

TOXIC TOWN

IBM, Pollution, and Industrial Risks



Peter C. Little

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TOXIC TOWN

For Jenny, Lucy, and Theo

PREFACE

One simple way to assess the impact of any organization is to answer the question: how is the world different because it existed?

—Samuel J. Palmisano, IBM Chairman

On June 16, 2011, International Business Machines Corporation (IBM) celebrated its one-hundredth birthday and commemorated this event with a year-long series of seminars and conferences around the world. The centennial celebration was an opportunity for IBM to reach out to many of its constituents in industry, government, and academia and engage with them in a variety of celebratory events. IBM Chairman Sam Palmisano even invited these “members” of the IBM family to pledge at least eight hours of community service during 2011 to commemorate IBM at 100.

IBM has much to celebrate. After a hundred years of business and technological innovation, the company has a dazzling resume, making investments and impacts in almost every sector of industry, government, and science. They have developed a supercomputer system named WATSON, named after IBM’s founder, Thomas J. Watson, Sr., that is able to approximate human speech and respond to questions with a precise, factual answer by running complex analytics. On a *Jeopardy!* match televised in February 2011, WATSON beat two champions of the game. IBM even has its own Institute for Electronic Government and is at the forefront of developing electronic voting services and technologies to advance the worldwide growth of “electronic” or “digital” democracy.¹ IBM’s Computational Biology Center has partnered with National Geographic to arrange the largest human genetic

dataset to model and reconstruct the “genographic” spread and makeup of humanity on planet Earth. In 2004, IBM launched Blue Gene, one of the fastest supercomputers in the world, which can compute 91.29 teraflops per second. To put that computing speed into perspective, one teraflop equals one trillion operations per second.

IBM’s involvement in the public health and healthcare sectors is also impressive. They have recently worked closely with the National Institutes of Health to develop a massive database of chemical data extracted from millions of patents and scientific literature to allow researchers to more easily visualize important relationships among chemical compounds to aid in drug discovery and support advanced cancer research. They have developed the Spatiotemporal Epidemiological Modeler, which is being used by public health scientists worldwide to trace the spread and distribution of disease. IBM is also at the cutting edge of medical imaging technology, which is improving medical diagnosis, allowing patients to better “see” the internal conditions of their body under medical analysis, and providing families with high-resolution images of their yet-to-be-born child.

IBM is also a major player in the fast-growing field of nanotechnology, which is based on the use of atomic and molecular scale structures and devices for enhancing information technologies. To further augment nanotechnology development and investment opportunities, IBM has generated a new “business” relationship with New York State. In 2008, a research and development mission co-sponsored and financed by IBM and New York State aimed at accelerating New York’s international leadership in nanotechnology research and development and creating new high-tech jobs. This corporate-state partnership has led to the development of the Computational Center for Nanotechnology Innovations, a partnership among Rensselaer Polytechnic Institute, IBM, and New York State that is building one of the world’s most powerful university-based supercomputers that is further miniaturizing devices in electronics and opening up the capacity of nanotechnology to influence multiple industries. A brand name of American capitalism, IBM even spearheaded the development of barcode technology to track commodities and improve global product distribution.

The list of IBM’s contributions to business, science, and technology and its achievements in all sectors of government and industry goes on

and on. The company has also received a number of awards for its environmental leadership in the business world. In 2010, it received several “environmental” awards. IBM ranked number one in the *Newsweek* “Green Ranking” of the biggest publicly traded companies in developed and emerging world markets for its business attention to environmental impact, green policies, and reputation. The company ranked number one in the latest Supercomputing Green500 List announced by Green500.org, an organization that ranks the top 500 supercomputers in the world by energy efficiency. The list the organization generates shows that 13 of the top 25 most energy-efficient supercomputers in the world today are built on IBM high-performance computing technology. Finally, IBM ranked number one in all-around performance and was in the top three in all five categories in Gartner/World Wildlife Fund’s recent “Low-Carbon & Environmental Leadership Findings Report,” a report that evaluated 28 information and computer technology companies on their all-around performance, including, but not limited to, the company’s “internal environmental performance.”²

Amid these things to celebrate, these products and moments of high-tech prowess and progress, certain consequences of such IBM productions do exist. Lenny Siegel and John Markoff, in their book, *The High Cost of High Tech: The Dark Side of the Chip*, exposed the “toxic time bomb” of the so-called green high-tech industry, writing confidently that “[h]igh-tech pollution is a fact of life wherever the industry has operated for any length of time, from Malaysia to Massachusetts” (Siegel and Markoff 1985:163). The following book extends this effort of exposure by focusing on a case study concerning the material environmental impacts of IBM technology which call into question IBM’s new technoscientific ideology based on a corporate desire and mammoth effort to “Build a Smarter Planet” in a decade (2010–2020), which IBM calls the “Decade of Smart.” “By a smarter planet,” according to IBM’s corporate website, “we mean that intelligence is being infused into the systems and processes that enable services to be delivered; physical goods to be developed, manufactured, bought and sold; everything from people and money to oil, water and electrons to move; and billions of people to work and live.”³ A Smarter Planet, as it appears here, is a cosmopolitan innovation whereby “everything” can become better with more infusion of “intelligence”—that always slippery term—and

the planet *becomes* smarter when IBM's intelligence infuses everything in our socio-natural world.

IBM's Smarter Planet mantra, stated best by Samuel J. Palmisano, IBM chairman and former president, during a speech to business and civic leaders in London on January 12, 2010, is powered by the fact that "Enormous computational power can now be delivered in forms so small, abundant and inexpensive that it is being put into things no one would recognize as computers: cars, appliances, roadways and rail lines, power grids, clothes; across processes and global supply chains; and even in natural systems, such as agriculture and waterways."⁴ In that speech he spoke of how digital devices—soon to number in the trillions—are being linked via the Internet, suggesting we are living among an "Internet of Things," resonating with the notion that contemporary reality is one marked by "vibrant materiality" (Bennett 2010). IBM's Smarter Planet initiative is modeled on the mission of using digital technology solutions to modernize the infrastructure of nation-states, by installing energy-efficient (or smart) grid technologies and reducing traffic congestion in cities via sensor technology. It is no secret that IBM is becoming more entangled in city- and nation-building efforts, and is also a senior firm that is representative of and for constantly expanding techno-modernization with deep domestic and international government and industry ties.⁵

IBM—famously nicknamed "Big Blue"—is excited about the capacity of data, what it calls "the knowledge of the world," "the flow of markets," even "the pulse of societies," to be transformed into intelligence, and the capacity of computers to have the processing power and advanced analytics to "make sense of it all."⁶ It is with this cutting-edge knowledge and technology that IBM believes it "can reduce cost and waste, improve efficiency and productivity, and raise the quality of everything from our products, to our companies, to our cities."

On the techno-economic surface, this all sounds promising and "smart." But, deliver this message of corporate progress and prowess on a loudspeaker in downtown Endicott, where IBM planted the seeds for its empire of business and innovation, and chances are the message falls on ears of distrust, discomfort, and even disgust.

How might this citizen response, in this community, complicate the story of IBM modernization, the corporate story of ever-increasing

processing power and computer analytics? The lived experiences and discourses of Endicott residents explored in this book do not fully answer this question. The book does, on the other hand, argue for a much needed pathway of understanding rooted in ethnographic research and description to show how and why this message of high-tech progress, dynamism, and “smartness” is contradictory and might be contested and thwarted for good reasons. In the spirit of one Endicott resident and former IBMer who has struggled to live a comfortable life in IBM’s contaminated birthplace, the following words mark the real active ingredient of this book: “I just want people to know. People need to know that there is a problem here. People need to know that it ain’t gonna be covered up. They try to make everything look nice by mitigating, but there is a big problem here. The fact is IBM took a dump on this community. They messed up here, big time.”

What follows is one anthropologist’s attempt to honor this recognized “problem” and, perhaps more important, to honor the lived uncertainty and frustration that persists after the toxic “problem” has been re-coded as a “mitigated” problem. It documents a community’s transformation from being an industrial boom town to a community strangled by the moral hold of “responsible” mitigation. It honors the elusive and precarious nature of risk mitigation in a polluted industrial birthplace. As the French philosopher Michel Serres might put it, it discusses pollution mitigation and repair as one of many extensions of toxic sludge, as a pollution response, reflex, and example of “corporate responsibility” that is as much about risk control and scientific assurance as it is a practice of re-appropriating and re-defining a troubled high-tech birthplace and landscape of late industrial corrosion.

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ACRONYMS AND ABBREVIATIONS

ATMS	Anti-Toxics Movements
ATSDR	Agency for Toxic Substances and Disease Registry
CARE	Citizens Acting to Restore Endicott's Environment
CCIA	Computer and Communications Industry Association
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, more commonly known as Superfund
CVOC	chlorinated volatile organic compound
IBM	International Business Machines Corporation
IRM	Interim Remedial Measures
ITRC	Interstate Technology and Regulatory Council
NIOSH	National Institute for Occupational Safety and Health
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
EJ	Endicott-Johnson Shoe Company
EPA	U.S. Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
PEM	Political Ecology of Mitigation
RAGE	Residents Action Group of Endicott
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
TCE	trichloroethylene
VI	vapor intrusion
VOC	volatile organic compound
VMS	vapor mitigation system (or sub-slab depressurization system)
WBESC	Western Broome Environmental Stakeholders Coalition

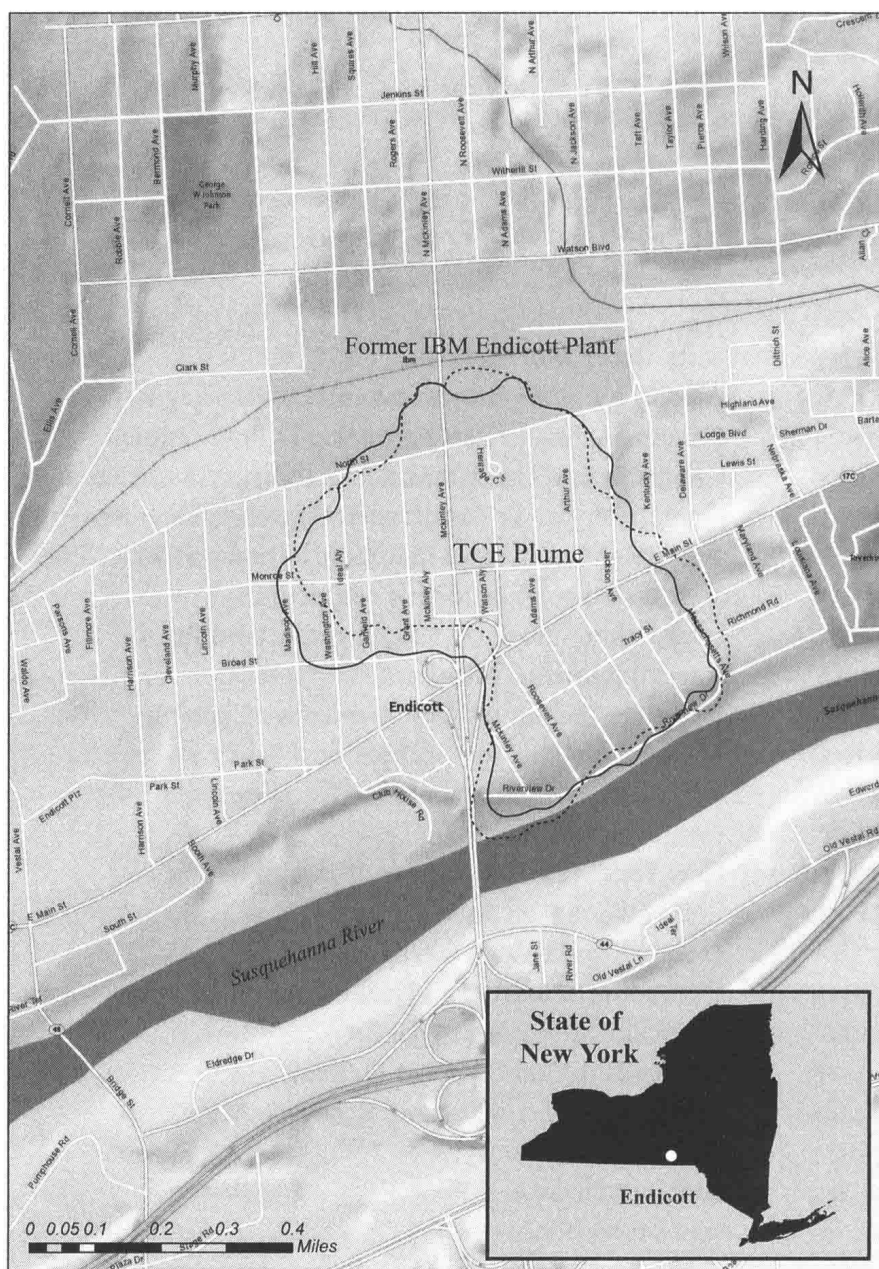


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