Special Section: ArtScience/Watershed

APPREHENDING THE ENVIRONMENT: WATERSHEDS OF ART AND SCIENCE

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Watershed: Art, Science, and Elemental Politics was held at the University of the Witwatersrand, Johannesburg from September 10–21, 2018, and brought together art and science concerns around knowledge systems, stewardship, water insecurity and threats to planetary survival. The program included practicing artists from India, USA, Peru and South Africa, with their work presented in the form of installations and exhibitions, walks and performances, poetry and book readings across the university campus; these events were integrated and folded into panel discussions and seminars. The bringing together of artists, scientists, policy makers and activists was the first occasion these concerns were the context of Watershed. In this issue of Leonardo, a number of the artists write of their work during Watershed, and the relationship of this to the physical setting, where anticipated temperature rise and decreased rainfall are greater than anywhere else on the globe.

Johannesburg, South Africa’s largest city and economic centre, depends on electricity largely generated by coal-fired power stations while its water is purchased from neighboring Lesotho. At the time of Watershed, Johannesburg’s water supply was relatively stable, but countrywide, there had been long term drought and harsh water restrictions. Extractive and manufacturing industry, patterns of consumption and waste all contribute to environmental degradation, multiplying the effects of changes in temperature, rainfall patterns, and lake, river and ground water reserves. These concerns were the context of Watershed.

The term “watershed” in this context referred to local water crises, global environmental crises and global warming, and the critical moment for a change of policy and practice by industries, governments and communities. The term was also literal. The University of the Witwatersrand is on the watershed which drains into the Limpopo River and the Vaal and Orange Rivers. On the highest point, The Origins Centre, Watershed seminars were held and the work of several artists shown, including that of Christine Dixie and Hannelie Coetzee (this issue) and Lucia Monge. The street running up the hill to the watershed ridge bisects the downtown campus: arts and the classical sciences, and applied science, law and commerce; this was where Marcus Neustetter performed Pushing Against the Watershed, as he and Christo Doherty describe (this issue). In Hyena Sculpture, Hannelie Coetzee traced the high points of the watershed; she supplemented her sculptures with an animated “walk” of four of the hyena across the watershed, and guided members of the public along it (this issue). Myer Taub, in Traces of the Spruit, took Watershed participants beyond the campus to follow the polluted streams (spruit) whose waters draw from the watershed. Others went beyond the city to reflect on environmental damage related to the country’s economic base. Christine Dixie’s work, Below the Sediments (this issue), a series of five panels of brushed metal and polymer sheets, focuses on the use and waste of water for fracking in the semi-arid Karoo; Lucia Monge, in Mi Niño, Your Dry Spell, Their Waterfall, examined plant ecology and botanical adaptive mechanisms, to understand how plants adapt and proliferate in the Namaqua desert. Brian House’s work, Acid Love, references the history of the city, the processes of chemistry, long wall mining and its overflow onto physical and social environments; House’s work on lethal acid mine drainage links with concerns of Atul Bhalla.

Bhalla’s work, Looking for Lost Water (Explorations at the Cradle), was located in the atrium of the Chamber of Mines [1, 2]. The work (Fig. 1) included 18 14-foot screens printed with the image of the landscape around Johannesburg’s commercially abandoned mines, much of it granite stained by acid mine drainage. The screens defined the inner atrium area where video and photographs depicted the physical landscape of Johannesburg’s illegal mines. Here thousands of young men, who have travelled without documentation to Johannesburg from neighboring countries, work up to four kilometers underground in dangerously unsafe conditions. The improvised sorting barrels – pendukha – displayed in the center of the work (Fig. 1) are used by artisanal miners to separate gold particles from the rock in which they are embedded; the sounds of rock breaking down in these barrels echoed through the atrium. The barrels were decorated with gold leaf brought by

Fig. 1. You always step into the same river. Looking for Lost water (Explorations at the cradle). Photographs, video, sound, text, print on fabric, gold, iron, galvanized steel, durable vinyl. Location: Atrium, Chamber of Mines, Faculty of Engineering and the Built Environment, University of the Witwatersrand, Johannesburg, 10-30 September 2018. (© Atul Bhalla. Photo: Atul Bhalla.)

Manderson and Doherty, Approaching the Environment
Bhalla from India: emphasizing the extraction of gold in South Africa; its sale and global export; the social and physical living and working conditions of the miners; the instability of land; and the use and disposal of water and acid mine drainage. Bhalla’s installation drew attention, without didacticism, to inequality, danger, and poverty.

Zen Marie’s *Paradise Fallen* (this issue) is based on work on Réunion Island (Indian Ocean) and in Dakar, Senegal (Atlantic), and complements the works that reference South Africa’s history and ecology. Through an installation of videos, large scale drawings and photo litho plates, Marie draws attention to the impact of early imperial history, slavery and incarceration on these oceans.

*Watershed* as an event brought together artist practitioners, scientists, humanists and activists. As those contributing to this issue illustrate, creative work allows for other modes of apprehending the current water crisis in South Africa, the ecological costs of mining and industrialization, and the continued echoes of colonialism. Complementing, extending and at times challenging the science discourse of *Watershed*, the artistic work highlighted how globalization, commodity capitalism, industrialization and politics all impact on the management and rights to and precariousness of water.

**References and Notes**

1. See <www.atulbhalla.com>, accessed 4 October 2019


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