In brilliant work spanning five decades, Helen and Newton Harrison have made proposals for gardens, neighborhoods, watersheds, large regions, and entire continents. From the very beginning, with ever increasing awareness, it has been inspired by the ecological imperative. In 2012, they began a fifty-year research project at Sagehen in the High Sierra, as “a work of art, a work of science, a work of bioregional planning, and a call for policy change.”

What does it mean for an artist to work in the domain of design, planning, and policy? What does an artist bring to those tasks that differs from the perspective and methods of the professional designer/planner? How does engagement with design, planning, and policy affect artistic practice and product? The works of Helen and Newton Harrison offer a host of answers and models from which designer/planners and artists have much to learn.

The Harrisons came to ecological design and planning as a logical extension of their evolving work. Neither had a background in these fields. Helen was a Chaucer scholar. Newton was a “field” painter (and still describes himself as a “colorist”); in the early 1960s he taught Josef Albers’s color course at Yale. After Earth Day in 1970, Newton decided to focus on work that “benefited the ecosystem,” and Helen began to build off his projects. At first, Newton was the artist, Helen the researcher. This changed in 1973, the year Helen found a book by Gilbert Plass, a physicist who predicted global warming in the 1950s. Together, she and Newton created San Diego as the Center of a World (1974), a collaborative work that addressed the prospect of climate change and the need for action. From then on, the two worked as coequal partners with a shared mission. By 1976, the Harrisons had “invented” their “fundamental contract”:

We would go to a place only by invitation; we would accept an invitation only if it included some means for networking into a larger community; we would agree only to go for a week or two at first, to think and research. To earn our way we would sing for our supper, so to speak, by speaking or performing.

If an idea emerges, and patrons or sponsors agree to support the work, the Harrisons may agree to remain and develop that idea. But they assert their freedom to define the problem and determine the product.

**Defining the Problem: “How Big Is Here?”**

The problem, the field of play, and the product emerge from the work itself. All three, as defined by the Harrisons, are usually quite different from their sponsors’ preconceptions.

For example, people asked them to help with a nature reserve along the Sava River near Zagreb. The Harrisons found that plans for the reserve itself were developing nicely, but discovered that its health
was threatened by pollution from factories and agriculture upstream. The problem was how to clean up the river. The field of play enlarged to become the entire watershed, and the product, a plan to control pollution (A Breathing Space for the Sava River, 1989-1990).

The Dalai Lama wanted an ecological “peace park” on Tibet’s high plateau. When the Harrisons looked at Tibet in the context of Asia, they discovered that the high plateau was the source of seven great rivers that fed the continent and that clearcutting forests in the mountain headwaters threatened those rivers. Instead of a peace park, they proposed to create a large model of the Himalayas and its river systems, which would serve as a meeting place for people from all the watersheds to gather and discuss an agenda for restoration (Tibet is the High Ground, 1991). They heard nothing further from the Dalai Lama.

“Almost all our work begins with a question.” Given the nature of the Harrisons’ work, the questions are inevitably eco-political and often subjective. What ecosystems are present, what is their state of health, and how are they entangled with human activities? “What’s good here, what’s bad, what’s horrible?” “How big is here?” What is the territory or field of play required to understand a problem and address its solution? What are the pertinent ecosystems and political and social systems? What processes sustain those systems and what territories (fields) and boundaries (frames) do those processes create? For example, “Pay attention to the flow of waters / pay attention to the integrity of the waters flowing / pay attention to where the waters desire to flow/...attend to the integrity of the discourse between earth and water / the watershed is an outcome” (Sixth Lagoon: On Dialogue, Discourse, and Metaphor, 1978 Correct date??)

The Harrisons formulate questions to frame their research. “How much would a crab acre cost, and how much would it earn?” (The Fourth Lagoon: On Mixing, Mapping, and Territory, 1973 Correct date??). “What would Bonn look like if the temperature rose three degrees centigrade?” (The Garden of Hot Winds and Warm Rains, 1996). “Is there enough biodiversity in the species existing in Sagehen to survive and possibly thrive when the High Grounds of the Sierra experience the full impact of global warming fifty to a hundred years from now?” (Sagehen in the High Sierra, 2012).

For the Harrisons, every work is a research project, a work of art, and a call to action. Their collective work is a model for what it means to practice art as a form of research. It is also a brilliant example of action research, which uses the process of enactment as a way to study how to bring about change in a system.

Inquiry and discovery: “Finding a Field of Play”

By the 1970s, the Harrisons had worked out a set of research methods, which they deploy on every project.

Field Work: “It’s All about Seeing”

The Harrisons start with an open mind: “What’s going on here?” In Baltimore, in 1980, people said they feared imminent riots in the streets. The artists saw vibrant streets, but they also found dead streets. “Every street that was working well was a promenade.” On the dead streets, the “promenade systems...created by people over time” had been broken up by city plans, setting up “conditions for further alienation of street life” and making it difficult to access the harbor from the neighborhoods, which further aggravated resentment about the neglect of low-income inner-city neighborhoods in the
face of enormous investment in the redevelopment of the harbor. Reconnecting the promenades became the focus (Baltimore Promenade, 1980).

The Harrisons look for things amiss. In 1977, they “looked at the Sacramento River and went along its borders, except it didn’t look like a river; it looked like a canal, a big canal.” This observation led to their investigation of the entire water system of irrigated agriculture in California’s Central Valley and to Meditations on the Sacramento River, the Delta and the Bays of San Francisco.

The artists are not detached observers. They look for what a place has to tell them -- to what stories it holds. They heed the feelings it evokes: the Sierra Nevada “looked tired.” Its waters, forests, and topsoil had been exhausted by damming and clearcutting, and the ability to regenerate was in doubt. “What would wake the place up?” This question prompted their fifty-year research project at Sagehen (Sagehen in the High Sierra, 2012).

Dialogue: “Talking Things Over”

Helen and Newton are “always talking things over,” and writing “is talking things over with a pencil.” Newton writes the first draft, Helen recreates it, Newton evolves the work further, and Helen finishes. In the process, they make discoveries.

They are also in continuous dialogue with others and with the places themselves. In the Sierra Nevada, they “interrogated” a watershed to learn how to help it survive the stresses of climate change, then consulted with ecologists, hydrologists, botanists, foresters, archivists, and Native Americans (Sagehen in the High Sierra, 2012). At Knowle West (2007), a low-income neighborhood of Bristol, England, they learned from local residents that the neighborhood’s wealth lay in its forested hillsides, meadows, open space, and backyard gardens, and they gave that land a name: Green Commons. In the Netherlands, conversations with planners, landscape architects, engineers, sociologists, farmers, and public officials revealed that powerful misconceptions were blinding the Dutch from seeing alternatives to plans that would destroy the country’s Green Heart; in response, the Harrisons devised a perceptual shock (Green Heart Vision, 1994).

Mapping: “We Use a Map to Meditate”

When asked to write a book about the future environment of Europe (The World as a Garden, 1998), the Harrisons began by putting together a large topographic map. “After a few days spent penciling out the roads and enhancing the rivers, something formerly invisible became very clear”: Europe was a peninsula, surrounded by water on three sides, separated from the Russian Plain and the Eurasian continent by rivers and marshes. “When we stood back and looked again, we saw that the salient feature in the newly visible Peninsula was the high ground, the mountains. It looked to us like we had a field of play.” Thus emerged Peninsula Europe: “I said ‘It’s an array of drain basins cradled by the mountains formed by the pouring forth of the rivers that begin in the high grounds.’ You said, ‘Most of Europe’s water begins there.’”

Through mapping, the Harrisons search for a “frame” (the waters), which creates a “field” on which to focus (Europe as a peninsula), then they look for significant figure/ground relationships (the mountains that stood out as “figure” against the “ground” of the lowlands). The process of mapping delineates both the field of play and the problem. In this case, the mountain ecosystems, source of Europe’s water, threatened by overuse and climate change. “Would it be possible to regenerate the 1.3 million square
kilometers of the high grounds of Europe….to enhance and guarantee the flow of fresh waters?” (Peninsula Europe 2001).

Mapping is a means to discover the overlooked and to create a new whole. The Dutch needed 600,000 new homes. They planned to build on the agricultural land at the center of the country because they believed that there was no more space in the cities. The Harrisons decided to map all the open land in and around the cities and found enough space for all 600,000 houses, which made it possible to preserve the country’s “Green Heart,” its ecological and cultural treasure (Green Heart Vision, 1994).

Libraries and Archives: “A Pecchant for Research”

In the 1970s, Helen would go the library and scan the shelves, her “antennae” searching for books that might inspire a project. That was how she discovered the greenhouse effect and the predictions of climate change that would become a focus for the rest of their career. It took six months of research in the archives of the Water Resources Center at the University of California, Berkeley to produce Meditations on the Sacramento River, the Delta and the Bays of San Francisco (1977). Such research—both the serendipitous encounter and the deliberate search—underpins the Harrisons’ work.

“A Guiding Metaphor”

The Harrisons search for metaphors to inspire and guide their thinking and designing. In Leipzig, when confronted with the problem of reclaiming a landscape scarred by open-pit coal mining, they imagined a “300-square-kilometer park that would take its shape and meaning from the ‘turned earth.’” Mining had turned the earth, but turning the earth is also a metaphor for cultivation. The park would be both “a memorial and an example of reclamation” (Brown Coal Park for Leipzig, Germany, 1994).

In Greenhouse Britain (2005-2007), by choosing the word “settlement” in place of the term “development,” the artists employed a “metaphorical flip” to help them imagine how, as sea levels rise, the upward movement of people “might happen gracefully.” “The differences between settlement and development are profound….the term ‘settlement’ has embedded in it the idea of habitat for ourselves and of niches for other living creatures.” Language matters.

In Baltimore, promenade became a guiding metaphor for the design of an exhibit and for performance (Baltimore Promenade, 1980). To the Harrisons, promenade is both activity and place “a stage on which people in a community meet and mix,” “tuned to a common movement and rhythm,” in a collective reaffirmation of community. The promenade is “an arena in which the communal drama can be publicly enacted, an arena in which to experience constancy and change, to define self and group.” To break up a promenade system is thus to destroy essential functions that sustain a community. Perhaps the planners and public officials had thought they were only dealing with streets of asphalt and concrete. When promenade as metaphor was enacted in a city-wide performance, it brought forth “a new state of mind” among the participants, including planners and public officials.

“Bringing Forth a New State of Mind”

Helen and Newton Harrison design their work to “bring forth a new state of mind,” because the state of mind that created a problem is unlikely to solve that problem and may even prevent people from
perceiving it at all. The Harrisons help people see things fresh. To transform what they think is possible. To spark their imagination. To inspire action.

To accomplish this, the Harrisons bring to bear ingenious strategies of performance and storytelling, and they construct environments that prompt people to see, feel, think, and discover. In Baltimore, they created an exhibit of their proposals with aerial photographs blown up in scale large enough for people to find and touch their own homes. They enacted the work in a city-wide performance event that “promenaded the design.” The parade began at the exhibit site and traced the proposed promenade route, stopping at various points, where the Harrisons told stories. A multitude showed up, marching bands played, the mayor joined in. Afterwards, the city pledged fifteen million dollars to build one section of the proposed promenade, and the Harrisons’ proposal became part of the city’s official plan (Baltimore Promenade 1980).

Metaphor

In Baltimore and elsewhere, the Harrisons use metaphor not only to guide their own thinking, but also to overturn preconceptions, to challenge conventional thinking, to shock the system. In Green Heart Vision (1994-2001), they took the metaphor from the Dutch themselves, then turned it on them: How can you build on your own Green Heart? To drive the point home, they plotted the proposed plan to build houses on the Green Heart on a map of the country, then reversed the map. Planners were outraged: how could the Harrisons present the map backwards? Because it’s a backward plan informed by backward thinking. Thus was the critique imprinted indelibly on people’s minds.

Performance

Performance has long been integral to the Harrisons’ work, from Making Earth (1969-70) to their latest project of bio-restoration at Sagehen: The High Sierra (2012), and performance takes many forms. At Knowle West (2007), they performed harsh public critiques of the City of Bristol’s plans to develop the neighborhood’s Green Commons, which planners saw as open land. For Meditations on the Sacramento River, the Delta and the Bays of San Francisco (1977), the performances included: putting up posters on streets and public restrooms in San Francisco (“What if all that irrigated farming isn’t necessary?”); commissioning billboards emblazoned with the word WATER; drawing sidewalk graffiti (“Let every community empty its wastes upstream from where it takes its drinking water”); posting advice to public officials in the personal column of the local newspaper; telling stories at the San Francisco Museum of Modern Art. The performance at SFMOMA, consisting of ten texts read by two voices, was an experiment to see “how much information you could compress and in how short a reading time for understanding to take place of extremely complex eco-political observations.”

Storytelling

Narrative has been central to the Harrisons’ work since the 1970s. The Lagoon Cycle (1974-1984) is an extended narrative of images and words in seven parts. There are “stories nested within stories,” rich in metaphor, with diverse characters. “The Seventh Lagoon: Ring of Fire, Ring of Water” (1980) opens with “Let me tell you a dream.” Imagine that “all ice has melted, the oceans have risen, civilization is under stress, and ecosystems are under stress.” At the end is a new beginning: “And in this new
beginning/...you will feed me / when my lands can no longer produce / and I will house you / when your lands are covered with water / and together / we will withdraw / as the waters rise."

Stories are a way of imagining alternative futures, conveying moral values, and guiding action. In their Baltimore work, the Harrisons considered themselves “storytellers of a specialized kind, who were generating a new urban narrative that would underpin more humane urban design.”

Exhibitions

The Harrisons’ exhibitions invite touch and are designed to engage both body and mind, to make ideas tangible. Maps and photographs are printed large (often eight feet high and many feet longer). Ideally they are hung two to four inches from the ground so that, as people approach, the image joins the floor plane and fills the visual field, which means that people feel like they can walk right into the map or photograph.

To help people comprehend what was happening to the Sierra Nevada, The artists made a “manifestation on the floor,” where they placed an aerial photograph, fifty feet long, of the entire twenty-four thousand square miles of the mountains on the floor of the gallery. “In the five or six paces that it would take to walk from one end to the other, the viewer could see the mountain range from the air—and then, bending down on one knee, see the mass logging operations that were going on.” Moving the image from the wall to the floor completely changes one’s bodily response to it.

For the exhibit of their Green Heart Vision (1994-2001) for the Netherlands, they placed two eight-foot-square maps side by side on the wall: the “backward” map of the proposal to construct 600,000 houses in the Green Heart and the plan of their own proposal (which portrayed the country in its correct orientation). The floor of the exhibit was an aerial photograph of the entire Green Heart with their proposal superimposed, printed on Delft tile, so that everyone “could see the location of their own house, their school, or their business” in relation to the Harrisons’ proposal. The artists were pleased “to see grandmas bring their grandchildren to look at the mappings and crawl around on the floor”: a democratization of art, planning, and policy.

Gardens

The Harrisons’ designs for gardens immerse people in an all-encompassing “manifestation,” where they can experience ideas directly through the senses. The Garden of Hot Winds and Warm Rains (1996), for example, would provide visitors with a “physical and metaphorical excursion through possible futures,” where they could experience the potential effects of projected changes to climate. This was the artists’ first “future garden,” designed to be part of the Endangered Meadows of Europe (1995-1998), an installation on the roof of Bonn’s art museum. The “future garden” was deemed too expensive, but the Endangered Meadows, designed to bring alive issues of biodiversity, was planted and inspired the city’s park director to ask for another meadow artwork, A Mother Meadow for Bonn, created with seeds from the rooftop meadow.
**The Enacted Work**

The Harrisons' works are calls to action, but the artists recognize that “simply having the opportunity to make the proposals” does not mean that they will be implemented. Nevertheless, they have a remarkable record of influential works that have been enacted in policy and in built form. And the projects often give birth to new initiatives.

Their proposal for A Breathing Space for the Sava River (1989-1990) inspired a similar project for the adjoining watershed of the Drava River. Together the two watersheds provide about 50 percent of the clean water for the lower Danube River.

The Endangered Meadows of Europe (1995-1998) is no longer installed on the roof of Bonn’s art museum, but lives on in the new meadows it has seeded in Bonn and other German cities.

The Green Heart Vision for the Netherlands was shelved after elections in 1994, but ultimately was enacted after a new government came into power in 2000. The vision will affect the entire country for decades to come.

Perhaps most remarkable in terms of its potential impact—in the Sierra Nevada and the world at large—is Sagehen (2012), a projected fifty-year experiment that promises to develop and demonstrate innovative ways to help ecosystems adapt to climate change. It is part of the mission of the Center for the Force Majeur, which they founded in 2009 in order to explore “ecologically available responses that will replace, in some measure, the value once provided by disappearing glaciers and snowmelt to river systems and both the ecosystems and the human cultures they support.” Projects in the works, yet to be enacted, advance this quest. Their proposal for Tibet: The High Ground (2005), for example, would transform lands exposed by retreating glaciers into a water-holding landscape where soil would gradually release water to feed the headwaters of the great rivers.

**Reflections of a Designer/Planner**

I view the work of Helen and Newton Harrison through the lens of a landscape architect and planner. For me, that work is breath-taking and inspiring. To follow the story from Making Earth (1970) to Sagehen in the High Sierra (2012) is to embark on an adventure where the encounters between consistent mission and approach, diverse places and people, and serendipitous events lead to a thrilling and satisfying whole. The work unfolds in a dialogical progression where one work informs the next. At times the narrative of a particular story is abruptly broken by circumstance, but then is taken up again years later.

I recognize in the Harrisons’ approach and methods many similarities with the best works of my profession, but the distinctive aspects of their work are telling. Designers and planners can learn much from the artists’ brilliant use of “guiding metaphor,” for example, not only to advance their own thinking, but also as a way to transform others’ perceptions. If designers use metaphor, they often do so in a shallow manner: using the form of a leaf or tree as the basis for the layout of a park, for example. Similarly, designers and planners routinely use figure/ground diagrams -- where buildings are shown in black (figure) and the spaces between them in white (ground) -- in order to study urban form. The Harrison’s use of figure/ground perception as a method for discovering the invisible is more complex and promising. Meanwhile, for designers and planners who want to consider how practice can be a form
of research, *The Time of the Force Majeure* is a textbook; the research questions alone are an inspiration.

What strikes me most deeply, however, is how the Harrisons design almost every aspect of every project to “bring forth a new state of mind” in themselves and their audience and the ingenious strategies they employ to accomplish this transformation. This is an essential missing step in most design and planning practice, and it is in this area that we have most to learn from the Harrisons. We need to apply this kind of thinking not only to everyday projects, but also to the major challenges facing humankind. Human societies cannot successfully mitigate and adapt to the stresses of climate change without a new state of mind, and designers, planners, and artists have an essential role to play. The Harrisons have been demonstrating this fact for more than forty years. It is time to join them.

Note: All quotations are from *The Time of the Force Majeure* and from conversations with Newton Harrison on February 15 and 20, 2016.