbors. After long delays resulting from methodological questions, the 2006 report found a higher incidence of lung, colon, bronchus, and rectum cancer than expected. However, the report stated, "but it is impossible to determine the cause of each case of cancer due to the multitude of risk factors, and the interaction of these factors, that play a role in cancer development" (*Cancer Incidence Among Residents of Addyston Village, Hamilton County, Ohio*, 2006, p. 4). Despite the stated impossibility of determining causes, the report did describe risk factors such as tobacco smoking, eating habits, exposure to radon and asbestos, and family history. The study did not recommend reducing plant emissions, but did promote improving exercise and eating habits as a way to improve health.

Lanxess managers touted the report as proof of the plant's safety. Neighbors privately questioned the study's methods and findings, but residents did not continue to pursue evidence about health effects. Several WAG members and an OCA leader sit on the company's public-advisory group (PAG) in order to continue to monitor emission reductions (U.S. EPA, 2009), but there was little ongoing discussion about environmental illness, particularly illnesses such as asthma and children's developmental disorders that were not a part of the health study. Neighbor organizing achieved significant plant investments in reducing neighbor exposure to ABS. Yet, because it was not central to the initial goal of the campaign, and due to uncertainty regarding health effects, residents' questions about environmental illness were not resolved.

Conclusion

Good-neighbor campaigns can empower communities, and "empowered communities may be able to protect themselves from the instruction of new hazards and eliminate extant ones" (Gee & Payne-Sturges, 2004, p. 1649). Health activism through community involvement is a key factor in the elimination of environmental health disparities, and increasing dialogue among health communication researchers, activists, and practitioners builds our understanding of the everyday experiences and challenges of participatory methods of health and social change (Camacho, Yep, Gomez, & Velez, 2008; Dutta, 2007; Ford & Yep, 2003; McLean, 1997; Zoller, 2009).

The Marietta campaign was trying to address two interdependent goals. The first, reducing air emissions, is a standard goal of good-neighbor campaigns, while the second, trying to get a scientific answer about the health effects, if any, of air pollution in the area, is not typically a goal of good-neighbor campaigns. By all accounts, at the time of the writing of this chapter, the Marietta campaign has been a success, but it was not without its challenges. Keep in mind that on the one hand, Marietta's first attempt at action was not successful, in part because it was not as strategic as the campaign started in 2006. The Addyston campaign, on the other hand, led to important upgrades to the facility, but mixed results regarding the community's concern about health effects. The two case studies offer a lesson for other communities and communication scholars who may work with them: it does take a strategic plan and an intense commitment from the community to achieve reductions in chemical exposure and an increase in knowledge about possible health effects.

The cases differ in their relationship to science. As other researchers have found (see Israel et al., 2010), CBPR can play an important role in eliminating health disparities. As Addyston showed, traditional science can both help and hinder neighbors, and campaigns can proceed without definitive proof of illness. Yet, the Eramet case suggests that good-neighbor campaigns involving complex environmental and health issues have much to gain from CBPR partnerships that enable community groups to get the science they need to enact long-term change, when those relationships focus on the needs and perspectives of neighbors.

These cases also raise important questions about how we measure success. Good-neighbor campaigns are used to address a diverse set of issues within communities with diverse sets of problems. Many parts of localized campaigns are difficult, if not impossible, to replicate in other areas. Overrelying on "measurable outcomes" of health improvements to judge the success of campaigns can lead us to overlook the power of grassroots activist campaigns that cannot carry out health-effects assessment work. This may involve measuring reductions in toxic exposure, rather than measuring reductions in illness. Additionally, the ability to measure health outcomes resulting from reduced toxic exposure is constrained by resource availability, lack of scientific knowledge

about toxins (particularly low dosage and interactive effects), and the inherent uncertainties involved in epidemiological research.

At the same time, researchers and environmental health advocates do need to continue to innovate tools for improved campaign communication, including finding systematic ways to translate epidemiology into user-friendly language and distribution. For instance, OCA leaders, Melissa English and Rachael Belz, noted the need for "citizen ready" information, a clearinghouse for health-science information, available local health data (such as asthma rates in a particular area) that would be laypeople friendly. Additionally, communication researchers can advocate for improved models of dialogue about risks that involve neighbors as legitimate stakeholders and knowledgeable health citizens.

Finally, campaigns that focus on a single company are important, but they may feel isolated or disconnected from larger issues of environmental health caused by industry across the country. Such campaigns may be confused with NIMBYism (not in my backyard). However, environmental health and justice activists have created national and international networks where citizens can compare tactics and share innovative solutions. For instance, the Louisiana Environmental Action Network (http://www.leanweb.org/) organizes local environmental activist groups into a statewide network. The Environmental Health Coalition promotes environmental justice in San Diego, addressing disparities in toxic exposures in the Latino community in the US, as well as the toxic effects of *maquiladoras* in the border areas near Tijuana (http://www.environmentalhealth.org/About_EHC/index.html). The Blue-Green Alliance (http://www. bluegreenalliance.org/) brings labor and environmental activist groups together to build a more environmentally sustainable economy. Many of these groups work together on larger political issues such as the regulation of toxins, right-to-know legislation, safe workplaces, and the promotion of the precautionary principle—an important policy tool that shifts the burden of proof for proving chemicals safe to the chemical producer rather than on citizens who must prove chemicals to be hazardous before they are regulated (Brown, 2007).

Researchers and practitioners have much to contribute in helping us to understand the relationship between local campaigns and this larger social movement. However, what we do know is that an engaged community using a good-neighbor campaign as a communication intervention, has the potential to disrupt existing power structures and positively affect change in communities experiencing health disparities. Open, ethical, and effective communication, including inquiry, dialogue, debate, persuasion, and protest, is key to the success of health social movements seeking to reduce environmental illness.

Note

1. Dr. Erin Haynes holds a doctorate in public health, and is an advocate of community-based research. Dr. Haynes's primary research interest is to examine the effect of low-level toxicant exposures on neurobehavioral outcomes. Specific research interests include evaluating biological and health outcomes in children resulting from exposure to multiple metals, such as lead and manganese, evaluating gene-environment interactions that may influence the neurobehavioral effect of metal exposure, and increasing public knowledge of environmental toxicants that threaten public health. She is currently working on an NIEHS-funded community-based participatory research R01 to study the neurobehavioral effects of metal exposure in two rural Appalachian communities: Marietta and Cambridge, Ohio.

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Relational Tensions in Academic-Community Partnerships in the Culture-Centered Approach (CCA): Negotiating Communication in Creating Spaces for Voices

Mohan J. Dutta, Sydney Dillard, Rati Kumar, Shaunak Sastry, Christina Jones, Agaptus Anaele, U. Dutta, William Collins, Titilayo Okoror, and Calvin Roberson

In this chapter, we engage with participatory reflections on a project that uses the culture-centered approach (CCA) (Airhihenbuwa, 1995; Dutta, 2008; Dutta & Basu, 2008) to develop culturally based, comparative effectiveness research summary guides (CERSGs) in two African American communities in two different counties of a Midwestern state. Funded by the Agency for Healthcare Research and Quality (AHRQ), this project works with two Midwestern counties that report large health disparities for African Americans, as well as large health disparities in the realm of cardiovascular disease. As a critique of dominant models of health communication, CCA seeks to foreground the voices of community members and their lived experiences and localized meanings of health, in demonstrating how dominant models of health communication have led to the silencing and erasure of such voices (Dutta-Bergman, 2004a, 2004b; Lupton, 1994). The goals of the CCA processes in this project are to create culturally centered CERSGs on heart disease that build on the participatory capacity of local communities to develop locally meaningful solutions, more specifically, to develop health-information capacities in the local communities. The CCA processes are driven toward transferring the spaces of power from the academic-community organization partnership to the more flexible, permeable elements of the community.

Connecting with the works of Barge (2004), Barge and Shockley-Zalabak (2008), Cheney (2008), Simpson and Seibold (2008), and the notion of "engaged scholarship," we explore the