

Marjetica Potrč: The Art of Sustainable Self-Sufficiency

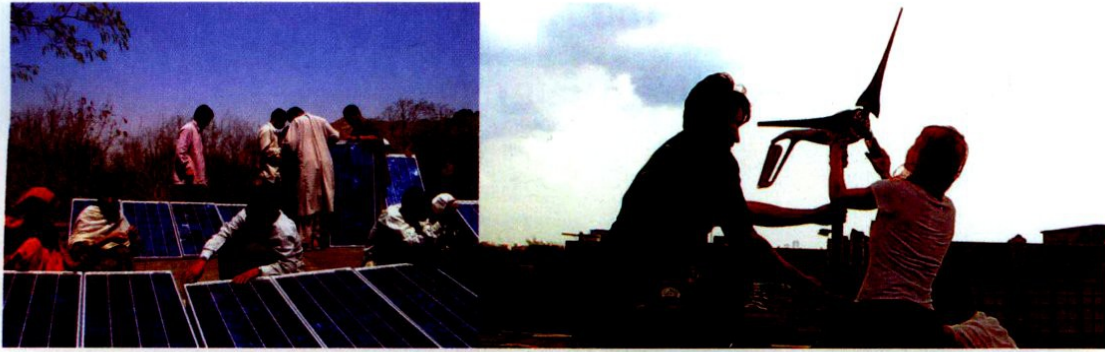
by Twylene Moyer

Marjetica Potrč takes the maxim that art can change the world and acts on it. Her interdisciplinary, community-driven interventions in urban and rural areas throughout the world put people first. Though conservation and environmental sensitivity ground all of her projects, Potrč shifts the focus from ideas to implementation—finding sustainable water and energy solutions that improve the lives of real individuals. Unique in their open-ended, grass-roots realization, her adaptable structures and systems turn the architectural priorities of capitalism upside down.¹ Rather than imposing a top-down social engineering that dictates—and enforces—how people should live (and conform), Potrč's projects acknowledge, and accommodate, differences in lifestyle—whether those differences arise by choice or necessity—and enable small groups to improve their situation. After more than 15 years of intensive research and fieldwork around the world, she puts an unexpected face on the enemy of social and environmental justice. Far worse than the acts of any given corporation are the governments—of all persuasions, including bloated, byzantine democracies—that enable and benefit from those acts while failing to meet the needs of all, not just some, of their citizens.

At its core, Potrč's work is about nothing less than empowerment, a concerted effort to restore “democracy built from below” by providing self-help solutions that enable marginalized groups to live with dignity and independence while protecting their local environments.² As she has astutely observed, “There are two urban forms in the global city that I consider to be most successful—after all, they are the fastest growing—namely gated communities and shanty-towns.”³ A direct consequence of unfettered inequality, this polarizing oppositional relationship has infected the world,

A Rooftop Rice Field at Byuri School, 2010. Building materials, energy- and water-supply infrastructure, and rice field, dimensions variable. View of project in Anyang, South Korea.





Power from Nature, 2005. Energy infrastructure, dimensions variable.

spreading beyond so-called third world cities to outlying suburbs and into the countryside, surfacing wherever privilege siphons resources and treats basic infrastructure as its exclusive preserve. From New Orleans, West Palm Beach, and Detroit to Shenzhen and Caracas, Potrč has intervened in the battle between the haves and the have nots, proving that imaginative eco-activism can measurably assist even the most disenfranchised, giving them low-cost tools to reinvent themselves and their communities. When government fails, those on the fringe have no choice but self-sufficiency; coupled with limited means and scarce resources, self-sufficiency demands sustainability. Residents in Caracas's La Vega barrio, for instance, are cut off from the municipal water supply. Without sanitation facilities, they face pressing water supply and sewage contamination problems. Potrč's *Dry Toilet* (2003), created in collaboration with the La Vega neighborhood association and Israeli architect Liyat Esakov, bypassed unresponsive city government and its wasteful water system with an ecologically safe, conservation-minded, and economically viable solution adapted to the conditions of the "informal city."

A similar strategy applies in the case of *A Rooftop Rice Field at Byuri School* (2010), located at an alternative school in Anyang, one of Seoul's satellite cities. Here, a tank collects rainwater from the roof of a pavilion at the top of the building and uses it to irrigate a rooftop rice field and serve upper-floor flush toilets. Students cultivate the rice, which is a major ingredient in their meals. Though growing one's own food is an important part of traditional life in Korea, Anyang's municipal planning authorities do not recognize the practice. Part of a citizens' effort to persuade the municipality to provide free, organically grown food for all students, Potrč's project, which underscores the importance of relocalizing food networks to foster self-sufficiency, demonstrates that an intelligent, creative approach to development can also be sustainable and beneficial.

While many of Potrč's field projects concentrate on the interdependence of water and community, others turn to energy infrastructure, supplying groups with clean, dependable power (some for the first time). *Power from Nature* (2005) provided self-sustaining technologies for the alternative rural community of Barefoot College in Rajasthan, India, and the Catherine Ferguson Academy, a high school for teenage mothers in Detroit.⁴ Potrč, working with the Nobel Peace Center, created a solar-powered system for Barefoot College and a hybrid wind turbine/solar system for the academy—renewable power sources that reinforce the message of self-sufficiency taught at both institutions.⁵ *A Schoolyard in Knivsta: Fruit and Energy Farms* (2008, commissioned by the Swedish National Public Art Council and the Municipality of Knivsta) transformed Thunmanskolen High School in Knivsta, Sweden, into a high-tech, energy-efficient orchard. The hybrid wind and solar system feeds energy into the existing electrical grid, sharing it with the larger community, while the orchard, which doubles as a public park, strikes a new balance between the urban and the rural. These sustainable values reflect the empowerment of the Knivsta community, which recently gained independence from the larger Uppsala Municipality.

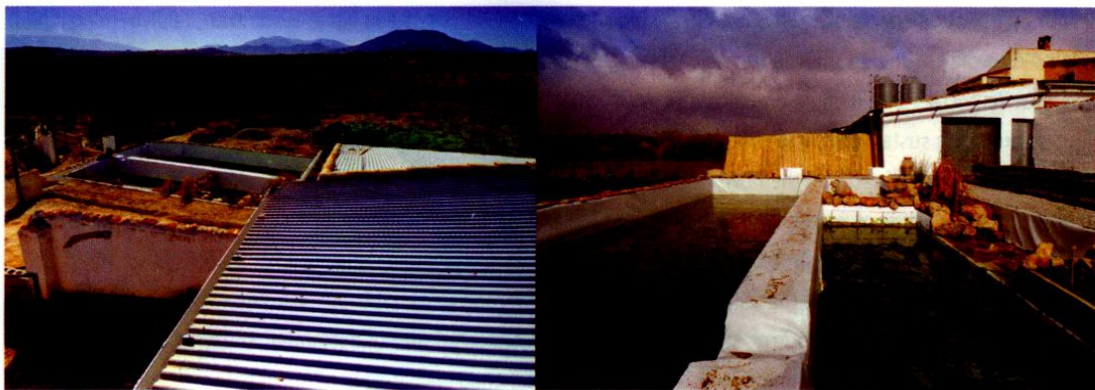


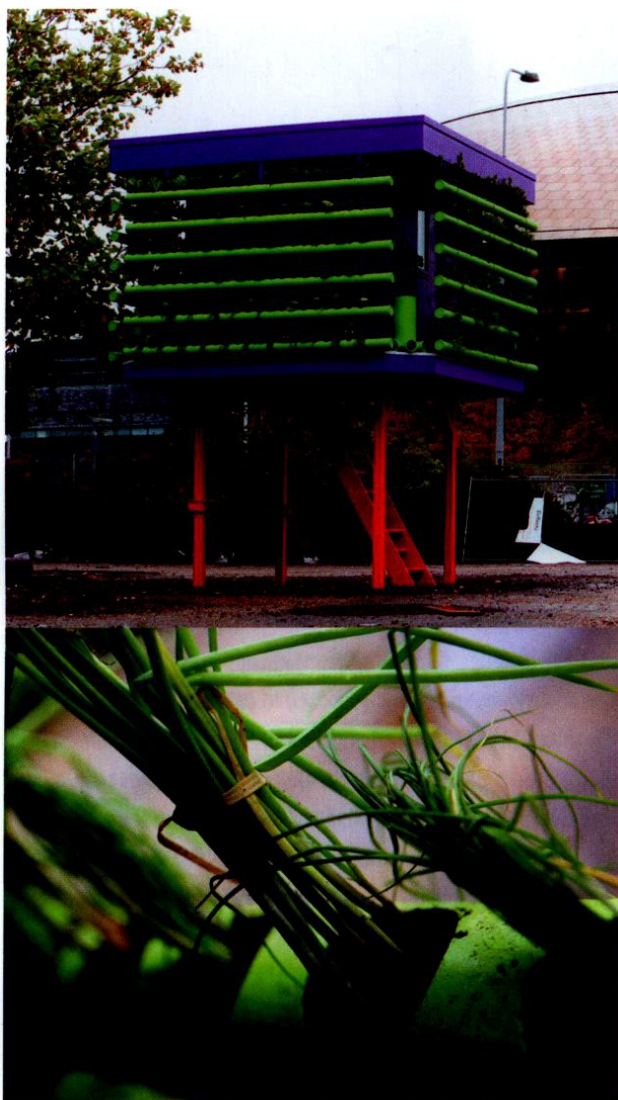
Above: *Balcony Wind Turbine*, 2004. Building materials and energy infrastructure, dimensions variable. View of project in Liverpool.

Below: *A Farm in Murcia: Rainwater Harvesting*, 2007. Water-supply infrastructure, dimensions variable. View of project in Murcia, Spain.

Some large-scale projects bridge the two faces of Potrč's practice—in the field and in the gallery. In 2007, under the auspices of the Sharjah Biennial, she created a solar-powered desalination device that supplies fresh drinking water for students at a public school in Al Dhaid. Though Sharjah City's main plant is supposed to provide potable water to all residents, in some parts of the city, taps deliver only salty water. To power its operation, *A School in Sharjah: Solar-Powered Desalination Device* harnesses the sun, a resource even more plentiful in the United Arab Emirates than oil, pointing the way to a future beyond fossil fuels. *Lookout with Wind Turbine* (2008), a collaboration with the Amsterdam artists' collective Vriza, created an addition to the loggia of the group's apartment in the Piraeus Building. This intervention enabled Potrč to divert the social regulation implicit in the building's Modernist design and replace it with a functional apparatus that draws connections between power (electricity) and Vriza's work of empowerment (the group opens its space for public events) while demonstrating that culture can be a powerful tool for reinventing the city.

Potrč's gallery works—sculptural case studies, drawings, and an ongoing series of experimental prototypes and utilitarian objects called "power tools"—articulate the conceptual framework behind her solutions in the field.⁶ While the on-site projects focus on immediate, individual needs and may not be readily translatable to other situations and locations, the gallery works take a more generalized approach to the human and environmental damage wrought by unfettered growth, using elite art world institutions as a means of disseminating radical egalitarianism. Turning galleries and museums into educational centers promoting alternative ways of thinking, she brings her creative solutions into mainstream consciousness. *Dry Toilet*, for instance, went through a half-dozen reincarnations over the course





Urban Farm, 2006. Building materials and utilities infrastructure, 3.5 x 3.5 x 4.6 meters. View of project in Roath Basin, Cardiff, Wales.

of several exhibitions, as Potrč reworked the original design intended for Caracas.

Urban Farm, (2006) a self-contained unit housing a hydroponic vegetable garden, living quarters, and vending space now located on the Roath Basin in Wales, was originally commissioned by CBAT The Arts and Regeneration Agency for its "Urban Legacies II—Another New Babylon?" conference. Perched on red stilts, with a ladder connecting a ground-floor public space to the second-level garden and living space (complete with bed, water systems, and a toilet), *Urban Farm* allows its occupants to conjoin life and work. Mobile and adaptable to any location, the design revives the concept of the traditional shopkeeper's house. Using ingenuity to expand a tiny footprint, it encourages sustainable rural trade within the heart of the city, balancing urban and rural lifestyles as well as public and private use of space.

Other sculptural constructions, ranging from the early *Core Unit* (Skulptur Projekte Münster, 1997) to *New Orleans: Shotgun House with Rainwater Harvesting Tank* (2008), *Primitive Hut* (2010), and *Tirana House* (2010), propose self-help building strategies that throw off the constraints of contemporary architectural practice. Based on extensive research that may or may not connect to on-site work, these projects offer free-ranging, experimental spurs to imagination that liberate people from the services that fail them. Accompanying drawings

provide intellectual blueprints for new ways of thinking about community, justice, and resources. In the case of New Orleans, Potrč's environmentally committed, DIY shotgun house appeared in conjunction with fluidly rendered and notated drawings sounding the call for residents to take back their "Great Republic of New Orleans" and build their own local democracy based on an organic synthesis of city and wetlands reconceived as a single organism.

By providing sustainable, low-cost, self-contained designs and infrastructures, Potrč's projects allow people to engage with the larger world on their own terms—another guiding principle of her practice. Much of her recent work learns from the example of Brazil's new territories, particularly the Croa River community in Acre, which consists of about 400 families living in the Amazonian rain forest. A 2006 residency there reinforced Potrč's belief that small, self-organized communities represent the only truly democratic, viable, and sustainable political systems, the only way to respect people and the planet. In Acre, she witnessed an interconnected web of bottom-up initiatives directed at individual empowerment and environmental protection—practicing good stewardship of forest-based resources, develop-

ing a small-scale, locally controlled economy, and most importantly, blending local experience and high-tech knowledge through the University of the Forest, which brings rubber tappers and Indians (caretakers of the forest) together with researchers to marry local experience and Western science.⁷ This experience has led Potrč to refine the questions that she has been asking for years: What does it mean to live a dignified and responsible life today? Just how far is it possible to “downscale” the world community/economy? Built on localized community partnerships, her ingenious field solutions support the age-old wisdom that when individuals take responsibility for building their own lives, they also build their communities, respecting and protecting an environment that in turn sustains them.

Notes

- ¹ Like Samuel Mockbee and the Rural Studio, as well as Rick Lowe and Project Row Houses, Potrč practices a community-based, equal-opportunity art for all. Many of the principles behind her theoretically rigorous work come from Yona Friedman, a pioneering architect who challenged the Modernist hegemony of the 1950s and '60s with his “mobile architecture.” Friedman advocated a people-first architecture of integrated, flexible infrastructure and housing capable of adapting to the constant changes produced by social mobility. Planning rules, as well as building technologies, could be created and re-created according to the needs of residents, based on self-construction and local materials. Housing is decided by the occupant, by means of “infrastructures that are neither determined nor determining.” Such mobile architecture is light on the land, capable of being dismantled and moved, alterable as required by the individual occupant, and integrated with means of food production. With an Eastern European background not unlike Potrč's, Friedman based his humanizing vision on direct experience of homeless refugees, first in World War II Europe, and later in Israel. A fierce critic of growing globalization, he also argued for a genuine democracy based on small divisions of people, as opposed to rules determined by what he called the “state mafia” and the “media mafia.”
- ² Marjetica Potrč, “Frontier Power: Human Bodies, Building Façades, and Fragmented Territories,” in *Islands + Ghettos*, exhibition catalogue, (Heidelberg: Heidelberger Kunstverein, 2008), pp. 50–67.
- ³ Marjetica Potrč, “Five Ways to Urban Independence,” in Livia Paldi, ed., *Next Stop, Kiosk* (Ljubljana: Moderna galerija, 2003), p. 77.
- ⁴ Founded in 1972, Barefoot College is an NGO that provides basic services and solutions to problems in rural communities, with the objective of making them self-sufficient and sustainable. Its “Barefoot solutions” address solar energy, water issues, education, health care, grassroots action, women's empowerment, and wasteland development. All of these initiatives are village-based, managed and owned by local residents. <www.barefootcollege.org>.
- ⁵ On her Web site, Potrč notes that the hybrid system at the Catherine Ferguson Academy was made possible after historic preservation authorities in Oslo refused to authorize her earlier wind turbine project for the Nobel Peace Center. See <www.potrc.org>.
- ⁶ The Power Tools include a hand-powered lamp, mobile phone recharger, micro air vehicle, and a series designed for “urban explorers.” See <www.potrc.org>.
- ⁷ The new territories in Acre, like many other rain forest communities, have been targets of bio-piracy; for this reason, responsible, locally controlled extraction of forest resources is essential to self-protection and community survival. For Potrč's analysis of the new territories, see “New Territories in Acre and Why They Matter,” available at <<http://e-flux.com/journal/view/10>>.