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Cancer Alley: Knowledge Production and Action

The residents of seven Louisiana parishes have seen an astronomically high rate of cancer among their neighbors for decades. The disease and debates over it are so prevalent that the area is known as Cancer Alley. Many stakeholders including chemical companies, the state government, and affiliated organizations dispute that the residents of Cancer Alley are even facing increased cancer rates, let alone how to solve what locals see as a public health crisis. Cancer Alley residents are largely poor and African American. They are fighting one of the biggest contributors to the Louisiana economy, so both the state economy and politicians are working against them, in spite of national evidence, guidelines, and recommendations backing the residents. The question at the heart of the Cancer Alley debate is why nothing has been done to improve the environment and health of Cancer Alley residents. The residents of Cancer Alley have to fight unnecessarily hard to make any change in the area because they are fighting a knowledge production system where their observations and evidence are dismissed by other powerful players like chemical companies and the state government who work to keep this knowledge buried and justify inaction.

Background

The term Cancer Alley was coined in 1987 by residents of Jacobs Drive in St. Gabriel, Louisiana. The people of Jacobs Drive noticed extremely high cancer rates of households on the

road. One resident said that 15 people along just one stretch of the street had been diagnosed with cancer (Lee). The term has since been expanded to describe a stretch of land along the Mississippi River from Baton Rouge to New Orleans encompassing seven parishes. Cancer Alley was originally home to sugar cane plantations. After the plantations were dissolved and slavery was abolished, the former slaves stayed and raised families. Many families today trace their ancestry directly to former slaves who were given land in the area. These residents have seen a giant leap in cancer rates corresponding to the increased presence of the petrochemical industry in the area. Sharon Lavigne, a resident and activist, said in 2019 that what the petrochemical industry does is, “pollute us with these plants, like we’re not human beings, like we’re not even people. They’re killing us” (Juhasz). Terry Frazier, a hospital receptionist in the area said that, ““Out of every 10 houses, there’s a prospect of one or two people that have died of cancer”” (Baurick et al.). The people who live here have cancer rates up to fifty times higher than that of the national average (Lartley and Laughland, “Almost”). The residents cite pollution from over 150 chemical plants in the area as the cause of the cancer rates.

Plants and factories continue to pop up in the area because “easy access to some of the continent’s busiest shipping lanes; plenty of cheap land for large facilities; and government officials that equate industrial investment with progress. A lax regulatory regime helps ease the path” (Baurick et al.). Cancer Alley is an optimal place for plants that are polluting the air and causing various illnesses in marginalized neighborhoods. A large portion of the Louisiana state revenue comes from the petrochemical industry, and without plants this money would be lost. Cries for environmental help go largely unattended or are ignored by local governments. Chuck Car Brown, the secretary of the Louisiana Department of Environmental Quality, has called the

activists in the area “fear-mongers” and, despite EPA guidelines and multiple studies to the contrary, said in 2017 that, “At this point, there is no reason to believe that there is any undue risk or exposure to the folks in St. John Parish” (Blackwell et. al). Although statistics on the actual number of plants vary, a conservative count would be 150 plants in the 85 mile stretch (Lee). In 2010, these plants accounted for a quarter of the petrochemical plants in the country (Simonsen et. al), and one plant is the only source of chloroprene in the nation.

Cancer Rate Debate

For a long time, the severity of cancer cases in the area has been underestimated by uninterested parties. In 2012, residents of cancer alley had been noticing the high rates of cancer in their families and neighbors for decades, increasing with the increase of chemical plants and refineries. However, studies at this time found that the cancer rates in Cancer Alley were the same as the statewide level (James et al.). One recent and widely cited study was done by the Louisiana Tumor Registry (LTR), part of Louisiana State University Health. The spokesman for one of the largest factories in the region calls LTR “a neutral state body” (Lartley and Laughland, “Residents”). However, it is important to remember that this is a state that receives billions of dollars from the petrochemical industry every year. LTR’s review of Cancer Alley statistics concludes that, “regarding the so-called ‘Cancer Alley,’ a commonly used term that has no scientific validity, results are mixed” (LSU Health New Orleans). It makes essentially no conclusions about the statistical validity of cancer in Cancer Alley, stating only that the rates vary throughout the region. However, the raw data from this study shows that 7 out of 10 of the highest cancer rates were in Cancer Alley, the highest in the area being a rate of 648.1 in a Jefferson Parish Census Tract. The state average is 489.1, and three of the seven parishes in

Cancer Alley have lows in the 500's (Maniscalco et. al). The conclusions of this study, which hide behind any ambiguity in the findings, allow the state government and chemical plants in the area to justify their continued inaction in improving the area.

Residents of cancer alley have only gotten their stories heard by a study with a different methodology, which coincides more with the way that they make their own observations. The University Network for Human Rights changed the research parameters of traditional studies and found much different results. Researchers did a door to door analysis of cancer rates in the town near one of the largest factories in the area, owned by the Denka chemical company, which produces chloroprene. They found enormous rates of cancer much different than the national average, with a 9.7% cancer rate nearest the factory. There is only a .6% chance of this happening anywhere in the country (University Network for Human Rights). Their conclusion was that, "Our data reveal extremely improbable rates of cancer and other illness among residents surveyed. We also found that prevalence of cancer and other illness among our survey sample is correlated with proximity to the Denka plant, with higher rates of illness closer to the plant" (University Network for Human Rights). This study reflects what the residents of the area have seen for decades. Robert Taylor, who has lived near the Denka plant for decades, says that "we know the closer you are to that plant the higher your chances of getting cancer are" (Sneath). After decades of observation of neighbors getting cancer and rates rising as the chemical pollution got worse, UNHR finally gave the residents of Cancer Alley scientific backing.

The different results of the University Newtwork for Human Rights study and the Louisiana Tumor Registry study, as well as how they are used and constructed by different

parties of the debate, show how much politics and personal factors can influence scientific findings. LTR was created by state legislation which states that, “Any health care provider or radiation center diagnosing or providing treatment to cancer patients shall report each case of cancer to the president in a format prescribed by the president within six months of admission or diagnosis” (Louisiana Tumor Registry Law). Any treatment center in the state of Louisiana treating Louisiana residents for cancer or out of state centers treating Louisiana residents must report cancer cases to the tumor registry. This is how LTR compiles their data, and they group data at a census-tract level. UNHR instead went door-to-door in a small area, looking at gradations of different distances from the Denka plant, and asked residents if they had been diagnosed with cancer. They compared these results to a theoretical population, stating that “for every resident in our survey sample, we had a corresponding resident – of the same race, sex and age – in our simulated population” (Lartley and Laughland, “Residents”). Although the study was backed with statistical evidence, a Denka spokesperson has completely disqualified it as science, saying ““From what we have learned, the study appears to be based on individual interviews rather than scientific analysis of actual cancer incidences”” (Lartley and Laughland, “Residents”). The Denka plant executives are already in a position of power over the residents of Cancer Alley. Their dismissal of the scientific evidence that backs the views of Cancer Alley residents demonstrates how this power translates to valuing certain science over others.

In creating a scientific fact, it is important how the political figures promoting a certain fact dismiss any opposition. The Denka plant dismisses the UNHR studies because of their supposedly non-scientific methods. As is seen in other historical examples, whether a discrepancy is determined to be “technique-driven or true features of the material had significant

epistemic weight” (Martin, 928). The Denka plant, which is currently in a position of power in the debate, determined for themselves that the UNHR conclusion is merely a result of the technique, not of actual truth. Denka is able to back this claim because they have the LTR study to fall back on as evidence. After declaring from their position of power that the UNHR study has no methodological validity, the question shifts from the actual cancer rates to how to study them, moving further away from any improvement in the area. The residents of Cancer Alley, however, are in a position of less power and must fight to have nearly inscrutable evidence. While there are still organizations with different stakes in the matter and some science to justify their claims, the debate will continue.

What Causes Cancer

The way that knowledge is currently treated is that there is one answer that must be agreed upon. When the studies find that cancer rates in Cancer Alley are similar to those of Louisiana and the nation, the argument that something must be done about Cancer Alley is invalidated. When research finds that cancer rates are actually higher nearest to the chemical plants, this data has to fight previous studies. In scientific studies, “the very idea of an epistemological uncertainty presupposes an a priori separation of the epistemological question of ‘how we know’ from the ontological status of ‘what we know’, where only the former, that is, our knowledge is allowed to vary” (Schrader, 277). In the case of Cancer Alley, the multiple bodies trying to produce knowledge are fighting to get the right answer to “what we know”, assuming that only one body can produce that knowledge and that one methodology is better than the other. The issue for Cancer Alley, especially the residents living there, is that their

epistemologies are counted out, and they are largely not allowed to make any progress toward convincing others of the ontology that chemical plants are causing cancer and other diseases.

It has taken decades for official scientific research to understand what the citizens of Cancer Alley have known for years. It was not until 2010 that the EPA even declared chloroprene, one of the major chemicals polluting Cancer Alley, as “‘likely to be carcinogenic to humans’ by all routes of exposure” (LaPlace). Modernity looks to science for fact, but in the case of Cancer Alley the shortcomings of this become apparent. Even after years of debate, there are still studies, such as the one from the LTR, which claim that the plants and chemical pollution do not contribute to the health of the residents of Cancer Alley. In addition, the administrators of large plants still argue that chloroprene has no ill health effects and disagree with the EPA’s classification of it. This includes the plant manager himself stating, “‘There is no relationship between chloroprene and cancer” (Blackwell et. al), contrary to what the EPA and UNHR states. Although Denka is still contesting the facts, the EPA labelling was a win for the people of Cancer Alley.

The EPA study had enough power to finally change the course of action changed, but still only slightly. Since 2017, the EPA has been measuring chloroprene concentrations in the air in various areas around the plant. In January of 2017, the company agreed to voluntarily reduce their chloroprene emissions by 85% from 2014. The EPA has issued guidelines saying that chloroprene levels in the air must be at .20% or below. However, the concentration of emissions is still well above this, over two years later. The latest readings recorded a concentration of 3.88 at one location and 4.17 at another (Denka Air Monitoring). This is about 20 times that of the EPA recommended point of concentration. The highest levels since the study started were in the

high 60's, over 300 times what the EPA demands. The levels throughout the last few years have been sporadic, varying from day to day, and not on a constant downward trend. An EPA official stated that, "it was 'doubtful' the agency would ever set a legally enforceable standard for the toxin. 'The fact of the matter is there is a sole source of chloroprene in the United States and it's here'" (Lartley and Laughland, "Almost"). Essentially, the chloroprene produced by the factory is valued over the health of the residents around it, and no big change will be made until this stops.

One problem is that the communities being victimized in Cancer Alley are some of the poorest communities, fighting against one of Louisiana's biggest economic contributors. The residents of Cancer Alley are very poor, mostly African American. In some places, up to 70% of the population is African American and $\frac{1}{3}$ of the population lives below the poverty line (Singer). Cancer Alley residents lack the resources and organization to fight back, and have often been marginalized. The residents cite the environmental quality as just another form of marginalization, saying "First slavery, then sharecropping, then this. It's just a new way of doing it" (Lartley and Laughland, "First slavery"). When residents do fight against environmental pollutants, they are fighting against one of the biggest pillars in Louisiana's economy. The Louisiana Chemical Association states that the petrochemical industry, "is the number 1 provider of jobs in Louisiana's manufacturing sector, supports more than \$79.7 billion in annual sales for businesses in our state and contributes more than \$1.1 billion yearly to the Louisiana treasury" (Loren C. Scott & Associates, Inc.). The importance of the chemical industry in the state, local employees, and the government cannot be understated. This elucidates the fact

that the scientific debate of cancer rates and carcinogens is situated in a highly political, economic system in which not everyone is objective or on equal ground.

In addition, neither the state government of Louisiana nor the federal government have issued any regulations on the chemical, and this inaction allows the continued pollution of Cancer Alley. The Louisiana Department for Environmental Quality's website states that, "While there is currently no federal or state standard for chloroprene emissions, EPA has offered a number as guidance. It is not an emissions limit" (Denka: The Path Forward). The Louisiana state government is not enforcing any regulations or limitations on the chloroprene emissions, relying on the imagined good will of the Denka corporation. However, Denka insists that it "operates its facility safely and within all permits written by the Louisiana department of environmental quality" (Lartley and Laughland, "Almost"), i.e. none. Chemical plants and state governments will continue to justify their inaction until a larger party comes in and stops them. They will continue to say that they are following all laws, when the lack of laws is the true problem.

It is clear that the Louisiana government does not value the health of Cancer Alley residents as much as they value the economic contribution of chemical plants. Multiple stories have made national news recently about Cancer Alley. Recently, Cancer Alley residents and activists Robert Taylor and Mary Hampton made news when they visited and were largely ignored by their representative Cedric Richmond. Richmond has been the US congressman for an area of Cancer Alley for almost ten years and has received over \$400,000 in campaign donations from the chemical and oil industry (Laughland and Holden). This very clearly demonstrates how the oil and gas industry empowers the political actors in the area. When

Taylor and Hampton went to Richmond's office to discuss getting help from their representative, they were largely dismissed. Richmond told them to write a letter to Denka, which has already been done. Hampton said, "Looking at his face, it didn't really seem like he was interested," and "It was like he was trying to brush us off" (Laughland and Holden). This is one example of a specific government official brushing off the residents of Cancer Alley. However, from the fact that there are no legal restrictions and national guidelines remain ignored, it is clear that the state government does not value Cancer Alley residents as much as the money and resources of the petrochemical industry.

The residents of Cancer Alley face major obstacles in changing their environment because they have been placed at the lowest end of the knowledge production system. As has been seen, the residents alone have been able to make very little change. They needed scientific and regulatory bodies to have any backing for their claims. Their observations alone were not enough. The Cancer Alley debate very clearly demonstrates different forms of situated knowledge (Haraway). One aspect of this is acknowledging the fact that different interest groups quite literally see different things in different ways, even if looking at the same thing. As Haraway says, "The eyes have been used to signify a perverse capacity...to distance the knowing subject from everybody and everything in the interests of unfettered power" (Haraway 176). The people who live in cancer alley see the people around them succumbing to disease at the same time as they see giant plants popping up around them. Studies funded by the state see parishes and census tracts, and how many people in each of these have been diagnosed with cancer. Human rights networks see people living in crisis, what is happening to them, and how it can be explained in distance from chemical plants. The same problem exists even after science enters

the picture. The science alone is not what produces knowledge and resulting actions. The science of Cancer Alley is wrapped up in subjective political and economic systems. Because of this, although science can play a key role, it can never present an objective fact. Of the knowledge that is produced about Cancer Alley, that which aligns with the agencies with the most power will always have the most authority.

Even with the national coverage that Cancer Alley has recently received, the top-down approach will never be enough to make real change. Nationally, people care about Cancer Alley. The Guardian is doing a year-long series on Cancer Alley. NPR, ProPublica, and CNN are among the national news organizations who have covered the story. However, there is a lack of coverage among local news organizations, and even less attention paid by local organizations and politicians. An attorney for the Cancer Alley residents says that locally, ““The government is courting and just greenlighting these facilities without any real appreciation of what they’re allowing into their community”” (Juhasz). On the local level, the government and those in power do not hear the cry of Cancer Alley residents, and without this local help any national coverage will not make a change. It is clear even from the way that their US representative treats the residents that those on the local level with the power to make change prioritize the money from the petrochemical industry over the health of Cancer Alley residents.

Conclusion

Why study Cancer Alley at all? If the statistics and science will always be erased by political power what is the point? For one, it is an excellent case study in how knowledge is formed. The people who live in the area are certain that the plants are causing cancer because they are looking at their individual stories and cases. Petrochemical organizations cite studies

done on a macro level to support their argument. Different levels of validity are placed on these studies based on who is doing the observations or studies and who is looking for evidence.

Cancer Alley is an example of scientific debate and the politicization of it impacting human mortality. Knowledge takes a long time to become fact. Currently, the knowledge and facts regarding Cancer Alley are still being debated, and the process is playing out very slowly. This process reveals how highly political scientific knowledge is. The science, however, will never speak for itself. It is wrapped up in a complex system of people, politics, and fact building, in which data is only one small part. Cancer Alley is a key example of the debate involved in knowledge production and how all elements involved in a system affect perception of facts.

The residents of Cancer Alley are silenced by means of being at the bottom end of a large, politically involved knowledge production and erasure system. In any debate over a scientific fact, different agencies approach the issue from different positionalities and may come to different results. Typically, the one which garners the most support will win. The problem in the Cancer Alley debate is that the people who are affected the most have the least say. The poor, marginalized residents of Cancer Alley, even when backed by science, do not have power against giant, deep-pocketed companies and the state and local government. There is very little action being taken because science and the people living in the area have to fight an uphill battle of fact production and scientific shifts, after which only small steps of change are made in the real world. Even in the face of scientific evidence, the residents of Cancer Alley receive no help because of apathy on the part of local officials and the petrochemical industry. This apathy will continue to allow inaction until some greater force can shake the traditional system.

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