

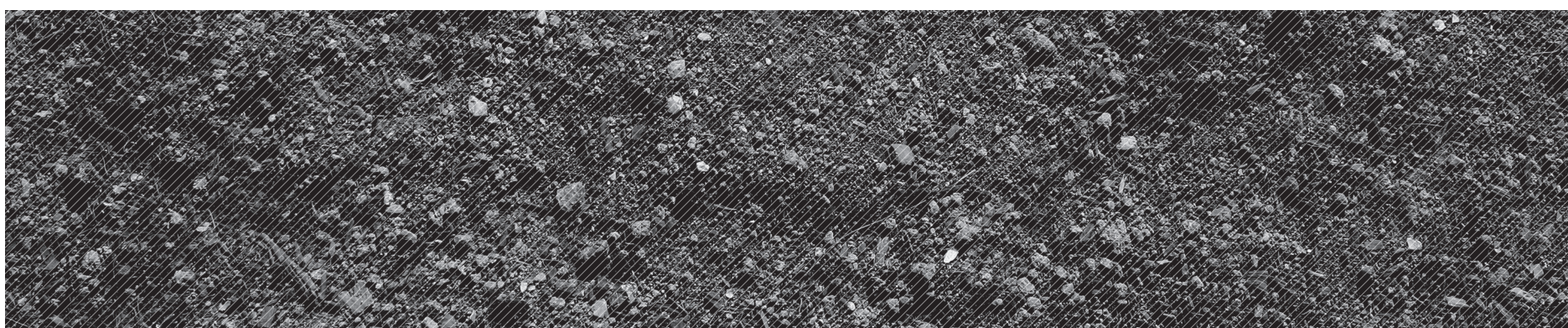
BARBARA SWIFT

*Grounded* is the first of four issues comprising *ARCADE* volume 28, a series urging change in the way humans inhabit the planet. Building on the questions regarding waste raised in volume 27, these issues use the four elements of alchemy — earth, water, air and fire — as an investigatory lens. In a post climate-change world, where we live with the results of our flawed design methodologies, this lens demands that we reconsider the way we approach design by fully engaging the complex systems of the earth. It demands that we reset our cultural viewpoint, create fluid methodologies and craft a new reality. This requires curiosity, perseverance, humility, grace and an open mind. The willingness to ponder apparently irrelevant information, co-habitate, and create with uncertainty and fear is essential.

We have used Cartesian methodologies to structure information, to inform designs, products and ideas, to order and communicate decisions. This approach rejects the complexity of systems for the simplicity of a decision tree. Rich, interwoven systems are simplified to fit the structure, not the other way around. If an issue or idea does not fit within a discrete pocket in the framework, we are troubled and discard it as irrelevant. To access long-existing, complex systems, we use indicators like the Spotted Owl. This is a start, but we need to craft ways to build a deeper understanding. This requires both the rational and intuitive, using the intuitive, the more fluid of the two, to find merged and complex solutions.

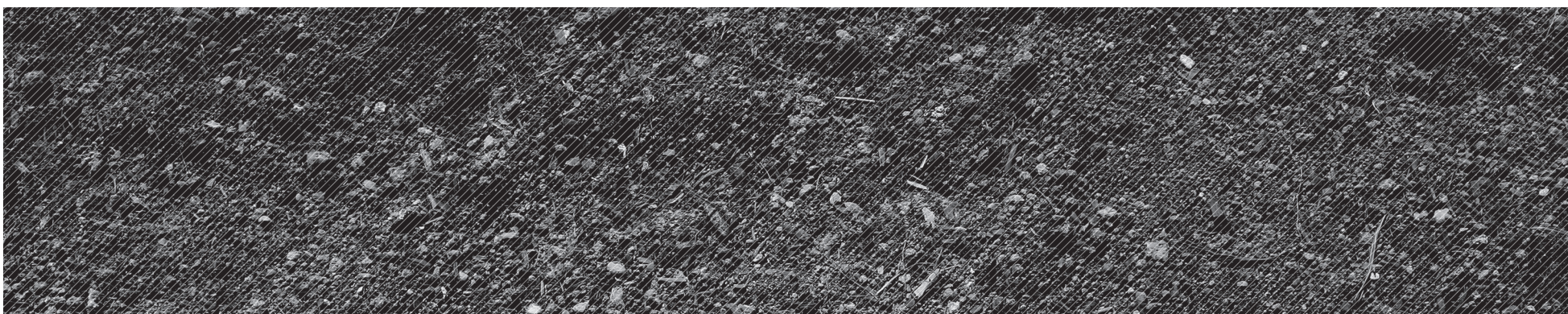
concerning the earth

grounded



Why earth? It is our foundation. The earth we view as static is alive and fluid. A cup of soil contains more than a billion organisms—a critical part of the food web. A square yard of cropland can contain from 50–300 earthworms—a foundation far from inert. Roofing manufacturers have found a market in green roofs and to-date are challenged to conceive of soil (unlike drywall) as a living medium at the center of the food chain. We take great pleasure from the earth, and with the taste of geology and ecosystems found in food and wine, *terroir* is the ultimate distillation of place. Great writers describe the power of place, coupling images of light, sky and the earth's silhouette with the color and taste of soil. This foundation is at the heart of complex, interwoven systems—physical, chemical, material, social, cultural and on and on.

This issue includes the thinking and efforts of individuals who are working with earth and who are comfortable with interwoven questions. They are willing to mull and work in the thick of complex systems and find solutions that integrate the complexity. Each brings to the effort dogged pursuit, exploration and humor. Each is a generalist and an expert. Each is an alchemist working with the aim of achieving understanding in the center of complexity. Each offers a way to approach design with strategies challenging our assumptions.



As a counterpoint to these new approaches, two exquisite photo essays illustrate, in a deeply powerful manner, the terrible damage embedded in our approach to the earth. One graphically shows human and ecosystem damage, and the other masks ongoing damage in the seductive beauty of forms and lines appealing to our eyes. The generosity of the San Francisco Museum of Modern Art photography collection brings to us a poignant and powerful collection of Dorothea Lange's work in the 1930s documenting displaced farm families and migrant workers. The photographs illustrate the harsh reality of overused and undernourished soil in the rush to produce a cash crop instead of working with what the soil can sustain. This imagery graphically illustrates the result of flawed solutions and the subsequent pain and waste. As part of the exhibit *Topographies in Built and Natural Landscapes*, commissioned by the University of Idaho's Prichard Art Gallery, the images from *The Palouse Project* are the result of a collaboration between photographer Lara Swimmer and architect Robert Zimmer in a mapping of one of the most fertile and erotic western landscapes. The tilled lines reflect lessons learned from the Dust Bowl, but as Sarah Scherr of Ecoagriculture Partners would point out, this annual working of the soils results in extraordinary waste with the loss of topsoil to erosion. This is a reminder that while powerful and beautiful, the Palouse is an earth-formed landscape at great risk with yards of the world's most fertile and valuable topsoil lost at a staggering rate to erosion each year.

James Urban, has steadfastly worked for years in the arena of urban soils and trees, coupling research with post-construction evaluation and innovation. This man formulated the soils that support the lush plantings growing on the Mercer Island Interstate 90 Lid. Decrying the 13 to 20 year average life of a typical urban street tree, when the same tree would live for 150 to 300 years in a more natural environment, James has done the primary research developing metrics supporting strategies which can result in these long lives—a true success and smart investment. If trees are to play a role in carbon sequestering and heat island reduction and add to the joy of urban living, they must have a place to grow. A tree with a 16" diameter trunk needs a minimum 1,200-cubic-feet of un-compacted, thriving soil to flourish.

Paul Kephart leads the ecological consulting firm Rana Creek in the pursuit of science and innovation with a commitment to replicating natural cycles, structure, function and diversity. Working with Bill McDonough on the Gap headquarters and its extraordinary green roof twenty years ago, and most recently the green roof for the Academy of Science in San Francisco, Paul has done some of the most important work in the area of green roofs and soils. By working with natural systems, bioclimatic zones and the associated teeming life in soils, he couples primary research with innovation and evaluation—test, try and learn. Here we get passion and science.

Professor Chuck Henry with the University of Washington Interdisciplinary Arts and Sciences has been called "Mr. Biosolids," having worked for years researching the broad range of issues associated with this product of our wastewater treatment facilities. His research has informed regulations, agencies and communities grappling with this culturally and emotionally distressing material. We are remarkable producers of extremely valuable waste that we wish was invisible. Professor Henry grapples with the value of this resource as well as the valid concerns and the cultural dissonance surrounding it.

Ecoagriculture Partners is an NGO doing groundbreaking work internationally in rural areas with indigenous communities developing alternatives to slash-and-burn, fertilizer-dependent agriculture. The results stabilize communities, reduce poverty, conserve biodiversity, conserve the soil that was previously depleted and reduce the destruction of carbon-sequestering forests. The collective global impact has remarkable social, political, environmental and cultural implications. Again, soil and its teeming life are at the root; this alternative thinking goes against the grain—in this case, that of the agro-industry and corporate farming.

*Terroir* is essentially about the integration of place, earth, culture and life. In her book, *The Taste of Place*, Amy Trubek explores this aggregate in American life. In a thoughtful interview, she urges us all to shift our relationship to food from that of a transportable commodity to the sensuous experience of place and living—think *Babette's Feast*. She believes that by creating an awareness of the web that supports the taste of the earth, the current discussion of food — including topics of food security, slow food, health, etc. — can move us all from a placeless culture to one where food profoundly connects us to where we are.

These individuals are a number of many who are working with the earth and all the things that spiral out from this focus. They share a full engagement with key issues in their search for the integrated circumstance. Each of them illustrates the compelling power of experimentation, mulling, passion and action. What this discussion of earth shows is that if you really want things to work, do the science, do the post-construction evaluation, think about it, mull the results and implications and integrate all this into the design. If you are truly interested in change and a constructive contribution, get comfortable with the uncomfortable. Get comfortable with what you don't know, and build the places in your design framework to allow those issues to percolate and inform your thinking. If you ask the question, "How is this relevant," and you don't know but feel it might be, hang onto it. The notion of *terroir* and a fluid earth is at the center.

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Barbara Swift is the founding member of Swift Company LLC and has a long commitment to changing the way we fundamentally think about all systems.

