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The 20th Anniversary of **Love Canal**: Lessons Learned

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*195 HISTORY OF **LOVE CANAL** AND SUNY AT BUFFALO'S RESPONSE

I would like first to talk about how I started to do research at **Love Canal** and then I want to comment on some of the previous speakers' presentations.

To start with my own research, when I was a graduate student I was taught that good research starts with theories, from which hypotheses are developed to be tested in carefully designed situations. My research at **Love Canal** started quite differently—almost by accident.

My interest in **Love Canal** began one morning in August, 1978 when I was in my university office, preparing the syllabus for an introductory sociology course. I planned to use a book by Kai Erikson on an environmental disaster—a huge flood at Buffalo Creek, West Virginia, as a supplementary reading assignment. At that time, Barbara Howe, who is now a State Supreme Court judge, was my colleague and a law student, and she too was teaching Sociology 101. She happened to walk by my office, came back, put her head in and asked about my textbooks. When I mentioned the Erikson book, she asked me whether I had heard about what was going on in Niagara Falls—some sort of an environmental disaster. She suggested we go there for a couple of hours, just to see what was going on, and we did.

We went to **Love Canal** a couple days later and I came home eight hours later absolutely obsessed with what I had witnessed. Here was a pleasant looking neighborhood with people moving out in droves. I had spoken with a young pregnant woman who was sure she was going to give birth to a monster. I spoke with another woman who pointed to her three year old daughter who was playing on the *196 floor and told me that she wondered whether her little girl would be able to have normal children when she grew up. There was a sense of panic throughout the neighborhood.

That day I spoke with a state social worker and a couple other state employees who were part of the nine-part Interagency Task Force that Governor Hugh Carey had created to address the **Love Canal** problems. The agencies comprising that entity, were to work together harmoniously to address the contamination problem, and they were just scrambling to set up their headquarters at the local school. The school, closed by order of the Department of Health the week before, was located on top of the clay-covered, chemically contaminated **canal**.

The very location was an example of the ambivalence that was prevalent in the state's approach at that time. On the one hand the Interagency Task Force was established because something was very wrong; on the other hand the authorities didn't really acknowledge that there very well might be a true contamination problem. For approximately seven months, the Interagency's headquarters remained in the school located right in the middle of the **canal** area. Other interested groups such as the residents' associations and the Red Cross had offices in the school, and large public meetings were held regularly in the school auditorium

during that time period. As a consequence, a number of people of all ages, both residents and employees, were exposed to the **canal** every day while conducting their business of addressing the problems.

When I saw what was happening I knew I just **had** to do research at **Love Canal**; I was really “hooked.” There were several potential research projects I could think of immediately. I spent about a week trying to get a grant. On a trip to New York City during that week, I even visited the offices of several foundations simply to ask if they would consider a proposal for a project at **Love Canal** were I to submit one. The typical response I received was a puzzled look and a question: “Why would a sociologist be interested in this problem? This is an engineering problem, a chemical problem.” I pointed out that a thousand families were involved, hundreds of them were moving out, neighborhoods were breaking up, people were under ***197** stress, people were worried that their new babies would be monsters. To no avail.

So I decided to use resources I knew I had, to go ahead and teach a field seminar in addition to my course load, and do a research project in that context. Five graduate students joined me during the first year, and three others the next year. We decided to do a field study, collecting information by participant observation, by gathering all the written materials we could find, and also by conducting interviews. For several years, with students during the first couple years and later by myself, I devoted hundreds of hours of field work at the **Love Canal**.

The university was a good base for me, providing me an office; student researchers; faculty experts willing to give me advice, interest and moral support; and the credentials which made it possible for me to approach the people involved at **Love Canal**. No one ever told me what to do or not to do in this study. I was awarded a \$1,000 grant by the graduate school (the Moir Tanner award), which paid for gasoline money for the students, for film, and cassettes for interviews and note taking. I was fortunate that at that time, bringing in grant money was not as essential as it seems to be nowadays, because I would have spent the time during a rapidly changing situation at my desk, instead of in the field where the actions were taking place.

Now that I have described the startup for my own research I would like to make some comments to clarify some points made today by previous speakers. One of the first pictures Ted Steegman showed was of an older resident of **Love Canal**, sitting in a red truck. The resident had said he figured that there was nothing wrong in the neighborhood and that it was a trumped-up publicity event. My graduate students and I interviewed almost eighty **Love Canal** residents about their experiences, perceptions and opinions about the **Love Canal** situation in the fall of 1978 and re-interviewed about 40 of the same people in the spring of 1979. Later, quantitative analysis of the interviews showed a correlation between age and denial that anything was wrong in that neighborhood due to **Love Canal**. The people who most wanted to leave the neighborhood, believing that their health was in danger were almost always younger, newer ***198** residents. One thing that tempered the older residents' responses was the presence of a child. If they had a grandchild who lived with them or nearby, or who visited regularly, the older residents' responses resembled those of younger residents.

Among younger residents, we learned on interviewing, that their attitudes sometimes resembled a bet. Unsure of where they might go and exactly what had happened, and what the consequences of exposure to buried chemicals might be, knowing for sure that the state had bought some houses and might buy theirs, they had to assess their own situations and try to make the best judgments they could about what to do. In a young family's home, the scene was often one where the wife might say, “Listen, these kids of ours are not going to go through their childhood more than once—let's get out of here. I don't care what it costs.” The husband might reply, “Wait! I had to work two jobs just to make the down payment on this house. Maybe the state will buy it. They did buy some. If we can't sell it, how are we going to pay rent for a new place and still make mortgage payments for this place?” This led to a number of problems within families.

Dr. Stevens said there was a point after the state buyout of homes in 1980, when the state Department of Health announced that the **Love Canal** neighborhood was “habitable.” In fact the most that the State would ever commit to was that the area was “not uninhabitable”—not quite the same, but often translated to mean “inhabitable” or even “safe.”

An inaccuracy I want to correct is that Dr. Naughton said that my husband, Murray Levine was on a medical school research committee established in 1980. He was not. I was. Murray was a faculty member of the Department of Psychology. His role at **Love Canal** was two or threefold. He listened to my daily recitals of what I had learned at **Love Canal** and gave me useful advice and feedback. He accompanied me to evening meetings quite often, and through me, he met some **Love Canal** residents. Lois Gibbs was undergoing a swift and remarkable personal transformation at that time, from a rather shy, dedicated housewife to an activist who learned within days, to organize people, meet with government officials, and talk to reporters among other things essential to mobilizing a community. *199 After I told my husband repeatedly that I wished I had the time to write her story he offered to help her prepare it herself. She tape-recorded her story, he transcribed the tapes and checked for duplication, and wrote an introduction to the book **Love Canal: My Story**, as told to Murray Levine.

I served on the medical school research committee at the request of the **Love Canal** residents. By the time the committee was established, some two years after the Health Department issued its order that the neighborhood might be a danger to the health of the residents, those residents had already been subject to a great deal of fear, panic and confusion, much of it induced by announcements from government agencies. The people had repeatedly experienced emotion wrenching events: one day the residents might be given a message that essentially said, "I'm from the government, and you are in terrible danger," only to be told a few days later, "well, it's not so bad, why did you get so excited?"

I am summarizing this in a simple way, but in fact, I know a dozen occasions when the **Love Canal** residents were given such messages. Panic peaked when the news broke in the spring of 1980 that there was a high incidence of broken chromosomes found in blood taken from a sample of residents. With a great deal of fanfare, the EPA announced this finding, only to retract the statement and denounce the findings a few days later. After that event, the organized residents decided that they would no longer cooperate in any further health studies done or sponsored by a government agency, unless they could have input at every level, from the initial formulation of the study to the dissemination of the results. In that context, I was asked by the organized residents to represent them on the medical school research committee of which Dr. Naughton spoke.

In the end, once the Reagan administration took over after the 1980 presidential election, the funding was cut off for the medical school research project, and thus a possibly valuable source of data on the effects of long term exposure to buried chemicals was lost.

I will turn now to the work of some people mentioned by previous speakers: neurologist Steve Barron, biologist Beverly Paigen, and geneticist Dante Picciano.

*200 Dr. Barron's work was mentioned. He was a member of the SUNY medical faculty, and had studied the rate of conduction of ulnar nerve impulses in a sample of **Love Canal** residents. Although he found evidence in his exploratory study that in his opinion indicated a need for further study, statisticians from the EPA decided that his findings were not at a low enough level of probability to pursue further. The probability levels as I recall were well below the standard used for publication of results. It is not the case that nothing was found to be wrong. It is the case that, based on his clinical experience, Dr. Barron found that the transmission of nerve impulses appeared to be slow, and that he would have studied a larger sample if he could have.

One of Dr. Paigen's purposes initially, was to help the NY Department of Health (DOH). She undertook an exploratory study with data collected by telephone, after residents answering the phones at the **Love Canal** Homeowners Association reported that people phoning to get information, very often would talk about their troubles, including their medical problems. This was at a time when there was concern about how far the chemicals had traveled underground and what effects they had had on the residents' health [Both still unknown]. The DOH was analyzing its first survey of the residents and possibly planning more studies. Paigen devised a questionnaire, trained the people who were handling the phone calls to ask non-leading questions, plotted the responses on street maps of the area, and made overlays of the patterns of the underground waterways and other channels such as sewer lines, and concluded that clusters of illnesses might be correlated with those pathways. When she traveled to Albany to present her findings to DOH people who had been her colleagues, she learned a hard truth about trying to do scientific work in highly sensitive, politically charged, media drenched events, with people whose agendas are not consonant

with scientific norms. The study results had been reported that morning in huge headlines in the newspapers, and although they concealed their reactions from her, the DOH people were upset. The Commissioner of Health dismissed the study as “a bunch of useless data collected by housewives,” and he *201 too learned a lesson, this one in public relations; the residents never forgot that remark, or forgave him for it.

Dante Picciano was a geneticist, who conducted an exploratory study at the request of the EPA. The purpose of the small study was to help to decide whether the EPA should undertake a large scale study of the effects of chemical exposure at **Love Canal** on the resident's chromosomes. While still in its planning stage, the funding for this exploratory study was sharply reduced. The researchers decided to go ahead without control groups and study only cases from areas where the exposure to chemicals might have been high relative to other areas. The study was intended as an internal working document to be submitted to the EPA. Picciano's report emphasized the lack of control groups. His paper presented the procedures he followed, his finding that when compared to the literature, there seemed to be chromosomal irregularities in the study sample. He recommended that a larger study be done, with at least three control groups (high, medium and low exposure). The report of the exploratory study was used for a political agenda and created a furor. As a result, Picciano, who had acted in good faith using the best procedures he could under the circumstances, became a victim. Among other things, an article, severely critical of him appeared in *SCIENCE*; Picciano sued and the case was settled out of court.

Finally, I think that Dr. Steegman was a bit too kind about the Thomas committee and its report. That committee came to very firm conclusions about the state of health of the **Love Canal** residents without a single study to refer to as evidence for their statements. Unfortunately, due to the prestige of the physicians who comprised that committee their unwarranted conclusions have entered into the body of scientific knowledge as the unchallengeable received wisdom about the consequences of long term, low level exposure to chemicals in residential settings.

Thank you for the opportunity to participate.

Footnotes

- ^{a1} Adeline Levine earned a doctorate in Sociology at Yale University. After 24 years as a Sociology department faculty member, she retired from State University of New York at Buffalo as a Full Professor and has been Professor Emeritas since 1990. In 1978, she undertook a research project at the **Love Canal** which resulted in a book, **Love Canal: Science, Politics and People** (1982), several articles and a videotape. She continues to work with the aftermath of the **Love Canal** by serving as a trustee for the **Love Canal** Medical Trust Fund.