

House Secrets: Industrial Tales in the World's Most Contaminated Cities

For the past two years, my primary focus in photography has been to document abandoned, nineteenth-century factories and industrial spaces, as well as to show the irreparable damage modern industrialism has had on the global environment and its population. By photographing the devastating effects on local neighborhoods wrought by factories and industry, my intention has been to show how seemingly isolated problems have contributed to the global environmental crisis we are witnessing today. To date this project has taken me to Manchester, England-the birthplace of the industrial revolution; to Cleveland, Ohio;¹ and Zagreb, Croatia.² If I were to become a recipient of the Mortimer Hays-Brandeis Traveling Fellowship, I would expand this project to include three additional locations: Kabwe, Zambia; Linfen, China; and Dzerzhinsk, Russia, (Attachment 1) known to be one of the most polluted cities on the planet.³ Through my photography I will show the impact of modern industrialism on the real, day-to-day experiences of people and their industrialized habitats.

My project seeks to attract broader attention to this very serious problem. From my perspective pollution is all the more troubling because although a very human story it nevertheless lacks a human face. It is for this reason that I propose to utilize the Fellowship money to spend a sufficient amount of time in mentioned locations-long enough to witness the effects of the pollution on the lives of the people and landscape first hand, making a photo-journal as I go. Though I have already done research on each city and have named key locations within those cities that I plan to photograph, my time abroad will allow me to do more research on location (by talking to local people, and by going through written archive such as old issues of local news papers) in order to understand as much as possible the history of local industry and its effects on the local environment and population. I propose to photograph the affected industrial sites (including factories, mines and landfills) and the

¹ The work, entitled *A Picture Window on Cleveland*, has already been exhibited in the U.S. and Europe.

² For my project *Waiting for the Perfect Monday*, I spent a month in one of the hospitals in Zagreb photographing patients whose illnesses were directly linked to pollution including asthma, cancer, and lead poisoning.

³ The Blacksmith Institute. 2006. <http://blacksmithinstitute.org/> (accessed October 3, 2006).

people who work in them, including their families. To this end I will photograph whole tainted landscapes and their human-scale counterparts: from home interiors to emergency rooms, from markets to churches. It is both the good and bad that local industry brings to local populations that interest me. In short, with my camera I will frame their historical moment.

During my two-year-long commitment to documenting industrial sites, I have contacted a number of individuals and institutions that also share my passion for environmental and humanitarian issues, including the Blacksmith Institute.⁴ Since 2003, the Institute has been identifying the world's most polluted centers in an effort to draw attention to what has already become a global environmental crisis. Ranking at the top of the list in 2006 were above-mentioned cities in Zambia, China, and Russia. Indeed, the figures for these metropolitan areas tell an alarming story. All of them are tainted with chemicals in amounts exceeding the World Health Organization's safe limit by millions of times. Death rates generally triple birth rates, and life expectancy is 10-30 years less than in other urban areas.⁵ Moreover, due to high concentrations of toxins in their blood, every third child in these locations needs immediate medical treatment that he/she is not receiving. Though eerily similar in the level of pollution and its effects on environment and local population, these cities are contaminated through different types of industries that irreparably poison Kabwe's soil, Linfen's air, and Dzerzhinsk's water. As such, each of these cities is representative of numerous similar cities throughout the world, the tip of an iceberg, a metaphor for the whole planet. Documenting all three will demonstrate how global these issues have become.

Site History and Travel plans:

Kabwe, Zambia. (Attachment 2) From 1902 until its closure in 1994, the city was home to one of the largest lead mines in Africa. During that time there were few pollution controls leaving the soil in

⁴ The Blacksmith Institute. 2006. <http://blacksmithinstitute.org/> (accessed October 3, 2006).

⁵ CIA - The World Factbook. 2006. <https://cia.gov/cia/publications/factbook/index.html> (accessed November 12, 2006).

and around Kabwe heavily contaminated with lead. Symptoms of acute lead poisoning occur at blood levels of only two times higher than those allowed by the WHO,⁶ and levels that are 12 times higher of mentioned recommendations can often be fatal.⁷ Records show that in Kabwe the average concentration of lead in the blood of children is 5-10 times more than the amounts allowed by the WHO. Such children are 90 times more likely to suffer from changes in their behavior, learning problems, and damage to the nervous system than uncontaminated children.⁸

Dzerzhinsk, Russia. (Attachment 3) Ranked as the most chemically polluted city in the world,⁹ Dzerzhinsk was among Russia's "principal production sites of chemical weapons"¹⁰ until the end of the Cold War. Hundreds of thousands of chemicals and toxic byproducts from weapons manufacturing were disposed of improperly, and of this waste, hundreds of separate chemicals were released into the groundwater, which still serves as the only source of water supply for the people of Dzerzhinsk. Today, the average life expectancy of inhabitants of this city barely exceeds 40 years of age, 25 years below Russia's average,¹¹ and 39 years below the average of other industrialized nations.¹²

Linfen, China. (Attachment 4) Situated in Shanxi Province, the heart of China's enormous and expanding coal industry, Linfen is the city with the worst air quality in the world.¹³ Consequently, the local population breathes toxins twenty-four hours a day, 365 days a year irreparably ruining their health. The ecological problems result in thousands of premature deaths every year, and epidemics of lung-cancer, arsenicosis and lead poisoning.

⁶ The World Health Organization considers concentrations of lead in blood of 10 mcg/dL and less to be safe. WHO/World Health Organization. 2006. <http://www.who.int/> (accessed October 20, 2006).

⁷ Stryer, Lubert. 2002. *Biokemija*. Zagreb: Skolska Knjiga.

⁸ Filipovic, Ivan, and Lipanovic, Sinisa. 2003. *Opca i Anorganska Kemija*. Zagreb: Skolska Knjiga.

⁹ BBC News! Programmes/Correspondent/Russia's Deadly Factories. 2003.

<http://news.bbc.co.uk/1/hi/programmes/correspondent/2821835.stm/> (accessed October 18, 2006).

¹⁰ MR. Edelstein. 2005. *Empowering Russian and American NGOs to address issues of future sustainability- Final project report*. Ramapo College of New Jersey.

¹¹ CIA - The World Factbook- Russia. 2006. <https://cia.gov/cia/publications/factbook/geos/rs.html/> (accessed November 7, 2006).

¹² Average life expectancy of people in Australia, Canada, France, Germany, Italy, Japan, United Kingdom, and United States Central Intelligence Agency. 2006. <https://cia.gov> (accessed November 12, 2006).

¹³ The World Bank. 2006. <http://www.worldbank.org/> (accessed October 28, 2006).

On each location I will spend three months leaving gaps of four weeks between trips in order to return to New York, develop my film, and make a preliminary selection of prints. Some of these I will show prospective subjects on subsequent trips, as I have learned that people are much more willing to be photographed if they can see examples of what their photographs might look like. Moreover, this period of reflection and review will enable me to learn from any mistakes I may make, and assess all necessary adjustments for my next trip.

Experience and Readiness for Project:

In what way am I suited for this project? In large part because I have been studying this subject matter in detail for over a decade. Before turning to photography full time, I received a B.S. in biochemistry from the University of Zagreb where my research interests focused on industrialism and the human food chain. Thus, I understand the chemical effects of pollution in a way few, if any, trained photographers do, for my scientific background allows me to recognize the effects of pollution as well as know where to look for less obvious examples.

Moreover, for the past few years I have been imaging industrial sites in Cleveland, Ohio; and Zagreb, Croatia taking repeated trips to each city in order to document the long-lasting effects of nineteenth-century pollution on those cities. That project has taught me in a very real way that the effects are tragic and long term. It is no accident that the industrial heartland of America, and Eastern Europe are also the most devastated economically. To be there among the ruins, so to speak, is to understand why people have been steadily emigrating from those areas for decades, leaving in their wake entirely devastated landscapes. For my Cleveland/Zagreb project I have been using a large-format camera exclusively-the same one I will use for my three-cities project (Attachment 5). My experience with the large-format camera has taught me what to expect in terms of security regulations

at airports, loading and unloading negative backs in near-impossible conditions,¹⁴ protecting exposed film at airport security sites (not as easy as one might imagine), and even dealing with factory workers and managers who grow wary when they eye a large camera being erected near their work site. Indeed, experience has taught me the value of making the acquaintance of my subjects before I start to shoot.

Since I have been deeply involved in photographing industrial sites for almost two years now, many non-profit organizations have already become familiar with my work. The Director of Constitutional and Legal Policy at the Open Society Institute, Mr. John F. Kowal, is helping me make connections with local environmentalists in China and Zambia in order to gain access to key locations. These environmentalists will also help me promote this project in local museums, galleries, non-profit organizations, and schools. Similarly, I have developed a working relationship with Mr. Kevin O'Connor, the director of the London Photographic Association, and have familiarized him with my new project. Since the LPA has already exhibited several of my images (most recently in London and Manchester), Mr. O'Connor is eager to review, and possibly exhibit my new series. I hope that such exhibitions would be a way of not simply educating the local population but also energizing them to make changes. Indeed, I hope and intend that my photographs will provide opportunities for awareness, dialogue, and action.

In addition to the over 20 countries on 4 continents that I have visited as a backpacker and photographer on a tight budget, I already worked in all of the countries that I plan to visit for this project with the exception of Zambia. I have already visited countries considered high risk for photographers-including Belarus, the last of the Soviet-style communist states, where foreigners are by and large considered a threat. Thus, I know how to handle myself when and if difficulties arise.

¹⁴ Unlike small and medium format cameras that use roll film protected from light by a plastic container, a large-format camera uses sheet film. In order to transfer such a film from the manufacturer's light-tight box to a negative holder safely, one needs a light-free environment. If the tiniest amount of light hits the film in the process of transferring, it will result in fogging, and the picture is ruined.

Above all, I am flexible and am not afraid to adjust my plans according to the situation on the ground. I know that the best-laid plans can be foiled by transportation delays, unexpected closures, and other unforeseen changes. Thus, while my plans are specific, I realize most of all that they are guidelines for a practical project that is adaptable enough to allow changes and adjustments if necessary. Furthermore, as I explore and learn about these sites, I anticipate and hope that new questions and directions will arise, another reason that I see my itinerary as a flexible and adaptable one.

Finally, I grew up in Zagreb, Croatia, during the time (just as in all the cities I have visited and will visit with this project) when there were no regulations regarding industrial pollution. I grew up listening to stories of how our river used to be "crystal clear." With other children, I used to draw shapes with my finger in thin layers of fine, toxic dust coming from the cement factory near-by. I experienced first hand the continuous environmental devastation. Through years my city has changed for the better, and so has Cleveland. However, there are numerous cities throughout the globe - known and unknown - that may not have resources or political will to do the same. My goal as a photographer is to show that even if we might eventually clean our back-yards, we should still be deeply aware of places whose population is still recalling tales of clean rivers, and whose children are still playing under a layer of toxins. My hope is that by bringing visual attention to these global sites that very outcome can be avoided. In the long run, this project will hopefully give me recognition as a serious documentary photographer, and credibility to continue expanding this project.

I am aware that I am not the only photographer interested in the decline of industrial cultures and their effects on environments and people both. The most salient modern practitioners in that genre are Bernd and Hilla Becher, whose images of factories and water towers in the permanent collection at the Museum of Modern Art became seminal in the middle of the previous century.¹⁵ Edward

¹⁵ Hilla Becher, Bernd Becher, Cornelius Tittel: High precision industrial age souvenirs. 2002. <http://www.signandsight.com/features/338.html/> (accessed November 7, 2006).

Burtynsky is another striking example. His powerful, even moving, images of industrial wastelands, shown in 2005 at the Brooklyn Museum, have gone a long way toward pointing up the problem I am addressing here.¹⁶ Sebastiao Salgado has also moved into this domain to the extent that industrial sites impact refugees and inhabitants of the Third World generally; he exhibited many works related to this theme in his retrospective at the International Center of Photography.¹⁷

What sets my work apart from all of these, I believe, is a matter of aesthetics. All too often when viewing the work of Burtynsky, Salgado and tangentially even the Bechers, there is the tendency to say "How beautiful!" when confronted with images of the most appalling waste. My work, in a postmodern fashion, attempts to work against this aestheticizing effect. Moreover, unlike the Bechers, Burtynsky and others, my work attempts a genuinely global dimension. We know now that the wellbeing of each of us depends on the wellbeing of the planet as a whole. We are also keenly aware of the number of voices out there who seem to deny - some at the highest levels of government - that industrial pollution is a problem with far-ranging effects. I would like to add my voice to all those who seek to document the problem, not in the language of only beautiful imagery but also in unblinking journalistic style. My desire to promote these works stems from the opportunity to allow a broader public to learn about the cities that are "sacrificed" in order to achieve and maintain faster economic growth for their home countries. The connections that I am building with global non-profit organizations and local environmentalists will help to facilitate that goal. I am hopeful that with the help of the Mortimer Hays-Brandeis Traveling Fellowship my final portfolio is going to be not only show-worthy photographically, but educational as well.

¹⁶ Edward Burtynsky - Photographic Works. 2006. <http://www.edwardburtynsky.com/> (accessed November 7, 2006).

¹⁷ Sebastiao Salgado. 2006. <http://www.ten-a.com.br/sebastiaosalgado/> (accessed November 7, 2006).