



# (Post Normal) Cultural Heritage

## Frances Whitehead

### The Post Normal

Recent attention to the 1991 debate concerning “Post-Normal Science” characterized by Funtowicz and Ravetz<sup>1</sup> has revived interest in Kuhn’s concept<sup>2</sup> of “paradigm shift” and the “normal”, creating connections between multiple types of disturbed sites, including: the post-industrial, the post-carbon, and the post-colonial. Kuhn postulated that periods of defined rules are interrupted by periods of scientific revolution, or paradigm shifts, where accepted rules are questioned. As a methodology for inquiry, where “facts are uncertain, values in dispute, stakes high and decisions urgent”<sup>3</sup>, Post-normal Science focuses on the generation of dynamic models, connecting qualitative aspects and quantification.

Cultural heritage, the legacy of ideas expressed through cultural forms, operates tacitly within the post-industrial landscape. It serves as a reminder of the embedded complexity of the project of land development, which continually transforms urban space, even after productivity has ceased. The prefix “post” is used to describe the current state of ecological, economic and social-cultural affairs, and implies that we are indeed living in the future of a past era. This trope also implies that we invoke our past as part of our current paradigm – *Post-carbon, Post-industrial and Post-colonial* are inherited cultural landscapes, literally *Post-Normal Cultural Heritage*.

### The Post-Industrial and The Post Colonial

The Post-Industrial is often associated with the Post Carbon, as the extraction and utilization of fossil fuels often drive the creation of disturbed land. These sites demonstrate how the costs of development are not reflected in our narrow markers of success: profit, power and technological innovation. These sites are never part of a future that is intended – they are both symbols of a passing era of materialistic

prosperity, and they are complex, ambiguous, and contradictory physical spaces, which continue to affect and be affected by the local community, ecosystem and infrastructure.

Seen in this light, these sites resemble conditions we identify as the Post-Colonial, where the burden of past policies and practices weighs disproportionately on communities where natural and human capitals have been exploited, under overt or tacit colonialism.

### Civic Experiments in Phytoremediation at Abandoned Gas Stations in Chicago

*SLOW Cleanup* is a whole systems approach, which increases the net benefits of plant based remediation processes. The plantings contribute to the aesthetics and passive economic revitalization of the sites, while adding environmental value, creating habitat, green corridor connections, reduced heat islanding, and carbon sequestration. Piloting the use of ornamental, flowering, and fruiting plants, along with the typical agronomic plants most associated with phytoremediation, original project research has increased the plant palette for this technology, identifying 12 new hydrocarbon remediator species in Lab Trials. Common urban conditions inform the design of 8 new land-use schemes, which can be constructed with these 12 species. The fenced site designs allow visual permeability through vistas and allees, while protecting the plants from pedestrians.

*A Community Laboratory Garden* hosts the parallel Field Trials for the program, embodying the principals of Post-Normal Science. The site is designed to be aesthetically pleasing, scientifically functional, and highly legible for all users, even as it cleans the soil onsite. The investigations at the Lab Garden will contribute to our understanding of the remediation of urban soils, provide advanced educational opportunities for

local students, and perform community outreach toward environmental awareness.

### Urban Agriculture for the Colonial Center, Lima, Peru

The historic center of Lima, a magnificent, crumbling, UNESCO heritage site, houses the urban poor, who suffer from inadequate nutrition and food insecurity. Lima has exploded in population in the last two decades, growing from 2 to 8 million. An SAIC team of faculty and students has provided creative support to the City of Lima in their efforts to create a meaningful urban agriculture program, integrating architectural conservation and the needs of current inhabitants. Paradoxically, it is the ruined architecture and vacated facades that offer the potential for green space – there are few parks and public spaces. Further, this spatial pattern of interiority is a growing cultural idiom,<sup>4</sup> as communities in every social stratum create gated-communities for self-security. The dominant issues in Lima are socio-spatial. Here we return full circle to Post-Normal Cultural Heritage, manifest in the underlying ethical and even pragmatic dilemma of sustaining a desert city that is arguably in the wrong place – a perpetual colonial legacy that must be examined as an unsustainable settlement pattern.

Post Normal Cultural Heritage is a perspective through which these inherent contradictions can be invoked, radical processes can be assimilated, and the complexity of sustainability can be productively addressed.

1 Funtowicz, S.O. and Jerome R. Ravetz. 1991. “A New Scientific Methodology for Global Environmental Issues.” In *Ecological Economics: The Science and Management of Sustainability*, ed. Robert Costanza. New York: Columbia University Press

2 Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 1st. ed., Chicago: Univ. of Chicago Pr., 1962

3 Funtowicz, S.O. and Jerome R. Ravetz. 1991. “A New Scientific Methodology for Global Environmental Issues.” In *Ecological Economics: The Science and Management of Sustainability*, ed. Robert Costanza. New York: Columbia University Press

4 Jörg Plöger, Lima “City of Cages” *European Journal of Geography*, 2005