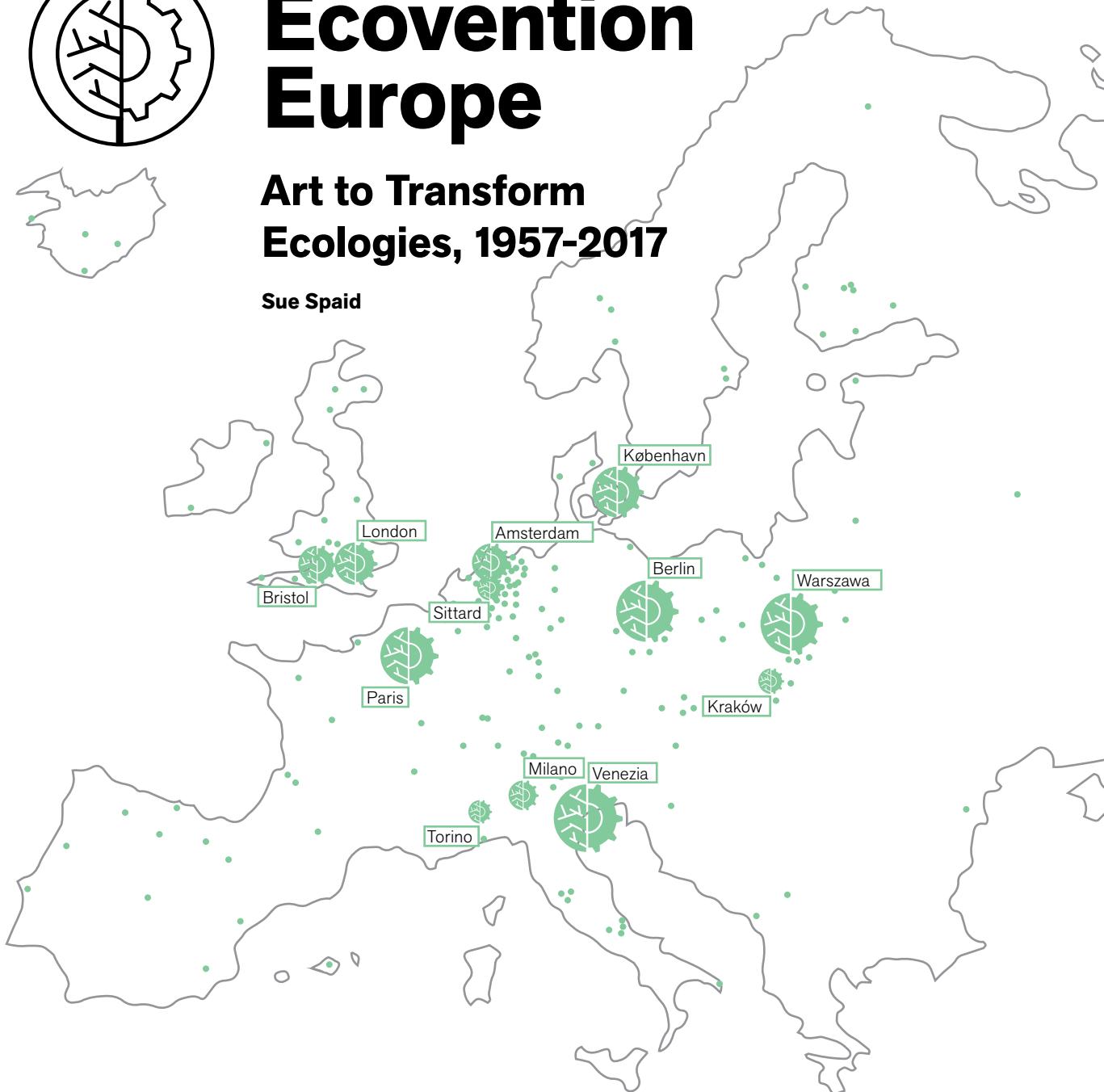
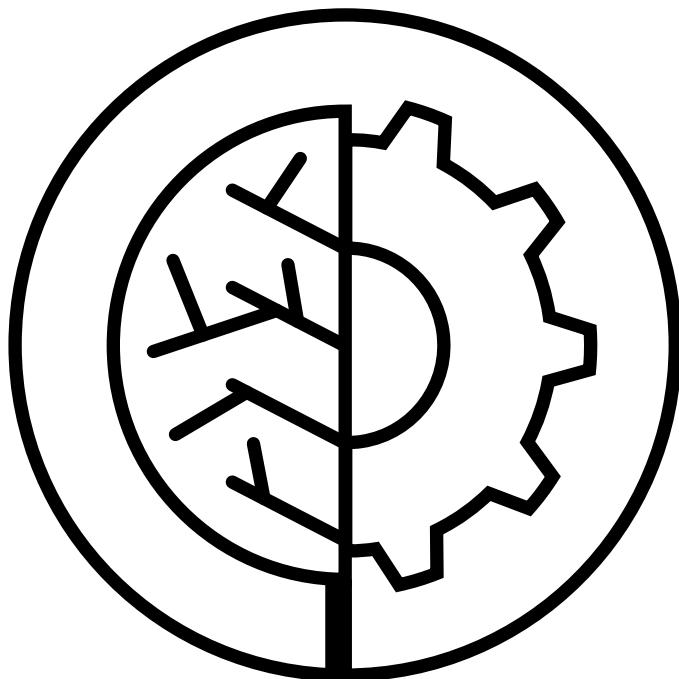


Ecovention Europe

**Art to Transform
Ecologies, 1957-2017**

Sue Spaid





This catalogue accompanies the exhibition:
"Ecovention Europe: Art to Transform Ecologies, 1957-2017"
Curated by Sue Spaid
Museum de Domijnen Hedendaagse Kunst
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**Hedendaagse
kunst**
**de do
mijn
en**
01



Front Cover:

Each city was awarded 1 point for:

- each eco-art show presented in one of its institutions (public or private),
- hosting a COP,
- and individual artists' projects launched in the region.

Points were not awarded for European Green Capital Awards.

Final score: Venezia 32, Warszawa 29, Berlin 29, Paris 27, København 24, London 20, Bristol 18, Amsterdam 18, Milano 14, Kraków 12, Sittard 12, and Torino 11. Team Italia wins with 57 points!

The cover is a "borderless map" of Europe that indicates every place mentioned in the book, giving special attention to twelve hotspots. Sizes of city dots are proportional to the amount of eco-art activity (Venezia is 3x larger than Torino, which is slightly smaller than Sittard, Kraków, and Milano, etc.).

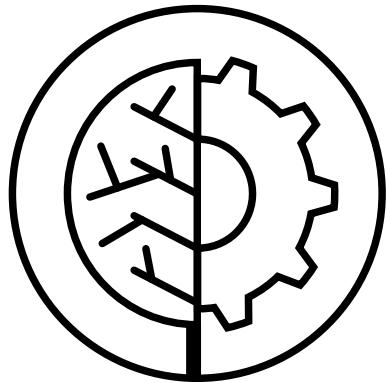
We do not claim to know every event that happened in every city since 1957, so this is an approximation ... Hopefully, it will encourage future researchers to locate and better document the many projects we missed or never discovered ...

Back Cover:

Nicolás García Uriburu and Joseph Beuys, RHEIN WATER POLLUTED BOTTLE-DÜSSELDORF, 1981. Photograph. Courtesy Azul García Uriburu. Collection: Nicolás García Uriburu, Buenos Aires, AR. ©Nicolás García Uriburu, reproduced with permission.

Cecilia Malik, *Happening with Forest Mandalas*, 2016, Hand-painted protest props. Kraków, PL. Courtesy Cecilia Malik: Photo Credit: Tomasz Wiech.

Lois Weinberger, *Ohne Titel*, 2011, Colour photograph, Courtesy SMAK Belgium. Collection: SMAK, Gent, BE. Photo Credit: Paris Tsitsos.



Ecovention Europe

**Art to Transform
Ecologies, 1957-2017**

Sue Spaid

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Section Thirteen: Index**A Sustainable Printing Manifesto**

Inspired by Sara De Bondt, "Insights 2014 Design Lecture Series," Walker Art Center, Minneapolis, US. Co-written by De Bondt and Chris Svensson, 2009. Tweaked by Kristian Bjørnard, 2017.

The "YES" column guided many of this book's design decisions..

NO

- Less than 100% post-consumer recycled paper
- Petroleum-based inks
- Heavy ink coverage
- Spot varnish
- Foil blocking
- Plastic (substrates, shrink wrapping, bags, etc.)
- Laminating
- Waste
- Glues
- Perfect binding
- Custom paper sizes
- Heavy paper stock
- Coated paper
- Single sided
- Trimming
- Bleed
- Metallic inks or paints
- CMYK
- Multi-colour (2, 3, 4, 5, 6+)
- Printing abroad
- Bigger
- More

YES

- 100% Post-consumer recycled paper
- Vegetable-based inks
- Light ink coverage
- Waterless printing
- Digital printing
- Blind embossing
- Reusing, reducing, recycling, renewing, repairing, reclaiming
- Engraving, embossing, die-cutting, lasercutting
- Staples
- Wire-binding
- Standard paper sizes
- Thin paper
- Uncoated paper
- Double sided
- Black & white
- One colour
- Maybe two colours
(In general, the fewer colours the better...)
- Printing locally
- Smaller
- Less

Director's Foreword

Museum De Domijnen Hedendaagse Kunst proudly presents the "Ecovention Europe" exhibition. The accompanying exhibition publication provides an overview of art and ecology in Europe over the last sixty years. Many different artworks and artists are addressed in this publication and excerpts from this text are included in the exhibition both inside and outside of the museum.

It is important that artists hold up a mirror to citizens and policy makers, so that they always remain aware of the choices they want to and need to make. Ecology is a topic that affects everyone at any given moment. The significance of understanding the ecological phenomena that are caused by people relates to the continued existence of humanity and the planet. Climatological changes can only be impeded if we all change our behaviour. This change starts with the individual but requires a global commitment to ensure that our planet remains viable for us, our children, and our grandchildren.

With 408 people per km² on a surface of only 41,543 km², Nederland is a densely populated country. Within this small country, a large segment of the population is concentrated in the Randstad region, where urbanization has been most rapid and pronounced. In addition, a large part of the country is located below sea level and, because Nederland is a delta, floods remain a constant threat.¹ This has seen ecological interests continuously being weighed against the need for economic progress and population safety.

Nederland is a country where water is both friend and foe and has the potential to present a significant threat to nature, the economy, and the population. The unique Dutch polders are an example of Dutch innovation resulting from the need to extend the liveable surface area while simultaneously reducing the threat from the rising waters of the Zuiderzee. A new nature reserve was created in the Zuiderzee polders, the De Oostvaardersplassen, which has received



European recognition. This rewilding project established a balance between urban and agricultural areas and nature.

In Zeeland province the Delta Works, instigated by the 1953 North Sea flood, were completed in 1986. However, at the start of the 21st century, people became aware that a significant portion of valuable nature was lost in the construction of the dikes in Zeeland. Voices are now being raised to find ways to reintroduce the lost fauna and flora without increasing the threat of floods. This is another example of seeking a balance between safety for the population and the interests of ecological structures.

De Domijnen focuses on social and anthropological issues in its museum policy. It is in this very period of climate change, important urban issues, and threats to ecological structures that the display of ecological art is of such significance. The museum wants to make a contribution to raising awareness about our own behaviour and its impact on nature - of which humanity is part and parcel after all.

In 2013, Sue Spaid curated "Green Acres" exhibition at the Contemporary Arts Center in Cincinnati, US; more than a decade after she co-curated "Ecovention" for the same venue. Her expertise in the field of ecological art is globally renowned. Museum De Domijnen is proud to announce that Sue Spaid, who wrote this exhibition publication, has joined our museum as a guest curator to create the "Ecovention Europe" exhibition.

In addition to the special exhibition in Museum De Domijnen, which runs from 3 September 2017 to 7 January 2018, different artists will be presenting their projects in Sittard-Geleen municipality. Artists often request collaboration from the local population or school pupils for these projects. Collaborating artists include Nis Rømer (DK), Vera Thaens (BE), Lois Weinberger (AT), Jean-François Paquay (BE), N55 (DK), and Søren Dahlgaard (DK/AU).

By creating these projects in the public space, the community of Sittard-Geleen is encouraged to think about sustainability, climate change, and ecological issues. Local residents will also be involved in maintaining these temporary ecological projects in locations such as the *Geheime Tuinen van Sittard* (the secret gardens of Sittard), a social project using public and hidden gardens to tell the story of Sittard and its residents.

This publication is more than just a catalogue that provides information about "Ecovention Europe." It is a historical overview of the development of ecological art in Europe that has never before been discussed so extensively.

We would like to thank all of the artists who contributed to this exhibition that connects the spaces inside and outside of the museum in exciting and intriguing new ways. We would also like to extend our gratitude to our guest curator Sue Spaid, without whose vision and knowledge of the development of ecological art in Nederland, Europe, and beyond, this exhibition and publication would not have been possible. This exhibition perfectly interlinks with the vision of Museum De Domijnen:

'We inspire, stimulate, and challenge people to continue to experience, to learn, and to be moved. We offer people new experiences and perspectives about their past and future, and situate culture in the heart of society.'

Tom de Rooij
CEO of Museum De Domijnen

1. '55% of Nederland is at risk of flood, 26% of Nederland is located below sea level, and 29% is at risk of river flooding.' Quote from Nederland Environmental Assessment Agency report.

Guest Curator's Foreword

Getting to this point has been a long, circuitous path that truly began in 2005, some twelve years ago, when for reasons I cannot quite recall SMAK flew me to Gent to propose an exhibition, so I proposed "Ecovention Europe." Artistic Director Philippe Van Cauteren kept asking me why I wanted to do the same show twice. I kept remarking that it would be a totally different show with a focus on European artists and projects, since "Ecovention: Current Art to Transform Ecologies," co-curated with Amy Lipton, included only five artists or collectives actually based in Europe, alongside nine others based in the U.S. who had implemented ecoventions in Europe. Van Cauteren must have thought me either lazy, crazy, or a bit of both for proposing a show that he thought I had done once before and seemed to have little to do with that era's European art scene. I even had in hand that day's newspaper with an article describing the Rotterdam-Antwerpen-Köln industrial triangle as one of Europe's most polluted regions, but he remained unconvinced. Instead, he suggested that I take a closer look at Lois Weinberger's solo show on view downstairs in SMAK's galleries. Having just spent several years researching artists' inventive ecological "interventions," I must admit that Weinberger's decidedly "non-interventionist" approach totally baffled me.

When I met Van Cauteren again eight years later, we joked about that odd encounter. It was not until Weinberger's second SMAK exhibition in 2015, however, that I began to grasp his strategy, which had seemed so decidedly unecological only a decade earlier. Being 2015 International Year of Soils, I was completely touched by the photo of a man, presumably the artist, wearing a white, long-sleeve dress shirt, cradling an armful of dirt like a newborn baby (on this book's rear cover). I couldn't stop staring at the photo, and since I was researching two separate articles inspired by 2015 International Year of Soils, I immediately emailed his wife Franziska, who kindly sent me images and mailed me two catalogs, giving me the opportunity

to delve more into his work. When Soil-Art Expert Alex Toland assigned me the task of writing on artisanal soil, I realised how his having exhibited a living compost heap during the 2009 Biennale di Venezia broadcast the significance of decay and regeneration to the widest audience possible. As the European artist whose entire career has addressed ecological issues in myriad contexts over the longest period, he is effectively this exhibition's senior protagonist.

Soon after moving to Belgium in 2013, Patricia Johanson suggested that I meet Roel Arkesteijn, a young Belgium-based Dutch curator, who was organising her career survey for a museum in Sittard, NL. On Assumption Day (a Belgian national holiday every August 15), we finally met one another while touring Bernd Lohaus' survey at MAC's in Mons, which gave us ample opportunity to climb the *terril* (French for slag heap) situated next to Parc d'aventures scientifiques, the science museum designed by Jean Nouvel. From the moment we met, "Ecovention Europe" was a topic of discussion, but where/when this exhibition would happen wasn't decided for a couple more years.

Meanwhile, I kept lists of appropriate artists as I encountered them. First, Denmark-based (this is not a typo...where fonts allow, I am attempting to use local names to refer to places) artist/blogger Bonnie Fortune invited me to contribute an essay to *An Edge Effect/Art & Ecology in the Nordic Landscape* (2014), her detailed anthology focused on eco-minded Nordic artists. This afforded me the opportunity to research artists from Ísland to Suomi. While presenting the paper "Doing Something: Novelty, Irritation and Entropy" at the International Institute for Applied Aesthetics in Lahti, FI, I met Polish environmental philosopher Mateusz Salwa, who recommended I propose a paper to the 2013 Sustainable Art conference at the Uniwersytet Wrocławski in Polska. Following the conference,

art historian Magdalena Worłowska sent me her list of Polish environmental artists, several of whom I met when I returned in 2016 to present the paper "Why Environmental Aesthetics Needs Both Science and Art" at Warszawa's Zachęta Narodowa Galeria Sztuki. Mateus played an instrumental role here, working directly with Teresa Murak to make sure that my representation of her over forty-year oeuvre rings true.

In August 2015, Touchstone collaborations and Clive Adams, Director of the Centre for Contemporary Art and the Natural World, invited me to present my "legacy" for their "Art of Soils" symposium at CREATE Center in Bristol, UK, enabling me to encounter works by Paul Chaney, Debra Solomon, and Touchstone collaborations for the very first time. By the time Roel and I finally sat down four months later to plan our show, my list had grown to 65 artists, and like a well-nourished plant, it grows longer each day! Seven months later, I was in Milano and desperately wanted to visit Ugo La Pietra, whose seventies-era environmental artworks had impressed me while at Parco Arte Vivente earlier in the year. Within the space of ninety minutes, Ravenna collector Patrizia Dal Re worked her telephone magic and I suddenly found myself in La Pietra's studio!

Roel and I both worry that it's easy to fall into the trap of using artists we already know as references, leading us to say "so and so" is the European Ballengée (animal studies), European Irland (water issues), European Johanson (large-scale restoration), European Miller (seed bombs), European Simpson (nurse logs), European Smithson (industrial sites), or European Steinman (urban farming), which is ridiculously easy to do. This is ultimately the worst possible way to try to understand what's happening in Europe, where environmental and political conditions are extremely different, since governments tend to have stricter environmental regulations, giving artists fewer reasons and opportunities to

intervene on the public's behalf. Since "similarly appearing" artworks often have different contents, such short-cuts tend to be loss leaders. Moreover, artistic strategies have changed a lot since 2002. If the nineties emphasised making, the aughties saw a rise in artists and collectives functioning more or less as post-studio consultants, think tanks, and bureaus, who tend to implement unpredictable *situations*; rather than *taking action* by initiating and testing environmental resolutions, as most "ecovention" artists have.¹

Amy and I specifically selected realised projects because we felt (and still do) that actions that generate real change are far more radical, and therefore more "threatening" than mere ideas. And as the popularity of the 2015 film *Demain* brilliantly points out, people are desperate for concrete examples that they can follow. The prospect of changing how we live, so that we can reduce our carbon footprint requires readily available prototypes that can be modified, adapted, and implemented in our communities and homes. Roel, Amy and I have historically advocated artists who have built scores of prototypes, providing designers models to copy and distribute the world around.

Yet the more "social" art became in the aughties, the more the "doing" part, which is crucial for ecoventions, seemed de-emphasised. One year after "Ecovention," Hans Ulrich Obrist, Molly Nesbit, and Rirkrit Tiravanija organised "Utopia Station" for La Biennale di Venezia. A free-ranging "field of dialogue" focused on the present possibility, potentiality, and plausibility of utopia; "Utopia Station" and its sea of incommensurable voices, set the stage for wide-ranging discussions taking precedence over pointed action. Consider this statement from the "Utopia Station" curators: "We meet to pool our efforts, motivated by a need to change the *landscape* [emphasis mine] outside and inside, a need to think, a need to integrate the work of the artist, the intellectual and manual laborers that we are into a larger kind of community, another kind of

economy, a bigger conversation, another state of being."² During the summer of 2003, the possibility for the landscape of art to be situated in *real* ground suddenly shifted to become a *placeless* network especially trained and equipped to contest Empire. In her analysis of "Utopia Station," art historian Natilee Harren remarks:

The trajectory of "*Utopia Station*" raises a deeply disturbing question. If, to be effective, the counter-Empire must work within the non-place of Empire—must 'push through Empire to come out on the other side' — then political aesthetics must become placeless [emphasis mine] as well. To suggest political transformation, must the art object and the museum be replaced by nomadic, performative practice?³

I certainly hope that "Ecovention Europe" demonstrates that it's still possible to "pool our efforts" "to change the landscape outside and inside" by taking action on real ground within the landscape, rather than resorting to a placeless political aesthetics. I thank CEO Tom de Rooij for making sure that this invaluable research would see the light of day. I especially thank Roel and his team for providing me this opportunity to take on this research in my attempt to make sense of this extremely dense and complicated story that is Europe's ongoing environmental art movement.

I especially thank all of the artists discussed in these pages, whose herculean efforts and creative ideas warrant their being registered in this document. Not only did most artists provide me invaluable feedback (and corrections) on texts penned on their behalf; but several readers like Søren Dahlgaard and Anne Berk responded to early drafts of much more. Collecting six decades of images and securing historical works for the exhibition has not been an easy task. I have fortunately been assisted by all of the artists, plus gallerists and collectors: Laura Hunt, Paula Cooper Gallery, New York City, US; Elyse Goldberg,

Smithson Estate, James Cohan Gallery, New York City, US; Megan Paetzhold and Marco Nocella, Ron Feldman Fine Arts, New York City, US; Tyler Auwarter, Leslie Tonkonow Artworks + Projects, New York City, US; Christina and Lev Kowalski, Atelier Piotr Kowalski, Paris, FR; Claudia Sorhage, Galerie Nordenhake, Berlin, DE; Wilfried Lentz, Rotterdam, NL; Antoinette de Stigter, Art Affairs, Amsterdam, NL; Brendan Becht, Amsterdam, NL; Joanna Kordjak and Małgorzata Bogdańska, Zachęta Narodowa Galeria Sztuki, Warszawa, PL; Zuzanna Sokalska and Anna Ciabach, Galeria Monopol, Warszawa, PL; Simona Cesana, Studio Ugo La Pietra, Milano, IT; Yachiyo Sugimoto, Studio Caldini, Firenze, IT; Lucrezia De Domizio Durini, Bolognano Pescara, IT; and Ernesto Kreitman Badell, lawyer for the Nicolás García Uriburu Foundation, Buenos Aires, AR.

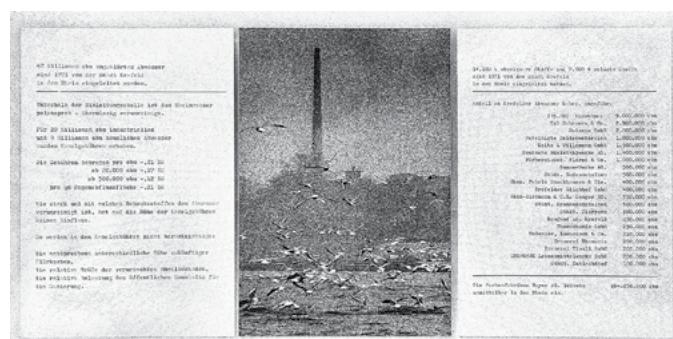
This book is dedicated to two under-recognised pioneers of the European eco-art movement: Argentine Nicolás García Uriburu (1937-2016) and Italian architect and visionary environmentalist Carlo Caldini (1941-2017), neither of whom I met. The former famously protested the declining health of water sources by “greening” dozens of rivers, fountains, and ports across Europe, beginning with the Canal Grande during the 1968 Biennale di Venezia. A founding member of eco-oriented design firm Gruppo 9999 (1968-1972), Caldini served as their spokesperson for over five decades. Before emailing him, I hadn’t actually seen Gruppo 9999’s 1971 bi-lingual poster (printed on p. 40), entreating students and “environment cultivators” to attend to the ecosystem in crisis. When Marco Scotini mentioned it on the introduction panel for his “Earthrise” (2016) exhibition at Parco Arte Vivente in Torino, IT, my curiosity was sufficiently piqued to track down Caldini to get an image for the book. To get Caldini’s email, I contacted Dr. Catharine Rossi, co-editor of *The Italian Radical Avant-Garde* (2013). In February, Caldini’s wife emailed me the sad news of his passing, but she also

reassured me that she and their daughters vowed to “keep the 9999 work alive.”¹⁴ I am convinced that our environmental crisis has but one cause: “chronic amnesia.” Anything we can do to keep the past alive is for the good of all, which incidentally motivated me to research and generate this book.

I owe a special gratitude to my long-time collaborator, sustainabilist Kristian Bjørnard, whose patience is as long as is his interest in the topic at hand. *Ecovention Europe* is the fifth book we’ve completed together in nearly as many years.

Sue Spaid, Ph. D.
Maransart, BE
March 2017

1. I employ the word “resolution” to indicate some solution’s unpredictability and plurality. Each artist is likely to propose a different resolution to every given environmental problem, so singular solutions are impossible.
2. Hans Ulrich Obrist, Molly Nesbit, and Rirkrit Tiravanija. “Utopia Station.” *Dreams and Conflicts: The Dictatorship of the Viewer*. Francesco Bonami (ed.). Venezia. La Biennale di Venezia. 2003. p. 333.
3. Natilee Harren. “Utopia Station: Manufacturing the Multitude.” *PART Journal* of CUNY PhD Program. Number 12: (In)efficacy. <http://part-archive.finitude.org/part12/articles/harren.html> Accessed 26 March 2016.
4. Email correspondence with Yachiyo Sugimoto dated 23 February 2017.



Hans Haacke, *Krefeld Sewage Triptych*, 1972, Photograph.

Courtesy Paula Cooper Gallery, New York, US. c/o Pictoright Amsterdam 2017.

With this work (discussed on p. 157), Haacke notes the Krefeld sewage plant’s role in dumping 42 million cubic metres of untreated sewage (household and industrial waste) into der Rhein each year. Also listed are the city’s major waste contributors.



Introduction



This section introduces ecoventions as a subset of land art, presents a succinct chronology of the past 60 years of ecological events in Europe and describes the global art scene that inspired the 2002 exhibition "Ecovention: Current Art to Transform Ecologies," as well as what transpired afterwards. In the nineties, avant-garde art practices such as social sculpture, novel technologies, gardening, and participatory art, which were originally adopted by artists eager to coordinate and carry out ecoventions in the seventies and eighties, became acceptable as art practices on their own, no longer the means to an end. Themes arising in this section include artistic strategies, "esthetic services," and utopic proposals.

But unless the work is inventive formally, it cannot change anything. It has to be inventive formally to change one's perception, emotions, and experience.

— Richard Serra

Before "Ecovention: Current Art to Transform Ecologies"

The Backstory. In 1999, Lance Fung invited me to propose an exhibition for his modest Soho gallery dedicated to seventies art. At the time, I was renting part of Amy Lipton's loft, so I requested her input. Since she was becoming active in that era's burgeoning eco-art movement, she suggested we co-curate a show of ecologically-oriented artworks from the 1970s. Studying the artworks that Lipton had in mind for "that seventies show," I was struck by the breadth of ecologically-beneficial projects realised by artists during that decade. These works had heretofore been read through the lens of conceptual art, land art, or Earthworks, thus disguising their actual efficacy. Back then, everybody knew Robert Smithson's *Spiral Jetty* (since 1970), but hardly anyone had heard of Alan Sonfist's *Time Landscape* (1965-1978/present), Hans Haacke's *Bowery Seeds* (1970), Patricia Johanson's *Cyrus Field* (since 1970), Joseph Beuys' *Forest Action* (1971), Smithson's *Spiral Hill/Broken Circle* (since 1971), Haacke's *Rhinewater Purification Plant* (1972), the Harrison Studio's *Lagoon Cycle* (1972-1979), Mierle Laderman Ukeles' *Maintenance Performances* (1973-1976), Sonfist's *Pool of Earth* (1975), Agnes Denes' *Rice/Tree/Burial* (1977), or the Harrison Studio's *Spoil's Pile* (1977-1978).

Lipton and I thus coined the term ecovention (ecology + invention) to distinguish artist-initiated actions that were driven by ecological concerns from that era's similarly large-scale, though characteristically pointless Earthworks. Fung flat-out rebuffed our far-flung offer to exhibit "uncanonised" ecoventions from the seventies. Fortunately, a few months later, I became Curator at the Contemporary Arts Center, so we expanded our proposed exhibition list to include 23 new comers from six countries, who had implemented ecoventions around the world; plus the eight historical figures mentioned above. Upon my arrival in Cincinnati, I pitched our exhibition idea to my

director for the 2000-2001 season, but the Duke Energy Foundation proposed that we postpone our exhibition one season, so that they could put more resources behind it. Luckily, that gave us 18 additional months to commission nine artists to come to Cincinnati to create *in situ* "demonstration" ecoventions, including Jackie Brookner's permanent ecovention *Laughing Brook* (2002-2009/present) in Salway Park, commissioned by Mill Creek Restoration Project. It would be my last exhibition as CAC Curator, though not my last CAC exhibition, since "Green Acres" opened there a decade later. Like Museum De Domijnen in Sittard, NL, the CAC has built its reputation presenting exhibitions that feature innovative ecological art practices.

Lipton and I co-curated "Ecovention" and produced its complementary book and website with the view that if only the artworld knew about the creative strategies artists had invented to tackle real-life ecological problems and the opportunities community officials were increasingly giving artists, more artists would join in, and collectors, curators, and gallerists would enthusiastically follow.¹ In the accompanying book's opening pages, I wrote "Certainly, art historical figures like Joseph Beuys, Mel Chin, Agnes Denes, Helen and Newton Harrison, *Ocean Earth*, Robert Smithson, Alan Sonfist, and Mierle Laderman Ukeles are known and collected, yet too few in the art world realise the role ecoventions have played in convincing local city planners, landscape architects, civil engineers, and watershed managers to rethink their practices." Fifteen years later, little seems to have changed! To our surprise, the movement failed to blossom beyond a dedicated coterie of environmentally-concerned artists.

Very few art critics champion practical art, let alone ecoventions. Even fewer art historians work on land art, let alone teach eco-art and ecoventions to their students; and too few environmental artists have or are even interested in gallery representation. In all these years, only the Museum of Contemporary Art Los Angeles has managed

to present a survey focused on land art. Being a historical overview prevented that exhibition from entertaining any further analysis of the medium beyond distinguishing Earthworks from earth art. Moreover, artists who are knowledgeable, organised, and skilled at realising large-scale ecoventions tend to be quite independent, which means that they are generally “too busy” to seek out exhibitions, let alone produce additional works to show, as separate from their crucial day-to-day ecological work in the real world. Artists are increasingly improving their abilities to translate outdoor projects for indoor audiences, a conundrum Smithson first broached in 1969 with his site/nonsite distinction.²

In other words, it is extremely difficult to “get the word” out, even when seminal artworks by world-famous artists like Beuys, Denes, Haacke, and Smithson are on view. Moreover, historically significant outdoor works are typically read through the lens of Earthworks, because so few writers and historians are prepared to discuss them on the level of artistic action, let alone to articulate their particular functionality, sustainability, biodiversity, and ecological import. Before discussing the differing scale, scope, and influence of European ecoventions, I first describe the art scene leading up to our 2002 exhibition, which coincided with the 2002 English translation of **Nicolas Bourriaud's** *Relational Aesthetics* and “Utopia Station,” an exhibition co-curated by **Hans Ulrich Obrist, Molly Nesbit, and Rirkrit Tiravanija** for the 2003 Biennale di Venezia. As we shall see, these two events tipped the artworld farther away from viewing “practical” or purposeful works as artistically viable, unwittingly laying the tracks for the artworld’s massive expansion on six continents, which has necessitated the creation of a cadre of eager curators, artists, and collectors to fill/discharge the rising sea of commercial and non-profit venues. The artworld has stood by, apparently mesmerised by sky-rocketing prices and ever more dazzling artistic spectacles. Meanwhile, hundreds of artists desiring self-directed alternatives turned to collective projects

with practical outcomes like farming-as-art, which helped to keep the ecovention vein alive, however isolated such projects are from ordinary artworld activities. Given ecoventions’ circuitous history, it’s important to continue this research.

Living Sculpture. In *Green Acres*’ Section Three, I discussed how **Rosalind Krauss**’ having excluded living sculpture (made from living materials) from her seminal essay “Sculpture in the Expanded Field” (1979) enabled her to focus on time-stable, entropic works, while excluding time-based experiential artworks such as ecoventions and environmental art altogether.³ As noted above, numerous artists had already produced living sculptures by the time she penned this paper, yet one does not surmise this from her essay. I always wondered whether her reluctance to accommodate living sculpture reflected Robert Smithson’s stance that “art degenerates as it approaches gardening,” a claim that proves paradoxical in light of the lush vegetation required to prevent his *Spiral Hill* from eroding away.⁴ Forty years later, sculptures’ variants still get plotted around Krauss’ “diamond of opposition,” which she developed in that text to categorise that era’s sculptural possibilities, yielding four distinct possibilities generated by two variables: “landscape” and “architecture.” Although Krauss’ diamond addresses the contrarian relationships between distinct universals, rather than some universal and its particular, hers is a tweaked version of the classic “square of opposition,” first proposed by Medieval-era scholastic **Apuleius**.⁵

Krauss herself terms her diagrams Klein Group graphs, which Structuralist theorists **Claude Levi-Strauss** and **Algirdas Greimas** regularly used, but Klein Group graphs concern symmetries, not oppositions (“landscape” and “not landscape”) as do Apuleian squares, making her versions effectively squares of oppositions.⁶ No doubt, the ongoing omission of living sculptures from art history reflects their not having found a comfortable position on Krauss’ “diamond of opposition.”

Most living sculptures are rather purposeful landscapes, for which there really is no ready slot on Krauss' 1979 diagram. Had she characterised her "landscape" and "not landscape" categories as medium-specific rather than place-oriented, as in "made with the landscape" rather than "sited in the landscape," I imagine art history would have turned out differently. If she wanted, she could easily revise her notion of landscape to include "cultivated nature." Such a change would accommodate both her marked-site examples and her conception of sculpture's "postmodern condition."

In the history of eco-art, one Soho gallery in particular stands out. Ronald Feldman Fine Arts exhibited Beuys (6 solo shows 1974-1986), the Harrison Studio (11 solo show since 1974), Brandon Ballengée (2012), and Laderman Ukeles (1984, 1998, 2007). **Ronald Feldman** even organised Beuys' 1974 New School talk "Energy Plan for the Western Man." In the chronology of ecoventions prepared for *Ecovention*, we enumerated 20 ecoventions implemented during the eighties by twelve artists in the United States, Deutschland, and Danmark, though only three worked with galleries (Feldman's of course), making it extremely difficult to track down the remaining nine. In fact, we never located **Harriet Feigenbaum** (US), whose work we definitely wanted to include in our exhibition.

The seventies-era ecoventions cited in this section's opening paragraph were relatively modest affairs, as compared to the complex initiatives launched by artists in the eighties to: *submerge* a 150-foot long coral reef 50 miles off the Atlantic Coast (**Betty Beaumont**), *shake hands* and greet 8,500 New York City sanitation workers (Laderman Ukeles), *transform* a lagoon's algal bloom into a thriving ecosystem (Johanson), *harvest* 1000 pounds of wheat in Manhattan (Denes), *scour* satellite imagery to identify and tax polluters (Ocean Earth), *invent* nature-based water-treatment plants using lemna (**Viet Ngo**), *cultivate* a ring of 60 willow trees to restore a coal-dust runoff

pond (Feigenbaum), *devise* a system to conserve acorn germination in Deutschland (**Georg Dietzler**), *construct* and install a massive raptor roost for eagles and hawks in Wyoming (**Lynne Hull**), and *found* Keepers of the Water to join communities, scientists, and artists (**Betsy Damon**). None of these ten italicised verbs from "submerge" to "found" were associated with art-making processes until the eighties.

Woefully overlooked is the fact that the process of realising this ever-expanding array of artistic enterprises first required artists to: 1) embrace *novel "art" technologies* from back-hoe driving to mapping and computer software, 2) expand the parameters of *social sculpture* whereby artists were suddenly seeking out and engaging diverse collaborators from scientists to architects, engineers, politicians, community members, and stakeholders who would remain the ecovention's stewards long after the artist left, 3) learn the basics of *gardening* and horticulture to create living sculptures, and 4) create activities that inspire and enrich volunteers and paid workers alike (the fore-runner of today's *participatory art*).

It's interesting to note that **Tom Finkelpearl**'s anthology *What We Made: Conversations on Art and Social Cooperation* (2013) references none of the aforementioned artists' projects, presumably because ecoventions are artist-initiated *actions*, rather than audience-inspired *situations*, a distinction that will be made clearer in the next part. In fact, *What We Made* only mentions ecology in reference to **Mark Dion**'s contribution to "Culture in Action" (1993), a teen venture that he initiated in 1991 as Chicago Tropical Ecology Group (renamed Chicago Urban Ecology Action Club in 1992) and architect **Teddy Cruz**'s Center for Urban Ecologies at University of California San Diego. Back in the seventies and eighties, artists implementing ecoventions had to learn and adapt all sorts of complicated skill sets to make their art, while later generations seem far more interested to ascertain, adopt, and expose

unusual skill sets as their art, rather than deploying them to do or make something novel.

The Artistic Strategy Diamond of Opposition.

By 1990, however, another Soho gallery, the always surprising American Fine Arts, Co (AFA), spearheaded by the fascinating **Colin de Land** (1955-2003), increasingly held the global artworld's attention when it came to criss-crossing the art/science border. Although most cases remained either science fiction or "science as art," several, especially those produced by Ocean Earth exemplify "art as science." AFA artists were broaching numerous boundaries, most notably art's purpose, its potential public, and its eventual reach. AFA exhibited seven artists/teams (**Dennis Balk**, **Mark Dion**, **Andrea Fraser**, **Simon Grennan** and **Christopher Sperandio**, **Christian Philipp Müller**, **Nils Norman**, and **Ocean Earth/Peter Fend**), whose exhibitions can now be understood as having championed particular artistic strategies, though it is unlikely that any of these artists intentionally played the roles I'm assigning them here, a quarter of a century later. To generate this analysis, I employ "The Artistic Strategies Diamond of Opposition," which contrasts artists who strive for situations against those who aim for actions, destined either to influence the artworld or to occur in the real world.

As demonstrated by the following tell-tale quotes culled from reviews of AFA exhibitions, actual exhibited artworks, and related brochures/press material; the battle over whether art's outcome should be conceptual, social, practical, or political regularly played out in AFA exhibitions from the late 80s until de Land's death in 2003. With each new exhibition, AFA artists, most of whom remain key players in today's artworld, effectively staged debates regarding whether artists ought to remain in the artworld or engage the real world; and what the artwork's role ought to be in galvanising audiences to grasp heretofore

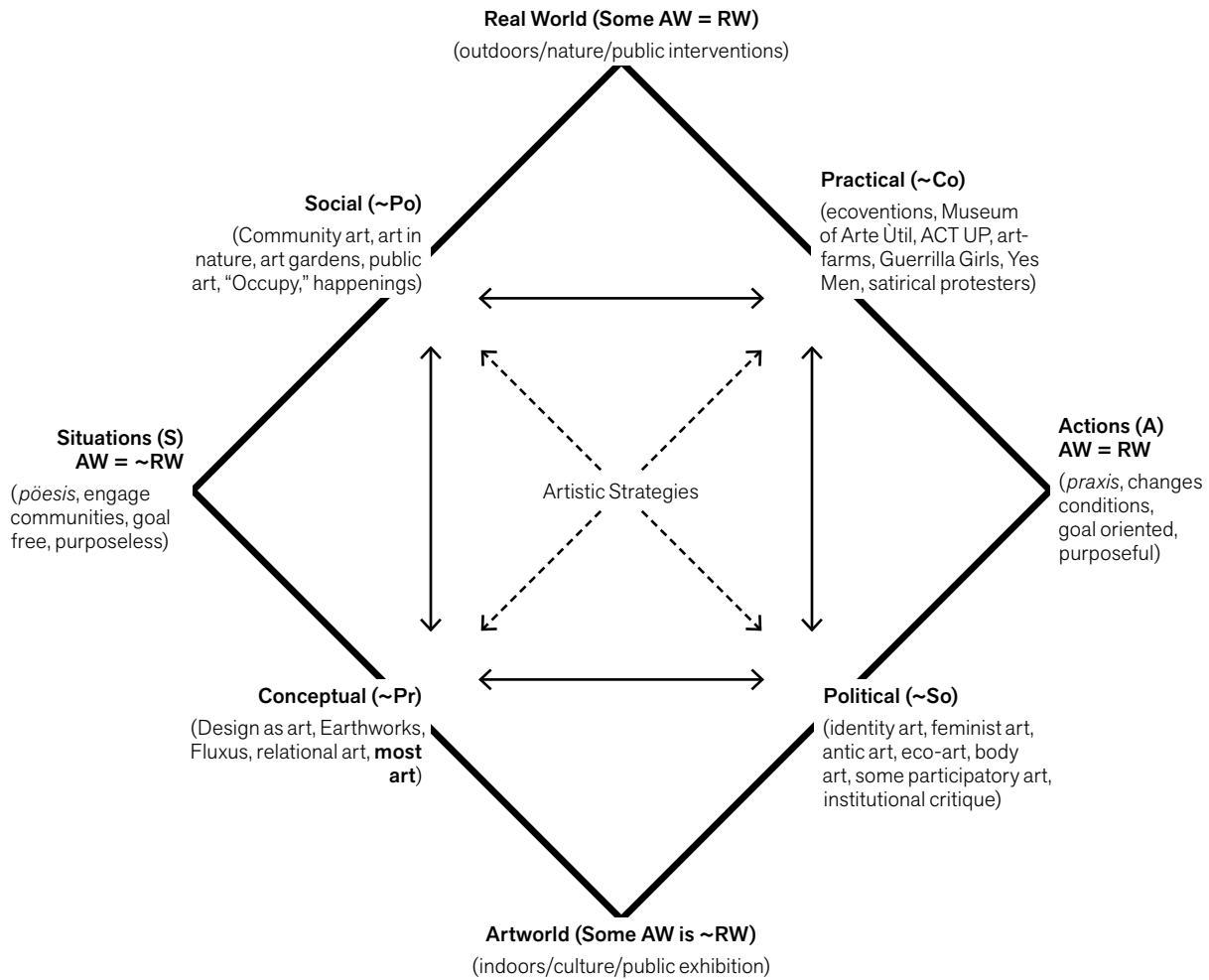
unimaginable ideas. Köln dealer **Christian Nagel** recalls, "Colin was an excellent thinker, a brilliant talker. His gallery was his studio, and he understood it not only as an exhibition surface but also as a *social space* [emphasis mine]. Colin de Land was one of the last avant-gardists of New York City."⁷

Dennis Balk

AFA Shows
1992
1993
2003

No two Dennis Balk exhibitions are ever alike. Over the course of two decades of work in New York, he has diagrammed quasi-historical vignettes on sets of cloth dinner napkins; written plays for the theater, some of which were linked to sculptural props displaced to a gallery; displayed raw vegetables on folding tables; and constructed machines that measure unseen forces (which were contingent on the viewer's physical participation). He has written a novella concerning, among other things, secret knowledge in ancient Egypt, and he currently writes on topics of interest in nanotechnology and physics....Balk is, after all, very good at making information and theory look like entertainment, and he accomplishes this by hybridizing and playing back contemporary visual codes (global/digital/youth/travel/culture/masculine/fun) revved up with special effects (game/world sci-fi/simulation/fantasy/NASA).⁸ (*Artforum* review of Balk's 2003 AFA exhibition)

Balk's partially wrapped array-objects (are they sculptures?) are components of his *Photo-Magnetic Receiver*, a device that may or may not allow a test subject to "see" on this photo-magnetic spectrum. Dropped out of their initial contextual fabrics, the arrays become mere stage props for Balk's unique brand of analytical theater, while remaining aesthetic objects in their own right. When does art become a hoax? When do we believe in its power to move us beyond limit conditions? What is the viewer's role? Balk's practice is one of testing, and



The "Artistic Strategies Diamond of Opposition" contrasts artists who strive for purposeless situations (S, left side) with those who aim to realise purposeful actions (A, right side). Some artists aim to impact the real world (RW, top half), while others endeavor to influence the artworld (AW, bottom half). The corners feature four possible outcomes: *practical* (Pr prompts people to make procedural changes in the real world), *political* (Po prompts spectators to reconsider prior beliefs/values, inspiring them to change their minds), *conceptual* (Co inspires spectators to adopt new ideas/perspectives regarding art or life's possibilities), and *social* (So provides viewers memorable experiences). I

do not claim that political art doesn't engender procedural changes. I rather claim that when it does, its impact is practical, not political. Similarly, when writers articulate an Earthwork's functionality and benefits for nature, its impact becomes practical, not conceptual. Similarly, when ideas generated by members of Occupy encampments influence public policy, their impact flows from the social to the practical. Being entirely contextual, these categories demonstrate that artistic strategies framing artworks are neither inherent nor essential.



as such literalises the metaphorical.⁹ (1999 Apex Art brochure for "The Production of Production")

Mark Dion AFA Shows 1994	Could these works actually be parodies of a certain genre of avant-garde didacticism? ¹⁰
1995	(<i>New York Times</i> review of Dion's 2003 AFA exhibition)
1996	
2000	
2003	The artist Mark Dion could be considered the leading contemporary dramatist of environmental disaster and accidental survival.... Mr. Dion turns the props and procedures of scientific inquiry into a <i>Twilight Zone</i> scenario. Everything has a period look but also seems like a projection into the future. You can almost hear the teasingly authoritative voice of Rod Serling giving a voice-over tour of the shows, calmly provoking discomfort at the prospect of dangers ahead. ¹¹ (<i>New York Times</i> review of Dion's 2000 double show at AFA and Bonakdar Jancou)

Mr. Dion's ecological concerns provide a capacious rationale for a kind of ghoulish humour, recalling **Tim Burton's** deliciously creepy movies.¹² (*New York Times* review of Dion's 1996 AFA exhibition)

Andrea Fraser AFA Shows 1991	And in Ms. Fraser's subtle, extended ethnological study, which is what this show amounts to, [distinctions] stay blurred. She may seem to take a scientific stance without comment, but she is well aware that such objectivity is always an illusion. Someone took these pictures (specifically, a white woman in West Africa) and determined the order in which they would appear here. (Even a random hanging is an authorial choice)... With a cool eye, Ms. Fraser serves up her material, with its loaded title, and says, "You decide," which is what the most
1993	
1997	
2004	

stimulating political art usually does.¹³ (review of Fraser's 1997 AFA exhibition)

Fraser's 1992 essay "Another Kind of Pragmatism" analysed de Land's "self-consciously unself-conscious décor." (remark found on Müller's website)

Simon Grennan + Christopher Sperandio: AFA Show 1996

Artists: The easiest way to describe our practice is to say that we make artworks with different people....We worked with a chocolate makers' union in Chicago to design and manufacture a candy bar that celebrated labour.

Colin: So you guys make new artworks with different people?

Chris: Colin, some artists want to be outside the mainstream, but we like to be knee-deep in it. It's tough though, I mean in the face of something like Microsoft. What kind of impact could our modest practice have?

Simon: We pretend that our practice is public and transgressive, but at the end of the day it's just entertainment.

Colin: So what keeps you going?

Simon: To do nothing would be deeply cynical.

Colin: If you make your work in the mainstream, then why bother with me?

Chris: Well, we did a pretty good job of going off and working with other folks, but you have a pretty good context for showing art here. We wanna work at AFA.

Colin: Let's Rock.¹⁴ (dialogue presented on painted cartoon exhibited at AFA in 1996)

Christian Philipp Müller
AFA Shows
1992
1994
1995
2000

Taking as his point of departure de Land's attempt to introduce social spaces into the gallery system, Müller pushed the implementation of this kind of social space to a more radical extreme. There was no

furniture whatsoever; if visitors wanted to sit they had to walk over to the art dealer's desk, forcing them to engage in a sales conversation.¹⁵ (website description of Müller's 1992 AFA exhibition)

In 1997, Müller was invited to participate in documenta X, where he presented *A Balancing Act* (1997), which took as its point of departure Joseph Beuys' *7000 Oaks* and Walter De Maria's *Vertical Earth Kilometer*, both presented at previous documentas. Addressing the idea of striking a "balance" between the social and the formal in art, Müller's work involved a tightrope act in which he paced off the distance between Beuys' and De Maria's works dressed as the infamous World Trade Center tightrope walker, **Philippe Petit**, carrying a six-metre-long balancing pole made half of oak and half of brass in reference to Beuys and de Maria.¹⁶ (website description of Müller's 1997 documenta X work)

Nils Norman

AFA Shows
1995
1997
2001

In response to what he sees as "a renaissance of protest culture," he has devised ways for impoverished urban neighbourhoods to defend and sustain themselves while engaged in system-baffling civil disobedience... Rounding things out is a strange and funny pair of cartoon strips, made in collaboration with **W. v. Delmont** that consider the social ecology of the contemporary art world and conclude that it is not in such great shape.¹⁷ (review of Norman's 2001 AFA Exhibition)

Norman's proposals skate such a thin line not only between humour and sincerity, but also between the total fiction of the proposals and the need, nonetheless, that many of us feel to live 'alternatively,' or at least to think about it.¹⁸ (review of Norman's 1997 AFA exhibition)

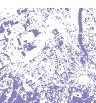
OEDC/Fend

AFA Shows
1988
1989
1990
1991
1992
1999
2000
2004

Cathy Lebowitz wrote: "Whether or not Rapid Response is able to build artist-designed alternative-fuel stations, the exhibition was successful in presenting an imaginative and in-depth look at concerns that affect everyone." When I met Fend coincidentally at the exhibition, he said that to him, this is precisely what qualifies his unbuilt projects as failures. *RAPID* wasn't just meant to provoke thoughts. It was meant to become a functioning gas station.¹⁹ (2015 exhibition reviewer quoting a review of Ocean Earth's 2000 AFA exhibition)

"Art Spy in the Sky: Peter Fend, the Buckminster Fuller of the New Wave takes '70s Land Art One Step Beyond."²⁰ (Alan Jones' 1988 *Arts* magazine headline)

The idea to release art as a secret weapon started on the way to Harvard Law School. It was 1976, and land artists like **Dennis Oppenheim** were planning vast interventions to be carved directly into the landscape. "I told myself I had to give up being normal." Fend moved to New York....The artworld, he felt, represented an extreme case of decay largely due to artists' tendency to shrink from their role as cultural leaders in their time. "I felt we needed artists to define our material culture in response to the emergency the world finds itself in." **The Offices of Fend, Fitzgibbon, Holzer, Nadin, Prince, and Winters** promised with delicious ambiguity: "Practical esthetic services, adaptable to client's situation." But Fend's full-earth orbit was still far off.²¹ (review of Fend's 1988 show in *Arts*)



Müller's description of his 1997 efforts to balance the social and the formal actually inspired me to develop the "Artistic Strategies Diamond of Opposition." Read through the lens of the social and formal, the ecological significance of Beuys' urban tree-planting scheme was not just erased, but replaced by an absurdist performance-art "pace off" whereby Müller pointed his balancing pole at earlier artistic strategies, while incidentally revealing his own internal struggle. He claimed to want to balance the social and the formal, but *all* art has a formal aspect. What truly distinguishes **Walter De Maria's Vertical Earth Kilometer** from Beuys' rather practical tree-planting scheme is its conceptual angle, a one-kilometre brass rod buried beneath Earth, which people must trust exists. By contrasting the social and the conceptual, two additional oppositions with the practical were generated. All that was left was to pit the political opposite the social, a view I attribute to **Hannah Arendt**, who distinctly split the social from the political in *The Human Condition* (1958). Müller had already had three AFA exhibitions, so his oeuvre seemed a natural starting point for my investigation. His eponymous oeuvre should provide a vital AFA clue, especially since he was among the first to exhibit a living sculpture at La Biennale di Venezia, when he exhibited *Green Border* (1993) in the Österreichischer Pavillon, and in *Green Acres*, I mentioned his dOCUMENTA(13) *Swiss Chard Ferry* (2012) as exemplary of artist-farmers cultivating biodiversity.

Additionally, I recall leaving AFA wondering whether de Land actually knew the difference between "bad science" and real science, a sentiment that was especially magnified when Jon Towers exhibited what appeared to me to be ordinary dehumidifiers evaporating water from gallery air. As art, it emitted both noise and a message, but as science, it really stunk! Still, it's instructive to note just how much "science talk" (nanotechnology and physics, sci-fi/simulation/fantasy/NASA,

Photo-Magnetic Receiver, environmental disaster, scientific inquiry, ecological concerns, ethnological study, scientific stance, objectivity, functioning, practical esthetic services) the above art writers supplied in order to champion AFA's unusual coterie of artists.

To my lights (and in hindsight), Grennan + Sperandio occupied the "social", Ocean Earth exemplified the "practical," Fraser and Balk inhabited the "political," Dion and Müller fulfilled the "conceptual," and Norman bounced between "practical" and "conceptual" for reasons I will try to explain. I use past tense here because this analysis concerns seven artistic strategies from twenty years ago, and no doubt each artist has since reconsidered his/her position. Even though most AFA artists created events from 3-D things, hardly any could secure a point on Krauss' diamond. **Jackie McAllister** recalls de Land explaining AFA's "no press-release" policy in terms of the very short time frame before language inevitably shapes perception. De Land aimed to keep this window open as long as possible, thus resisting the channeling of the viewer's experience through the strictures of language.²² I imagine, however, his policy having the opposite effect, whereby the chatter generated by nonplussed gallery visitors overshadowed their actual art experiences. It's no wonder his gallery remained the talk of the town for fifteen years.

In hindsight, AFA artists were unusual given their near complete focus on artworks as events and not things. As already noted, de Land was notoriously social, so it's not surprising that he selected artists with similar aspirations. (AFA exhibitions were entirely situational; always art, partly real; rarely practical, somewhat political, mostly conceptual, yet inordinately social). In fact, de Land actually considered his gallery a "situation, a nexus between the artist's studio and the market place."²³

In 1999, **Tim Griffin** and **Bennett Simpson** curated "The Production of Production," a tightly knit exhibition of just six artists/teams; including

AFA stalwart Dennis Balk and **Gareth James**, poised to join up. In the accompanying Apex Art brochure, the curators remarked:

Products are illustrative; practices are activating, programmable. As contemporary art practices become more open-ended and diversified, as medium-specificity gives way to context or information management, the products that artists make will grow more malleable and more visibly attuned to their making: real-time self-historicisation. The idea of the product is changing. Information sells itself.²⁴

Griffin and Simpson's text offers further evidence of the ensuing artistic struggle between the handful of artists, who wanted their proposed ideas to take on a life of their own, impacting the real world in "real time," and the vast majority who were happy to remain artists known only to the artworld.

Earlier in the decade, **Peter Weibel**'s exhibition "Kontext Kunst: The Art of the 90s" (1993), had identified a similar tendency, what he distinguished as the service character of art, not only "the usability of artworks in the form of archives or discourse platforms, but also as cafés and libraries," a tendency explored by four 1993 exhibitions (Graz, Hamburg, Arnhem, and Firminy) and "critically reflected upon that same year in 'Services' in Lüneburg, organised by Andrea Fraser and Helmut Draxler."²⁵ Incidentally, seven of the 35 artists who participated in Weibel's "Kontext Kunst" exhibited at AFA. Building on the artistic strategy initiated by **Barbara Steveni** and **John Latham** of the UK's Artist Placement Group (1966-1989), whereby artists work directly with a "total context of people," Weibel hovers over the "social" and "practical" borders.

It is no longer purely about critiquing the art system, but about critiquing reality and analysing and creating social processes. In the '90s, non-art contexts are being increasingly drawn into the art

discourse. Artists are becoming autonomous agents of social processes, partisans of the real. The interaction between artists and social situations, between art and non-art contexts has led to a new form, when both are folded together [as] *kontext kunst* (context art). The aim of this social construction of art is to take part in the social construction of reality.²⁶

In light of this book's focus, it's especially relevant that Weibel's descriptions of "non-art contexts being drawn into the art discourse," and artists "becoming autonomous agents" or "partisans of the real" also characterise those artists who implemented ecoventions in the seventies and eighties. Griffin and Simpson's expectations for art (activating, programmable and open-ended practices, information management) indicate just how enterprising some artistic strategies were becoming. Only a decade after art writer **Alan Jones** first heralded Peter Fend as the **Buckminster Fuller** of the New Wave, championing Fend's firm for offering "practical esthetic services, adaptable to [any] client's situation," few artists were ready to decide which side of the divide (real world vs. artworld) best fit their art practices. Did they want their art to go practical or stay conceptual? Did they want to make art with "different people" or stick to contributing *anonymous* biting commentary?

Lipton and I envisioned "Ecovention" contributing to this timely discussion so as to further tip artworks in the direction of the real world. The timing of "Ecovention" couldn't have been more perfect, but no one (except perhaps Weibel or Bourriaud) anticipated the sway of the "social," the very same energy force that has inspired ever more cookie-cutter contemporary art venues to open around the world, luring ever more collectors to international art fairs, eventually necessitating facebook (2005), twitter (2006), and then "Occupy" (2011), the deafening pinprick heard around the world that many truthfully hoped would finally burst that social bubble, and maybe it has...

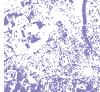
After “Ecovention: Current Art to Transform Ecologies”

The Climax. As already noted, many people, especially greenmuseum.org who sponsored the book accompanying “Ecovention” as a way to generate content for its burgeoning website, expected the book, which has been available online for free in its entirety for over fifteen years, to inspire artists the world over to realise ecoventions across the globe. Several explanations for why this didn’t take hold as expected include: 1) The minute the artworld shines a light on some underground art movement, it risks dying from over-exposure. 2) When added artworld attention forces artists to shift their priorities to “above ground” activities like exhibitions and sales, underground projects suffer. 3) After a while, underground activities lose steam and just peter out. 4) When “the cat is out of the bag,” it usually signals that it’s time for artists to try something new, thus spurring innovative underground activities that have yet to be identified. None of these claims sufficiently explains why practical action suddenly took a back seat to “socially-engaged” artistic practices.

As already noted, “Utopia Station” premiered the next year, launching the idea of art exhibitions as listening exercises. Writing a few years later, art historian **Natilee Harren** compared the “ceremonious brevity” of “Utopia Station” to that of a carnival, an aspect that might be true of all exhibitions, given that: exhibitions are ephemeral, their time spans are fleeting, and their impacts are rarely so noticeable.

The major critique of “Utopia Station” goes for much of Tiravanija’s work as well: the idealism of the gesture is undermined by the fact that it cannot continue forever. All that remains after the celebratory unveiling is a collection of garbage and unused objects. The temporality of the carnivalesque is something that both [Michael] Hardt and [Antoni] Negri and the curators of “Utopia Station” ignore. As

a revolutionary tactic, its power is its ceremonious brevity; it upsets conventions, but only temporarily. When the carnival ends, its objects become lifeless oddities, artificial significations of joyful activity, and unused tools for manufactured relations.²⁷



What really sets “Utopia Station” apart from that era’s art exhibitions is that people mostly recall “participants” designing posters and actively debating utopia’s possibilities, though not the exhibited artworks, such as **Agnes Varda**’s three-screen video installation *Patatutopia* (2003), positioned to prompt discussion. “Utopia Station” lent credence to social sculpture as an incessant situation, in this case an unrelenting discussion and debate concerning utopia, which neither necessitated nor was meant to generate an end product. That “Utopia Station” travelled for several years afterward helped to keep the conversation ongoing. For the most part, utopic plans are meant to remain imaginary, since only this state capably resists realisation. Harren, however, is right to expect more from exhibitions than “lifeless oddities, artificial significations of joyful activity, and unused tools for manufactured relations.”

In hindsight, the popularity of “Utopia Station,” which took on new forms as it travelled, galvanised a growing trend, whereby ambitious artists found greater inspiration in hosting events (throwing parties or performing lectures) than exhibiting things they wanted to make. Suddenly, an artist’s revolt (against making objects in the studio), grounded in utopic aspiration, was afoot! Like Grennan and Sperandio, the prospect of producing “transgressive” works with the public seemed more rewarding, perhaps because artists who work this way are typically paid upfront for their services, rather than expected to front production costs.

Like the artists exhibited in “The Production of Production,” most enterprising artists who sell their services tend to consider their efforts exemplary of Fend’s “esthetic practices.” Frankly,

Installation Shots: "Ecovention: Current Art to Transform Ecologies," 2002
 Contemporary Arts Center, Cincinnati, US. Photo Credit: Tony Walsh
 Left: Mierle Laderman Ukeles, AMD&Art, and Superflex.
 Centre: Reiko Goto and Nine Mile Run Greenway Project.
 Right: Alan Sonfist, Betty Beaumont, Tera Galanti, Aviva Rahmani, and Georg Dietzler.



1957-2017: From Eco-Activism to Procedural Change

EUROPEAN HISTORICAL EVENTS

Treaty of Rome
 European Economic
 Community born (BE,
 DE, FR, IT, LU, and NL)

Willy Brandt calls
 for return to blue
 skies over Ruhr
 Valley, DE

EEC Common
 Agriculture Policy

1955	'56	'57	'58	'59	'60	'61	'62
		"Natuur en Kunst" Stedelijk Museum, Amsterdam, NL			"Van Natuur tot Kunst," Stedelijk Museum, NL		Beuys initiates Elbe River action, DE Knowles performs Let's Make a Salad, ICA, London, UK

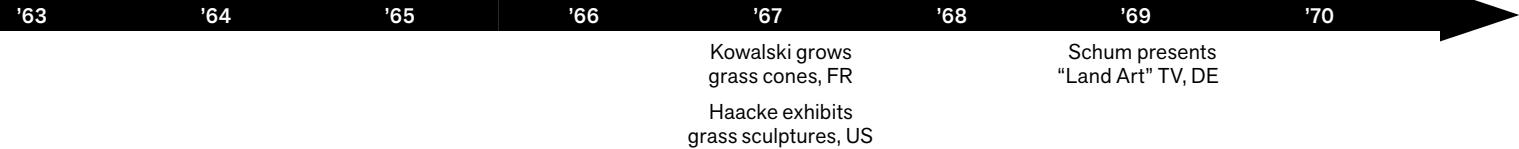
EUROPEAN ART EVENTS



Introduction

Rachel Carson's *Silent Spring* translated into German, French, Swedish, Danish, Dutch, Finnish, Italian...

Whole Earth Catalog begins distribution First Earth Day



Left to right: Tera Galanti, *Beautiful Moths (Fly)*, 2002; Georg Dietzler, *Oyster Mushroom Growing Experiment*, 2002; Patricia Johanson, Natural-infrastructure proposals, 1990-2001; George Steinmann, *Komi-A Growing Sculpture*, 1997-2002; Harrison Studio, Peninsula Europe, 2002; should be inserted between Johanson and Miller Kathryn Miller and Michael Honer, gurney from *Desert Lawn* actions, 1994.



Paris Summit (EEC environmental laws)

UN Conference on the Human Environment, SE

First Environmental Action Programme

UK, DK, and IE join EEC

1971

'72

'73

'74

'75

'76

'77

'78

Harrison Studio serves fish, UK & BE

Smithson builds Spiral Hill/Broken Circle, NL

de Vries exhibits species count, Rotterdam, NL

Haacke exhibits *Rhinewater Purification Plant*, DE

Haacke proposes *No Man's Land*, DE

Murak performs *Sculpture for the Earth*, SE

Beuys cultivates potatoes as art, Berlin, DE

"B78: from nature to art, from art to nature," La Biennale di Venezia, IT



Introduction

GR, ES, and PT join EEC

'79

'80

'81

'82

'83

'84

'85

'86

Chernobyl Disaster

"Stadt-Natur-Skulptur"
competition,
Hamburg, DE

Beuys plants 7000 Eichen, Kassel, DE ('82-'87)



Single European Act
in force (EU12)

UN issues the
Brundtland Report

1987

'88

'89

'90

'91

'92

'93

'94

UNFCCC
negotiated at
Earth Summit,
BR

European Union

FI announces
plan to build
Denes' Tree
Mountain

Geva's *Ecological
Garden*, Müller's Green
Border, and Ocean
Earth's Soil Rig at La
Biennale di Venezia

"Kontext Kunst," Graz, AT



Left to right: Joseph Beuys, *Save the Forest*, 1973 and *Pala*, 1983; Brandon Ballengée, *Malformed Amphibian Project*, 2002; Agnes Denes, *Tree Mountain*, 1992-1996/present and *Wheatfield: A Confrontation*, 1982; and Jackie Brookner, *Laughing Brook*, 2002-2009/present, Salway Park, Cincinnati, US.



COP1, Berlin, DE

'95
Harrison Studio's
Green Heart,
Gouda, NL

Denes constructs
Tree Mountain,
Ylöjärvi, FI

'96
Harrison Studio
move meadow,
Bonn, DE

'98

'99
"Nature Reality,"
Aachen, DE

Cartagena
Protocol in
Biosafety

2000

'01

Global Strategies
for Plant
Conservation

'02



Below: Buster Simpson, *HVAC Water Reclamation System*, 2002, Mercantile Center, Cincinnati, US.

Right: Laurie Lundquist, *Green Screen*, 2002, Mercantile Center, Cincinnati, US.



Ecovention Europe

2003

American Fine Art closes, US

"Utopia Station," La Biennale di Venezia, IT

'04

'05

'06

'07

'08

'09

'10

City Biodiversity Index born at COP9, DE

documenta 12 (2 living sculptures), Kassel, DE

Convention in Biological Diversity adopted

COAL Prize Art and Environment launched, Paris, FR



Left Top: Lynne Hull, *Shelter*, 2002, Todd's Pond, Swaim Park, Montgomery, US.

Left Bottom: Lynne Hull, *Dragon Fly Tail*, 2002, Powel-Crosley Lake, Cincinnati Nature Reserve, Milford, US.

Above: Susan Leibovitz Steinman, *One Straw Revolution: Demonstration Biointensive Garden*, 2002, Federal Reserve Bank Plaza, Cincinnati, US.

'11	'12	'13	'14	'15	UN International Year of Soils	UN International Year of Pulses	'16	'17	'18
dOCUMENTA (13) (7 living sculptures), DE	"Climate Change," Bahamas and MECS, La Biennale di Venezia, IT	"Museum of Arte Útil," Van Abbemuseum, NL							local ecoventions commissioned for Sittard, NL
									→

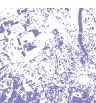
their practices couldn't be more different so long as they generate situations (the diamond's left side), rather than perform actions (the diamond's right side). Harren attributed situational enterprises to "Utopia Station" participants **Superflex** and Tiravanija, but as the above descriptions of AFA exhibitions attest, this trend had been brewing since the late eighties. With Nicolas Bourriaud's *Relational Aesthetics* providing a theoretical justification for open-ended situations, artists eager to resolve ecological problems or to take action as "cultural leaders," were left to swim harder and harder against the tide.²⁸ Exemplary of that era's artistic strategies, **Stephanie Smith**'s "Beyond Green" (2006), a Smart Museum exhibition with an ecological angle, featured primarily conceptual art, as if conceptual art's nonperceptual features make it more sustainable.

To my lights, the growing interest in conceptual art, the fascination with utopic resistance, and the preference for open-ended situations conspired to extinguish any interest in art's being practical, that is, until **Tania Bruguera**'s "Museum of Arte Útil" (2013-present), an expanding visual library detailing scores of artists' practical artworks, popped up at the Van Abbemuseum in Eindhoven, NL. Personally, I prefer the term "practical" to "useful," since all art is useful to somebody. "Degenerate Art" was especially useful to the Nazis in directing people's sentiments towards nationalistic art, and collectors find their collections useful as investment vehicles. By contrast, very little art is actually practical, and I have yet to find a case where someone flipped practical art to become impractical the way some have flipped useful art to harm those whom it was meant to benefit.

That socially-engaged art and open-ended situations garnered so much attention and have held the artworld's sway for well over a decade reflect a global demand for social interaction as art; no doubt a reaction to the sense of alienation, dread, and depravity served up by the Internet. Some have described this shift from making things to

negotiation as "European in spirit" (see also Chiang Mai Social Installation (1992-present)), but it rather signals a backlash against an exhibition system that puts the burden on artists to foot the bill. This approach thus requires exhibitors to find funding before artists produce the goods. In 2003, former Reagan Administration foreign-policy specialist Robert Kagan famously wrote, "Americans are from Mars and Europeans are from Venus," which was code for Americans are tough guys who "have the military capability to take on their enemies", while Europeans "vainly" attempt diplomacy with dictators, in order to impose "the model of EU-style negotiation and compromise on the rest of the world."²⁹ What interests me here is not Kagan's absurd mapping of Americans and Europeans onto male/female clichés (ca. 1992), but his awareness of Europeans' appreciation for negotiation and compromise, which some consider an art form all its own. What is definitely European in spirit, more accurately French (and entirely masculist), and manifestly influenced a generation of post-millennial artists is the Situationist International (SI), for whom artistic inaction found its justification in resistance, though what exactly they were resisting was never so clear.

Continued Ambivalence. In the early sixties, theoretically-inclined SI members enjoyed regular spats with Parisian **Nouveaux Réalistes** who regularly produced and exhibited their art, something SI leader **Guy Debord** actively discouraged SI members from doing. In fact, Debord famously ousted members who sought out exhibitions. As early as the late 1950s, some SI members were scheming to "anarchitect," that is, to imaginatively rethink architecture from within, rather than to build it in real. Debord recognised in **Asger Jorn**'s Albisola (IT) compound an "inverse Pompeii," the relief of a city that had never been built. Architectural theorists within the group, such as **Roberto Matta** and Jorn, valued "emotion and human interaction" above all else and were adamantly opposed to that era's right angles and Functionalist architecture.



They imagined inciting subversion to defeat the “empire of rationalism,” which they attributed to Modernist architects like **Le Corbusier**.³⁰ Not only did they aim to demystify oppositions, but they saw all exclusions as inviting subversion. Today’s utopian dreamers and socially-engaged artists owe much of their artistic strategies to the SI, who championed debating, attending conferences, publishing articles, hosting parties, and drinking with friends as “artistic activities” all their own.³¹

In *Green Acres*, I described Nils Norman’s practice as “grassroots utopia,” since he seemed to want viewers to envision working together for the common good, yet it didn’t really seem to matter whether they actually did so. In light of the “Artistic Strategies Diamond of Opposition,” I suddenly understand why so many of his really interesting proposals never actually panned out. If utopias are the kinds of events that are never realised, as utopia-critics claim, then Norman’s commitment to the “Island of Utopia” runs counter to any goal to realise some proposed idea, however beneficial doing so might be. In *Green Acres*, I rather naïvely quoted Norman without fully understanding his obvious concerns about the implications of “socially-engaged art” remaining either a conceptual ploy or actually becoming practical. And as my diamond indicates, socially-engaged art is distinctly positioned to cross over into practical and conceptual art, as Norman worried.

Can a grassroots biodynamic system that comes out of a utopian tradition [conceptual] operate citywide, become integrated in the city’s existing planning processes [practical] and possibly eventually replace them? Is this in itself a naïve and misplaced utopian idea? Does a public art project [social] help or hinder such an endeavor? Can and should “socially engaged” projects [social] effect social change [political] or are they empty, anaesthetised signifiers [conceptual]—a new form of aesthetic realism and content provision for a broader industrialised market?³²

Given that Norman’s work is no less social and utopian in character, I now believe that most of his clever proposals were designed from the get go with rejection in mind, so as to avoid ever having to test his ideas in the real world, something I would never have considered until now. I just imagined that he never was assigned the appropriate jury, who could grasp the import of his proposed ideas, much the way *House & Gardens* dismissed Patricia Johnson’s 150 ingenious garden designs in 1969. I now think Norman recognised the value of proposals and models as a way to share his ideas, even ideas that he would never really want to implement, again a notion I would not have entertained before. It’s sort of the difference between a great work of literature (like **Georges Bataille**’s *Story of the Eye*) that might be ruined (forever) were it to be made into a film. Norman’s proposals strangely beg to stay imaginary in scope. Perhaps, he felt constrained by the “be careful what you wish for” mantra.

When curator **Helen Molesworth**’s reviewed Norman’s 1997 “Social Surplus” exhibition at AFA, she sensed his overall ambivalence on this front, as she emphasised the “total fiction of the proposals and the need, nonetheless that many of us feel to live ‘alternatively,’ or at least to think about it.” What’s most telling is that after working with Stroom a decade later to realise Den Haag’s *Eetbaar Park* (since 2010), his ambivalence only intensified, leaving him without a solid conviction either way. Norman’s utopian proposals owe their desire to resist the real to SI anarchitecture.

Nothing could be further from the mindset of the two generations of artists who developed and implemented ecoventions in the seventies and eighties than the perpetuation of some open-ended discussion with little or no expectation of resolving or proving anything. Whether utopic or social, few artists bothered to challenge this tendency until **Sakarin Krue-On** quietly planted a rice field at documenta 12, the first such field ever to sprout in Deutschland, followed by his later posting the sign “Not a utopia/ Not a self-reliance/

Is the truth/ Is helping one another" during his 2008 exhibition in Thailand. This simple clarification of his rice field's purpose as an action in the real world with a practical outcome (feeding people, giving voice to people power, accomplishing something remarkable) reflects "the importance of the rice field action as a realised accomplishment, rather than some symbol of idyllic peoples."³³

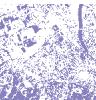
Coda. "Ecovention Europe" features many more artists than its 2002 precursor, mostly because many more European institutions have mounted exhibitions to address environmental concerns. Even though scores of artists' practices address ecological issues, Europe has yet to witness the tendency for artists to collaborate with scientists, politicians, and stakeholders to realise inventive strategies that *transform* large swathes of land, the practice that originally inspired us to coin "ecovention" as an artistic category all its own. Moreover, the past decade's focus on conceptual art, social practice, and public engagement practices may explain why so many European artists cite Mark Dion as an exemplary eco-artist. Not only is his practice primarily focused on culture, but he has rarely been so collaborative as Joseph Beuys, Georg Dietzler, **Henrik Håkansson, George Steinmann**, or Superflex; the handful of Europe-based artists originally featured in "Ecovention."

It's odd how rarely younger artists mention the Harrison Studio, even though this duo has exhibited in Europe since the early 1970s and has implemented key projects across the UK, DE, and NL. Like Dion, European museums collect their works, a factor that cannot be overlooked, since museum collections further disseminate artists' ideas, especially when museums create exhibitions to highlight their holdings or lend works to other institutions. Some museums find it difficult to collect and/or exhibit collaborative works, a factor that sometimes discourages collaboration. Then

again, collaborative groups often command larger budgets, allowing them to amass more resources to allocate to a singular project.

Rather than downplay recent artistic trends, *Ecovention Europe* presents a broad survey of artists who continue to find inventive ways to resolve our planet's current ecological crisis, even if European artists have felt less compelled to initiate projects to transform local ecologies, as earlier "Ecovention" artists did. Given the shift over the past decades toward conceptual art, some artworks discussed in these pages may seem exemplary of eco-art practices, yet their technological adaptations often make them no less inventive. Eco-art practices "consider issues of sustainability, adaptability, interdependence, renewable resources, and biodiversity, but they don't necessarily attempt to transform the local ecology."³⁴ As this book demonstrates, numerous artists have realised large-scale ecoventions across Europe. Still it's more important to highlight the range of artists' inventive resolutions, rather than to esteem one approach and exclude others.

Even the pace of American artists implementing ecoventions slowed substantially after 2002. As collaboration, interdisciplinary work, and community art increasingly became cultural norms, large-scale ecoventions, which sometimes cost artists more in terms of time and money than they earned in terms of credibility, were not the only option for artists seeking rewarding, collective work. Most significant of all, the artistic tide shifted as well, as artists retreated from studio practices that emphasised doing-as-making to the more dematerialised doing-as-being, such as social sculpture, negotiation processes, or consensus-gathering schemes. Ecoventions exemplify post-studio work, or doing-as-acting, yet they are practical actions all the same, whose outcomes matter. It sometimes seems like the "conversational drift," initiated by the Harrison Studio four decades earlier as a useful starting point, became an artform all its own.



As this book demonstrates, European artists have publicised environmental degradation and resolved ecological problems no differently than in the US. Roel Arkesteijn encouraged the addition of three new sections (food security, climate change and *oikos*) to complement *Ecovention's* original five (activism, valuing anew, biodiversity/species depletion, urban structure/environmental justice, reclamation/restoration). As with *Green*

Acres: Artists Farming Fields, Greenhouses, and Abandoned Lots, many more artworks are discussed in the context of this book's appropriate categories than are featured in the exhibition, and artists' works are discussed in multiple sections, rather than pigeonholed into singular categories. Fifteen years after my first book, I now define ecoventions as artist-initiated, practical actions with ecological intent. 

Section Notes

1. When ecovention or green acres appear in quotes, the exhibition is indicated; in italics, the book is referenced. When ecovention occurs as is, I mean an artist-initiated practical action with ecological action.
2. Robert Smithson. "Dialectic of the Site and Non-Site." Gerry Schum. "Land Art." Berlin. 1969.
3. Sue Spaid. *Green Acres: Artists Farming Fields, Green Houses and Abandoned Lots*. Cincinnati. Contemporary Arts Center. 2012. pp. 96-97.
4. Robert Smithson. "A Sedimentation of the Mind: Earth Projects." *Artforum*. September 1968.
5. Steven H. Cullinane. March 17, 2009. <http://www.m759.net/wordpress/?s=Krauss+22Klein+Group%22> Accessed 3 May 2016. This blog reprints Arthur Danto's 1993 review of *Optical Unconscious*, were he distinctly terms her squares the "square of opposition," not Klein Group graphs. Arthur Danto. *Artforum*. Summer. 1993.
6. Rosalind Krauss. *Optical Unconscious*. Cambridge. MIT Press. 1994. p. 14.
7. Francesca Gavin. April 2014. <http://www.dazeddigital.com/artsandculture/article/18968/1/the-underdog-colin-de-lan> Accessed 4 May 2016.
8. Jan Avgikos. "Dennis Balk." *Artforum*. September 2003.
9. Bennett Simpson and Tim Griffin. *The Production of Production*. Apex Art. 9 September 9–9 October 1999.
10. Ken Johnson. "Mark Dion-'Collaborations'." *New York Times*. 18 April 2003.
11. Holland Cotter. "Mark Dion." *New York Times*. 14 April 2000.
12. Pepe Karmel. "Mark Dion American Fine Arts." *New York Times*. 2 February 1996.
13. Holland Cotter. "Andrea Fraser: White People in West Africa, 1989-1991." *New York Times*. 14 November 1997.
14. Jackie McAllister and James Fuentes. "American Fine Arts- If Culture Means Anything." *Zing Magazine*. Issue 19. August 2003.
15. <http://www.christianphilippmueller.net/index/works/A-Sense-of-Friendliness> Accessed 14 May 2016.
16. <http://www.christianphilippmueller.net/index/biography> Accessed 3 May 2016.
17. Holland Cotter. "Nils Norman-Dismal Garden." *New York Times*. 15 June 2001.
18. Helen Molesworth. "Nils Norman." *Frieze*. Issue 35. July-August 1997.
19. Elvira Wilk. "Peter Fend's 'To Be Built'." *Art Agenda*. 16 December 2015.
20. http://inquest.us/wp-content/uploads/2012/05/FENDFILES_0004web.jpg Accessed 4 May 2016.
21. http://inquest.us/wp-content/uploads/2012/05/FENDFILES_0004web.jpg Accessed 4 May 2016.
22. Jackie McAllister and James Fuentes. 2003.
23. Laura de Copet and Alan Jones. "Colin de Land." *The Art Dealers, Revised and Expanded: the Powers behind the Scene Tell How the Art World Really Works*. New York. Cooper Square Press. 2002
24. <http://www.apexart.org/exhibitions/simpson.php> Accessed 5 May 2016.
25. <http://www.christianphilippmueller.net/index/works/A-Sense-of-Friendliness> Accessed 15 May 2016. Four 1993 exhibitions focused on the "service-character of art" included "Kontext Kunst," Neue Galerie im Künstlerhaus, Graz, AT; "Backstage," Hamburger Kunstverein, Hamburg, DE; "Sonsbeek." Arnhem, NL; and "Projet Unité," Unité d'Habitation, Firminy, FR presented artworks. In 1994, I curated "Interdisciplinary," which explored the burgeoning necessity of nonart skills for arts practitioners. Woodbury College. Los Angeles, US.
26. Peter Weibel. *Kontext Kunst- Kunst der 90er Jahre*. Köln. DuMon Verlag. 1994. p. 54. translated by Barnaby Drabble. <http://shiftyparadigms.wordpress.com/non-fiction/>
27. Natilee Harren. "Utopia Station: Manufacturing the Multitude." *PART Journal* of CUNY PhD Program. Number 12: (In)efficacy. <http://part-archive.finitude.org/part12/articles/harren.html> Accessed 26 March 2016.
28. I purposely employ the verb "resolve" to emphasise the fact that ecological problems demand a will (or resolve) and don't have definite solution sets like math problems. Each artist brings his/her own solutions to the table, some of which will work better than others. Even if the community accepts a particular solution to an ecological problem, it is rather resolved, not "solved."
29. Julian Coman. "Americans are from Mars, Europeans are from Venus." *The Telegraph*. 2 March 2003. <http://www.telegraph.co.uk/news/worldnews/northamerica/usa/1423535/Americans-are-from-Mars-Europeans-from-Venus.html> Accessed 6 April 2016.
30. These ideas are borrowed from Vincent Meessen's video *Wild Architect*, whose text is derived from a letter about Asger Jorn, sent to Meessen by Jorn's former companion Jacqueline de Jong.
31. Soon after *artUS* published my critical review of the SI survey at Centraal Museum, Utrecht, NL, I received a surprise email from Dennis Balk, whom I had never met, thanking me for my candid assessment of SI's concerted and concealed efforts to "negate" art.
32. <http://www.dismalgarden.com/collaboration-edible-park-permacultuur-centrum-den-haag>
33. Spaid. 2012. p. 158.
34. Sue Spaid. *Ecovention: Current Art to Transform Ecologies*. Cincinnati. Contemporary Arts Center. 2002. p. 12.



Activism to Publicise Ecological Issues / Monitoring Ecological Problems



This section explores the variety of strategies employed by artists to conserve precious resources, aware communities of particular ecological problems, or pose alternative methods. In most cases presented here, activism facilitated procedural change.

Creativity is the driving force in any process of change.
— Alfred North Whitehead

Direct Action

This section focuses on artists whose artistic efforts have challenged citizens and politicians to acknowledge ecological problems and to take action, often defying that era's conventions and practices. Focused on changing minds, ecoventions explored in this section don't take the form of large-scale Earthworks. These artists rather initiate inventive strategies to garner attention for ecological problems, with the expectation that public awareness will force some sort of resolution. Projects discussed in this section have underlying purposes, unlike similar examples of performance art, poetic rituals, or consciousness-raising strategies that are meant as ends in themselves. And like large-scale ecoventions, most were devised to engender procedural change, and often succeeded.

Activism might seem to be a rather broad category, since most artworks feature subversive elements that challenge preconceptions, introduce unfamiliar ideas, and proffer alternative explanations. Very few subversive artworks, however, are activist in spirit. The heart of activist art is some act, whereby an artist makes a concerted effort towards some particular outcome. It is not enough to "transgress," since art (by definition) is always transgressive. When "activists" take action, they unwittingly set history in motion.

As I've described elsewhere, the legacy of ecoventions as actions in the real world owes more to **Harold Rosenberg**'s 1952 characterisation of Action Painting as a "moral act" and **Hannah Arendt**'s distinguishing actions (a new course of events dependent on the presence of others) from labour (activities geared towards survival) and work (creative, yet utilitarian acts), than it does from its having evolved from socially-engaged practices, whether Dada protests/antics, Situationist International's political schemes, performative practices like Fluxus, or seventies-era land art/Earthworks.¹ That **Joseph Beuys** (1921-1986) specifically termed his ecological works "actions," though not

situations (used by SI in 1957), happenings (coined by **Allan Kaprow** in 1957), environments (employed by Kaprow in 1958 and **Carlos Cruz-Diez** in 1967), events (exercised by Fluxus in 1961), situations (adopted by **Julio Le Parc** in 1965), or situated works (espoused by **Daniel Buren** in 1968); drew a line in the sand that forever set ecologically-motivated actions on a separate course.

So far as I know, no one has analysed whether "irreversible" actions are distinctly Germanic (a lineage leading from Rosenberg and Arendt to **Gustav Metzger**, Beuys, and **Wiener Aktionismus** to **N55**, **FIELDCLUB**, and **Urbania-hoeve**), while "reversible" situations are particularly Parisian (from **Guy Debord** to **Nicolás García Uriburu**, Le Parc, Cruz-Diez, Buren, **Nicolas Bourriaud**, etc.).² As noted in Section One, Austrian **Peter Weibel**'s notion of kontext kunst wavers between both poles, just as Wiener Aktionismus does whenever artists' actions incite legal action. Situations have duration, but when they end, they are over; while actions have consequences, so their duration is comparatively endless. Having split in the late fifties, their paths continue to diverge, though each regularly takes its turn on the Artistic Strategies Diamond of Opposition as the current artworld trend.

Also mentioned in Section One are the political implications of artworks meant to prompt different thoughts, as compared to the procedural changes resulting from artworks whose outcomes are practical. Artworks that have influenced procedures rarely set out specifically to change procedures. Artists rather tried something else that proved more effective than either doing nothing or continuing the same approach. That is why ecoventions are actions, and not what Arendt termed work (creative, yet utilitarian acts). When community officials, landscape architects, civil engineers, or watershed managers adopt artists' prototypes as models to be copied elsewhere, procedures get changed, but they do so primarily because the artist

has helped them to recognise some aspect they hadn't previously noticed or considered before. In 1985, Beuys said: "Art that can not shape society and therefore can not penetrate society's fundamental questions in order to influence questions of capital is no art."³ With this quote, he not only affirmed artists' roles, but encouraged them to reshape society, just as his actions fundamentally influenced policies concerning education, ecology, economics, and especially the idea of creative capital. Book publisher Phaidon's website acknowledges Beuys' oeuvre's influence.

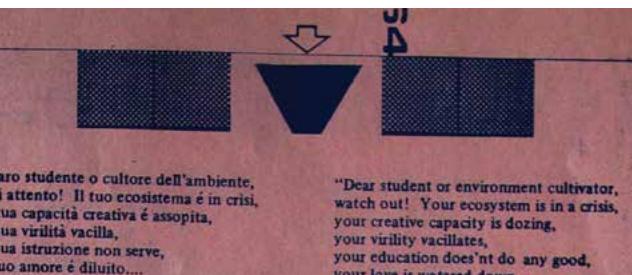
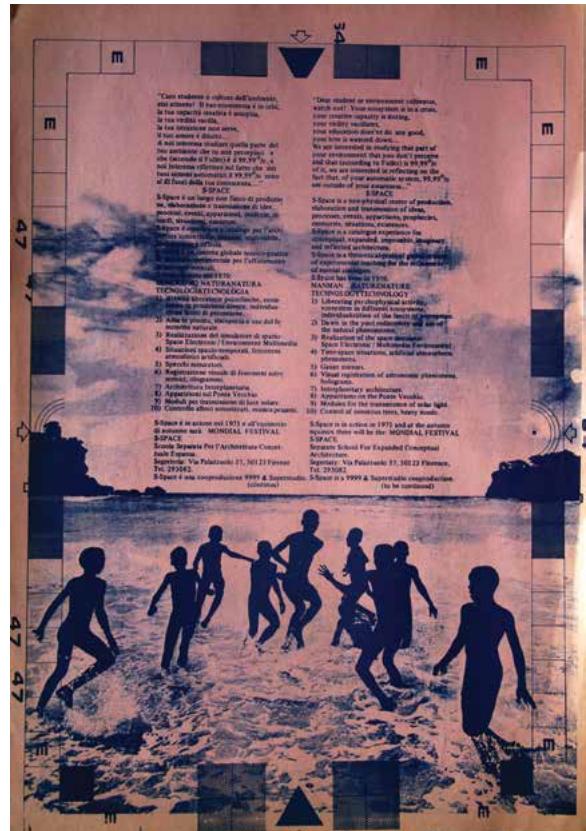
These near-baffling works might not look like the kind of thing likely to change the world for good. Still, a little under three decades since Beuys' death, [Deutschland], having survived both Nazism and a fairly toxic style of communism is now one of the most, tolerant, civilised ecologically sound, and economically successful countries in the world. Did Beuys' work help nudge the country towards this state? Surely it played a part.⁴

In 1962, Beuys organised what is considered the first ecological "action," a call to clean up die Elbe, which flows through Hamburg. Although little is known about who participated, what was actually accomplished, or how long the action lasted, this formative event has remained at the top of his résumé all these years. It's unknown whether this action was merely a public outcry or an actual river cleaning, but over the next quarter of a century he repeated this artistic strategy (real world actions with practical outcomes) in varying contexts and on differing scales, the largest being *7000 Eichen* (*7000 Oaks*) (1982-1987/present). In Section Six, I discuss a restoration project on a "citywide" scale (what he called an ecological *Gesamtkunstwerk*) that he proposed for Hamburg nearly a quarter of a century after performing his first action there. Hamburg's mayor notoriously vetoed it in 1984, two years before his death.

Shortly after the United States issued its Clean Air Act (1971) and Federal Water Pollution Control Act Amendments (1972), six European Economic Community member nations (BE, FR, DE, IT, LU, NL) met in Paris to adopt environmental regulations. It is in the context of governments beginning to address pollution, either by punishing polluters or by forcing polluters to clean up sites, that eco-activism arose in the early 1970s to engender a greater public awareness of a widespread problem. It is during this era that four Italian architecture students, working together in Firenze as **Gruppo 9999** (1968-1972), launched their "Dear Student or Environment Cultivator" campaign. Not only was Italia a founding EEC member nation, but it is routinely one of Europe's top three manufacturers, and a well known agriculture producer. No wonder these architects believed that they held a stake in their nation's volatile environmental future.

As we shall see, getting authorities to act responsibly sometimes requires artists to incite public revolts against politicians, whom corporate lobbyists regularly deceive or bribe. Most artists opt either to expose ongoing environmental hazards and potential catastrophes or to be global witnesses of nature's grandeur. The latter role, historically played by painters, dates back millennia to 7th Century Chinese ink painting and European landscape painters like **Hand G** (likely one of the van Eyck brothers) in the 15th Century, **Titian** and **Pieter Bruegel the Elder** in the 16th, **Rembrandt** and **Peter Paul Rubens** in the 17th on up to **J. M. W. Turner**, **J. C. Dahl**, **Peder Balke**, **Caspar David Friedrich**, and the Hudson River School in the 19th Century.

As has been widely discussed elsewhere, the environment is increasingly "threatened by global warming, the destruction of tropical forests, excessive fishing and a shortage of drinking water. Only 2% of the world's water is fresh water, and most of it is frozen in glaciers and icecaps."⁵



Gruppo 9999, "Dear Student" manifesto, 1971, Poster.

One year before the European Economic Community passed environmental regulations to address air and water pollution, Italian architects Gruppo 9999 launched an environmental campaign to capture the public's attention.

Continuing in the vein initiated by Beuys and Gruppo 9999 over five decades ago, contemporary artists have been active on all fronts, strategising ways to: stabilise global warming, preserve tropical and primeval forests, connect healthy soil to health and climate change, and protest the careless contamination and routine privatisation of surface and groundwater sources.

Resource Management

During the early 70s, Joseph Beuys became famous for presenting hours-long, lively "chalk board lectures," during which audience members were invited to join him on stage for a debate. In 1973, he presented his first such lecture, a 12-hour performance at Melville College in Edinburgh, UK. In 1974, he chatted with: Buckminster Fuller at the "Black and White Oil Conference" in Edinburgh, UK; **Caroline Tisdall** at the Ulster Museum in Belfast, UK; art lovers at the ICA in London, UK; and held "Incontro con Beuys" in Pescara, IT. His decision to safe-guard the chalkboard "thought-pictures" produced during his talks was likely inspired by his life mentor **Rudolf Steiner**'s having saved 1000 of his "black-paper" diagrams for posterity. During the 2013 Biennale di Venezia, 54 Steiner drawings from 1923 were exhibited alongside **Walter Pichler** and **Tino Seghal**, adjacent **Carl Jung's Red Book** (1914-1930), in **Massimiliano Gioni**'s exhibition "The Encyclopedic Palace." While it's less known what specific points Steiner's drawings originally illustrated, Beuys' notes are less obscure, since many of his performances were videotaped in black and white.

In 1974, Beuys launched his "Energy Plan for Western Man," which he presented to audiences in New York City, Chicago, and Minneapolis, inspiring Americans to generate "people power" in order to unleash:

creativity's potential, man's relationship to nature, and his own mystical world view. During these performances, Beuys would draw, erase, and

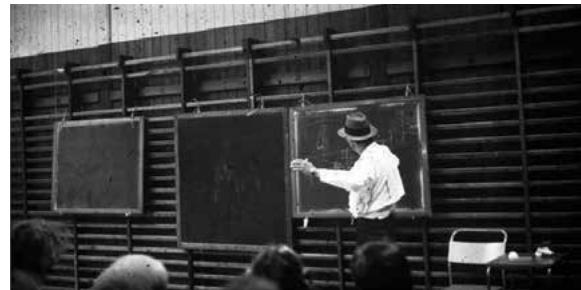
redraw throughout the event, diagramming his theory of social sculpture –art's political, evolutionary, and revolutionary power to free human kind from all oppression....His vision of radical democracy required every person's participation in determining his or her own destiny, which necessitates thinking, feeling, willing, and protecting creative freedom.⁶

In contrast to classical economics which states that "the more men can produce, the more they will purchase" (Say's Law), Beuys countered that demand ("stated actively by the consumer") should drive supply, rather than the other way around. Beuys scholar **Regina Brenner** describes Beuys' political economy as follows:

The inner needs of a human being should be met first through the "production of spiritual goods" in the form of ideas, art, and education. "We do not need all that we are meant to buy today to satisfy profit-based capitalism." When the soul's needs are satisfied, products of daily life could be very basic and simple, as can be seen in Beuys' studio and private home.⁷

To emphasise the financial role played by editions issued by him to fund his simple life and art exhibitions, several were explicitly titled *Economic Value*. Some such multiples featured basic groceries or simple products manufactured in Eastern Europe meant to express his stripping down to essentials and thus demonstrating a "counter image," though of course they were saleable goods all the same, whether targeted to collectors or benefactors. And of course, edition sizes were hardly determined by "pre-orders," so Beuys never actually proved whether "Say's Law" is false.

No doubt, ramped up edition sizes, some as large as 10,000, helped to distribute far more products in the end. Consider that as late as 2006, the Broad Art Foundation in Los Angeles



Top: Joseph Beuys, "12 Hour Lecture," Melville College, Edinburgh, UK, 20 August 1973. Photo: Courtesy Ronald Feldman Fine Arts, New York City, US.

Joseph Beuys, "Incontro Con Beuys," Pescara, IT, 3 October 1974. Photo Credit: Buby Durini dell'Archivio storico De Domizio Durini.

Between 1973 and 1974, Joseph Beuys travelled across the UK, IT and US presenting "chalkboard lectures." This helped to spread his novel ideas regarding creative capital, social sculpture, and his "energy plan for western man."

purchased 570 Beuys works from Berlin-based collector **Reinhard Schlegel** to amass the nation's largest collection, a feat that could only be supply (and budget) driven.⁸ Even though this deal didn't directly benefit Beuys or his heirs, he'd no doubt be pleased that his works have greater accessibility in an admissions-free museum than they did, concealed in a private home.

As artists go, Beuys was hardly the only one to advocate a simpler life, neither burdened by belongings, nor enslaved by some uncontrollable urge to produce more. In 1969, **Douglas Huebler** famously remarked "The world is full of objects,

more or less interesting. I do not wish to add any more." And in many ways, this was the impetus for "ultra-conceptual art," that era's artistic strategy for making artworks that were meant to be invisible or at least "dematerialised" as **Lucy Lippard** and **John Chandler** termed it; and could be created from instructions performed *in situ* by artists, using locally-available materials that could be borrowed for the occasion, rather than permanently enshrined within.⁹ And of course, this seemed extremely interesting (and practical) for about six years (1966-1972), but even dematerialised art encouraged hoarders and collectors, proving once again (contra Beuys) that supply (no matter how small) generates demand.

Over the next four decades, artworks grew progressively larger, inspiring: "eighties art," ginormous exhibition spaces like Guggenheim Bilbao, the ever-expanding Gagosian franchise, "Unlimited" (Basel Art Fair's monumental show), ever-posher Hauser & Wirths, the addition of Hong Kong outlets of international galleries, not to mention the 1000 museums that were scheduled to open in China between 2006 and 2016. Having built 100 per year, China remains on track to complete its goal.¹⁰ But, how will artists fill all of these spaces? Beuys might have described this as demand-driven, but today's demand originates with desperate exhibitors, not passionate collectors. Problematically, no one seems to have considered the ecological impact of so many spaces requiring art to be produced and shipped around the globe, let alone stored whether it's purchased or not. The only viable solution is to 3-D print everything, so the material can be melted down and reused to print 3-D things for the next exhibition.

And there really would have been no turning back had there not been an aughties artistic rebellion on par with the dematerialisation of art in the sixties, a move made possible by technological advancements in lighter media such as: websites (in lieu of studio visits), emailed imagery (instead of duping and mailing slides), "net art" (in lieu of studio art), micro-chips (to store exhibition

materials), 3D-scanning (rather than shipping), and 3-D printing (redeploy materials infinitely). As noted in Section One, some camps have witnessed a semi-artistic revolt, which was either a revolt against routine *studio practices* or some artistic movement surrounding "delegating as art-making." But, there has yet to be a revolt against artistic production once an exhibition is scheduled or a commission is agreed upon, just revolts against *making* in the studio as a matter of course. In fact, those artists exhibiting their works around the globe are entirely complicit with this supply-driven system, even if their production capacity is constrained by actual exhibition opportunities.

Consider a 2016 movie about Daniel Buren's career, during which a world map comes into existence as the narrator alphabetically lists each country where his work, which is typically light-weight, has been shown and then gives the number of exhibitions within each country (totaling over 2600), as if to illustrate his oeuvre's penetration. What is the carbon footprint to get him or his team to so many faraway places? How much is enough?

Incidentally, this very argument has been used to condemn the existence of exhibitions focused on ecological issues, which critics strangely hold to far higher standards than ordinary exhibitions. Rather than censure environmentally-concerned exhibitions, I heartily encourage them because ecologically-minded artists and their hosts are especially keen to rethink exhibition formats in order to minimise artworld waste, eventually encouraging sustainable resource management.

In light of the art explosion over the past few years, **Kinga Kiełczyńska** (b. 1972) wrote a 2009 manifesto with alternative guidelines. Artworks produced accordingly substantiate its validity as an artistic strategy with practical outcomes. Taking advantage of a visibly empty gallery, during an actual sound installation, she created *Clean Space Revolution* (2010), a series of photographs of people seemingly scrutinising

(with great admiration) the white walls of the former Temporäre Kunsthalle Berlin, DE. Because her photos both conceal the actors' actual actions, as well as **Karin Sander's** true exhibition, she describes her actions as "hacking" another artist's exhibition. Initially, the idea of a hacked exhibition sounds a bit unfriendly, but one soon realises how necessary this doubling and tripling up of resources (put to multiple purposes) is for our planet's future. Rather than adding new things, she redeploys existing resources to make her art.

Similarly, Kiełczyńska created *Neue Hélène* (2011) by basking in the aroma of **Marcel Duchamp's** *Belle Haleine* (1921) during its 72-hour sojourn at Neue Nationalgalerie in Berlin, yet another exhibition hacked to avoid expending nonrenewable resources on art. No doubt, Duchamp would have been delighted by her stealth efforts to upstage the museum's vanity at exhibiting his perfume bottle in isolation, serving more as a monument either to the extreme profit of its prior owners **Yves Saint Laurent** and **Pierre Berge**, or the sheer audacity of its new owner, who shelled out \$11.3 million for this rarest of status symbols, Duchamp's last remaining "assisted readymade."

Taking advantage of her father's having just renovated their home's car garage, a makeover that must have screamed "white cube" exhibition space, Kiełczyńska scurried about the neighbourhood gathering abandoned objects that looked like they could be art, so as to enlist them in her garage "photo shoot." She titled the net result *Kosmos* (2011), after the last novel of Polish author **Witold Gombrowicz**, whose deeply psychological books embrace paradox and depict absurd situations. No doubt, it sounds absurd to round up the neighbours' junk to make one of the following four points: art is everywhere, there's interesting junk for the taking, no one has a right to leave junk outdoors, or a nice photo is all one needs to transform an exhibition of nonart into an art exhibition.

REDUCTIONIST ART MANIFESTO

1. There is too much art on the planet and it needs to be reduced.
2. Instead of constructing unnecessary beings and polluting the physical and mental space use what is already created.
3. Feed of what you have and not what you are trying to achieve.
4. Consider the source of every material object you are confronted with as its extension.
5. There is a rule known to physicians that 'a true diagnosis of a case contains in itself the therapy'. No true diagnosis is possible, however, without investigation of the 'history' of the case. Applied to our task, this means that we must try to find a way to act against overproduction by following the reversal process of human development, both individual and historical, which will enable us to recognize in man's own being the cause responsible for the present situation.
6. The evolution implied by development is not drawn in a linear structure but a series of potential possibilities that do not necessarily need to be compelled.
7. Instead of producing, rather concern yourself with the ideas that were not materialized as the ones to be considered. The inner space will be an alternative to the material creation, not everything that exist inside of us needs to become material. We need to learn to profit from our spirits and energies.
8. Production takes a place in the negative space of what is left after reducing a particular art piece and the mental/physical vacuum we can enjoy afterwards.
9. The first works to be reduced are the ones that take up the most space: this refers to big public artworks, or architecture - related pieces that urgently need to disappear. The new public commissions should propose what works have to be reduced and the manner of recycling the leftovers.
10. Clean space revolution also applies to the virtual endless creations that require a lot of energy to be used in order to view them.
11. Our consciousness will slowly grow into a direction of diminishing instead of expanding and the awareness of what advantages can be brought by the act of removing instead of adding.
12. The next 2 points of the manifesto are cut.
- 13.
- 14.

Kinga Kiełczyńska, *Reductionist Art Manifesto*, 2009

In 2009, Kinga Kiełczyńska created a manifesto for her generation. Although it echoes earlier calls for consuming less by living imaginatively, she implores artists to go even farther than most are prepared to go. It is the first image featured in Anton Vidokle and Pelin Tan's video 2084 (2012).

Kiełczyńska's gesture thus goes farther than either **Hans Haacke's** *Monument to Beach Pollution* (1970), a photo shoot of a massive mound comprised of objects gathered from a 200m x 50m beach front in Carboneras, ES; or **Hans Schulte's** *Corona Save the Beach Hotel* (2011), a functioning hotel made from twelve tonnes of rubbish collected from Belgian, Italian, Spanish, and French beaches, constructed on the Plaza de Callao in Madrid,



ES. Kiełczyńska's selected, sorted, and arranged abandoned items grant each object its individuality, while installations by Haacke and Schulte (b. 1967) concealed each object's individuality under a pile or in walls. Unlike the vast majority of sculptures made from upcycled materials, including works by **Jan Eric Visser, Michelangelo Pistoletto, Christian Boltanski, Webster and Noble, and Sislej Xhafa**, the three aforementioned trash installations prompt spectators to look, to ask why, and to wonder what's next for all of these displaced items?

Like Kiełczyńska, most of us have received enough plastic bags, plastic cutlery, and paper napkins over the years to have been buried alive had we not brazenly tossed them out, dirty or not. To drive home just how much plastic bags still rule daily Polish life, she archived the 1000s of plastic bags that accumulated over two years. To emphasise their ubiquity, she published scores of them in a nearly life-size picture book *Pozostana Długo, Po Twoim Odejściu* (They Will

Be Here Long After You're Gone) Archive 2001-2003 (2014), which viewers perused during an architecture exhibition at the Muzeum Sztuki Nowoczesnej w Warszawie. Interestingly enough, her picture book works best exhibited in a Polish context, otherwise non-Polish spectators might be tempted to demonise Poles, rather than consider their personal role in perpetuating this mania (as plastic-sac recipients).

Kiełczyńska's 2009 manifesto and practice are especially radical, since she regularly finds ways to piggy-back off of opportunities granted others, whether it is a sound exhibition that looks empty or a short-term exhibition of Duchamp's perfume bottle. Given the artworld's current state, three points from her 14-point *Reductionist Art Manifesto* really stand out.

3. Feed off what you have and not off what you are trying to achieve.

Kinga Kiełczyńska, *Clean Space Revolution*, 2010, Temporäre Kunsthalle Berlin, DE.

Far right: Kinga Kiełczyńska, *Neue Hélène*, 2011, Neue Nationalgalerie, Berlin, DE.

To avoid further resource exploitation, Kinga Kiełczyńska has hacked other artists' exhibitions, inserting her own ideas in a manner that makes hacked versions her own.



4. Consider the source of every material object you are confronted with as its extension.
7. Instead of producing, rather concern yourself with the ideas that were not materialised as the ones to be considered.

To live an outright ecological position that makes art with resources and materials that have already been mined/harvested, manufactured, transported/shipped long ago, and used over and over, is not just an outrageous gesture, as it was with **Mike Kelley's** "pathetic" thrift-store finds proposed as fine art. Hers is an artistic strategy that requires a great deal of planning, awareness, and imagination (the capacity to envision an existing artwork's potential as something else).

Water Actions

In addition to calling for a 1962 action to clean up die Elbe, Joseph Beuys filmed the Scottish bog *Rannoch Moor* in May 1970, which premiered as part of the *Celtic (Kinloch Rannoch) Scottish Symphony* during the 1970 Edinburgh International Festival. The next year, he enacted *Eine Aktion im Moor* (Bog Action) (1971) for which he "jogged through a bog, bathed in the mud, and eventually swam through this swampy pit."¹¹ These days, shoreline communities regularly restore and construct wetlands, but fifty years ago, they were increasingly under threat from urban planners who hired engineers to drain them to create low-lying land masses, known as polders, useable for agriculture and neighbourhood development. Since the 11th Century, some 3000 polders, about half the surface area of north-west Europe's reclaimed land, were created from marshlands and fenland in Nederland. België/Belgique/Belgien and Deutschland have their share of polders too.

Linking bogs to the rainwater cycle that stores and replenishes rain *in situ*, Beuys observed, "Bogs are the liveliest elements in the European landscape, not just from the point of view of flora,



Top: Hans Haacke, *Monument to Beach Pollution*, 1970, Carboneras, ES. Courtesy Paula Cooper Gallery, New York, US. c/o Pictoright Amsterdam 2017.
Kinga Kiełczyńska, *Kosmos*, 2011, Warszawa, PL.

Ever since Hans Haacke gathered up everything he found on a Spanish beach in 1970, and exhibited it as a memorial mound, an untold number of artists have cleverly upcycled "trash" as their art. For *Kosmos* (2011), Kinga Kiełczyńska gathered objects from around the neighbourhood of her parent's home and displayed them as *œuvre d'art* in her parent's newly renovated "white cube" of a car garage.



Nicolás García Uriburu, *COLORATION OF THE GRAND CANAL-VENICE*, 1968, Photograph. Collection: Nicolás García Uriburu. © Nicolás García Uriburu, reproduced with permission.

Keen to shake a shamefully-serene Biennale di Venezia, Nicolás García Uriburu dumped fluorescein into Canal Grande in the wake of May '68. Over the next 45 years, he repeated this action in scores of cities across four continents.

fauna, birds, and animals, but as storing places of life, mystery and chemical change, preserves of ancient history. They are essential to the whole eco-system for water regulation, humidity, ground water, and climate in general.¹² For Beuys, Eurasia, the region where Europe ends geographically, begins in Ostende, BE. The Eurasian theme in Beuys' work owes its origins to Rudolf Steiner's "concept of a mythical continent known as Eurasia representing the crossroads of East and West."¹³ Moreover, Beuys grew up in Kleve, DE, an unusually wet region, sandwiched between Nederland

on the north and west and der Rhein on the east, where bogs, ponds, streams, and biodiversity are abundant, even today.

One of the more curious artist-activists was Nicolás García Uriburu (1937-2016), who moved to Paris in 1967 and collaborated with Beuys several times during the eighties. Keen to shake Venezia's serene tranquility in the wake of May '68, Uriburu dumped fluorescein, a biologically-innocuous pigment that initially looks red, into the Canal Grande at 8am on June 18, 1968, "colouring" it fluorescent and electric green. Manufactured in France by the Ugine-Ullman company, fluorescein is available in red (infernal violence), blue (skies), and green, which connects to "nature in its most human aspect."¹⁴ Nouveaux réalisme manifesto co-signer **Pierre Restany** recalls:

During the eight hours of the high tide, Venezia found itself painted a fluorescent green from top to bottom, along the 3 kilometres of the [Canal Grande]. Vaporetti and gondola passengers were travelling on green. Everybody was talking about that. Venezia was grateful to Uriburu for a sumptuous and ephemeral enhancement he gifted the city for a single day.¹⁵

In addition to "protest[ing] the polluting of these waters,"¹⁶ Uriburu also wanted his first action to draw attention to the fact that the 34th Biennale di Venezia was being held during a period of "disorder and contestation." Philosopher **Elena Oliveras** notes that every time he "colours" the water, he considers it like a baptism: "It's a rite of water purification, to make everyone think about defending rivers and oceans."¹⁷ Remarkably, Uriburu's works do not exist until the colour is "integrated into the real: red pigment [joins] water in a green artwork. The work of art has a life, a beginning, and an end. It shifts places, shapes, dimensions; it dissipates (variable duration according to meteorology, tides, and currents)."¹⁸

What admittedly began as a consciousness-raising scheme (more a situation than an action) soon became an international campaign, taking him to four continents over 45 years to colour water sources in dozens of cities. What was initially meant to denounce the antagonisms between nature and civilization evolved into a rather explicit crusade against the tendency for developed nations to exploit developing nations' resources. He wrote, I paint "my body, my sex, and the waters of the world. The more developed countries are destroying our water, our land, our air; the future reserves of Latin American nations."¹⁹ He later repeated this action in Lac de Vincennes, Paris, 1971; Fontaine du Trocadéro, Paris, 1972; 14 fountains during documenta 5, Kassel, 1972; Port of Nice, 1974; Haven van Antwerpen, 1974; Fontaine du Soleil, Nice, 1974; Trafalgar Square, London, 1974; der Rhein, Düsseldorf, 1981; Hara Museum of Contemporary Art fountains, Tokyo 1982; Fontaine du Louvre, Paris, 1989; São Paulo, 1992; Riachuelo, Buenos Aires, 1999 and 2010; and die Weser, Bremen, 2012. When exhibited, the edition of green contaminated water that Beuys and Uriburu collected together from der Rhein in Düsseldorf (stored in 24 bottles, signed jointly, and dated 1981) bear witness to this ongoing threat.

Partnering with Greenpeace in 1999, he performed *Basta de contaminar* (Stop Contaminating) on the Mantanza-Riachuelo River, the world's ninth most polluted site, which courses through Buenos Aires, AR. On International Water Day in 2010, he partnered once again with Greenpeace to perform the ironically titled action *Utopía del Bicentenario: 1810-2010*. He coloured the Riachuelo green to mark 200 years of the river's contamination, which began with the opening of a salt mine along its banks in 1810, the same year that the six-year Argentine War for Independence (against España) began. A full seventeen years after Uriburu's first action there, the Matanza-Riachuelo River Basin Authority engaged 13 river municipalities, as well as the City of Buenos Aires

in a large-scale clean up meant to insure potable drinking water and recreational facilities for 7 million local inhabitants, 10% of whom live below the poverty level. Back in 2011, Oliveras expressed her deep reservations about this site's potential: "[T]he problem has been compounded by population growth, requiring ever larger quantities of water and sewer streams. Besides the sewers, the main sources of contamination in the Matanza-Riachuelo basin are industrial residues, mainly from the food sector, which includes toxic amounts of heavy metals (lead, mercury, zinc, cadmium, copper, manganese, nickel) and hydrocarbon derivatives."²⁰ Uriburu's boundless optimism and continued focus over several decades has finally engendered procedural change.

I have been trying to sound an alarm against the contamination of rivers and oceans for forty years, and it is through my actions in different parts of the world that I have transformed my work into a kind of contestational, globalising alert. Today, and with even more reasons than forty years ago, I continue to denounce the contamination of water, and our savage destruction of our planet's reserves. A planet that in our blind omnipotence, we believe [is] inexhaustible and indestructible.²¹

No doubt, **Olafur Eliasson** (b. 1967) shares Uriburu's worries concerning surface water, yet his *Green River* series seems less overtly political, let alone practical. Eliasson's preferred colourant is Uranine, a water-soluble dye used to test ocean currents. He has enacted *Green Rivers* in Bremen, DE, 1998; Moss, NO, 1998; Northern Fjallabak Route, IS, 1998; Los Angeles, US, 1999; Stockholm, SE, 2000; and Tokyo, JP, 2001. Rather than face reproaches from citizens alarmed by Stockholm's suddenly green rivers, the City of Stockholm apparently fabricated news about a chemical spill to allay citizens' unanswerable concerns. Despite the similarities between these two artists' actions, Eliasson's



Nicolás García Uriburu (Left to right) COLORATION OF TRAFALGAR SQUARE FOUNTAINS, 1974 ; COLORATION OF PORT OF ANTWERP, 1974 ; GREEN RHEIN, D ÜSSELDORF-GERMANY, 1981.

Decades before the Fourth Plinth (Trafalgar Square's public art program) (since 1999), Nicolás García Uriburu greened its fountains. In 1981, Uriburu and Joseph Beuys signed and dated "Green Rhein" stored in 24 bottles (see back cover).



motivation seems more perceptual than ecological, as his unauthorised, anonymous actions rather raise "awareness of the spectator's engagement through disruption of normalcy."²² Similarly, people rarely discuss the environmental impact of *New York Water Falls* (2008), for which 13 million liters of water tipped down scaffolding in the East River over 100 days between 7am and 10pm. While on one hand Eliasson's four majestic waterfalls seemed spectacularly useless and energy excessive, the force of the falling water no doubt aerated gallons upon gallons of bay water, increasing the access of oxygen for fish, animals, and plants.

Hoping to disrupt normalcy yet again, Eliasson collaborated with landscape architect **Günther Vogt** on *The Mediated Motion* (2001), for which they transformed the four-story tall Kunsthaus Bregenz into a vertical nature walk by installing logs sprouting shiitake-mushrooms, a duckweed pond, soil spills sloped against walls and a dead-end veiled by fog. To drive home just

how destructive humans are to nature, Eliasson installed *Riverbed* (2014), a life-size river, inside a gallery. As visitors walked along side of it, they accidentally kicked bits of rock into the flowing stream, reminding visitors of the ramifications of their everyday actions. As **Anna Paluch** remarks, "*Riverbed* especially forces audience members to step on, damage and sometimes destroy parts of the piece, whether we intended to or not. Just [as] every action we make outside the gallery space can either directly or indirectly have a profound effect on our environment."²³ I worry however that the consequences of damaging this artwork are not nearly as high as the consequences of damaging nature. When artworks are insured against damage, a damaged artwork's owner is remunerated as if it were a sale; not so nature, since there is no equivalent exchange.

While rowing her homemade boat along Kraków's six rivers, which **Cecylia Malik** (b. 1975) hadn't even heard of until she undertook this

Nicolás García Uriburu, COLORATION MATANZA RIACHUELO WITH GREENPEACE - BUENOS AIRES, 2010.

The lefthand image shows the fire-red fluorescein before it hits the water and turns green. In 2016, the Matanza-Riachuelo River Basin approved a clean-up plan, but work has yet to begin.

Images on both pages: Photograph. Collection: Nicolás García Uriburu. ©Nicolás García Uriburu, reproduced with permission.



challenge, she photographed scores of sections along the river as evidence of concrete channelisation. During her 2013 Bunkier Sztuki exhibition "Rezerwat Miasto" (The City Reserve), spectators felt inspired to plait *Biała's Braids*, a six and one-half-kilometre chain (though potentially endless) of braided scrap fabrics, which she hung from the Town Hall Tower on Kraków's market square on Earth Day (April 20, 2013). Meant as an action on behalf of *all* rivers, Malik's public action *Warkocze Białka* (Braids of Białka River) emphasised the Białka River, which is part of a network of areas protected under Natura 2000, a European Commission project.

Biała has its source high in the Tatra Mountains, where Rybi Potok and Biała Woda meet. This is the only mountain river in Polska that is so wild. Every year, it changes its channel through violent swelling. It reflects the nature of the mountains and symbolises the Podhale region. There are lobbyists in the

region, as well as officials and experts in Małopolska, who think that it is nature that has to yield to human interest. The slogan concerning the need of "flood protection though the taming of the rivers" was used yet again and followed up; it is repeated by local leaders and MP's connected with the region. EU funds for flood protection are not without significance for the fate of the rivers, either.²⁴

Despite Natura 2000, Polish politicians were considering in 2013 whether to relax regulations, so that the riverbed could be deepened and containment walls that mitigate against flooding could be built as per local resident demands.

[Malik] has directed much-needed attention to the fraught debate between supporters of environmental protectionism and development in Polska, where decades of communist rule that focused on building heavy industry have taken a terrible toll on natural ecosystems. While some Western European



Top: Cecylia Malik, *Bialka's Braids*, 2013, Galeria Bunkier Sztuki, Kraków, PL.

Cecylia Malik, *Warkocze Bialka* (Braids of Bialka River), Rynek Główny (Market Square), Kraków, PL.

To gear up for an Earth Day protest on behalf of Polish rivers, especially the Bialka River which some Polish politicians consider over-protected, Malik inspired scores of volunteers to plait fabric scraps into a 6.4 kilometre long bluish braid. Hung from a tower during an Earth Day protest in Kraków's main square, they evoked a waterfall. Seven months later, she was invited to install her braids as public art during COP19 (2013) in Warszawa, PL.

governments are attempting to reverse the mistakes of the 1960s and '70s with projects to restore rivers encased in concrete, experts say the Polish authorities largely remain locked in old thinking.²⁵

On November 16, 2013, the *Kraków Post* reported "Record-Breaking Braid Saves Kraków River," and a day later, the *Global Post* led with "World's Longest Braid Saves Polish River." As the *Global Post* reporter wrote, "Not just art for art's sake, the project was part of her campaign to save the Bialka River in southern Polska from over-development."²⁶ Yet another of Malik's clever campaign strategies captured the imagination of scientists, fellow artists, ordinary people, and eventually the politicians whose ears the protestors bent. According to the *Global Post*, "It was media-savvy –a visually appealing, oddball campaign lapped up by reporters also tired of the same old approach."²⁷

Malik has worked tirelessly to expose the fact that huge amounts of EU funds were misused to channelise 10,000 kilometres of Polish rivers between 2011 and 2013. Channelised rivers really only ever help those in the concrete business. Fans of channelisation claim that channels control flooding and reduce natural erosion. Problem is, channelisation actually increases the river's velocity, disabling the river's capacity to handle rainfall, agricultural runoff, and bank erosion, and it destroys animal habitat. According to **Roman Żurek**, a hydrobiologist who works for Kraków's Institute of Protection, only 2% of Polska's 4000 water bodies are deemed healthy. He laments,

In most of the parts of Polska, they are cutting down trees and building walls on the banks of the rivers. It's very unnatural. The devastation is huge.²⁸

Malik worries that most ecological protests are ineffective because they don't grab the media's ear and eye, which her protests are meant to do. Regarding the Bialka River protest, she noted



that, "There had been a lot of things –letters and petitions –but it was boring, completely boring. So my friends and I prepared something crazy, funny, beautiful and nice. We wanted to make the fight famous."²⁹ Her mantra has become "defend beauty with beauty."

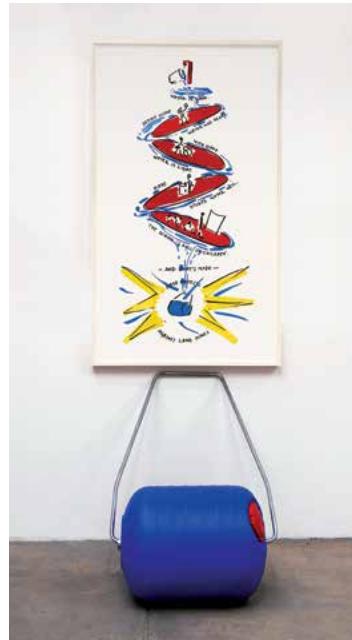
Plant Actions

Originally titled *Overcome Party Dictatorship Now, December 1971* (not to be confused with plastic sacs distributed during documenta 5 (1972) in an edition of 10,000 (500 included felt rectangles)), the image documenting Joseph Beuys' action was reprinted in 1973 and re-titled *Retten den Wald* (Save the Forest) to commemorate the 1971 action.³⁰ Art critic **Alan Antliff**, the author of a Phaidon Focus book that highlights controversies arising from Beuys' "actions" of the sixties and seventies, explains the significance of Beuys' first recorded "direct action:"



That December, Beuys and fifty students demonstrated how direct action could work by sweeping paths through a small public forest in the city of Düsseldorf that was threatened by the planned expansion of a tennis club. They marked the trees that were to be cut down, exposing just how devastating the destruction would be. Beuys issued a call to "Overcome the dictatorship of the parties, save the forest!" and distributed a poster announcing "Let the rich beware, we will not yield. Universal well-being is advancing."³¹

A decade later, Beuys penned *An Appeal for an Alternative* (1981), a manifesto of sorts addressed to all people of the European cultural sphere and civilisation, which was reprinted in the documenta 7 catalogue. Naming the ecological crisis as one of four symptoms of the crisis in late-capitalism, he wrote:



Far left: Cecylia Malik, *6 Rzek (6 Rivers)*, 2011–2012, Kraków, PL. Over a two-year period, Malik rowed across six Kraków rivers in her handmade canoe, documenting each river's condition along the way.

Marjetica Potrč, *A Hippo Roller for Our Rural Times*, 2005, Utilitarian object and printed drawing. Photo by Eli Ping Weinberg. Courtesy the artist and Galerie Nordenhake, Berlin/Stockholm.

To bring attention to the difficulties faced by people the world around when accessing potable water, Marjetica Potrč exhibits "Power Tools," one of which is the *Hippo Water Roller*, a drinking water collection and transportation device invented in South Africa to aid remote African villagers. A cross between a shopping cart and a 90-liter water-barrel, this simple object increases the amount of water an individual can transport at one time, while decreasing the amount of energy and time required to do so.



Top: Joseph Beuys, *Retten den Wald* (Save the Forest), 1973, Poster. Courtesy Ronald Feldman Fine Arts, New York City, US.

Joseph Beuys, *How the Dictatorship of the Parties Can be Overcome*, 1971, Edition 10,000.

Courtesy Ronald Feldman Fine Arts, New York City, US.

Our relationship to nature is characterised by its having become thoroughly disturbed. There is the threat of total destruction of our fundamental natural basis. We are doing exactly what it takes to destroy the basis by putting into action an economic system which consists in unscrupulous exploitation of this natural basis... Between the mine and the garbage dump extends a one-way street of the modern industrial civilisation to whose expansive growth more and more lifelines and life cycles of the ecological systems are sacrificed.³²

A founding member of Uruguay's Grupo Bosque (Forest Group), Nicolás García Uriburu participated in a 1974 reforestation campaign in Maldonado, UR, and led three decades of tree-planting expeditions in Argentina and Europe. In 1978, Pierre Restany co-authored the "Río Negro Manifesto: On Integral Naturalism," which championed reforestation and protested the destruction of the Amazon Rain Forest. He later identified Uriburu's work as exemplary of his manifesto's tenets.

Following his defense of banana trees growing in a large city plaza in Buenos Aires in 1980, Uriburu initiated numerous tree plantings across the globe, such as planting pine trees in East Uruguay in 1987 or the planting of thousands of local trees along Buenos Aires streets, especially along Avenida 9 de Julio between 1978 and 2000.

In light of Uriburu's concern for clean water and trees, he assisted Beuys during the planting of trees in Kassel to create *7000 Eichen* (7000 Oaks) during documenta 7 in 1982. While installing his 1982 Hara Museum of Contemporary Art exhibition, he collected hundreds of wooden chopsticks tossed in the trash by one restaurant in just three hours. He bundled them like a tree stump and attached the message "By Eating Each Day, You Destroy a Forest" (written in Japanese) to remind the Japanese that they annually consume 14.3B pairs of chopstick, which is the same as "240,000 cubic metres of wood. The direness of the situation

from the Latin American point of view resides in the fact that this wood is extracted from the Amazon rain forest."³³ Elena Oliveras offers this overview:

In counterpoint to such destruction, Uriburu decides to act, undertaking the planting of trees. In 1970, he planted one hectare of trees in Uruguay, and four years later he planted a symbolic *ombú* (a species [native] to South America) at the Museum de Arte Latinoamericano in Maldonado, Uruguay. Starting in 1978, with a group of collaborators, he planted aboriginal trees in 9 de Julio Avenue in Buenos Aires. His dream of creating a green river of trees to join the north and the south became a reality: today a fresh green corridor enhances this well-trafficked street.³⁴

Kiełczyńska's performance *Hunting Gathering* (2009) initially recalls Beuys' 1971 forest action, but in this case she, **Melanie Bonajo** (b. 1978), and **Emmeline de Mooij** (b. 1978) decamped to the beloved Puszcza Białowieska to clean it. Dressed as futuristic forest nymphs, sporting metallic emergency capes, they sprayed, vacuumed, dusted, and scrubbed the forest, using every forest-scented household cleaner they could find. Absurdist in spirit, their gestures are infinitely less ridiculous than those who believe using such products connects their homes with nature. While such scents likely trigger memories of experiences in nature, the ecological damage incurred by the manufacture and regular use of household goods from simple shampoos to aerosol sprays, tile cleaners, and detergents is insurmountable, not to mention the expired pharmaceuticals that are routinely dumped down household drains.

To prepare for Pori Art Museum's travelling exhibition "Strangers in the Arctic" (1996–1998), **George Steinmann** (b. 1950) embarked on a research mission to the Russian Arctic (Lapland), organised by FRAME: Finnish Fund for Art Exchange. There, he witnessed untold environmental devastation, wrought by a century of

mindless mining, smelting, and nuclear-industry practices. His experience there not only inspired *From to Beyond* (1995–1997), an installation that explores the impact of Soviet-era industry on the indigenous Sámi people's habitat, everyday practices, and rituals, but a second more expansive artwork, *Komi- A Growing Sculpture* (1997–2006). In 1995, the very same year Steinmann visited the Russian Arctic, the taiga zone of the Ural Mountains in Russia's extreme northeast Komi Republic, where one finds Europe's largest pristine forests (never before logged), which is a UNESCO World Heritage Site. Like many forests, it is at risk of environmental degradation, given its surplus of exploitable natural resources, which include timber, oil, and mineral deposits. In fact, Russia's second largest energy reserves are located in Komi, which is also Russia's prime source for metals like bauxite, titanium, chromium, manganese, and barium. This region's dominant industries include coal mining, petroleum and natural gas, timber, pulp, and paper.³⁵

These circumstances prompted Steinmann to propose a Centre for Sustainable Forestry as a public art project. To this end, he spent months collecting environmental data in the region of Pechorollych and Priluzje, and meeting with local people and scientists, representatives of the Swiss Agency for Development and Cooperation (SDC), and forestry specialists. Working alongside these various partners, he developed strategies to protect Komi's natural resources against further exploitation and identified sustainable methods for natural resource development, resulting in a work of art.

Originally titled *Voj-Vozh* (Komi for "In the north/in the forest"), Steinmann used the international art world's infrastructure both to bring attention to "the issues of pristine forest conservation" and to strategise methods for informing forest inhabitants about the importance of boreal forest conservation, sustainable forest management, biodiversity, and Komi healers' knowledge of medicinal plants. A transdisciplinary network, initial



Top: George Steinmann, *Komi-A Growing Sculpture*, 1997-2006, "Call and Response," 2014, Kunstmuseum Thun, Thun, CH.
Photos registered with ProLitteris Switzerland.

Komi women, singers, and healers, 2001, Objachevo, RU.
Photo and Video Still Credit: George Steinmann.

Responsible for developing *Komi-A Growing Sculpture* in its entirety, George Steinmann initiated one of the earliest "sustainability through art" models. A transdisciplinary network, specific advisers involved people of the Priluzje region, including foresters, guides, and healers; the Swiss Agency for Development and Cooperation (SDC), Bern, CH and Moscow, RU; and the Silver Taiga Foundation, Syktyvkar, RU.

advisers involved people of the Priluzje region, including foresters, guides, and healers; Professor Yrjö Haila, Department of Environmental Policy, University of Tampere, FI; the State Forest Agency for the Komi Republic; and aforementioned SDC, Bern, CH. During this project's first five years, they amassed interesting scientific data concerning lichens. Steinmann worked with a pharmacist to prepare essences of plants, berries, and herbs for future use as phytotherapeutics.

One of the earliest models of "sustainability through art," Steinmann was responsible for developing *Komi-A Growing Sculpture* in its entirety. As a result of Steinmann's ten-year involvement in this region, the Centre for Sustainable Forestry was initiated in partnership with numerous collaborators such as the SDC, Bern, CH and Moscow, RU; the Silver Taiga Foundation, Syktyvkar, RU; Heikkinen-Komonen Architects, Helsinki, FI; and local representatives, including elderly Komi women. Together, they inventoried the existing pristine forests (24% of inventoried area) remaining amidst logged areas, mapped berry and mushroom locations, and recorded Komi knowledge of healing herbs.

To create a "model forest" solution, they used traffic-light colours on a map to distinguish areas that are "off-limit" (red) from those that are best to log (green).³⁶ Not only does this model forest employ restrictive logging rules, but negotiations with regional authorities led them to adopt these higher standards. As a result of logging, 30% of the soil had been damaged, reducing forest production by 35%. To protect the soil from further damage, they produced a GIS map to guide loggers of areas to be logged only in winter or avoided after rain.³⁷

Because most of the region's loggers began their trade long before profitability was of concern, the loggers themselves needed to be trained on how to "evaluate logging profitability depending on regional market prices for timber and logging costs."³⁸ Surprisingly, more than 90% of the forest proves unprofitable to log.

Most important, as a result of the “Priluzje” Model Forest project, 800,000 hectares received the FSC forest management certification in 2003; a further 2,000,000 ha were certified by 2006; and it was expected that four times as much could be certified by 2009.³⁹ Innovations in this region have been disseminated to neighbouring Arkhangelsk and Kirov regions. Although Steinmann officially transferred this project to the Russian government in 2007, he held book launches in both Moscow and the Komi capital Syktyvkar, where most Komi live. The accompanying book *Komi- A Growing Sculpture* offers a tri-lingual account of his decade-plus involvement in this project. Despite the 300km journey from the Priluzje region, two buses transported villagers to the book launch in Syktyvkar, where they participated by singing.

Noticing how often people throw out their houseplants, **431art** (since 1996, **Torsten Grosch** and **Haike Rausch**) started saving tossed-out plants in 2006. Initially, they were a little dumb-founded and quite horrified by our disposable society that feels little qualms about tossing out “life” with their trash. To facilitate the anonymous transfer of plants, they sometimes install *Pflanzenklappe* (Plant Hatch) in public spaces, but these hatches tend to fill up quickly, sometimes attracting as many as 200 plants in 10 days. They've since set up permanent plant adoption offices in Frankfurt and Gießen, while other cities have hosted temporary adoption offices.

431art's initial act of collecting, nursing, and reviving originally-discarded plants evolved into the website www.botanoadopt.org (since 2009) that has helped redistribute hundreds of unwanted plants over the years to new owners inhabiting nine European nations. New owners not only sign contracts, but they agree to upload photos of the plant to the website twice a year. To hasten the interest in plant adoptions, 431art sometimes prepare fictional biographies for otherwise nameless plants and photograph owners over the years

to give “proof of the plant's continued existence.”⁴⁰ Each plant thus derives its identity from its photo log and ongoing biography.

Since adopting parents must collect the plants themselves, all sorts of people have come into contact as a result of *botanoadopt*, “regardless of age, education, occupation, ethnic origin, or religion.”⁴¹

The biographies deal with facts and fiction in a way that shifts perspective. The aim of the project is –simply described- using artistic activities and intervention in everyday life to question and redefine one's definition of nature, as well as to initiate a self-continuing communicative process among the participants and their environment.⁴²

Some people connect 431art's *botanoadopt* to Frankfurt's “GrünGürtel” (green-girdle), an 80-square-kilometre “green belt” surrounding the city that has gradually taken shape since the early 1980s, laying the foundation for Frankfurt's being ranked first on the 2015 Green City Index and sixth on the 2016 Sustainable City Index.

To protest the Frankfurt Airport's 2009 decision to decimate a forest in order to add a new runway, 431art dug up 33 young beech trees and replanted them in an artist's colony as part of their ongoing *botanoadopt* project. Two years later, Deutschland's remaining Ancient Beech Forests were declared a UNESCO World Heritage Site. In 2014, they invited the public to land paper airplanes and model aircrafts at Schöppingen International Airport's ten-metre long, one-metre wide landing strip in the *Bannwald-Migration* (Avalanche Forest Migration)(since 2009), their name for their transplanted beech grove sited on land provided by Josef Spiegel in Schöppingen, DE. According to Christian Kaufmann, the “two artists are interested not only in nature and our dealings with the resources around us, but with the tension between nature and civilisation and with the issues stemming from today's communication-driven society.”⁴³

431art describes *botanoadopt* as a “plants rights” project, since they view plants as “beings with their own perception” and they treat responsibility as a “new form of currency.”⁴⁴ To this end, they offer courses in “empathy training with plants.” Moreover, their website provides information and helpful links concerning plants; they sometimes invite teens (since 2013) to work with them, and they have presented numerous talks at interdisciplinary conferences (ISEA Istanbul, DRHA London, RUHR 2010, and SPVU Zagreb). 431art points out that “*botanoadopt* draws on alternative economic models of exchange and donation; questions raised regarding ecological actions are investigated via models surpassing the boundaries of art.”⁴⁵

On 25 September 2009, Cecylia Malik gained inspiration from one of her favourite novels, *Italo Calvino's The Baron in the Trees* (1957), which captures the exploits of a twelve-year old baron who inhabits various trees in rebellion against his father. Starting to climb a different tree each day, Malik posted her antics on Facebook daily. She soon developed quite a following of people keen to view her every next climb, compelling her to keep this up for 364 more days, resulting in a 4'22" online slide show and an artist's book *365 Drzew* (365 Trees) (2011) published by Fundacja Nowej Kultury Bęc Zmiana. What's most interesting is that the book's essayists each interpret Malik's action differently (emancipation, ecology, taking back public space), though she herself calls it “a private rebellion, a small protest” in the book's introduction. **Sylwia Chutnik** writes, “Crowds of girls will want to climb up higher, higher than possible, higher than life. Up to the clouds, maybe even stars. And they will look down on their previous home with [its] suddenly small LCD screen”.⁴⁶ *365 Drzew* doubles as memoir:

It was a kind of diary that kept records of the passing time and season changes. The entire action was possible thanks to Facebook, as for twelve months

I was able to put one photo of me in a tree on my Facebook profile, each day. That is why the action had more and more fans and was commented [upon] live. More and more people got involved in it, even to such an extent that my fans sent me pictures of themselves in trees. They also recommended those trees to me which they thought I too should climb, and they made my photographs available to their friends. And it was the Facebook society that came up with the idea of publishing a book.... While climbing trees, I experience reality with all my senses, but the image I create often becomes unreal. What I also find important is my perception of wild life, which I intensely experience, too.⁴⁷

Funny thing is, Malik was initially motivated to climb a tree because she was searching for a way to escape, to create an autonomous zone all her own; much like **Virginia Woolf's** room of her own. Many of the photos were shot by her children, who sometimes accompanied their mother on her daily outings. Although she didn't begin as an environmental activist, she ended up becoming one as more and more ecologically-minded people contacted her via Facebook, granting her tree-climbing an ecological angle. Having spent time in the Polish mountains as a child, she had always appreciated nature and felt a distinct commitment to protect Polish national assets, but she hadn't considered using her art to nature's end, which she routinely does these days.

Animal Actions

In 1974, Joseph Beuys spent five days (May 21 to 25) cohabitating with a coyote in New York's Rene Block Gallery, a performance work entitled *Coyote: I Like America and America Likes Me*. Historically maligned by cattlemen who viewed this intelligent species as a threat to livestock, the coyote symbolises both its own endangerment (as a maligned species) and the native American Indians who considered coyotes sacred.⁴⁸

Left: 32 Drzewo Klon Photo: Królowej Jadwigi
Right: 79 Drzewo, Wiaz, 12/12/2009, Chiem Pierwszy śnieg!



Left: 211 Drzewo, Rajska Jabłon, 23.04.2010, pod Wawelem a
Right: 251 Drzewo, Modrzew, 02.06.2010, Zablocie a



Cecylia Malik, *365 Drzew* (365 Trees). Clockwise: Klon (Maple) 26 October 2009; Wiaz (Elm) 12 December 2009; Modrzew (Larch) 2 June 2010; and Rajska Jabłon (Paradise Apple) 23 April 2010.

Beginning on 25 September 2009, Cecylia Malik updated her Facebook profile daily, showing her inhabiting a new tree each day. When her project ended a year later, her life was forever changed, as her antics had attracted Polish ecologists eager to recruit her to help them fight their causes.



Cecylia Malik and Justyna Koeke, *Alcon Blue Collective*, 2011, Zakrzowek reservoir, PL.

Below: Cecylia Malik, *Oratorium on Saws and Happening with Forest Mandalas* (Puszcza Białowieska protest), 2016, Kraków, PL.

Photo Credit: Tomasz Wiech.

Cecylia Malik regularly lends her creative impulse to protest groups that organise to protect Polska's natural resources. In 2011, she and her sister Justyna Koeke organised Alcon Blue Collective to protect a reservoir that provides habitat for migrating butterflies. To protest the destruction of the Puszcza Białowieska, Malik organised *Oratorium on Saws* with eye-catching forest mandalas.



Capitalising on her Facebook notoriety, Cecylia Malik initiated *The Alcon Blue Collective* in 2011 to protest a developer who had purchased the Zakrzowek reservoir outside Kraków to build a housing development directly on the migration path of Europe's Blue Butterfly. Working with her sister Justyna Koeke, they held workshops for people to make wearable blue wings, which they encouraged people to wear daily, not just during the protest. When the actual day arrived, 500 people showed up wearing blue wings, causing quite a media frenzy, and leading the developer to conclude it was no longer financially viable. More recently, the reservoir was sold to the City of Kraków as a recreation area, but this area remains under constant threat since politicians prefer economic development to animal habitat.

In response to the new Polish government's environment minister **Jan Szyszko**'s colourful descriptions of a "beetle infestation" in Puszcza Białowieska, as well as his misguided claims that large-scale logging would combat the infestation, Malik powered up her creativity to enlist her Facebook cohorts to paint eye-catching protest discs. Puszcza Białowieska is home to 20,000 animal species, including 250 types of birds and 62 mammal species, plus Europe's largest, the bison. Europe's tallest trees, firs towering 50m high, and oaks and ashes of 40m, also flourish in this forest that has remained much the same for 8,000 years.⁴⁹ **Bogdan Jaroszericz**, a Uniwersytet Warszawski biologist, and **Jerzy Gutowski** from the Forest Research Institute reported, "The forest is not dying because of the beetles, as some believe. The recent outbreak, just as the previous ones [eight since the end of the 19th Century], corrects the unnaturally high share of spruce in the treestands."⁵⁰ Even if a million trees, 10% of the forest, are affected, dead spruces will allow more sunlight and can serve as nurse logs, providing insects and future plants habitat and nourishment.

Joseph Beuys, F.I.U. *Difesa della Natura J. Beuys (Protect Nature J. Beuys)*, 1984, Bolognano, IT. Photo Credit: Buby Durini dell'Archivio storico De Domizio Durini.

Christian Philipp Müller, *On der Sehnsucht im Einklang mit der Natur zu leben* (On the Longing to Live in Harmony with Nature), 2001, Magrè sulla Strada del Vino, IT.

Both Joseph Beuys and Christian Philipp Müller found artistic inspiration in Italian vineyards. In addition to displaying a banner across a vineyard, Beuys created this boxed edition to help fund the Free International University in Italia.



On 12 March 2016, protesters held up their alluring, colourful discs. Only this time, they were less successful. Two weeks later, the Polish government decided to allow loggers to harvest four-and half times more cubic metres of trees than originally planned. Not only did Szyszko ignore the voices of "citizens and scientists, the European Commission, Unesco and conservation organisations," but Greenpeace feels certain that the EU will "launch punitive procedures against Polska for violating its Natura 2000 programme." No doubt, Malik will continue the fight.

Soil Actions

Long before 2015 UN International Year of Soils, artists actively produced artworks to convey the significance of healthy soils and soil's relationship to cultivating nutritious food. Since Lascaux

and Altamira, no shortage of artists have realised soil's potential as an artistic media. The small sample of European examples introduced here exhibit a range of techniques (drawing, sculpture, and research) to relay soil's significance to their publics. While visiting a winery in Pescara, the capital of Abruzzo, Joseph Beuys photographed people holding up *Manifesto Bolognano*, a banner exclaiming "Difesa della Natura J. Beuys" (Protect Nature J. Beuys)(1983) in red, yet another protest in the vein of the "revolution shall be televised." Absent an actual protest, this protest's effectiveness requires its being regularly published and exhibited, in order to reach its audience.

Twenty years after Beuys staged his vineyard protest, **Christian Philipp Müller** (b. 1957) presented three glass cubes filled with three different local soils to remind visitors of terroir,

especially the roles played by this region's varying alpine soils: including: 1) limestone-rich, alluvial hills, 2) drier, cool climes at higher elevations, and 3) warmer climes at lower elevations in cultivating grapes used at Alois Lageder, a state-of-the-art biodynamic winery located in Magrè sulla Strada del Vino, Alto Adige (Southern Tyrol), northern Italia's autonomous province. A testament to the diversity of soil types found in the Adige, Müller's sculpture *On der Sehnsucht im Einklang mit der Natur zu leben* (On the Longing to Live in Harmony with Nature) (2001) supports vineyard owner **Alois Lageder**'s personal mantra, "Live together with nature, not outside of it."

North Light Arts' first John Muir Artist in Residence, **Natalie Taylor** (b. 1971) held a two-week residency at Dunbar Town House Museum in East Lothian to explore "Fertile Ground: Soil." Dunbar happens to be Scotland's first "Zero Waste Town," a Scottish initiative to reduce waste by encouraging reuse. To research East Lothian soil, Taylor collected soil samples from about ten local farms and community gardens.

What was very noticeable was that the soils were very different in colour according to their provenance. The best, richest and darkest in colour [came from] Phantassie Farm, while the lightest (least sticky) reddest soil [came] from Watson's seeds (least imbued with beneficial organic matter).⁵¹

When she discovered how prohibitively expensive it is to scientifically test for trace minerals and elements, she opted to conduct a visual study instead. This inspired her to paint a soil-food web to "lay bare the interrelationships between ourselves, and soil, and all of the thousands of micro-organisms involved in creating that beautiful substance for our use."⁵²

During her residency, Taylor led a well-attended soil-making workshop using an unusual composting technique, the Japanese Bokashi

(fermenting) method, a speedy composting process whose bins work indoors and out, and produced the exhibition "Alchemy of Soil" (2015). Prior to the residency, she remarked:

I have become more and more convinced that food production is of enormous importance, and that localising it, and empowering communities to become self-sustaining is the way forward. Soil is fundamental for the production of the vast majority of our food, therefore if the soil is depleted our nutrition sources are compromised. Art can be a way of drawing people in and introducing new ideas, so in my residency I propose to highlight the importance of soil to our collective health.⁵³

In November 2015, British Green MEP **Molly Scott Cato** commissioned **Touchstone collaborations** to contribute their film *Soil Saturdays* as an artistic intervention during the public conference "Why Soil matters?; A European perspective," held at the European Parliament, in Bruxelles/Brussel, BE. Organised by Greens and the European Free Alliance, this conference served as a last-ditch effort to publicise healthy soils' indisputable role in fighting climate change in the run-up to COP21, opening twelve days later in Paris. On site to promote their film, Touchstone collaborator **Miche Fabre Lewin** installed a *Soil Shrine* similar to one that had been at the heart of *Soil Saturdays*, held only a few months earlier at CREATE Center in Bristol, UK (discussed in greater detail in Section Nine). Temporarily installed in parliamentary offices, Touchstone collaborations' *Soil Shrine* embarked upon a new role as "soil publicist." Lewin's lighting of a candle sparked a controversy because she lit a match without a "fire permit," thus attracting even more attention to the cause, as well as that of women across the world, charged with tending fire. The soil shrine featured local soil samples in various cylindrical containers supporting numerous fragrant and flowering plants, a rock indicating

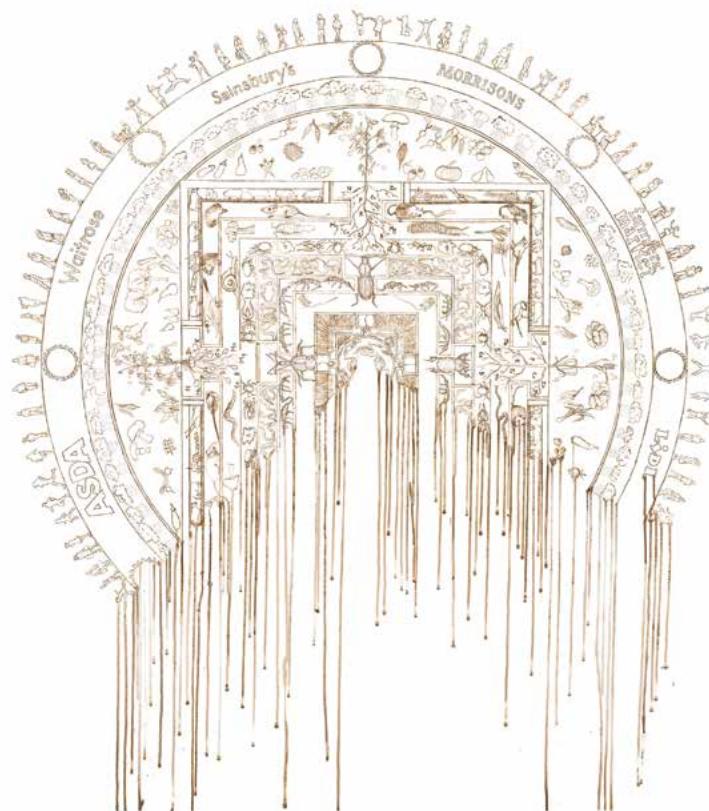
soil's mineral components, a small bowl of water, a ritual bell, a photograph of numerous hands sharing in soil's bounty, and a shadow box demonstrating how soil works its magic, as water traverses varying layers from humus to soil and clay, and is eventually filtered by rocks as it seeps into the groundwater.

Public Park Actions

Since tree transpiration is responsible for 70-90% amount of the rainwater occurring in cities, it's no wonder that so many artists have championed urban-tree planting schemes, as on par with protecting tropical and old-growth (primeval or virgin) forests. Critical of how slowly the city administration was reacting to an urgent problem, Joseph Beuys characterised his 1971 forest action with 50 people as "Urban Afforestation" meant to counter the ineffectual lethargy of "Urban Administration." People who deny the importance of city trees for absorbing pollutants, cooling cities in summer, warming cities in winter, producing fresh oxygen, sequestering carbon, reducing stormwater runoff, storing rainwater, and recharging the rain cycle are prone to contest the value of urban forests, which deniers claim thwart economic opportunities. By far, Beuys' most famous action is *7000 Eichen* (7000 Oaks)(1982-1987/present), his plan to reforest Kassel, DE, initiated during documenta 7.

The oaks symbolise life's fragility and the mutually beneficial relationship between nature and humans. Anyone could participate by sponsoring a tree for \$210. In return, each sponsor received a signed certificate stating "small oak trees grow and life continues." Students from the Free International University helped plant the trees.⁵⁵

Each tree was planted adjacent a four-foot tall, locally-quarried basalt stele, which nourishes the soil as it decays. Originally meant to symbolise continuity, these days the steles signal which trees belong to *7000 Eichen*. Fifteen



Natalie Taylor, *Alchemy of Soil*, 2015, Ground soil and gum arabic on canvas.

Natalie Taylor substituted a soil food web (depicts consumers' relationship to supermarkets and farmers' markets) for the Buddhist imagery of the Tibetan Kalachakra mandala, which she witnessed monks painting fifteen years earlier in San Francisco. After grinding her collected soil samples into paint, she added gum arabic to make the texture long-lasting. She wanted her drawing to capture soil's sacredness, as well as its interconnectedness, to reiterate a point made over one-hundred years ago by Scottish-American naturalist John Muir. To visualise the worldwide amount of degraded soils, she left 30% of the paper empty, where the pigment dripped down, as if draining away.⁵⁴



Joseph Beuys, *Piantagione Paradiso Bolognano*, 1984, Bolognano, IT. Photo Credit: Buby Durini dell'Archivio storico De Domizio Durini.

No doubt, Beuys' most famous action with lasting consequences is *7000 Eichen* (*7000 Oaks*) (1982-1987/present). During documenta 7, he and volunteers planted tree-stele pairs, which his son completed during the opening of documenta 8. Less known is an initiative, launched that same year to plant 7000 disappearing shrubs and trees on 17 hectares in Bolognano, IT (near Pescara in Abruzzo). On his 63rd birthday, Beuys planted this Italian Oak adjacent his studio. To memorialise Beuys' having planted an Italian Oak 15 years earlier, Harald Szeeman planted a second Italian Oak in 1999 during the inauguration of Joseph Beuys Piazza in Bolognano, IT.

Despite Beuys' death in 1986, tree-stele pairs have been planted across the globe. In 1996 Dia added 32 pairs to 5 planted in 1988 (a Gingko, Sycamore, Linden, Bradford Pear, and Oak) at 548 W. 22nd Street in New York City, US. In 1997, a Cottonwood-stele duo was added to the Minnesota Sculpture Garden in Minneapolis, US. In 2001, 500 volunteers planted 350 trees in four Baltimore parks, one of which is UMBC's Joseph Beuys Sculpture Park.

different tree species were planted, of which sixty percent were actually oak trees. When Beuys died in 1986, only 5500 trees had been planted, leaving his son **Wenzel Beuys** to complete the artwork, planting the 7000th tree at the opening of documenta 8. Around the same time Beuys began *7000 Eichen*, he initiated *Piantagione Paradiso Bolognano*, his plan to grow 7000 "disappearing" (at risk of extinction) shrubs and trees on 17 hectares in Italia.⁵⁶

In 1997, the Walker Art Center sponsored *7000 Oaks Minnesota*, a three-part undertaking coordinated by curator **Todd Bockley** and culminated with a basalt stele and cottonwood tree planted in the Minnesota Sculpture Garden. Indicative of the difficulties he faced while implementing his ecovention during documenta 7, Beuys' widow **Eva Beuys** wrote Bockley:

I am so glad to hear what you do!... An extraordinary idea and very fitting. Naturally I think it's very difficult to realise this [type of project]. I at least know how difficult the realisation for Beuys in Kassel was. So I am very grateful that there are so many in America prepared to honour this project.⁵⁷

To show people that each tree has a value all its own, **Linas Domarackas** (b. 1967) uses ecological paint to create miniature paintings over spots where branches were cut or bark has been removed, thus protecting the trees from further rot. He first conceived of Zielona Galeria (zielona is Polish for green) in the mid-90s, but it didn't come to fruition until **Klary Kopcińska** and **Jósefa Zuka** (of Warszawa's Galeria 2b) included it as part of their outdoor exhibition "transFORM on the Vistula" (2009). With funding from the Arts Council, he and **Katia Sokolowa-Zyzak**, who typically paints cats in a naïve style, produced 60 tree paintings in Warszawa Praga Park (situated on the Wisła's right bank, north of the National Stadium) over a three-week period. Rooted in a lost tradition, central- and eastern-Europeans have decorated sacred trees since pre-Christian times. These days, people show their respect by hanging Christian shrines on trees. To gain stakeholder support and attention for Zielona Galeria, he led a parade to celebrate the painted trees, which culminated in a drumming circle. Domarackas believes that this project and others like it not only encourage local citizens to care more about nature, but that open-air galleries provide people the most accessible way to encounter art and nature. This project inspired the discussion of secondary issues such as how artists' actions differ in intent from the ordinary vandalism that plagues this and every other public park and whether artists ought to determine this public space's use, since it is located in the Praga district, an artists' neighbourhood where galleries too are popping up.

Another artist known for hanging things on urban trees to demonstrate their value is **Elżbieta 'Wela' Wierzbicka** (b. 1964). Primarily working as a painter, she occasionally produces outdoor works. Realised for Europa Park, an open-air sculpture museum situated near Europe's geographical centre, 19km northeast of Vilnius, LT; the north-, south-, east- and west-facing six-step staircases of *La pedestal pour un arbre* (Pedestal for a Tree) (2000) enable park visitors to get closer to this tree without damaging its roots. Wela considers this a philosophical homage to the tree as a creation that can be even more complete and complex than an artistic creation. In 2011, she encircled several trees in a large-scale red *Couronne d'Epines* (Crown of Thornes) at the Paris International Golf Club in Baillet-en-France, FR, as a way to draw attention to the plight of trees, since tree roots compete with turf for nutrients, even as tree shade prevents turf grasses from growing in summer and impedes frost melt in winter. For *Gravitation Suspendu* (Suspended Gravity) (2007) at the Centrum Rzeźby Polskiej w Orońsku in Orońsko, PL, she wedged a giant rock between two steel triangles to symbolise the suspension (or prolonged indecision) arising from politicians' deciding between two contradictory options, ecological protection or "economic opportunity."

In addition to artists' actions meant to increase city dwellers' interest in trees, several artists have contested: the energy spent on manicured lawns; petroleum to power lawns, chemicals to kill weeds or promote growth, and human labour. In 1968, **Hans Haacke** designed *Topographical Contour Project Proposal for Fort Greene Park, Brooklyn*, requesting park gardeners to leave a ten-foot thick ring of grass unmanicured forever, though it's not known whether he actually presented it. Had the city enacted Haacke's park proposal, the park would not only have a fabulous artwork in the form of a "forest ring," but his action might have spawned the "ubiquitous American lawn" debates some four decades earlier.

Nis Rømer, *Public Air Quality Indicator*, 2007, Københavns Rådhus, København, DK.

Far right: Vera Thaens' *Lost Common Sense*, 2014, "EXIT/14," Thor Park Waterschei, Genk, BE.

Keen to alert citizens, Nis Rømer's *Public Air Quality Indicator* opens up wide on beautiful, unpolluted days, while Vera Thaens' seedy, illicit broccoli plantation reflects the toxic nature of Monsanto's owning the patent for all the broccoli eaten, as well as the threat posed by zero broccoli diversity.

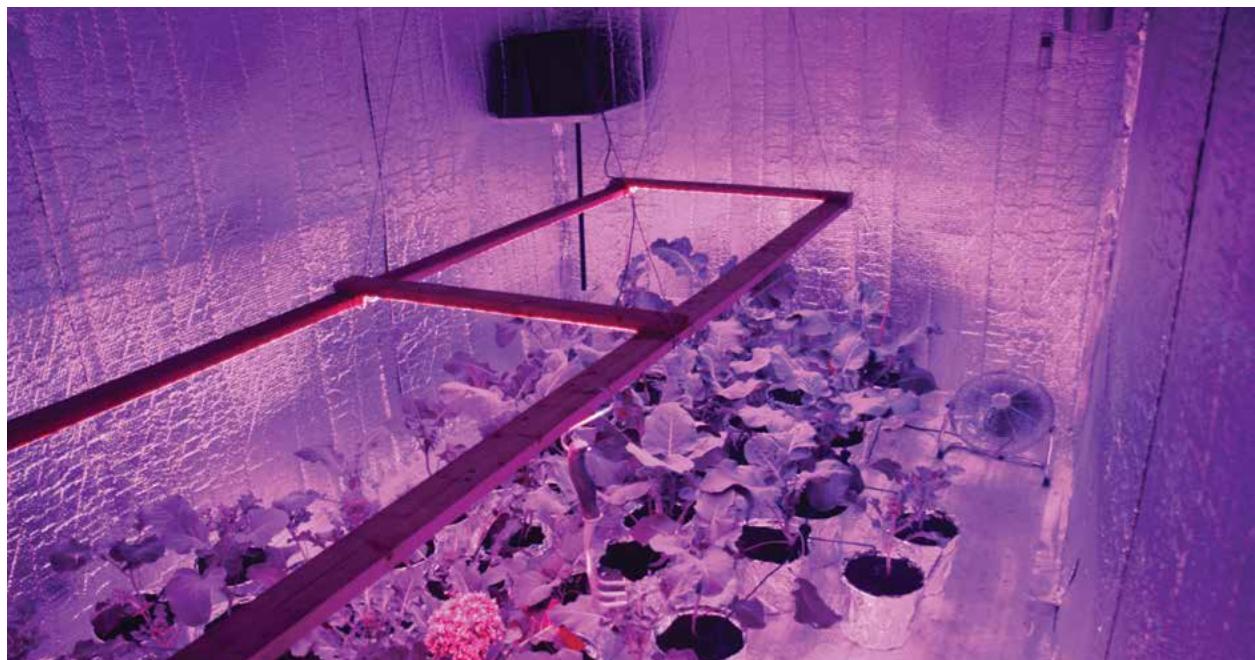


Answering an open call a few years later, Haacke proposed *Vorschlag "Niemansland"* (Proposal "No Man's Land") (1973-1974), which advised that a 30m diameter circle be carved into the pavement in front of Bonn's new Ministerium für Bildung, Wissenschaft und Recht and left untouched. Additionally, he requested that the German government relinquish all rights in and to this territory, granting everyone equal access to this no-man's land.⁵⁸ Despite being rejected, the proposal works quite well on its own as conceptual art.

In 2011, social-design studio **Wooloo** (since 2002) proposed a similarly radical gesture as their artistic contribution to the Sixth Moss Biennial in Moss, NO. For *Two Years' Untouched Garden*, they insisted that the grounds surrounding Gallery F15 lay fallow for the next two years (2011-2013), a "harmless proposal" protested by local politicians, who quickly passed a law to ensure lawns are mowed every Friday "(a chess move to ensure that the issue would not remain moot)," and now

their banned work lies only in people's imagination. According to Wooloo, whose members include **Martin Rosengaard**, **Sixten Kai Nelsen**, and **Russell Ratshin**, their sustainable art practice does not always result in activist outcomes; it only appears that it does since they tackle so few projects. **Alby Gård** summarised Wooloo's goals and eventual outcome.

At Momentum, Wooloo applied Norge's environmental policy onto Gallery F15's preened back garden which faces a verdant slope overlooking the Oslo Fjord...The original idea for their piece lies in not allowing humans to interfere with the garden, both mimicking and responding to Norge's international environmental and foreign aid policies –specifically the UN's Reducing Emissions from Deforestation and Forest Degradation (REDD) programme, which promises one billion USD to Indonesia, if the country decreases their annual deforestation. This gesture attempts to compensate





During the 1970s, Teresa Murak sometimes sported a cape sprouting garden cress, while strolling for two hours from "Krawkowskie Przedmieście Street through Plac Zwycięstwa to the Saxon Garden," confronting Communism's limits with freedom, a free act where agency and possibility intersect.

for the fact that Norge produces approximately 2.2 million barrels of oil daily, reaping economic benefits from exploiting and exporting their natural resources. Wooloo remarks "It's this absurdity –the REDD program's condescending promotion of non-action, paid for by action –that led to *Two Years' Untouched Garden*."⁵⁹

Wooloo tried to "shift away from the fictive towards the consequential." Fortunately, its unintended outcome (inaction), however undesirable, makes the same point as its intended outcome, which was also the strength of Haacke's Bonn proposal. Gård remarks, "The prospect of real change is magnified by their stance, or rather by being forced into inaction –by not being able to let Gallery F15's garden grow wild –their work becomes a compelling protest against ineffectual policies."⁶⁰

Along the same lines, though far less controversial is Lise Duclaux's *Zone de Fauchage Tardif* (Late Mowing Area) (2005/2012), which MAC's (Musée des Arts Contemporains de la Fédération Wallonie-Bruxelles) not only owns, but de-installs and re-installs at will, like a **Sol Le Witt** wall drawing. Duclaux initially created this meadow for the lawn of the Engineers House at Grand Hornu, the former industrial site housing Mac's in Mons, BE. When reactivated in 2012, she selected a more visible site, which museum staff members pass by twice daily. Although the surface area was twice that of the original, spread over four large beds, the same 63 species were sown, some 81 varieties of annuals, biennials and perennials selected for their resistance and adaptation to terrain and exposure. As its title suggests, this meadow is meant to require no maintenance, just a mowing before winter at a height that protects perennials, so as to complete the plant cycle.⁶¹ Left as is, the garden responds to time, wind, birds, rodents, insects, and whatever else unexpectedly encounters this meadow. Over a three-year period, the meadow's designated lifespan, a rather ornate garden evolves.



Taking Action

Air. To draw attention to the importance and availability of “breathable” air, Nicolás García Uriburu enacted *Clean Air for Ever* (1968-1986) during the 1986 Biennale di Venezia. In 2007, **Nis Rømer** (b. 1972) installed an air quality monitoring device on Københavns Rådhus, which opens the window wider as the amount of contaminants polluting the air decreases. Created in collaboration with the National Environment Institute’s senior scientist **Jørgen Brandt**, there are five air quality levels with the highest represented by a closed window, leaving lesser amounts of pollution to swing the window open more. Automatically updated four times a day with data from the National Environmental Research Institute, people on the street level easily noticed that day’s air quality. For *World Saver 2* (2008), **Ralf Sander** (b. 1963) uses chlorophyll like the “leaves of the tree” to transform carbon-dioxide into C₆H₁₂O₆, converting most of the CO₂ to oxygen, leaving the air with 70-90 percent less CO₂.

Climate Change. To challenge Tate Modern’s British Petroleum Sponsorship, **Platform** (since 1983) partnered with the **Art Not Oil Coalition** (since 2004, a coalition of autonomous organisations united against oil industry sponsorships) among others to form **Liberate Tate** (since January 2010), for which they organised a protest at Tate Modern during COP21 (2015). Paradoxically, Liberate Tate was formed during a Tate workshop when Tate curators discouraged participants from floating the idea of taking action against its sponsors.

Liberate Tate have often brought unwanted items into Tate gallery spaces as part of their unsanctioned performances to complicate the presence of BP at Tate. Ten litres of an oily like substance, a naked man covered in oil, ...a 60kg block of Arctic ice...a 16.5 metre, 3 tonne wind turbine blade...⁶²

Environmental Justice. Over the years, numerous artists’ groups have found innovative ways to protest aspects of life that they find unjust. Since the 1970s, **Teresa Murak** (b. 1949) has walked through downtown Warszawa sporting a cape sprouting garden cress, a plant typically grown during the Easter season in Polish homes. Her two-hour strolls down “Krawkowskie Przedmieście Street through Plac Zwycięstwa to the Saxon Garden” during the early 70s were a manifestation of life and a demonstration of freedom given the Communist era’s political realities. **Joanna Kordjak** characterises Murak’s cress performances as having a transformative impact on their environment: “Over the past dozen or so years, Teresa Murak’s interventions in the city landscape have taken the form of sowing that enable the artist to affect the life of the local community in a real way, and introduce nature in the middle of the urban space.”⁶³ During documenta 12, **Ines Doujak** installed *Siegesgärten* (Victory Garden) (2007) a 17-metre long handmade table featuring plants growing beneath 70 seed packets, whose texts discuss “biopiracy;” the way multi-national corporations outright steal/swindle seed patents, natural resources like seeds and soil, indigenous knowledge, and even human tissue for shareholder profit.

During COP15 (2009) in København, **Field Work** (Nis Rømer and **Lise Skou**) organised *Environmental Justice*, which began with a discussion regarding environmental justice, followed by a march from COP15 to Kunsthall Charlottenborg, where artists carried posters made to bring attention to the environment’s significance for all. Similar in spirit to 431art’s *botanoadopt*, Rømer had the idea to initiate *Plant Nursery* (ongoing since 2011), enabling elderly people who need help caring for their plants to swap them permanently, give them away, or coordinate temporary plant care while they’re out of town.

To publicise the nefarious nature of the European Patent Office’s having granted Monsanto

a 2013 patent for the ordinary “garden-variet” broccoli regularly eaten by Europeans, **Vera Thaens** (b. 1958) created *Lost Common Sense* (2014), a clandestine broccoli patch grown under black lights like illicit marijuana plantations and destined for secret sites across the artworld. **Lara Almarcegui** (b. 1972) is currently exploring what citizens actually know about their mineral rights, which no doubt has serious, and long-term implications for environmental justice. In a move to protect mineral rights, she has obtained the rights to iron ore deposits in Norge, enabling her inactivity to thwart further excavation. She has also acquired mineral rights in Graz, AT.

To shed light on Europe's numerous rural initiatives, the international collective **Myvillages** (since 2003) opened their “International Village Show” (2016-2018) in the Gartenhaus at the Galerie für Zeitgenössische Kunst, Leipzig, DE. Myvillages has its own brand **Company**, which distributes homemade, rurally-produced drinks that they sell to raise funds for their artistic efforts. Similarly, Olafur Eliasson's studio produced *Little Sun* with the idea that buyers in developed nations would pay much more for each lamp, thus offsetting prices in places where people most desperately need access to light at night.

People Power. While all of the projects discussed in these pages require heaps of people power, some simply are people power; available energy for publicising and coordinating projects. Over the years, numerous artist-initiated groups have sprung up to draw greater attention to artists' efforts to address ecological problems. Since 1992, Hamburg's **Galerie für Landschaftskunst** has organised exhibitions and *in situ* artworks concerning nature, land, and the city. **N55**, begun in 1994, initiated MOVEMENT in 2002, to “find ways of living with as small concentrations of power as possible.” Keen to explore the tensions arising between town and country, culture and ecology, and rural and village environments, architect

Regina Poly established Garten Steinhöfel (since 2002), a 2-hectar ecological garden in the Ostbrandenburg village of Steinhöfel, DE. Founded on principles implicit in **Gilles Clément's** garden philosophy as “open to all, promises nothing and gives everything,” Garten Steinhöfel grows atop the premises of a former palace garden. **Land-KunstLeben**, a group of artists, gardeners, and people interested in sustainable transformation have joined together around this garden, which has attracted volunteers from all over Europe to tend it.

In 2006, artists **Brett Bloom** (b. 1971), co-founder of *Temporary Services* in 1998, and **Bonnie Fortune** (b. 1978), author of the *Mythological Quarter* (careful attention to place) (2011-2014) blog, began amassing the *Library of Radiant Optimism*, a modest collection of mostly self-published books from the late sixties and early seventies focused on ideas geared toward creating a different world, which influenced works produced for *Let's Re-make. And And And*, a workshop-oriented collective, cropped up during dOCUMENTA (13) to: share free tea amidst an herbal garden, distribute six varieties of organic seeds, and generate interest in urban farming. This section's “final word” comes from Fortune's ever-inspiring *Mythological Quarter* blog:

We are deeply invested in exploring the intersection of culture and ecology. We believe artists have a valuable role in shifting from lives based on consuming to more resilient healthy ways of being. Through interviews, recording city use, and producing original research, we document people, places, and projects that are taking a culturally-based response to present day environmental issues....We continually work to expand our knowledge by conducting interviews with artists and scientists.⁶⁴

Section Notes

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6. Sue Spaid. *Green Acres: Artists Farming Fields, Greenhouses and Abandoned Lots*. Cincinnati. Contemporary Arts Center. 2012. p. 25.
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8. Christopher Knight. "The Broad Foundation's Huge Joseph Beuys Collection Goes on View." *Los Angeles Times*. 28 September 2009.
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10. I always hoped that this was just an "Internet-hoax," but I'm afraid it has been widely reported and is mostly true, though I myself have not gone to China to inventory their surfeit of cultural institutions.
11. Sue Spaid. *Ecovention: Current Art to Transform Ecologies*. Cincinnati. Contemporary Arts Center. 2002. p. 22.
12. Caroline Tisdall. *Joseph Beuys*. The Solomon R. Guggenheim Museum. 1971. p. 148.
13. Donna West Brett. *Joseph Beuys and the 'Energy Plan'*. Sydney. University of Sydney. 2012. p. 5.
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Valuing Anew / Living with Wastelands

This section presents an overview of artists who have found creative ways to reframe public attitudes towards particular sites and objects, which people originally viewed as degraded, dirty, contaminated, or useless. Artists discussed here have done so not by salvaging sites, per se, but by devising clever strategies for reversing characterisations that they deem patently false such as irreparable, unhealthy, or trash. They thus provoke people to perceive nature in a new light, as artworks that challenge viewers' received views eventually alter their perspectives.

Apparently doing nothing and celebrating it/
at best don't think about the thing/
about the object in the hands/
thoughts go through it/
thoughts are elsewhere/
and this state is not constant/
intertwined thoughts/
sporadically following something precise temporary/
things are added or subtracted/
as if raised and harvested/
everything from one source/
guided/
pursued/
poured and left/
like that.

— Lois Weinberger, 1995.¹



Right: Hans Haacke, *Grass*, 1967, Soil, seed, water, Plexiglas.
Courtesy Paula Cooper Gallery, New York, US. c/o Pictoright Amsterdam 2017.

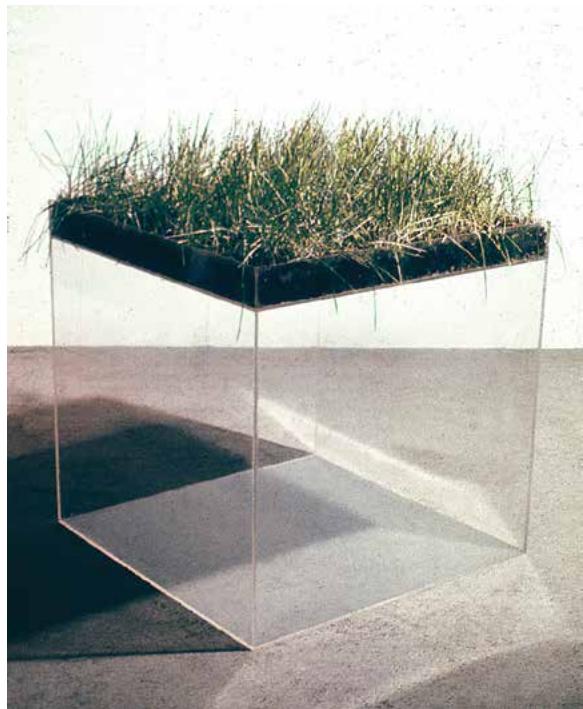
Piotr Kowalski, *Dressage d'un cone*, 1967, Folding table, Plexiglas panels, rotating platters, 5 motors, cotton, Italian Rye Grass seeds. Collection of the Centre Pompidou in Paris, FR.
Photo Courtesy Lev Kowalski, Paris, FR.

Living on opposite sides of the Atlantic Ocean, Hans Haacke and Piotr Kowalski thought to grow ordinary grass indoors and revalued it as art, forever changing the course of art history.



Appreciating Nature on Par with Art

In 1967, German émigré **Hans Haacke** (b. 1936) exhibited *Grass Cube*, grass floating atop an acrylic pedestal at the Howard Wise Gallery, New York City, US, and *Grass*, a pile of earth seeded with grass growing directly on the floor of the Hayden Gallery, MIT, Cambridge, US; while Polish émigré **Piotr Kowalski** (1927-2004) was constructing "table-top" machines for growing grass in his Paris studio. Kowalski's first sculpture, *Dressage d'un cône* (Cone Dressage) (1967) consists of five yellow Plexiglas triangles hung behind five rotating metal plates. Each plate hosts distinct soil cones, produced by the spinning motion, whose peaks merge with the yellow triangles, even though the growing grasses exhibit varying heights. Influenced by both centripetal and gravitational forces, "the grass [is] shown on a pedestal, deliberately raised and cut from its natural environment, and the yellow triangles behind it underscore the tension



between nature and culture....By giving a geometrical shape to the grass, the artist made visible the restraints that humans impose on nature."² A year later, **Sjoerd Buisman** (b. 1948) grew grass on an inclined trough mounted to the wall.

So far as I know, these four works are the earliest examples of living sculptures, though hardly the first time artists received satisfaction from growing grass! On one level these gestures seem totally banal, but they actually unlocked the doors of artistic possibility on both sides of the Atlantic Ocean, forever changing people's attitudes regarding what counts as art. Initially, Kowalski's set-up may strike one as the more high-tech, but all three employed the most impressive technology of all, that of grass seed, an 18th Century invention for quickly growing pleasurable lawns to accommodate strolls, summer picnics, and even bare feet. These days, manicured lawns are discouraged, but ornamental grasses have never been more popular,

especially those that have been exquisitely cultivated to look deceptively natural.

That Haacke and Kowalski opted in 1967 to grow grass indoors is significant for several reasons. Despite grass' association with nature outdoors, its ubiquity and familiarity as *lawn* convey comfort, tranquility, and leisure. Most people have spent enough time staring at blades of grass to notice the many insects inhabiting its soil substrate, yet few consider grass harmful or dirty, even though it sprouts from soil all the same. And in fact, artists' sprouting grass hit upon a super-popular action. Art audiences loved it...no problem there, but how could one call it art?

The very same year the Beatles released "Sgt. Pepper's Lonely Hearts Club Band," post-minimalists and conceptual artists were conspiring to push minimalists and pop artists from the "Top of the Pops." Those who view their gestures as exemplary of post-minimal or conceptual art could argue that Haacke and Kowalski inspired people to realise that: grass (nature) is rather a cultivated manmade system (culture); nature (grass cones and patches) is irregular unlike idealised, manmade forms (discs, triangles, and cubes); or nature capably defies limits imposed by human beings, such as rotating plates or square trays. Haacke employed the term "system" to convey his rather:

explicit intention of having their components physically communicate with each other, and the whole communicate physically with the environment. ... Changes are desired and are part of the programme – they are not due to the shifting experience of the viewer.³

However imperceptible systems are, they do capture interactions, inter-relationships, and mutual-interdependencies between human beings and their immediate environment. Human beings set these growing actions in motion and are therefore responsible for preserving them

intact, otherwise living sculptures die. Historically, artworks needed conservation, but none demanded routine maintenance, let alone stakeholders prepared to take over in the artist's absence. Most important, the human upkeep imparted small grass patches as *art* immediately signals a far greater value than that of lawns routinely trampled by people forging short cuts, a.k.a. "desire paths." To treat growing grass with even more care than one ordinarily does art objects requires exhibitors and viewers to adopt new values. For these reasons, I claim (counter to Haacke back then) that desired changes are due entirely to viewers' shifted perspectives, which alters experiences, otherwise *Grass* gets trampled.

Fortunately, we can patch together a story about the protection of *Grass*, which was originally exhibited as a "system" or schedule of inter-related routines, but grew into *Grass Grows* (1969), the artwork. Wayne Andersen, the 1967 exhibition organiser, recalls MIT janitorial staff not only caring for *Grass*, but defending it from students' "hacks."⁴ Caroline Jones, the 2011 exhibition curator chose *Grass Grows* (the artwork) over *Grass* (the system), since "as a system, the pile was intended to demonstrate phenomena over time:" "students shoveling dirt into a pile, commercial manufacturers selling winter rye seeds, and even more dubious maintenance workers watering and tending the crop planted in the heap."⁵ In other words, the system requires additional work (over and above maintenance) than the artwork, which only requires routine watering once it's installed. Rather than demonstrate nature's autonomy or mind-independence, these grass patches rather implicate human beings as inescapably linked to "nature," though not nature as a mere cultural construct, but nature as a sustaining and life-giving environment all its own, to which human beings owe a great deal more attention, protection, and care than they have thus far seemed willing to provide. With the doors finally flung wide open, artists started pouring out

into the great outdoors in droves, and their actions' outcomes have been shifting viewers' art perspectives ever since.

Hidden Ecological Benefits

Artists who are prone to "value anew" typically do so for one of two reasons. They either worry that reclamation and restoration camouflage industrial abuses that ought to remain revealed (and not concealed), or they simply recognise value where others haven't. Best known for holding the first view, **Robert Smithson** (1937-1973) produced exemplary works. Highly critical of using art to revamp degraded land, he preferred to highlight industry's role in moulding land forms. Because of his premature death, he realised only a handful of ecological works that capture industry's complicity in shaping landforms such as *Asphalt Rundown*, 1969, Roma, IT; *Spiral Jetty*, 1970, Great Salt Lake, US; *Broken Circle/Spiral Hill*, 1971, Emmen, NL; and *Amarillo Ramp*, 1973, Amarillo, US. While some artists consider Smithson's Earthworks and/or

his criticisms of reclamation art indicative of his particularly anti-ecological stance, his decision to situate his Earthworks in industrial sites clearly had ecological intent. More important, none of his works, including *Glue Pour* (1969), whose photograph of its thick, caramel-like stickiness exaggerates its toxicity, degraded their sites and several like *Spiral Jetty* introduced hidden ecological benefits.

I say "hidden" because I doubt he considered his Earthworks to be practical actions, so their positive outcomes are a happy accident. Many art historians have discussed Smithson's use of counter-clockwise coils (*Spiral Jetty* and *Spiral Hill*) to convey entropy, a. k. a. decay (clockwise coils symbolise growth). Meanwhile *Amarillo Ramp's* clockwise ouroboros, originally situated amidst a lake, captures the eternal cycle of renewal or depicts the geological time scale.⁶ *Spiral Jetty's* coils host brine shrimp (and other similarly small creatures), supplying them protective spawning habitat, as well as habitat and food for migratory birds. Given the Great Salt Lake's importance to

Robert Smithson, *Spiral Jetty*, 1970, Great Salt Lake, Utah Mud, salt crystals, rocks, water; 1500 feet long and 15 feet wide; Collection: DIA Center for the Arts, New York

Photo: George Steinmetz. Courtesy Dia Art Foundation, New York, Art © Holt-Smithson Foundation/© Pictoright Amsterdam 2017

Far right: Robert Smithson, *Broken Circle/Spiral Hill*, 1971, Emmen, NL. Art © Holt-Smithson Foundation. c/o Pictoright Amsterdam 2017.

Spiral Jetty provides habitat for brine shrimp, which feed millions of migratory birds (up to 250 different species) passing through twice a year. Also an ecovention, *Broken Circle/Spiral Hill* has lured thousands of people to visit a sand and gravel pit, where they could re-evaluate the remains of an industrial site, just as it is, and on its own terms.



migratory birds (some 5 million visit twice a year), the lake and its marshes, which provide the birds resting and staging areas, as well as an abundance of brine shrimp and brine flies, was designated part of the Western Hemisphere Shorebird Reserve Network in 1992.⁷

Smithson is known to have approached several US mining company executives with the idea that his services (anticipated *kontext kunst* discussed in Section One) might interest them. Under government and public pressure to clean up degraded land, mining company executives probably misunderstood Smithson's ideas, which likely would have preserved their industries' destruction in tact. **Barbara Matilsky** remarked how Smithson's *Bingham Copper Mining Pit-Utah Reclamation Project* (1973) made no attempt to ameliorate the blight caused by strip mining. Rather, he recommended that four small curving lines be added to the very bottom of the world's largest open-pit mine, transforming a three-mile trench into a gorgeous gorge filled with water.⁸ "In accepting

the reality of the site, Smithson ensured that the damage from industry would remain visible."⁹ But of course, no one ever imagined that Smithsonised blights could become tourist sites in their own right.

Although *Broken Circle/Spiral Hill* is widely considered to be Smithson's primary ecological work (a claim I naïvely repeated in *Ecovention*), or at least his most successful reclamation, I am at pains to frame it as a reclamation project, unless replacing sand and gravel mined from a pit with a fabulous artwork constitutes reclamation. Yes, the overall site has been reclaimed for new purposes, but the visibly shrunken sand dune and enlarged lake remain in a realm left on their own. Whatever Smithson originally intended his Earthworks to do, they primarily inspire people to go way out of their way to experience industrial sites that they would no doubt ignore otherwise. As **Thomas Dreher** notes,

The viewer who walks on Smithson's *Spiral Jetty* or *Broken Circle* looks beyond the work itself onto the surrounding environment. The relationship of the



viewer "in" the work to landscape is, for Smithson, at least as important as the top view.¹⁰

If one takes this as Smithson's basic operating premise, his anti-reclamation philosophy readily offers visitors new experiences that inevitably challenge people's perspectives and viewers' values about their immediate environment.

Even though critics (and especially artists who self-identify as eco-artists) have called his Earthworks environmentally-insensitive, his works not only mark industrial sites, but they often either compete with or "complement" such sites. In 1969, environmentalists keen to protect migratory birds stopped Smithson's plan for **Lucy Lippard's** "955,000" to visualise the process of erosion by shattering 100 tons of green-tinted glass on a barren rock, off Vancouver Island. That same year, he notoriously dumped hot liquid asphalt over the side of a working rock quarry outside Roma, an action that simultaneously trapped seeds in the asphalt, since a verdant strip long ago replaced the black, icky muck.¹¹ As I wrote, soon after **Patrizia Giambi** and I discovered the remains of *Asphalt Rundown* in 2005:

Few anticipated that the asphalt would survive, yet no one, not even Smithson, could have envisioned his action's outcome. Given the known details surrounding his permanent Earthworks,... Smithson would have designated someone to record this entropic cliff's development had he suspected something interesting might follow. Not surprisingly, *Asphalt Rundown's* deplorable reputation has cast a shadow over its prognosticative potential. Only eco-artist **Patricia Johanson** dared to predict its bucolic outcome. ... *Asphalt Rundown* spontaneously immortalised the unintended consequences of an artist's free act.¹²

Even if this action's outcome was unintended, Smithson probably had an inkling about its

possibility, since bitumen (asphalt) was used to build the Hanging Gardens of Babylon.

Broken Circle/Spiral Hill, sited in an active sand pit, presents an entirely different situation. Unlike *Asphalt Rundown*, Smithson's contribution of a sandy spiral hill (vegetation was added later to prevent erosion) and the lake's sculpted sand form complement the quarry's daily activities, which entail extracting sand and gravel from the surrounding land. Unlike copper and coal mines, these industrial activities do not destroy the surrounding landscape in the process. Over time, this industrial site and tourist destination have grown mutually interdependent. The more the site's saleable resources diminish, the more its value as land depends on its cohabitant becoming a monument. As a result, the sand pit owner regularly restores the two components of Smithson's sculpture, making them stronger and better suited to resist erosion. There's now even a visitors' centre. It's difficult to imagine what will become of the site once all of the sand is mined, though the owners seem to have created a bird sanctuary. As of January 2017, the owners are considering to sell it. Paradoxically, the site will be left with a multi-million dollar monument, but may one day lack the necessary resources to keep it in tip-top shape, requiring a constant recruitment of stakeholders to renew their ties to this once sandy land by reflecting upon the sandy sculpture's explicit relationship to its industrial past.

If Smithson's sculptures have lured the curious to Earthworks adjacent industrial sites in the middle of nowhere, consider the actions of Stowarzyszenie Kulturotwórcze "Nie z Tej Bajki" ("Out of This World," an Association of Culture Creators), which was founded in Ostrowiec Świętokrzyski, PL. Since 2007, this group has organised activities in the post-industrial space of the former Ostrowiec steelworks and co-hosts **Jakub Słomkowski's** annual artistic project *Kolacja na hucie* (A Dinner at the Steekworks) with guests



Since 2008, members of Stowarzyszenie Kulturotwórcze "Nie z Tej Bajki" ("Out of This World," an Association of Culture Creators) have met annually at Ostrowiec Świętokrzyski, PL, to enjoy *Kolacja na hucie* (A Dinner at the Steelworks) with guests from around the globe seated at one long table, typically outdoors.



Cecylia Malik, *Critical Water Mass*, Since 2012, Kraków, PL.

Top: 2012.

Centre: Marta Sala's performance, 2014. Photo Credit:

Mateusz Torbus

Bottom: 2016. Photo Credit: Piotr Dziurdzia.

Ever since Cecylia Malik collaborated with Małgorzata Nieciecka and Mattyna Niedośpiął on the first *Critical Water Mass*, it has been an annual Kraków event. In 2015, Malik was "longlisted" for the Visible Award, which honours artworks in the social sphere.



from around the globe, typically seated outdoors at one long table.

Gathering young artists and culture creators, [Out of this World] is active in fields which include: initiating and supporting artistic and cultural projects; creating favourable conditions for the personal and artistic development of young culture creators, especially those coming from the Świętokrzyskie Voivodeship; animating and supporting local activities, especially concerning youth; and providing a platform for information and experience exchange between individual and organisational facilitator of culture and art.¹³

An artistic and social initiative, Słomkowski's annual "Dinner at the Steelworks" draws attention to the forgotten and deteriorating steelworks (various owners are on record from 1827 until its demise) in Ostrowiec Świętokrzyski.

Similarly, Cecylia Malik's 2011-2012 action of paddling six rivers flowing through Kraków in a handmade wooden row boat (discussed in Section Two), and her ensuing *Six Rivers* (2012) video, inspired something never imagined, the 2012 Critical Water Mass festival. Since then, this has been an annual event, where "citizens bring their own dinghies, air mattresses, rafts made of PET bottles, surfboards, and kayaks."¹⁴ Now approaching its sixth incarnation (in 2017), this communal float along the Wisła (Vistula), sometimes compels paddlers to risk a dip in a river that was heretofore deemed unsuitable for swimming. As a result of Malik's having chartered this unknown territory, people's behaviours are not only changing, but now local citizens, including politicians, are showing a greater interest in this giant river coursing through their beloved country.

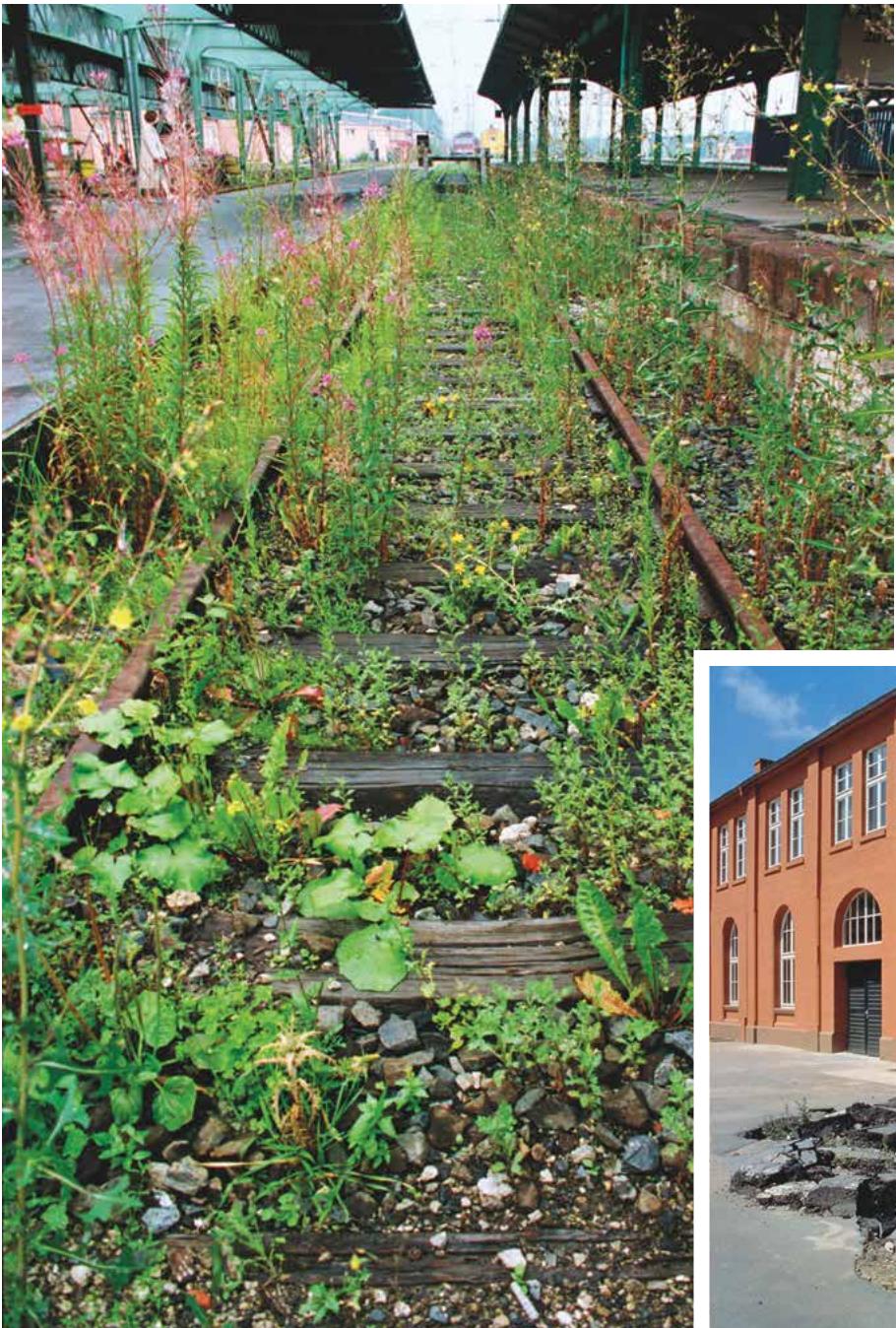
A Realm Left on its Own¹⁵

Since the 1970s, Austrian artist Lois Weinberger (b. 1947) has produced artworks that inspire people to

question their most basic values: what is spent vs. what can be reused?, what is desirable vs. what is neglected?, when should human beings interfere vs. when should they leave life alone? The questions aroused by Weinberger's works are endless, yet his works never answer, let alone explicitly address such questions. Some people may find it quite difficult to grasp what they are meant to experience, let alone think about. I imagine visitors arriving at Kassel's Kulturbahnhof where Weinberger's *Das über Pflanzen ist eins mit ihnen* (What is Beyond Plants is at One with Them) (1997) is permanently sited along one of its abandoned railroad tracks, unable to locate his living sculpture. Although the exhibition map indicates its exact location, few visitors fathom that "weeds" planted alongside rail tracks might actually be someone's artwork.

On one hand, it might seem like an exercise in growing non-natives in foreign soil or illicitly introducing "unwanted" weeds. On the other hand, such efforts are aesthetic gifts on par with botanical gardens, as he generously shares what he's discovered elsewhere with people who are unlikely to have previously experienced these foreign plants. Most important, this work invited viewers (628,776 attendees in 1997) to reconsider their attitudes toward outsider weeds, cultivated and transplanted with great care, yet migrants all the same that stand to transform the terrains of their new homes, as they continue to set down roots. As Tom Trevor notes,

For Lois Weinberger, the uncontrolled growth of ruderal plants, heedless of human society, the drift patterns of grasses, and the relentless urgency of "greenness" is an artistic metaphor for resistance to the prevailing order of consumerism and a counterculture to the reductive taxonomies and categorisations of "the orderly." Within this "singularity," he foregrounds the "living," the ungovernable spirit of wildness, untamed by the ordering forces of the Pure and the True –what Lévi-Strauss describes as



Left: Lois Weinberger, *Das über Pflanzen ist eins mit ihnen* (What is Beyond Plants is at One with Them), 1997/present, documenta X, Kulturbahnhof, Kassel, DE. Photo Credit: Dieter Schwerdtle.

Below: Lois Weinberger, *Brennen und Gehen* (Burning and Walking), 1997, documenta X, Kulturbahnhof, Kassel, DE. Photo Credit: Weiner Maschmann.

Since 1988, Lois Weinberger has collected plants from his travels in the Balkans, Ukraine, España, Syria and Greece. Between 1988 and 1999, he grew them in *Gebiet Wien* (Area Vienna), but in 2004, they were transplanted to the Ruderal Society, a one-hour drive north of Wien, AT. He uses these plants to make new versions of *Brennen und Gehen* and to replant *Das über Pflanzen ist eins mit ihnen*.



"wild thinking" –and so gives form to a new politics/ poetics of heterogeneity and dissensus.¹⁶

While most art writers tend to discuss *Das über Pflanzen* in terms of its being a metaphor for migration issues (whether refugees, asylum seekers, or transients), the act of introducing foreign plants, however temporarily, goes much farther than "wild thinking," which is presumably imaginary. Weinberger's foreign transplants are rather artistic actions with measurable consequences for their local environment. Nearly twenty years later, some may reduce his numerous generous incursions to rather thoughtless invasions with foreign plants. Yet I imagine many more passersby starting to recognise Weinberger's action as a strategy for boosting an ecosystem's health, as a greater number of varieties sharing resources typically leads to higher resource exploitation. Minimally, this work explores the ecosystem functioning of a biodiverse ecosystem comprised of cohabitating foreigners inhabiting urban communities.

Like Smithson, Weinberger has argued in favor of leaving industrial sites as they are, rather than reclaiming them. In 1988, he recorded the earth's condition, as well as plants growing in several gravel pits located in Hohenhau (Lower Austria). In 1993, he planted red poppies atop slag heaps in Hohenhau, a gesture that is more a marker than a makeover since Common Poppies (*papaver rhoeus*) symbolise remembrance, but aren't known for their phytoremedial capacities.¹⁷ Moreover, Common Poppies are wildflowers, which in some circles constitute agricultural weeds, since they produce copious amounts of seeds that prove disruptive to farmers' fields when carried by the wind. Trevor elaborates:

The urgency of growth in wild plants and the urgency of desire.... Both can be identified as a driving "urge" but these equivalent forces cannot be isolated

for scrutiny as they are essentially performative, existing "in process," immanent to their respective fields of nature and of culture. Rather, such a fluid condition, or urgency, can only be revealed in action, in a particular place and a particular time, facilitated by the artist through a subtle "non-intervention" or "voluntary renouncement" of human interference: "Fallow grounds are places where boundaries show themselves as something in motion/something uncertain –places which have reached a place where one can speak neither of a beginning nor of an end nor of a standstill."¹⁸

Trevor's description of Weinberger's practice as either a "non-intervention" or the "voluntary renouncement" of human interference is not entirely true. Despite his not being particularly interested to remediate brownfields, as demonstrated by his 1993 poppy planting and 1998 Hiriya Dump proposal ("natural development without design"), his regularly introducing wild flowers that he's collected the world over and cultivated in his garden can hardly be considered a non-intervention or renouncement of human interference. Perhaps a better assessment of his approach would be to liken it to non-hierarchical governance or a "decentralised network structure of different groups working collaboratively," since he seems more interested to let events take their course.¹⁹ This was never more evident than in his *Hiriya Dump* "non-proposal," for which he explicitly requests:

no spaces intended to structure recreation activity/ such as bicycle paths/ playgrounds or fitness miles are planned. The users themselves/ not the landscape planners/ will create the paths and the playgrounds. The places and contexts that will arise in this manner/ may then be cautiously developed-narrow trails/ gravel paths/ paved ways. . .this is the unique possibility to arise a park following the natural development/ without designing and beautifying everyday occurrence. . .the dump does not



consist of useless accumulations/ but of significant contents/ which puts the promises/ that the objects held quite recently into a new light.²⁰

Weinberger's *Hiriya Dump* proposal initially recalls an anyspacewhatever, or "open-ended situation where anything can happen," since his proposal specifically requests the actor-recipients (the park's actual users, rather than himself as the artist working alongside some external design team) to coordinate the future park's activities and designate its significance.²¹ He concludes, "The plans for Hiriya Dump/ I see as a fragile structure set into secondhand nature/ where what has lost its value/ will not be displayed as something sublime/ but will lead to the contexts/ that made it arise and end/ processes that also take place in gardens..."²²

Given Weinberger's proclivity for repurposing old items, rather than disposing of them, it's hardly surprising that he aims to shine a bright light on the dump whose contents he deems "significant"

and whose objects held great "promises" when they were brand new. Furthermore, his plan for tying the landfill's destiny to its end users' inputs connects to the necessity of each gardener to manage his/her garden. As we shall see below, and in even greater detail in Section Nine, the process of taking responsibility for renovating and caring for one's environment first requires one to renew one self, but also contributes to this self-renewal.

Just as Weinberger collected and replanted species from foreign countries, the duo **les fujak** (since 2000, **Olivier Huet** and **Margrit Neuendorf**) collected scores of species from Darmstadt's celebrated downtown sites such as Rosenhöhe, Mathildenhöhe, Internationales Musikinstitut and Prinz-Georg Garten, and replanted their finds to create a charming (and surprising) pocket garden (an urban species collection) on the Waldkunstpad running through the Städtischer Wald. Meanwhile, they dug up forest plants and replanted them in urban planters across town, adding little signs to



les fujak, *Biotope Grafts*, 2014, Internationales Waldkunst Zentrum, Darmstadt, DE

After creating a "city species trail" alongside the Waldkunstpad, les fujak replanted forest species in planters around the city of Darmstadt.



publicise their public interventions as part of the 2014 exhibition "Art Biotopes" at the Internationales Waldkunst Zentrum in Darmstadt, DE.

Do-Nothing Gardeners

Similar in effect to Hans Haacke's *Bowery Samen* (*Bowery Seeds*) (1970), whose randomly deposited seeds unexpectedly sprout life, **herman de vries** (b. 1931) has created four sanctuaries, where either the wind or birds drop their seeds, generating hundreds of unanticipated plants and numerous large-scale trees. For de vries, the word sanctuary captures some place that is both respected and protected; while simultaneously characterising both a sacred site and natural reserve.²³ In 1993, he created his first sanctuary, a fenced-in circular field measuring 12 metres in diameter, sited in the middle of a busy highway intersection near Stuttgart, DE. Four years later, he was invited to create another sanctuary, this time for "Skulptur Projekte" in Münster, DE. In this case, he opted for a 3-metre tall and 14-metre

diameter brick enclosure whose elliptical windows facilitate close-up views of several 6-metre tall trees flourishing inside. A product of its times, the brick wall is often covered with graffiti both inside and out.

In 1999, he installed *sanctuarium*, a wrought-iron gate with a view onto a meadow growing inside a large-scale, circular berm in Zeewolde, NL. In 2003, he initiated a path through the *bois sacré*, enabling hikers to witness the gradual return to earth of *sanctuaire de roche rousse*, an old stone farmhouse situated at 1400 metres above sea level, near Digne-les-Bains, FR. Already over-run with rose bushes and boxes, he enclosed the structure behind gold-tipped wrought-iron bars. Famous for saying, "I hate art in nature," de vries prefers nature just as it is. For him, "nature is sufficient unto itself...what we can still find around ourselves of nature requires no human intervention. It is itself."²⁴ Funny thing is, his sanctuaries are effectively art in nature, even if the

Right: Lois Weinberger, *WILD CAGE-RUDERAL GARTEN*, 1991/2013, Universalmuseum Joanneum, Graz, AT. Photo Credit: KIÖR:I

Below: herman de vries, sanctuarium, 1997/2016, Skulptur Projekte, Münster, DE.



built parts are truly meant to be frames protecting nature from human intervention.

Around the same time de vries started creating sanctuaries to let nature be, Lois Weinberger started transplanting plants from his collection to different locations, as if they had randomly settled. In 1991, Weinberger first proposed his "wild cube," a see-through metal enclosure where nature could settle randomly, but he didn't realise one until 1999, when he installed his giant (4m x 37m x 3.7m) *WILD CUBE* at the Faculty of Social and Economic Science at the University of Innsbruck, Innsbruck, AT. He notes that "the plant society is the virtual sculpture—it grows whatever [it] wants to grow." In 2011, he installed a smaller version (4m x 12m x 4m) at Haus Belvedere in Wien, AT and in 2013, he created *WILD CAGE-RUDERAL GARTEN* (1991/2013), a round version for the



Universalmuseum Joanneum in Graz, AT. These works epitomise what people often call "do-nothing" gardens. They are ecoventions because they have inspired people to embrace wildness, disarray, and chance, properties that enhance habitat and thus augment biodiversity, yet are often prohibited in public gardens.

Indicative of how radical de vries' and Weinberger's "do-nothing" approaches are, consider that most people's reactions to Mexican artist **Abraham Cruzvillegas**' *Empty Lots* (2015-2016) at London's Tate Modern have been overwhelmingly negative. Because the soil boxes were sited indoors, isolated from seeds carried by either the wind or birds, they were erroneously characterised from the onset as blank plots, even though each of the 240 triangular lots contained some 23 tonnes of soil gathered from dozens of parks

across London, UK. Rather than waiting the full six months to discover what might transpire, guerrilla gardeners like **Vanessa Harden** seed bombed them early on, first with California Poppies and then with Sunflowers (during the "Deadline Festival"). Pleased with her actions, Harden remarked,

We planted without permission being sought and encountered three security staff as we [seed] bombed. They were initially concerned but we persuaded them that our action was in the spirit of the installation. Now we wait to see if the gardening was successful.²⁵

If Harden associates successful gardening with sprouting plants, as this statement suggests, it's baffling that she didn't first wait to see the results of the initially random sowings. *Empty Lots* only pretended to be empty, as Chinese Chives and Garlic Mustard sprouted in Hampstead Heath's plot; opium poppies popped up in soil unearthed at Finchley Primary School; an oak sapling burst through soil collected at Clapham Commons; a cute, little buttercup appeared in Akiva School's lot; and stinging nettles were visible everywhere. I find the seed bombers actions in vain, since "Doing nothing," or just letting *Empty Lots* be, would have been (by far) the most authentic gesture. That "environmentally-aware" guerrilla gardeners felt compelled to intervene seems terribly "old-school," on par with gardeners managing exotic gardens, however entropic.

That Cruzvillegas requested museum guards not to deter people from sowing his garden enabled museum visitors to customise this living sculpture, an outcome that recalls what Weinberger once envisioned for Hiriya Dump (actual users are invited to determine the space's activities) or **Lise Duclaux** expects to transpire with *Zone de Fauchage* (Zone of Late Mowing), as discussed in Section Two. Cruzvillegas' inaction revealed the duplicity of "gardeners," whose apparent lack of



Lois Weinberger, *WILD CUBE*, 1998/1999. School of Social and Economic Sciences, University of Innsbruck, Innsbruck, AT.
Photo Credit: Gerbert Weinberger.

Since 1999, Lois Weinberger's *WILD CUBE* has been sited at the Faculty of Social and Economic Sciences at the University of Innsbruck, Innsbruck, AT. In this context, it has heartily endured nearly two decades of seasonal changes.

trust in soil's potential prompted their counterman to ensure a garden. He described the guerrilla gardeners' actions as "gestures of hope," yet their inability to let his initial action take its course over time rather suggest their anxiousness about the future, which is typically rooted in hopelessness. Surveying the green scene, only two months before his living sculpture was scheduled for composting, the artist remarked, "The piece is evolving,



Top: Lois Weinberger, *Garten*, 1994/2002, Landesmuseum Niederösterreich, St. Pölten, AT. Photo Credit: Helmut Lackinger.

Lois Weinberger, *Garten*, 1994/2012, Gare de Rennes, Les Prairies Biennial d'Art Contemporain, Rennes, FR.

Using similar approaches, Lois Weinberger planted *Gärten* (1994/2002-present) in multi-coloured buckets at the Landesmuseum Niederösterreich in St. Pölten, AT, and a decade later grew *Gärten* (1994/2014) in green buckets at Les Prairies Biennial d'Art Contemporain in Rennes, FR.

transforming. It now talks about local identities. You can see there's a conviviality here."²⁶

Since 1994, Weinberger has taken a similarly hands-off approach to gardening. In 1994, he first exhibited *Gärten* (Garden), hundreds of plastic buckets containing earth, whose formerly invisible contents effectively sprouted a spontaneous roof garden. Using the same recipe, he grew *Gärten* (1994/2002) in multi-coloured buckets at the Landesmuseum Niederösterreich in St. Pölten, AT and *Gärten* (1994/2012) in translucent green buckets for Les Prairies Biennial d'Art Contemporain in Rennes, FR. More recently, he presented *Portable Garden* (1994/2016-2017), fabric bags featuring plants growing from seeds hidden in soil collected from wastelands around Paris' 19th Arrondissement, and sited where la rue des Ardennes intersects la rue de Thionville.

Following a similar tact, Chinese artist **Song Dong** constructed *Doing Nothing Garden* (2010-2012), a 6-meter high flowering knoll (formerly a pile of rubble and biological waste) presented like a bonsai on a rimmed platter in the Karsau Park during DOCUMENTA (13). Capturing this work's capacity to inspire spectators to value anew, **Vanessa Badagliacca** comments:

Through our memories and reflections, *Doing Nothing Garden* can continue to offer ways of thinking about how we –as a species, as societies, and as individuals –might renew ourselves, our circumstances, and our environments through not acting –through doing nothing, not striving to fulfill our potentials or to stave off the disasters threatened by all our potential-fulfilling behaviours.²⁷

She adds that our efforts to discuss this haphazard heap sited in a carefully manicured landscape can lead us "to explore our own beliefs and the very core of ourselves."

Additionally, Badagliacca connects the biodiversity sprouting on Song's mound to: 1)

naturalness and non-action in Taoist philosophy, 2) Gilles Clément's notion of *Un Tier Paysage* (third landscape) such as abandoned wastelands, and 3) Giorgio Agamben's little 2009 essay "Su Ciò che possiamo non fare" (*On What We Can Not Do*). For her, Song's garden suggests "the possibility of renewing ourselves and [the] environment through not doing." But of course, actually "doing nothing" when faced with environmental degradation lies somewhere between committing a crime and a pipe-dream for those who frame inaction as the antidote to the plethora of problems caused by human invasion. Inspired by Agamben's essay, she rather associates "not doing" with one's actually choosing not to do, since every potentiality is equally an impotentiality, a "being able to not do," a view that she finds reiterated in Song Dong's string of 5 yellow-neon Chinese characters presented as signs on the mound, which convey "not do –in vain– not do."²⁸ She interprets this to mean that "if you don't do anything you don't get anything, so maybe you could take the chance to do [something], although you could get anything from it." Reading Song's signs through Agamben's text, she concludes that:

"Doing Nothing" means following the continuous flux of life, which moves and changes as it follows its natural course. Doing nothing is not about staying at a fixed point. "Doing Nothing" is not the opposite of "doing." Recognizing the dual existence of these two concepts may help us regain our balance.²⁹

For Badagliacca, the "garden in motion" gains its purpose from its own potentiality, not some external source as does the bonsai tended by a gardener with some particular end in mind (or the guerrilla gardener for that matter). "With human control absent, there was a chance for spontaneous growth."³⁰ Just as Weinberger argued for keeping the contents of the Hiriya Dump in tact and visible, so people could remember the value

of all that they've abandoned; Clément, according to Badagliacca, attributes the importance of *tiers paysages* to their capacity to help us recognise "what we have abandoned and the value of abandonment. Renovating our environment can only be successful if we are also committed to renewing ourselves."³¹ Having sought to empower the future park's end-users to renovate their own environment, Weinberger aimed to involve users so that they can renew themselves in the process of renovating their environment. Being abandoned sites, Clément's *tiers paysages* are typically teaming with biodiversity, since they provide "refuge for species of plants and animals that have been driven out of" more controlled terrains such as farms, parks, forests, wetlands, and even natural reserves. But *tiers paysages* are also extremely vulnerable to human incursion, which is why Clément thinks there should be a kind of "reserved non-reserve," which is effectively what Weinberger means by his characterising his *Ruderal Society* as a realm "left on its own."

Abandoned Monuments

In 2000, Lara Almarcegui launched her *Wastelands Map Amsterdam*, a guide to 26 empty sites in Amsterdam, NL. While in residency at FLACC in 2004, she secured a one-hectare wasteland in nearby Genk, BE. Legally guaranteed to remain free from development for twelve years, her site was later folded into Manifesta 9 (2012), whose focus was the Limburg region's history of coal mining. Three years later, she documented 80 sites in Al Khan, an abandoned fishing village in Sharjah, AE. And the next year, she produced *Ruïnes in Nederlands XIX-XXI* (2008), a series of over 160 photographs documenting abandoned buildings in a state of ongoing decay. That same year, she prepared a *Guide to the Wastelands along the Bilbao River Estuary*. To counter all of the building going on due to Expo 2008, she assured the legal protection of a 700-square metre *descampado*,

a “reserved non-reserve” on a floodplain of the Ebro River, near Zaragoza ES. That same year, her action to keep *An empty terrain in the Danshui River, Taipei* “safe from architecture” in perpetuity proved successful. Additionally, she has preserved a parcel of land at Haven van Rotterdam (2003-2018). She has since made numerous attempts to preserve wastelands in Bremen, Madrid, and Le Havre. Even if she has had only a handful of successes, every action had an impact:

Yes, this [Taipei] project is the only one when I really got a place changed, but funny enough, this influence and big change consists just in making sure the terrain doesn't get developed. The work consists in literally keeping land safe from architecture. I have made many failed attempts to protect terrains...but it is worth trying because I also managed to have some terrains protected forever, and this is when an art project resembles a dream to me: I hardly believe such a project has been realised.³²

In 2009, Almarcegui produced *Wastelands of the Port of Rotterdam*, a brochure featuring 17 fallow grounds, for which she focused on portscapes which are lacking in human design. In 2012, Almarcegui documented Parque fluvial abandonado (Abandoned River Park), a 20-hectare green space that was originally meant to wrap around the La Lastra industrial estate in León, ES. Constructed atop land fill that was added when the river's curves were filled in so it could be channelised in the 1960s, the industrial site was built in the late 1990s, but the surrounding park never happened due to lack of funds. She chose this place for its geographical location, as well as its striking vegetation.

Motivated to keep land safe from architecture, her wasteland projects invite people to appreciate land independently of economic values tied to investment property, resale profits, and tax shelters. For **Max Andrews** and **Mariana Cánepa Luna**, her

books celebrate wastelands by offering alternative readings of the city landscape:

Her attraction to these sites lies in their often ambiguous legal status, as much as in the fact they are mostly remote or inaccessible to our everyday experience of a city. Whether seen within a discourse of environmentalist preservation or urban “legibility” and city branding, her celebrating *terrain vague* questions our concept of wilderness or wildness, as well as asks why some places are deemed more special or natural than others. These guidebooks offer an alternative reading of the city landscape, encouraging readers to take part in an unsanctioned kind of sightseeing by visiting these indeterminate, transitional anti-landmarks.³³

Of equal importance are her tours to sites, something Robert Smithson desperately wanted to offer audiences. Visitors to her exhibitions often have the opportunity to join her on guided discoveries of places and construction sites that she has discovered through her research. Once people gain an understanding of a place, they are better equipped to grasp the underlying issues, a point that repeat visits to Smithson's *Broken Circle/Spiral Hill* demonstrate time and again, because these landscapes change dramatically over time.

In 2000, Almarcegui first displayed the construction materials required to construct a brick water tower adjacent the tower in Phalsburg, FR. In 2003, she exhibited *Construction Materials of an Exhibition Room*, mounds of materials (29 metric tonnes of stone, 15 tonnes of gravel, and three tonnes of steel) needed to build FRAC Bourgogne. After the exhibition, materials were returned to lenders. Seeking to further reveal the expenditure of resources on artsplaces, she presented the raw materials needed to build the Museo de Arte Contemporánea de Vigo (2006-2008), Frieze Art Fair (2006), and Fondazione Sandretto Re Rebaudengo (2008). In 2010, she reversed the



Top: Lara Almarcegui, *Un Descampado a orillas del río Ebro* (A Wasteland on the Banks of the Ebro River), 2009-perpetuity, Zaragoza, ES.

Lara Almarcegui, *Guide to the Wastelands of the Lea Valley, 12 Empty Spaces Await the London Olympics*, 2009, London, UK.



Lara Almarcegui, eight guides, since 2006

Since 2000, Lara Almarcegui has documented los descampados (wastelands) on four continents from Amsterdam, NL (2000) to São Paulo, BR (2006); Al Khan, AE (2007); Bilbao Estuary, ES (2008); London, UK (2009); Haven van Rotterdam, NL (2010); Flushing River New York, US (2010); Beirut, LB (2011); Fiume Tevere Roma, IT (2011); Genk, BE (2012); Le Havre, FR (2012); León and Madrid, ES (2012); and Sacco San Mattia Venezia, IT (2013).

process, focusing instead on the construction rubble produced by demolished buildings. To convey the reusable rubble that would be generated by the destruction of the Pabellón Español, she completely filled its interior with nine mounds of brick, cement, gravel, mortar, wood, sand, glass, tile, and steel, totalling some 623m³, that she borrowed for the occasion.

During the 2013 Biennale di Venezia, she also published a guide and offered tours to Sacco San Mattia, an artificial island adjacent Murano, formed by glass and construction debris deposited in the harbour. "Indeed, the Sacca is an abandoned tip created between 1930 and 1950 by repeat dumping of rubble and dredging of the lagoon. This

undeveloped plot with a surface area of 26 hectares is the largest piece of available empty land in Venezia, which has made it the subject of countless speculation initiatives."³⁴

Almarcegui has also calculated cities' material weights, including that of São Paulo, BR; Lund, SE; Burgos, ES, and Dijon, FR. Weighing in at 1,224,497,942 tons, including 446,818,460 tons of concrete and 74,410 tonnes of plastic, São Paulo is the heaviest by far. As Andrews and Luna note, "When seen from the perspective of the geological timeframe, these components living in the buildings seem humbled, as they are demonstrably seen to be 'nothing more' than a temporary conglomeration of materials within the flow of time." 

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Biodiversity / Accommodating Species / Studying Species Depletion

A number of artists have practices that are dedicated to studying species depletion and preserving biodiversity, whose greater species varieties suggest ecosystem functioning. Some artists consider animals to be their work's ultimate audience, while others offer their studios, public sculptures, and art exhibitions as mini-biology laboratories, where the public can access their research first hand. The 1992 United Nations Earth Summit defined biological diversity as "the variability among living organisms from all sources, including, *inter alia*, terrestrial, marine, and other aquatic ecosystems, and the ecological complexes of which they are part: this includes diversity within species, between species, and of ecosystems."¹ Biodiversity engenders human consequences, since it turns out that biodiversity offers a bio-indicator for cultural diversity, as pluralistic societies tend to protect a greater number of species.²

Promoting life means taking note of the many and various factors of the growing and maturing organisms.

– Hans de Vries, 1971

The edge effect is the idea that the more edge you create, the more biodiversity you create, where a meadow meets a forest, or a piece of water meets a meadow, and so on. Two different ecologies meet. Two different kinds of landscapes meet. There is an edge there. That is where you find the most biodiversity at that edge. You don't just have a meadow, you have a meadow and trees and bodies of water. The idea of creating an edge is very important to permaculture.

– Nils Norman, 2014³

Registering Biodiversity

Between 1962 and 1963, **herman de vries** (b. 1931) often awoke around 4:30am to record bird sounds, using a large 100 cm parabolic microphone borrowed from the Institute of Biological Research in Nature. Opting for spots where numerous gardens bordered large forest regions, he considers this work exemplary of the Zero (Art) Movement, in whose exhibitions he participated, since there was no “composition, no selection- just recordings. These recordings were reality-music: *natura artis magistra*, a title derived from the full 19th century name for the amsterdam zoo, usually called artis.¹⁴ In the early 1970s, he recorded six little waterfalls from the same small brook. Years later, he added other water sounds such as rain, coastal breakers, surf, and the sound of dripping water in a small forest spring to produce *water. the music of sound* (1977), a 33 1/3 LP album. “It was all an expression of our reality and there was nothing to add, nothing to change, complete information as poetry, perfect.”¹⁵ Thirty years later, de vries created *chance & change, weilersbach* (2007), a 47-minute video filmed over two days in May, along the Weilersbach River near Steigerwald, DE. In 2007, he also made the 37-minute video *chance & change, no beginning/no end*.

Unlike the 1974 image of **Joseph Beuys** cohabitating with a coyote, which is arguably one of the best known art images from the seventies, photographs of **Hans de Vries**'s (b. 1947) earlier animal interactions rarely circulate beyond the tiny coterie of ephemera dealers. As part of de Vries' contribution to “Sonsbeek: Buiten de Perken,” (1971), he actually inventoried amphibians, insects, and moths inhabiting a one-square kilometre plot in Rotterdam, NL.

De Vries originally planned to inventory a 20-square kilometre plot, a size that he selected because one could walk its dimensions in any direction in an hour. He exhibited his findings during “Sonsbeek: Buiten de Perken” at Lijnbaansgracht

Centrum in Rotterdam, NL. When the cleaning lady threw away his installation, he telexed the enigmatic message, “Communication difficult due to the lack of participation of the public,” which was posted on the wall in its place.⁶

His idea to exhibit a species count as art would have been equally unusual had he proposed it as scientific research. The term biodiversity had yet to be coined and “species counts” were still rare, yet one can easily surmise that de Vries grasped his actions’ potential applications and implications. Between 1968 and 1975, he thrived amidst an all encompassing ecosystem where professional, artistic, and personal avenues merged as one, though his artistic stretch was comparatively short-lived. After moving to Deutschland in 1978 to pursue biodynamic dairy farming full time, de Vries moved to Danmark in 1992, eventually setting up a business for advising Dutch dairy farmers on how to move their farms to Danmark.

What I wanted has come about in my life. I have become a farmer and an artist, even though I did not deliberately set out to do so.⁷

In another “Sonsbeek: Buiten den Perken” venue, de Vries exhibited *De koien en pinken van boer Kremer* (Farmer Kremer's Cows and Heifers) (1971), literally a film featuring cows frolicking in their stables.⁸ Adjacent this film, he exhibited a “pasture plan,” on which he had recorded his daily observations of Farmer Kremer's cows, beginning with their annual emergence from their stable on Easter (13 April 1971). Until May 10th, they were brought out daily, after which they remained outdoors day and night. De Vries attributed their changing schedule to variables such as grass length, weather patterns, and available fodder (food).

Although de Vries didn't formally train as an artist (he lost interest in school and decided to “really go live” instead), he self-identified as an artist and participated in several high-profile exhibitions,

precisely because he found no other way to articulate his daily activities, which certainly bridged that era's preference for conceptual art (the book was his preferred medium) to his keen observational skills, methodical record-keeping, interest in registering daily activities, and ability to manage all of these activities as part of a larger ecosystem. **Krist Gruijthuijsen** adds, "de Vries was a close observer, an onlooker, an eyewitness, whose aim was to discern and document the relationship between man and his natural environment."⁹ A member of the Society for Advancement of Biologically Dynamic Farming since 1971, de Vries' lifestyle/daily life were no doubt influenced by **Rudolf Steiner**, who also served as art-guru for artists **Wassily Kandinsky**, **Piet Mondrian**, **Hilma af Klint**, and Beuys, though of course many decades after Steiner's death in 1925.¹⁰

Lynne van Rhijn recalls the remarkable simplicity of de Vries' artistic practice:

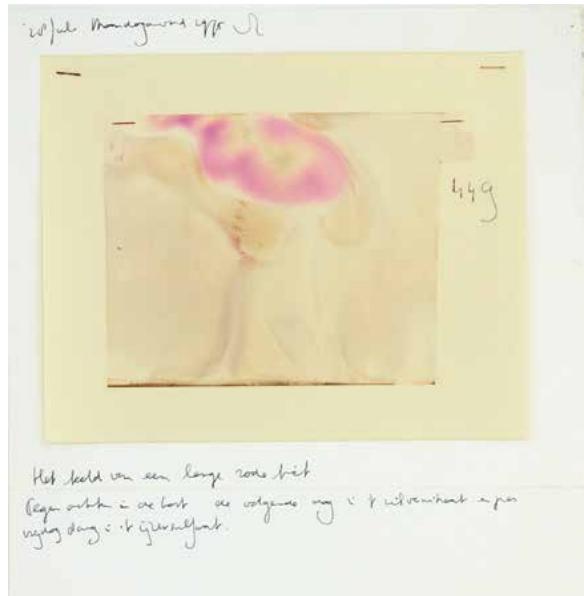
Even before working with nature drew his attention, his attitude was very simple: look at what is, in a given situation at a given time. No purpose. No message. Just something 'designate'. "Artist without art" was written on his business card, as if to emphasise that he was not art.¹¹

De Vries once told a reporter "I pretend nothing." Exemplary of that era's dematerialised art, he piled-up twenty televisions, letting them "show the art" for a 1969 show. Elaborating on this gesture, he wrote: "I just piled up a lot of televisions. If someone sees this, then the next night he'll think of my sculpture while watching television in his living room." It's not known whether he returned the TVs to the store following the exhibition, but one imagines him doing so. Not surprisingly, he once demeaned land art as "mutilation of the earth." As van Rhijn points out, he finally hit upon his one true purpose. "What I do, aware of the relationship between man and nature is indeed useful. It is of the utmost importance."¹²

During this period, there was an interesting artistic strain coursing through the Italian-Dutch conceptual art scene, what **Piero Gilardi** termed "micro-emotive" art in two 1968 essays published in the American magazine *Arts* and the Stedelijk Museum's *Museumjournaal*.¹³ **Sarah Maso** describes micro-emotive art as arising "from an interest in minimal sensations or experiences (micro-emotions), which are caused by slow processes or events that are so common or unremarkable that no one notices them in everyday life."¹⁴ Although de Vries did not participate in "Micro-Emotive Art" (1969), a group show curated by **Ger van Elk** for Amsterdam's Galerie Swart, de Vries has since become the "poster boy" for micro-emotive art, largely because the British, Dutch, and Italian artists who did participate are better known for their contributions to later art movements.¹⁵

In light of de Vries' twin interests in systems and micro-emotive tendencies, it's no wonder he considered his everyday activities artistic, even though some people might regard them as farm-life or ordinary daily activities! Reflecting on de Vries' practice forty years later, artist **Ted Purves** sees parallels between de Vries' two vocations.

On one level, [the two vocations] share an interest in process, in observation, experimentation, and tracking change. On another level, a deeper and more social level, both the practice of art and the practice of farming can also be seen as variant attempts to negotiate a life of unalienated labour. For farming, this means that the product of one's time and labour is not solely spent producing for wages. Farming holds the hope that portions at least of one's production go back into the earth to grow again and can directly feed one's body for the next day. For art, this relation to unalienated labour is more philosophical and is tied to the post-Kantian belief in art's freedom.¹⁶



Above: Hans de Vries, *Rising Picture*, 1971, Photographic paper, fruit juices

Over the years, Hans de Vries used fruit juices to create hundreds of rising pictures, whose final product he photographed since the rising pictures fade quite rapidly. Between 1971 and 1973, he regularly collaborated with his then wife Emmy on seven artist's books, three of which (*De geschiedenis van de citroengeranium* (The History of the Lemon-Scented Geranium) (1973), '*Dooiebeestenboek* (The Book of Dead Beasts) (1973), and '*n jaar rond: huiselijke handelingen door het weer* (All the Year Round: Domestic Activities and the Weather (1971)) are pictured below.

Courtesy Wilfried Lentz Rotterdam, NL.



De Vries' interest in making books began as a collaboration with his then wife **Emmy** on photo albums/diaries that documented their daily activities like *Ons dagelijks voedsel* (Our Daily Food) (1968), Animals Album (1969), *Wintervertellingen* (Winter Tales) (1968, 1969, 1970), Allotment Garden (1969), Beekeeping (1970), *Gebeurtenissen/Handelingen* (Happenings/Doings) (1971), and daily Maple Tree sketching (1972).

Some of the documents in their albums were later published as artists' books, beginning with *Het Tuinboek* (Garden Book) (1971), '*n jaar rond: huiselijke handelingen door het weer* (All the Year Round: Domestic Activities and the Weather (1971), *Kruisingen* (Cross-Breeding) (1973), '*Dooiebeestenboek* (The Book of Dead Beasts) (1973), and *De geschiedenis van de citroengeranium* (The History of the Lemon-Scented Geranium) (1973). By far the most touching is the dead animal book, a:

registry of all of the animals he and his wife came across in 1971 on their way to Wintschoten from their home town, Beerta in the north of Nederland. The publication's design reflects de Vries' manner of working: showing things as they are, plainly, and with little to no formal concern. *Het dooie beestenboek* straightforwardly displays each dead animal accompanied by a handwritten text and a sketch of the situation in which it was found.¹⁷

In 1973, he exhibited his books at Kunsthistorisch Instituut, Groningen, NL. In 1974, he launched a new approach, since he considered their diaries too personal to circulate. "So what he proposes to do is to circulate the boxes among a limited number of 'subscribers'. Subscriptions can be taken out at the exhibition and further information can be obtained from RAN [Rotterdam Art News]." (Rumour has it that only seven people subscribed.)

Being a biodynamic farmer, de Vries knew the technique for making "rising pictures," with

which both **Goethe** and Steiner had experimented. He used the juice from whatever fruit or vegetable was handy, noting the way:

The juice 'rises' in the paper, giving it a structural portrayal of a potato, a beet root, and so on. According to de Vries, the shapes in the 'rising' pictures are determined by the season in which the plants are harvested. Their juice reflects the changing seasons. When they are uprooted this relationship is broken and they retain the image of the last moment when they were still connected in this way to the soil.¹⁸

De Vries viewed these rising pictures as a kind of "self-portrait" made by each plant. When he discovered how unstable these pictures were (they quickly faded), he photographed hundreds to preserve their viability over time.

Rather than focusing on recordings, **Henrik Håkansson** (b. 1968) has primarily opted for live broadcasts. He first gained international attention with *Z.O.N.E. (Zoological Optimised Nocturnal Ecstasy) for Frogs* (1996), presented in "NOWHERE" at Denmark's Louisiana Museum. Hardly his first artwork to feature musically-gifted frogs, Håkansson and DJ Jean Louis Huhta played techno and trance, inspiring a "polyrhythmic croaking chorus."¹⁹ His *Monsters of Rock Tour* (1996) carried the sound of thousands of live crickets chirping together across a public address system, while the survival of Peruvian fern stick insects inhabiting *Wall of Voodoo* (1996) depended on their manmade ecosystem, which didn't quite work out as planned.

Despite these eyebrow-raising schemes, later works explored the intersections of technology, biology, and art in a manner that both allows spectators access to aspects of nature that are ordinarily off limits, while also critiquing the limitations of the human gaze, as well as science's pretense to order, control and rationality. His works' strength as art heavily depends on the well-being

of their animal subjects, though they remain cast as objects of amusement for human spectators. One might even say that his work lets people spy on nature, but at least doing so liberates nature from neglect. Riffing on *Andy Warhol's Sleep*, Håkansson videotaped *Sleep (Eunectes murinus)* (1998), an anaconda asleep in Yasuni Park (EC). Three hours later, the video abruptly ended when his camcorder's batteries died.

For *Tomorrow and Tonight* (1999), he collaborated with the University of Basel's Institute of Geography's Urban Ecology Research Group to build a roof garden atop the Kunsthalle Basel. For most eco-artists, the experimental garden where the drama of nature unfolds would be the focus, but here the garden rather sets the stage for its remote viewing. Projected images of nature outdoors were interrupted by images of human beings experiencing the exhibition indoors, enabling the "objectified/subjugated/violated/spied-upon" human beings to momentarily exchange places with nature. Works like *Untitled (Production Set)* and *Prototype (Funnel Trap)* (both 2000) actually lure insects to high-tech sound stages, where their routine activities can be recorded from multiple perspectives. When the A and B-sides of *Nightingale- Love Two Times* (2001), a record with an Italian and Swedish nightingale on either side, are played on two record players simultaneously, not only is there a duet, but biodiversity doubles as cultural diversity.

In contrast to works that effectively entrap animals in technological gear, whether cameras or sound stages, for human enjoyment, Håkansson has created several works focused on species depletion that more specifically address biodiversity. No doubt, his most popular work was *Out of the Black Into the Blue*, an open-air sanctuary for butterflies and moths that were once indigenous to Italia, but are now extinct, built in the Nordic Pavilion of the 1997 Biennale di Venezia. Not only was feeding especially popular, but visitors could experience metamorphosis first hand, either in

person or on monitors set up to highlight various parts of the garden. For *A Thousand Leaves* (2000), Håkansson trained pen-size cameras on aspects of a 90-foot-long temporary meadow, where he grew a European flower, Suomi's endangered thrift, in a constructed meadow adjacent a beach. Visitors observed plants' and insects' real-time progress on flat screens attached to the meadow's fence. In 2001, he created the *Zeewolde Field Library*, a trailer that doubles as a field observatory, replete with books on Dutch flora and fauna.

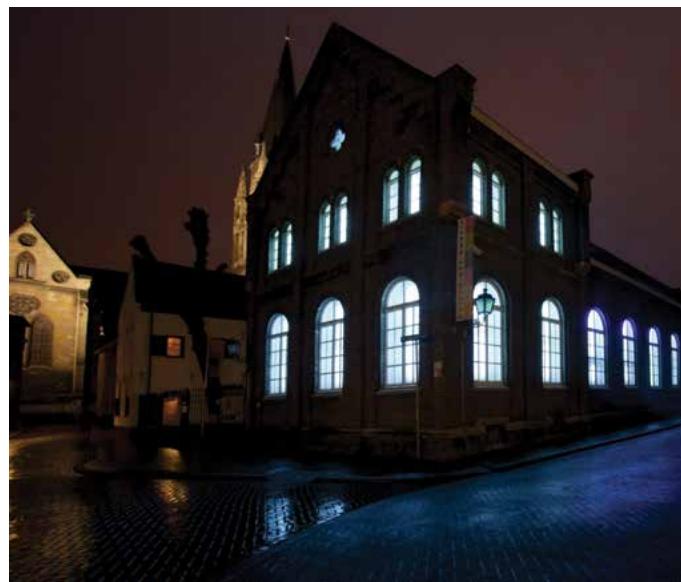
Having spent the late nineties and early aughties conducting field research in such far flung places as an Ecuadorian rain forest, Trinidad's Arima Valley, a constructed Finnish meadow, a Swedish wetland, and a Basel roof garden, Håkansson switched gears in the aughties, focusing his exhibitions more on forests than animals. He did however conduct research in Mexico, leading to his creation of *Monarch- the Eternal* (2008). In 2016, he built three huge *Insect Societies* (with beehives) sited in Holzwiede, DE for Emscherkunst 2016.

Like herman de vries, **Brandon Ballengée** (b. 1974) trained as a scientist. Unlike de vries, Ballengée attended art school prior to earning a Ph.D. in Biology and he routinely participates in both worlds simultaneously, exhibiting art while publishing the results of his many field surveys in scientific journals. His artistic and scientific research is entirely focused on the global decline of animal populations. According to Ballengée,

A primary focus of [my] research has been the rapid global decline and occurrence of developmental deformities of amphibians. Between the years 2005 and 2008, [I] worked to identify the causes for limb reduction deformities among Common toads in Yorkshire, UK. [I] discovered that dragonfly larvae and other small predators attacked the developing legs of tadpoles which resulted in an array of limb deformities. In 2009, [my] long-term

collaborator **Stanley K. Sessions** [and I] published these findings as "Explanation for Missing Limbs in Deformed Amphibians" in the *Journal of Experimental Zoology*.²⁰

During Ballengée's 2014 solo exhibition at Museum De Domijnen, he led nearly 200 citizen scientists (museum volunteers and school children) to conduct amphibian field studies in 28 wetlands in Limburg Province, NL. Three visits to one wetland in Nieuwstadt, NL turned up a total of 1671 amphibians of three different species: 544 European common brown frogs, 1103 European common toads, and 24 green "edible" frogs (the French delicacy). During these surveys, citizen scientists discovered both the presence of Ranavirus (a frog disease found in a northern province in 2010, but never before in Limburg) and the highest deformity level Ballengée has encountered in two decades of performing amphibian studies in wetlands. Scientists consider malformation rates under 5% alarming, but acceptable, while



percentages above indicate “hotspots,” signaling epidemic levels.²¹ He actually found deformity rates among green frogs to range from 0% to 76% during 3 counts and 54% of adult green frogs were missing limbs, digits and/or eyes.

Ballengée and three local scientists published their rather grim findings in the Dutch biology journal *Natuurhistorisch Maandblad* 104: 3 (March 2015). At this stage, it's difficult to pinpoint the exact cause of such high limb deformities, let alone the massive tadpole mortality rates. Possible explanations range from emerging diseases such as Ranavirus, which is not known to cause deformities; invasive species such as a large population of Asian stone morokos found in one pond; “predatory injury to tadpoles from leeches, larval Odonates and some fish (Veith and Viertel, 1993; Ballengée and Sessions 2009; Bowerman et al. 2010); parasitic infections (Sessions et al. 1999; Johnson et al. 2001); genetic factors among some populations (Dubois, 1979); varied agrochemicals, other pollutants such as heavy metals, industrial wastes, and

urban effluences (Bridges 2000; Flyaks and Borkin 2004; Fort et al. 2006; Spolyarich et al. 2011),” possibly leached into the groundwater from nearby hard-rock mines. This was supposedly the first time since the 1960s that amphibian deformity studies had been conducted in Nederland.

Archives

When it comes to biodiversity, one of the most basic questions concerns knowing how to distinguish differences, discern diversity, as well as measure and account for it. New species often resemble others, but after years of looking, noticing, and parsing the details differentiating one species from the next, nature lovers gain access to a spectacularly differentiated scene. To preserve the knowledge that might one day be lost, numerous artists have created archives. Whether specimen collections, nature recordings (audio/video), or photographs, these archives serve as contemporary versions of yesteryear's treasured watercolours, such as the “Surinam insects” by Maria



Far left: Brandon Ballengée, *Love Hotel*, 2014, “Season in Hell,” Museum De Domijnen, Sittard, NL. Photo Credit: Bert Janssen.

Brandon Ballengée, *Malformed Amphibian Studies*, 2014, Nieuwstadt, NL. Photo Credit: Jo Vervoort.

As part of Brandon Ballengée's 2014 Museum De Domijnen career survey, he worked alongside citizen scientists to conduct field studies in local ponds, streams, and wetlands. The results were beyond frightening since they recorded the largest ever population of malformed amphibians (about 95%).

Sybylla Merian (1647-1717), "American birds" by **John Audobon** (1785-1851), the **Titian R. Peale** Butterfly and Moth Collection from the 1800s assembled by the painter of the same name, or **Paul Cezanne's** botanical collection from the 1930s.

Artists' archives serve scientific purposes when they: furnish reference points against which future samples can be compared; display and publicise species variegation; or offer material resources for later artworks focused on variations among collected samples, whether soil, leaves, or animals. To gain further precision, I employ the term *collection* to denote living specimens, such as **Lois Weinberger's** seed and plant collection comprising his Ruderal Society, as discussed in Section Three; reserving the term *archive* for inanimate objects, even those that were once alive.

One of the rare artists to have trained first as a botanist, herman de vries worked as a scientist for nearly twenty years before focusing full-time on his art: first at the Institute for Research in Plant Diseases (1952-1956) and then at the Institute for Biological Research in Nature (1961-1969). In 1961, nearly a decade after his first solo exhibition in an Amsterdam gallery (1954), he started exhibiting with Nul (a.k.a. Group Zero) the minimalist art movement founded in 1957 by **Heinz Mack**, **Otto Piene**, and **Gunther Uecker**. de vries cites the Zero movement as having opened up a gate for him regarding how to convey process, to show what's happening. For nearly two decades, de vries produced mostly white, modest installations of upright, totally abstract forms, and optically-sensitive wall works whose arrangements seemed grid-inspired, yet most were derived from random and chance placements of paper squares, lines, or dots.

Even as de vries' works remained classically concrete, exemplary of hard-edge, minimalist tendencies; he was constantly conducting plant research in the markets, fields, and libraries of Afghanistan, Eastern Europe, India, Laos, Mauritania, Morocco, Russia, Senegal, Seychelles, Sri

Lanka, Thailand, Tunisia, Turkiye, etc., to discover both the "lost" knowledge of medicinal herbs and the sheer richness of natural soils and plant species. This research culminated in *natural relations: eine skizze* [= a sketch] (1989), a nearly 800-page volume documenting the medicinal, psychedelic, mind-moving, and pharmacological properties of around 2000 plants. **Mel Gooding** has described de vries' "sketch" as an "elegy to the innumerable plants whose healing and sacred virtues have been lost to human use."²² Divided into four parts (Delhi, Eschenau, Morocco, and Senegal), each section reflects the particular geographic locale whence edible sources were sampled. de vries adds,

we are only living beings because of what we eat, drink, and breathe. the conscious union of our organism with our life space is re-ligion (the original meaning is derived from latin: to join, to link, to connect, unite). it is yoga, from the Sanskrit root yuj, meaning to connect, to join, taking in our food is a way of participating in the world's unity of existence.²³

By 1974, de vries' interest in specimen collecting was influencing his artistic practice. de vries' specimen presentations recall Zero's grid structures, while the three-year sapling studies and sunny/shade-leaf pairings (1973-1976) of **Sjoerd Buisman** (his younger countryman) resemble "all-over" compositions. In the beginning, de vries' leaf collages featured one or more species collected from one place on one particular day. His "random" and "pseudo-random objectivation" collages, which recall piles of pick-up sticks or floating matchsticks, paved the way for his later *salix I and II (weiden-blätter)* (1986), a diptych featuring randomly distributed willow leaves juxtaposed with a willow-leaf grid. By 1985, de vries' square-patch collages were giving way to gridded earth rubbings (sometimes called "earth wipes"), such as *from earth* (1985). Of all of de vries' archives, most impressive is his earth museum, currently located at Musée

Gassendi, Digne-les-Bains, FR, which holds 8000 soil samples, handpicked from cultivated places like fields and paths. Rubbings made from soil are yet another intentional human act.²⁴

Although variety clearly captivated both Buisman and de vries, the former changed gears after illuminating the physical effects of sunlight's uneven distribution, while the latter has remained focused on species variegation ever since, and for good reason!

bringing together earth from various regions and countries in the world, these works enable us to see their differences and similarities. none of the [8000] samples in my earth museum are in fact the same. like the faces of men, the forms of the leaves of one tree, any earth sample is a new form. every happening, every new chance to realise form reveals a new one. i added a mirror to underline the fact that they may look identical but still be different, they can look different but are still identical. nature doesn't repeat itself. it's always new, all ways to be all ways to be all to be ways to be.²⁵

During dOCUMENTA (13), Tue Greenfort exhibited *The Worldly House* (2012), a multi-species archive, exhibited in a cabin that once housed black swans. This exhibition was inspired by biologist **Donna Haraway**'s 2003 *Companion Manifesto* and her ideas of "multi-species co-evolution." Haraway's 2008 book *When Species Meet*, whose message is "To be one is always to become with many," has since inspired academics to reshape links between humans and non-humans. To produce this vast archive, Greenfort gathered informational material, such as photographs, documents, and videos, from over 100 artists, whose work has unwittingly addressed inter-species relationality such as **Allora & Calzadilla**, Brandon Ballengée, **Joseph Beuys**, **Kristina Buch**, **Mark Dion**, **Fernando García-Dory**, **Tue Greenfort**, **Henrik Håkansson**, **Pierre Huyghe**, **Eduardo Kac**,

Marcos Lutyens, **Åsa Sonjasdotter**, and **Koen Vanmechelen**. I write "unwittingly" because most of their projects were produced for purposes other than demonstrating multi-species relations, though of course Greenfort's decision to archive this material as a set makes total sense.

As noted in Section Two, the idea of artists engaging non-human species as *art* dates quite specifically to May 1974, when Beuys performed *I Like America and America Likes Me*, for which he spent four days cohabitating with a coyote, though apparently sharing his meals with humans upstairs during gallery "off-hours"²⁶ Greenfort's archive highlights far more than species diversity, as it draws attention to Harawayan notions of relationality, entanglements with otherness, and routine intra-actions amidst shared environments, as opposed to interaction across boundaries.²⁷ For some, her approach reflects common sense, derived primarily from living amongst and appreciating non-human species. For others, these are complex concepts that require constant re-articulation, since routine selfishness and human cruelty towards humans and non-humans alike indicate just how little people understand their entanglements with others.

Since 2015, **Rebecca Chesney** has kept an *Invaders Archive* to preserve information about invasive plant species. Thus far, three species have been archived: Giant Hogweed, Buddleja, and Himalayan Balsam. After collecting each seed, she draws them, preserves them in 3cm-diameter resin discs, and uses the drawings to make screen-prints. During a 2016 residency as PEAK's first Artist-in-Residence near Wales' Black Mountains, she "systematically documented her immediate environment: taking photographs of lichen, silage bags, craggy peaks, elements of the sky, rotting sheep carcasses, half buried and partly rusted farm machinery," as well as the extremely rare Ley's Whitebeam tree and the Horsehoe bat. Taking a cue from Air Wick's "Spirit of Brecon Beacon" room fresheners, Chesney

Sjoerd Buisman, installation shot, "De bomen van Buisman," 2015, Kranenburgh, Bergen, NL.

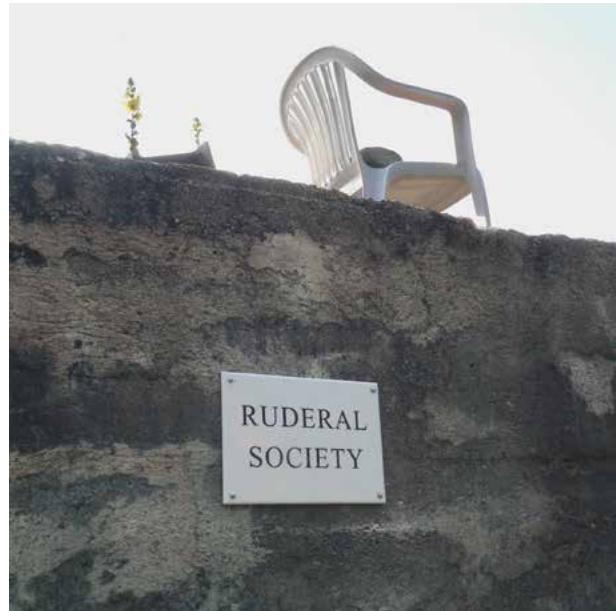
During the 1970s, Sjoerd Buisman used the annual leaf loss of a single deciduous sapling to produce "all over" compositions. To grant viewers greater access to plant growth, he combined consecutive years as diptychs and triptychs. In 2015, Kranenburgh displayed dozens of his leaf series on one wall.



produced a Brecon Beacons palette derived from her locally-sourced samples. The Brecon Beacons colour archive encapsulates the feelings of "Hedgerow Bunting," "Frosty Bracken," "Packamac," "Shot Fox," and "Joyride."²⁸

Collections

In 1978, Lois Weinberger started inventorying everyday situations in his hometown of Stams, AT, since he noticed objects being used for purposes other than what they were originally designed to do. To this end, he photographed tractor tyres transformed into growing containers, hollowed-out trunks functioning as flower beds, car seats used as park benches, tree fungus providing a shelf for shaving supplies, and an animal yoke turned into a lamp.²⁹ As a series, *Bestandaufnahme* (Stock Taking) not only pays tribute to local ingenuity, but this imaginative exercise incidentally inspired him



to enumerate diverse objects' potential applications. For example, alongside a photograph of a flower bucket, he wrote "probable prototypes: feeding trough for pigs, African dug-out, Oberammergau flower-box."¹³⁰ Rather than treating refuse and other people's neglected goods as things that are obsolete, trash, or disposable; he imagined multiple ways objects could be used, giving ordinary things new purposes, if not new lives. Unlike the artistic presentations of other people's discarded belongings discussed in Section Two, Weinberger positioned his neighbours' upcycled cast offs as enchanting, if not awe-inspiring.

Weinberger takes a similar attitude towards his plants, many of which are considered undesirable weeds, which he collected while traveling through the Balkans, Ukraine, España, Syria and Greece. After replanting them (for safe keeping) in his "wild-plant" collection, they are ready to be transplanted elsewhere to create his artworks. For the 1992 exhibition "Beelden Buiten"

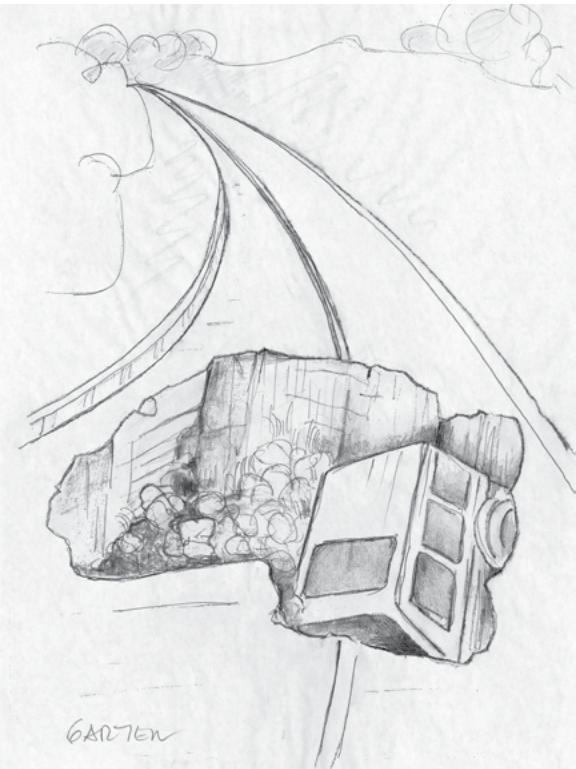
(*Outdoor Pictures*) in Tielt, BE, Weinberger transferred fourteen plant species from *Gebiet Wien* to create his first *Brennen und Gehen* (Burning and Walking), an action he later repeated when he transplanted species amidst jack-hammered roads in Salzburg, AT (1993), Berlin, DE (1994), Kassel, DE (1997), and Tokyo, JP (1998). Ever since documenta X, *Das über Pflanzen ist eins mit ihnen* (What is Beyond Plants is at One with Them) (1997), sited amidst an abandoned railroad track at the Kulturbahnhof, has sprouted "immigrant plants," plants that have traveled far and wide thanks to Weinberger's perambulations. Originally situated on 600-square metres of "poor soil," he has moved his wild-plant collection from *Gebiet Wien* (1988-1999) to the *Ruderal Society* in 2007. *Gebiet II* occupies the grounds of a former mirror factory, an industrial site about an hour's drive north of Wien, AT.

Like de vries, **Georg Dietzler** (b. 1958) initially exhibited unadulterated botanical specimens, such as blossoms, buds, leaves, and seeds,



Lois Weinberger,
Ruderal Society,
Since 2007, Gars
am Kamp, AT.

On the site of a former mirror factory, Lois Weinberger launched the *Ruderal Society*, the current home of his vast seed collection and plant nursery, about an hour's drive north of Wien, AT.



Top: Lois Weinberger, *Autobahngarten*, 2000, Pencil on Paper, 29.5 cm x 21 cm.

Bottom: Patricia Johanson, *History of the Highway: Debris Garden*, 1969, Pencil on Paper, 21.5cm x 28cm.

but his work took an ecological turn in the late 1980s. Concerned that trees comprising **Joseph Beuys'** *7000 Eichen* (1982-1987/present) were routinely damaged by cars and could one-day become extinct, he initiated a long-term conservation project known as *7000 Acorns* (1989-1991/2002), which required storing acorns at -20°C in a deep-freeze for eighteen months at a time, after which new seeds replaced them. Originally stored in an "atomic bunker" hidden inside a public parking lot, the freezer was later moved to Dietzler's personal storage unit, which over eleven years hosted seven generations of 7000 acorns, awaiting the life-saving technology that would have allowed them to be stored frozen in perpetuity. As the artwork's end-date indicates, Dietzler's initiative didn't last as long as he had hoped. Upon returning from a long trip in 2002, he discovered that the company managing his storage unit had not only gone out of business, but had sold his unit's contents as salvage, along with the precious notebooks he had used to carefully record the acorns' numerous collecting sites, their deep-freeze date, seed conservation techniques, numbers of germinated seeds, as well as planting dates and locations.³¹

Invited to propose an artwork for a new Den Haag suburb, Wateringse Veld, herman de vries proposed *bomenmuseum* (tree museum) (1996-2011/present) for which each of the suburb's 400 new streets would each be lined with different tree species, enabling as many species as possible to be represented around town. Not only is *bomenmuseum* the largest art project in Wateringse Veld, but such a large assortment of trees is unique in Nederland. "It is a variation of the old arboretum, a park where all sorts of special and ordinary specimens are planted."³² Not only was nature restored to the lives of townspeople, but biodiversity is emphasised

In 1969, Patricia Johanson created 22 extremely different illustrations for transforming US highways into gardens, though none has been realised. Alternatively, Lois Weinberger actually sited five gardens on busy city streets before designing his German highway garden.

herman de vries,
bomenmuseum,
1996-2011/2017,
Wateringse Veld,
Den Haag, NL.

Each of Water-
ingse's 400 streets
is lined with one of
400 tree species.



Maria Thereza Alves (in collaboration with Gitta Geschwendtner, *Seeds of Change: A Floating Ballast Seed Garden*, 2007-2012/summers only, Bristol Floating Harbour, Bristol, UK. Courtesy Arnolfini, Bristol, UK)

This floating garden was planted with seeds deposited in the river centuries ago, transported from far away in the boat ballast.



as well, giving the townspeople a unique identity that enriches their connection to place.

From 2008-2009, **Camilla Berner** collected seeds from a København wasteland and exhibited them as a pyramid in *Precious Things and Stuff We Don't Like*. She wanted both to show the diversity of plants co-existing on a small area (124 species within 1700 m²) and to store them for future use, in case either climate change causes certain species to become extinct or we change our perspective towards weeds. Berner remarks:

Seeds hold a great power. The seed is the beginning for something new. Ecological issues never consist of just technical terms- they are mixed with very emotional and often irrational concerns, as nature mirrors our cultural identity. So I find an aesthetic practice ideal because it is able to include and operate with all of these complexities simultaneously.³³

For Berner's contribution to "Publik: Contemporary Art in Public Space," she planted *Black Box Garden* (2011), a vibrant and lively "heath," grown with seeds collected in 2007 from Kroyers Plads, a vacant lot in one of København's most expensive, harbour-adjacent sites. *Black Box Garden* refers to the idea that the seeds register a recent history of inhabitants' planting practices much like an airplane's black-box recorder captures its last 30 minutes of flight data. Upon hearing that the lot had been sold, she decided to grow her garden, using only the seeds (92 species) collected *in situ*. Despite its having been temporarily grown from seeds deemed weeds, she recalls:

I had an immensely rewarding experience by doing this garden through eight months. My children are still talking about it. The local kids had such fun in this garden. They could play all the games they could not do anywhere else because all the playgrounds are so strict from any kind of wilderness. . . .

In many way, my experiment was to ask---can you order disorder?³⁴

For the "Visit Tingbjerg: Contemporary Art Festival," Berner presented *Species Plantarum: Tingbjerg* (2012), for which she gathered seeds around Tingbjerg, a København suburb that was once a garden community with a *gårdlag*, or gardening committee. She only collected seeds during the early part of the season, so there would have been even more seeds for her seed shed had she collected them over the whole growing season. Still, she collected enough seeds to create a portrait of the community based on its available seeds.

During documenta (13), **Christian Philipp Müller** displayed seed packets from some sixty-three varieties of Swiss chard inside the Othoneum. He had previously planted the seeds aboard his *Swiss Chard Ferry* (2012), a leafy pedestrian bridge made from four attached floating row boats hosting 63 buckets of flourishing Swiss chard, straddling the Kleine Fulda in Kassel's Karsaue Park. A Swiss national, Müller likely selected Swiss chard because of its "cultural heritage," though of course Swiss chard is no more Swiss than Swiss Miss cocoa. Even so, his presentation no doubt drew people's attention to the notion of variety, which especially seems surprising for a lesser known vegetable that is so little consumed that it is rarely sold in grocery stores. The high level of Swiss chard biodiversity most likely reflects its modest production and minuscule consumption, as compared to vegetables like potatoes, which means that Swiss chard species don't endure the intensive regulations that ensures that farmers will produce what's needed to meet widespread demand.

For *Seeds of Change: A Floating Ballast Seed Garden* (2007-2012/summers only), designed by landscape architect **Gitta Gschwendtner** for a once derelict concrete grain barge now floating in the Bristol Harbour, **Maria Thereza Alves** (b. 1961) planted non-native seeds that were originally



"trafficked" to Bristol, UK. Mixed in with the earth, stone, or gravel, seeds served as ship ballast during the 19th Century, only to be dumped directly into the river, so that docked ships could make room for local cargo to be transported elsewhere. Sometimes, the process of dredging harbours to support ever-larger ships unearths seeds deposited long ago along the riverbed, enabling seeds to spring back to life after lying dormant for up to 100 years. Knowing this, Alves dug up small earth samples from the riverbed, while volunteers germinated the seeds. Thus an "array of plants, which were grown from these original sites, became a living embodiment to the port's trading history, and reflected the different global routes travelled by Bristol merchants."¹³⁵ If Weinberger's replanted invasive species sometimes prompt unwarranted concerns on par with erroneous attitudes towards migrants, Alves' ballast-flora garden captures the residue of African slaves migrating to the new world, accompanied by ballast bearing seeds from across the world that ended up in Bristol.

Since the millennium, many gardeners have felt pressured to replace their gardens' non-native plants with natives, but some biologists view non-natives as actually contributing positively to biodiversity, though of course not when dominant non-natives edge out young natives. In some cases, natives and non-natives have developed symbiotic relationships that depend on the presence of both, so destroying the one might not necessarily save the other. On this level, Weinberger's introducing foreign species from his collection and Alves' replanting buried non-natives can be seen as biodiversity experiments that actually test ecosystem functioning, though I imagine native purists and anti-invasive ideologues considering their actions counter-productive (or even anarchic).

The point can't be to follow precise rules, since so few rules are generally applicable. One can, however, strategise ways to minimise each particular ecosystem's entropy or to optimise ecosystem functioning. And since no ecosystem is ever in perfect equilibrium, there may very well be



Lois Weinberger, *Gartenarchiv* (Garden Archive), 1988-1999, 624 slides in Plexiglas cases. Collection: Stedelijk Museum voor Aktuele Kunst, Gent, BE.

Image from: "Lois Weinberger," 2006, 21st Century Museum of Contemporary Art, Kanazawa, JP. Photo Credit: Suemaso Mareo.

After voluntarily dismantling *Gebiet Wien* (Area Vienna), the plot where Lois Weinberger cultivated his collection of live specimens for eleven years, he created *Gartenarchiv* to keep his original collection's biodiversity alive in the public's memory.

numerous ways to achieve either goal. Since falling biodiversity levels are perhaps the simplest way for communities to recognise ecosystem instability, it's fortunate that 200 nations have already signed a treaty that affirms their commitment to track biodiversity. Species depletions and intra-actions are no doubt serious affairs. Species depletion has typically been viewed as the result of some combination of reduced access to nutrients (including water and sunlight), competition from invasive species, and human incursions. In terms of human incursions, I have in mind the way construction regularly causes flooding and soil erosion; soil erosion reduces animal habitat; desertification diminishes access to food and water; and fertiliser runoff (from lawns and monoculture farming) spawns algal blooms, thus suffocating everything living within the bloom's perimeter.³⁶

Biodiverse Ecosystems

As noted in Section Three, **Hans Haacke** was one of the first artists to take an interest in systems as

art. His seminal work *Grass Grows* (1969) grew out of his 1965 manifesto that called for a changing, indeterminate, living-in-time, non-stable work of art that the viewer could handle. It would also react to its environment, temperature changes, and light.³⁷ These days, science characterises three systems- open (allows matter, energy, and/or information transfer across the system's boundary), closed (only energy is transferable like Haacke's *Condensed Cube*), and isolated systems (no transfer occurs across system's boundary like 99.99% of all artworks). Focused as it was on environment-reactive artworks, Haacke's 1965 manifesto applies to both open and closed systems.

As it turns out, so many artists were "systems-oriented" that **Jack Burnham** published "Systems Aesthetics" (1967) in *Artforum* and later curated "Software" (1970), which featured works by 21 artists such as Haacke and **Agnes Denes**, for New York City's Jewish Museum. So widespread was the "systems-bug" that **Nancy Holt** and **Robert Smithson** parodied that era's artistic obsession with

systems and record-keeping in *East Coast/West Coast* (1969), their hilarious, improvised video-taped debate during which the “west coast” persona repeatedly responds, “I don’t care [about] all this ‘systems’ stuff. I’m out there *doing it*.” “Not only were dirt and seeds little-known art materials back then, but the work’s changing nature introduced an artistic interest in time-based materials,” which of course has preoccupied scores of artists ever since.³⁸

One of the most impressive attempts at creating habitat corridors is the project known as *A Vision for the Green Heart of Holland*, which the **Harrison Studio** proposed in 1994 to maximise green space and optimise biodiversity. In anticipation of people needing 600,000 new homes by 2010, the Cultural Council of Southern Holland invited artists, architects, and urban planners to propose solutions for vast tracts of farmland at the centre of a ring of culturally diverse cities, including Amsterdam, Harlem, Den Haag, Delft, Rotterdam, and Utrecht. Eight months later, the Minister of the Environment’s formal report referenced many of the issues and strategies raised by the Harrison Studio’s proposal, which they first exhibited in a small chapel in Gouda, before travelling on to Delft and Zoetermeer. Their proposal’s success has often been attributed to their having involved Dutch ecologists and architects in its conception from the onset.

Their proposal’s most inventive feature was its “Bio-Diversity Ring,” a multi-use park with housing on its perimeter that encircles the existing farmland and polders to form a protective urban edge for the “Green Heart.” Considered the first-ever “continuous corridor for bio-diversity in continental Europe,” the Harrison Studio envisioned new homes being built outside this one- to two-km wide, 140-km long Bio-Diversity Ring and its outreaching arms, enabling the preservation of Nederland’s “Green Heart,” as well as the transfer of wealth to communities outside the ring, rather than to new giant cities or existing cities within. Most important, their “Bio-Diversity Ring” could absorb 5,000 tons

of carbon dioxide and make about 25,000,000 m³ of water available, thus eliminating the need to tap the polluted Rheine during summer months³⁹.

As **Jari-Pekka Naulapää** points out, however, the “systems” part of an ecosystem is extremely difficult to define, making the identification of a particular system’s boundaries, let alone the quantification of its inputs and outputs, nigh impossible.⁴⁰ That said, the term ecosystem, as used here, pertains to a particular artwork’s living matter, so the systems part is easier to contain, though perhaps no less difficult to quantify. As it turns out, some consider the notion of biodiversity no less elusive than that of ecosystems. Scientists routinely debate various methods for measuring and/or extrapolating biodiversity from select sites, while some philosophers of science remain skeptical about the usefulness of tracking biodiversity, other than to count species for the sake of counting, remaining indifferent to the possibility of capturing intra-action or tracking species depletions/augmentations.

Experiencing Biodiversity

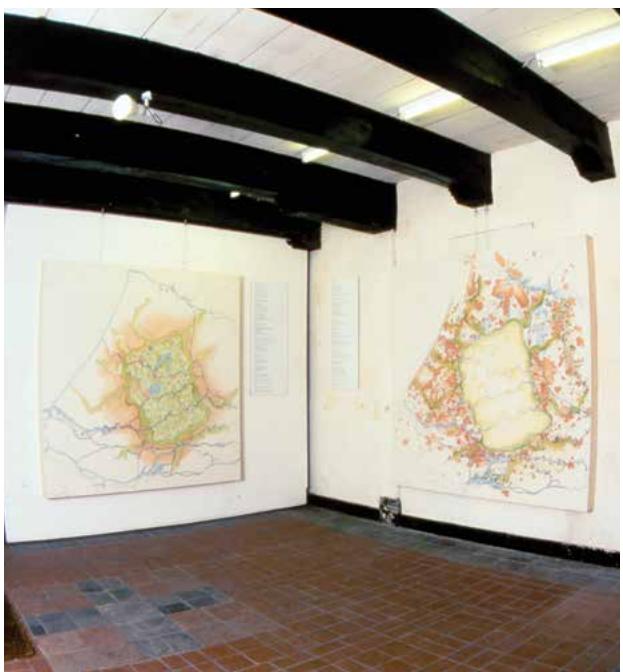
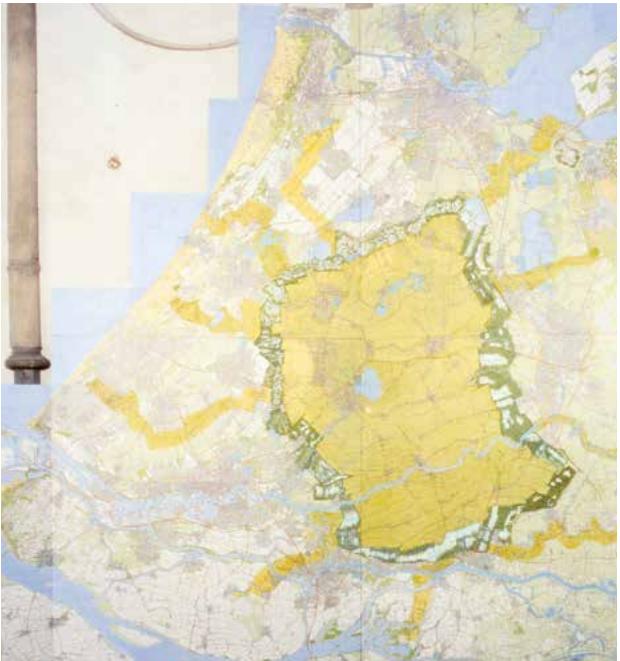
Perhaps the simplest and safest claim one can make in favor of tracking biodiversity builds on biologist **Michael Scherer-Lorenzen**’s view that ecosystem functioning depends on biodiversity, as opposed to biodiversity being the “determinable” dependent variable that reflects some combination of nutrients, climate, and disturbance.⁴¹ Thus, counting species, with special attention to native offspring which are weaker than their parents, offers insight into ecosystem functioning. By contrast, one cannot use species diversity, productivity, or resource exploitation to predict, let alone maximise biodiversity.

Most people live and work indoors, so they only ever view a handful of species at a given time (save occasional trips to zoos and botanical gardens), so it’s particularly difficult for them to glean insights regarding multi-species “co-evolution” (this term is better served by “co-adaption,”



Above and next page: Harrison Studio. *A Vision for the Green Heart of Holland*, 1994."The Green Heart Reenvisioned," Jeruzalemkapel, Gouda, NL. Courtesy Ronald Feldman Fine Arts, New York City, US.

Working with Dutch ecologists and architects, the Harrison Studio conceived a strategy for adding 600,000 new homes along a "Bio-diversity Ring," whose perimeter encloses, and thus protects farms and polders.



since evolution entails much longer timeframes) from reading about the suspected 8.7 million species (80% of which remain undiscovered). Two ongoing art projects and a temporary one, notably Åsa Sonjasdotter's *The Order of Potatoes: A Potato Perspective* (since 2005) and Jean-François Paquay's *Portager* (since 2012), as well as Kristina Buch's *The Lover* (2012), a raised butterfly garden situated on the Friedrichsplatz during dOCUMENTA (13), have invited audiences to focus on biodiversity in action. Like a walk in the woods or a hike along a stream, artworks such as Buch's eden planted with 3000 indigenous plants (180 different species) nourishing some 3000 "homebred" butterflies (40 different species) with new imago emerging from chrysalis every day, expose passersby to biodiversity firsthand, thus concretising notions of intra-action, entanglement, or relationality.⁴²

Exemplary of biodiversity, Sonjasdotter (b. 1966) has remarked how potato varieties can be traced to "coincidences, accidents, planning, violence, and careful custody over thousands of years."⁴³ A study trip to India, where farmers regularly collect, improve, and breed the seeds of local rices, cereals, and beans; first inspired her to grow potatoes as a way to participate in Scandinavia's farming heritage. All the while, she became increasingly fascinated by European Union laws regulating potato legality, suitability, and acceptability despite local preferences and customs. Incidentally, potatoes first reached Europe via Wien, AT in 1587, but weren't cultivated locally for another two centuries. Her two main projects thus play off the fact that some kinds of potatoes belong to the "cultural common," since they were cultivated long before plants were "commodified," while species that fail to uphold European Union standards of "durability, uniformity, and storage" are often considered "illegal." Moreover, farmer-bred potatoes considered local delicacies are rarely registered for commercial distribution within the EU.⁴⁴

Sonjasdotter first encountered such discrepancies in 2005, when she realised that none of the traditional potato varieties that she had planted on her family's farm, located on the island of Ven between SE and DK, were registered on the EU Variety List, and therefore could not be commercially distributed.⁴⁵ As a result, her first potato project, *The Order of Potatoes: A Potato Perspective on a European Matter* (since 2009) featured fourteen traditional varieties that are considered contraband beyond their original region, the exception being the Dutch Bintja, whose distribution is currently permitted, though it too was once banned in Nederland on account of its high pesticide requirements. Despite their European roots, it turns out that Mehlige Mülvertler (grown in AT for centuries), Bamberger Hörnchen (one of Europe's oldest varieties), Æggeblomme (grown in DK for at least a century), Rosa Tannenzapfen (grown in Central Europe since the 1850s), and Rot Emma (cultivated by potato-breeder **Karsten Ellenberg**) can all be considered "gangsters." Sonjasdotter's farming methods are no less rebellious! She's cultivated fugitive tubers on an Amsterdam roof, invited Danes to abscond with "contraband" spuds, grown sacks of potatoes in a Berlin community garden, tendered "outlaw" varieties during the Bucharest Biennial, and harvested a large outdoor patch, vaguely shaped like the state of California, adjacent Los Angeles County Museum of Art.

Ellenberg, a potato-breeder and gene-bank creator (120 varieties), has received lots of press for his efforts to reintroduce a variety known as Linda to the commons. Even so, his business model apparently threatens "the breeding industry by creating a completely different market, one interested in small-scale farming and diversity."⁴⁶ Strangely, some European governments have found it easier to outlaw potatoes than to identify them. During the 1940s, Swedish agronomists collected 10,682 potato samples, but could only identify 188 species, leaving 102 varieties

unidentified, which couldn't be placed on Sverige's national registry of "most efficient varieties" because they were "unknown."

Sonjasdotter's follow-up project, *The Way Potatoes Go: A Potato Perspective on an American Matter* (since 2010), which she first presented in Los Angeles, includes fifteen varieties in common use. "By growing common potatoes in the US, she gives Americans access to their misplaced potato heritage, while she reminds Europeans of strange laws that restrict European access to fourteen varieties, one of which, the Vitelotte, also belongs to the American list of 'common potatoes'."⁴⁷ In 2012, Sonjasdotter decided against planting "common" potatoes at Pyramid Hill Sculpture Park north of Cincinnati, US, and gave away hundreds of potatoes (originally ordered for Pyramid Hill) to local gardeners keen to grow nine heirloom varieties from the Americas. Curious as to what might happen (both legally and agriculturally) if her "Americans" were grown in Europe, I plopped one each in an ordinary US priority-mail mailer and dropped the lumpy pack of spuds in a post box, destination BE. A twist on Sonjasdotter's original scheme, Paquay ended up growing her "American" list in his artisanal European soil. The result succeeded in spades, as each of the nine little tubers produced scores more.

In 2014, Sonjasdotter's proposal to grow twelve French heirloom varieties of potatoes in Paris was awarded France's prestigious COAL prize. As recently as the 19th Century, Parisian farmers were so good at intensive farming that they both filled local markets and exported excess crops to England. Imagine how convenient it once was to transform transportation waste into vital fertiliser. The arrival of the car not only reduced the manure supply, but it eased transportation across distances, while WWI jumpstarted the chemical industry, availing chemical fertilisers for unknown fields far from city life. Both events conspired to purge cities of their urban farms, what we call the 0-km movement today.⁴⁸

For over forty years, Jean-François Paquay (b. 1956), a master gardener and ceramist, has farmed a modest experimental/studio farm in Maransart, BE, enabling him to link all aspects of his artistic practice from urban farming to ceramics production, geodesic greenhouses, tea ceremonies, and even home-brewing. His practice engenders a wide-ranging system, whose byproducts are repurposed, leaving no wastes behind, since raked lawn leaves are composted as leaf mould; composted food scraps and horse manure are used in his *Portager®*; peonies pruned at season's end are burned to generate ash glazes for ceramics; and honey produced by his bees is fermented to generate home-brewed beer.

Paquay works by day as a cartographer for CREAT (Centre de Recherches et d'Etudes pour l'Action Territoriale) at Université catholique de Louvain in Louvain-la-Neuve. Built in 1972, the Louvain-la-Neuve campus is an elevated concrete suburbia of sorts, surrounded by farmland, some 25 km south of Bruxelles/Brussel, BE. Knowing full well that people increasingly want to learn how to grow their own food and that CREAT aims to publicise their urban planning services as sustainable, Paquay installed a 3-m² potager (French for kitchen garden) on the terrace directly outside CREAT's offices. As an artwork, Paquay's *Portager®* (blends portable with potager) not only links CREAT to street-life below, but it offers a visible research experiment concerning biodiversity in the urban environment and truly demonstrates how easily urban life can be infused with locally-grown food. Although his design's name is protected as a registered trademark, the actual design is accessible to the commons, with expectation that end-users can use his instruction manual to assemble their own baskets for around 7 euros in order to grow their own food.

Several factors make the *Portager* unique. For one, it is effectively a pixilated garden whereby every 30cm x 30cm plot is contained in one portable basket. As a result, the garden can be



Jean-François Paquay grows Åsa Sonjasdotter, *The Way Potatoes Go: A Potato Perspective on an American Matter*, 2012-2013, Maransart, BE.

Since the potatoes Sonjasdotter had ordered to grow during "Green Acres" (2012) were hardly "seed potatoes," few could have predicted the success rate of nine "Americans" grown in European soil. After picking up a rather lumpy package (post-marked US) from his local post office, Paquay stored it indoors all winter, replaced a grass plot with artisanal soil and straw, and planted the potatoes in their own patch, resulting in the sprouting of scores more spuds come summer's end. On two separate Valentine's Days (2014 and 2017), Paquay has miraculously discovered *Rode Eerstelings* forgotten from the year before!

planted more densely than ordinary garden rows and each pixel (individual basket) can be rearranged during the day, maximising both exposure to the sun and exposure to other plants. In just three short years, Paquay's *Portager* has proven the significance of diversity, which is familiar to both biointensive and permaculture farming methods. Most noticeably, his yields are far higher in the *Portager*, where he really packs plants in and can rearrange their containers to optimise sun and shade, than in his "fixed" garden rows, where he plants similar plants.

Another factor that Paquay has encountered concerns the way the *Portager* enhances biodiversity. In his mind, everything that arrives is part of the system. In 2014, he experienced additional butterflies, infinitely more slugs, dormant seeds (he calls them cookies since they're hidden amidst leaf mould and retain information), earwigs, aphids, lady bugs, nettles, borage, euphorbia, the fungus oidium, and caterpillars. Paquay considers all of these new (even if unwanted) factors as

contributing to the *Portager's* greater biodiversity. Ultimately, he attributes the *Portager's* greater yields to his home-made soil, which itself is a diverse amalgamation of millions of micro-organisms all working together to nourish the soil.

Like most artisanal-soil producers, Paquay routinely performs soil tests to discover its mineral content and clay, sand, and silt composition. Equally applicable to soil, pH tests identify the soil's acidity ($\text{pH} < 7$) or alkalinity ($\text{pH} > 7$), which proves relevant since each plant prefers soil with a particular pH. It turns out that pH tests also indicate biodiversity, specifically microbial diversity and plant nutrients, since pH levels tend to constrain life.

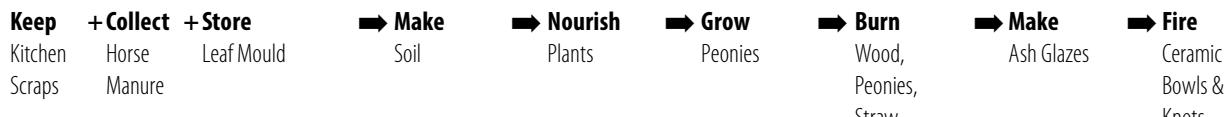
Many microbial species cannot tolerate extreme levels of pH (high or low). Alterations in pH can render essential microbe enzymes inactive and/or denature proteins within the cells and prevent microbial activity from occurring. However, there are microbes that can withstand extreme pH environments. At pH [levels] below 5, fungi and acidophilic

Åsa Sonjasdotter, *Potato Patch*, 2014, Prinzessinnengarten, Berlin, BE. Photo credit: Åsa Sonjasdotter.

Far right: Jean-François Paquay, *Leaf Mould Boxes*, since 2012, Maransart, BE.

Åsa Sonjasdotter and Jean-François Paquay both have access to outdoor studios, where they conduct their ongoing experiments related to biointensive farming, microclimates, novel varieties, and artisanal soils.





bacteria have a competitive advantage over other bacteria that thrive at a more neutral pH. . . Below a pH of 5, essential plant nutrients like phosphorous, calcium, and magnesium are not available. Low pH can also cause aluminum (Al^{3+}) to be released from soil materials. Al^{3+} in soil solution is not only toxic to plants and microbes; it can combine with OH^- ions causing the free H^+ ions to lower the pH further.⁴⁹

An overall ecosystem, Paquay's project demonstrates how ecosystems can be created from the elements of one's personal, artistic, and professional life. His project could inspire people to imagine alternative ways of living whereby their contemporary lifestyles are transformed into sustainable systems, where every aspect plays a role. Despite a nearly fifty-year history of artist-farmers

(since 1970) and artist-gardeners (since 1967), few have expanded their system to connect farming and gardening activities to more traditional forms of artmaking, such as ceramic glazes. In other words, Paquay has found a way to make this loop go full cycle in his own living environment.

A university environment, rich in academic researchers, curious students, and university staff thus seems the ideal venue for Paquay's all-encompassing system. Moreover, as members of society's educated elite, university inhabitants must work extra hard to expend fewer resources and repurpose more, but they are hopefully more likely to modify their behaviour in light of new information.

More recently, Paquay has turned his attention toward medieval vegetable gardens,



many of which were designed as edible environments, such that people could eat communally amidst their next meal. To this end, he assembled an *Edible Environment* (2015-2016) comprised of 27 Portagers surrounding a large table. Inspired by UN 2016 International Year of the Pulse (the British term for legumes and fresh beans), Paquay filled dozens of baskets with various pulse varieties.

Boosting Immunities

As a young child, **Koen Vanmechelen** (b.1965) raised chickens. To create his ongoing *Cosmopolitan Chicken Project* (CCP) (1999-now), he first bred the Belgian Mechelse Koekoek and the French Poulet de Bresse to create the Mechelse Bresse, which he bred with an English chicken, whose offspring was bred with another species, and another and another... arriving at the Mechelse Danske (CCP21). As of 2017, he has created twenty-one generations of crossbred chickens, whose photographs register their gallantry. Several of his hybrid chickens were sited at the Verbeke Foundation in Kemzeke, BE (2008-2015). In addition to promoting chicken biodiversity, he has projects with pigs (LUCY Peel Petuum Mobile), a collaboration with Heyde Hoeve to transparently crossbreed stronger pigs; cows (SOTWA) for which a Kenyan cow was added to a Tanzanian Maasai tribe's herd to inject fresh blood and DNA into the herd; and as part of Planetary Community Chicken (PCC), he most recently crossed his latest cosmopolitan chicken rooster with an industrial egg layer to strengthen the egg layer's gene pool, thus boosting its immune system.⁵⁰

[Vanmechelen's] project wants to show that in some way we are all related and interconnected, part of the same universe. And that also man is part of a planetary superorganism. He is bioculturally connected with all other species, some of which

can be of vital importance for our survival. The art is finding the appropriate intermediary agents that form the bridge between the species.⁵¹

Just as Sonjasdotter's *The Order of Potatoes* incidentally explores Europe's food regulations, Vanmechelen's project reveals chicken breeding's legal struggles, requiring him to set up chicken farms in six countries in order to sidestep such constraints. Arts reporter **Monica Hesse** remarks: "How difficult for a chicken to come to Belgium is linked to Belgium, to its fears and phobias and official policies. Bringing a chicken from Russia was nearly impossible, and there was so much fear over disease in African livestock that he eventually opened a farm in Tanzania and took himself to the chicken." Vanmechelen, whose crossbreeding programmes augment diversity to boost animal immunities, adds, "Think how difficult it must be for humans to cross those borders."



The newest addition to Vanmechelen's oeuvre is MECC (Mushrooms, Eggs, Chickens, and Camelids). During his 2015 solo exhibition "This is Not a Chicken" at the Museum De Domijnen, Vanmechelen worked with biologists from the Universiteit Gent to see whether oyster mushrooms, growing in straw fertilised with camel dung, could become infused with the camel's special immune properties, making the mushrooms themselves virus-resistant. Vanmechelen employs the simplified sustainable growing method that Zimbabwe mushroom farmer **Chido Govera** developed in the late nineties.⁵² Could chickens fed a diet of "super mushrooms" strengthen their immune systems enough to wipe out bird fleas? He continued this research in two exhibitions on view in Venezia and Murano during the 2015 Biennale di Venezia. To test the benefits of human beings fed potentially virus-resistant eggs and mushrooms, he created Restaurant B in an existing restaurant in Murano, IT.



Working to breed potatoes that are immune from disease, Åsa Sonjasdotter has been following a potato breeding strategy first initiated by **Raul Robinson**. Sonjasdotter has worked alongside gardener **Matze Wilkens** in the potato patch at Berlin's Prinzessinnen-garten (Princess Garden) (since 2009), where **Bennar Markus** manages about fifteen varieties. According to Sonjasdotter,

The whole boosting the immune system thing, it's just what farms always used to do. It is rather simple, you make as many crossings as possible and then you expose the new plants to all kinds of diseases such as viruses, fungi, etc. The diseases will show up sooner or later. They are just around.⁵³

In addition to boosting potato breeds to resist disease, she is also attempting to create a "Kreuzberg potato," that is a "micro-local" breed

Jean François Paquay, *Edible Environment: Pulses*, 2016, Maransart, BE. During 2016 UN Year of Pulses (the British term for beans and legumes), Jean François Paquay grew dozens of varieties of pulses in an *Edible Environment*, amidst flowers, vegetables, and fruit trees typically grown in his *Portager®*, providing plenty of Okin food for eaters, whose next meal is just one arm's length away.

that is particularly acclimated to the climate and environmental conditions of the Kreuzberg neighborhood. In describing their new potatoes, she remarks "We have some super cute, nice, sweet and delicious, new varieties, but we would like to focus more now on boosting the immune system. It has been learning by doing."⁵⁴

Co-Habitation

Since the millennium, animals (dead or alive) have been omnipresent in contemporary art: from **Berlinde de Bruyckere's** upcycled carcasses to **Mircea Cantor's** caged peacocks, **Cai Guo-Qiang's** flying tigers, **Maurizio Cattelan's** suspended horses, **Wim Delvoye's** tattooed pigs, **Damien Hirst's** formaldehyde sharks and cows, **Carsten Höller's** "tripping" deer, **Huang Yong Ping's** insect universe, Eduardo Kac's Day-Glo bunny, **Paula Pivi's** albino zoo, **Børre Sæthre's**

Koen Vanmechelen, *Restaurant B*, 2015, Murano, IT.

Koen Vanmechelen, *Mechelen-Wyandotte* (CCP20), 2016, chickens.

In 2015, Koen Vanmechelen performed an experiment during his Museum De Domijnen exhibition to see whether oyster mushrooms grown in camel feces could acquire camel's special immune properties. During the Biennale di Venezia, he experimented with eaters at Restaurant B in Murano, IT to test whether human beings fed diets of "supershrooms" and "supereggs" might also receive such benefits, boosting their immunities to viruses.



fantasy creatures, **Xu Bing's** copulating pigs, **Koen Wastijn's** leaping puma to **Zhang Huan's** terrified dogs. So endless is this list that **Dorota Łagodzka** and **Leszek Golec** curated "Ecce Animalia" (2014), a sculpture exhibition featuring 42 works of "animal art" by 31 historic and contemporary artists/teams.

Despite animals' omnipresence in art, it is baffling how rarely contemporary art moves beyond the specularised viewing of animals posed as objects of fascination and fetishisation for human consumption. I briefly discussed this issue in relationship to Henrik Håkansson's work, whose use of technology ensures a kind of distancing or remote viewing that objectifies animals, even as it simultaneously critiques technology's constraints, especially as it pertains to the omnipotence of remote viewing in relationship to scientific practice. Regarding the popularity of animals in academia and art, Łagodzka observes:



In relation to animal studies, a change in the academic paradigm has been noticed which is expressed in a so-called “animal turn.” Despite such a term, it describes a long-lasting process which relies on an enhanced interest in the relations between humans and animals and is connected with a need for a critical analysis of previous attitudes in relation with animals, as well as suggesting new ones. Animal Studies is sometimes linked with the discourse described as “posthumanism,” understood as a critical stance toward anthropocentrism...⁵⁵

In contrast to the aforementioned artists' efforts to capitalise upon the popularity of animal imagery, especially online animal pastimes (e.g. posting “kittlers”), **Tatiana Czekalska** (b. 1966) + Leszek Golec (b. 1959) rather insist on the round-the-clock presence of living animals, however shy and otherwise invisible (seemingly absent) such creatures might actually be. For example, a kitty adopted from a shelter guarded their 2015 exhibition “Still” at Galeria Monopol in Warszawa, PL. Another artist group exhibiting upstairs installed a mouse hole, leaving viewers to imagine each night’s game of cat and mouse.

As a result, many of Czekalska + Golec's works are open systems, where animals freely enter the spectator's space, engendering a sense of vulnerability and unease on the part of exhibitors and viewers alike, an emotion rarely felt in museums and art galleries. One exception is *Catwalk: Performance for Photography* (2015), an artist's book featuring around 50 photos (shot between 2009 and 2015) of a white cat living its life. Shot entirely in the pitch black dark of night, the cat is clearly in control, not caring a wink about its voyeurs. By contrast, artworks typically feature animals as isolated systems, since the “animal part” is either frozen in formaldehyde, taxidermied, or photographed.

To the horror of museum officials who worry about protecting their collections, Czekalska

+ Golec routinely propose to exhibit sculptures co-created with woodworms, *Homo Anobium* and *Św. Franciszek, 100% rzeźby 1680-1985*, a pair of disintegrating 17th Century boiseries (one is an unidentified Franciscan saint, the other St. Francis of Assisi). No longer of use to any church, let alone the one that originally commissioned them some 350 years ago, this literally holy pair heartily serves Czekalska + Golec's needs, mainly because they prompt wild reactions from would be exhibitors, thus demonstrating the threatening nature of sculpture as *habitat*, though not as *art*. I imagine their presence prompting fears of destruction, either to the building's wood or the artworks stored in their wooden crates.

To offer birds a safe perch alongside buildings crawling with prowling cats, Czekalska + Golec produced *Columbarium* (1997), which first lured birds visiting the 1997 Istanbul Biennial, Istanbul, TR; and later travelled to the Xawery Dunikowski Museum, Warszawa, PL, and the Kunsthalle Bielefeld, Bielefeld, DE.

Keen to find a way to improve insects' lives, Czekalska + Golec worked with a jewelry designer to devise *Avatar I* (gold, 1996), *Avatar II* (silver, 1999) and *Avatar III* (silver, 1997), three elegant, though tiny, instruments (and of course hyperallergenic) that are so gorgeous that people feel automatically compelled to use them either to transport insects to safety or to safely store insects until they can be properly reinserted into their natural environment. They exhibit such tools either on column-like pedestals or installed directly on gallery walls. Meanwhile, the handful of cats roaming the galleries receive puffs of invigorating ions, which stream at a rate of 250,000 ions/cm from “implants” inserted on the wall at cat-nose level. The artists have also conceived of the ideal disposable glove, *Avatar Bio/Logical II*, 2002, produced from biodegradable materials, making them perfect for use in restaurants, schools, banks, and clinics. 



Czekalska + Golec, *Homo Anobium Św. Franciszek*, 100% rzeźby 1680-1985.
Courtesy Muzeum Rzeźby Współczesnej
and Centrum Rzeźby Polskiej w Orląku,
Orońsko, PL.

This is one of two boisserie that they co-created with woodworms. This literally hol(e)y pair is no longer of use to any church, yet it heartily serves Czekalska + Golec's needs, mainly because it prompts wild reactions from would-be exhibitors. This artwork demonstrates the threatening nature of sculpture as *habitat*, though not as art.



Czekalska + Golec, *Columbarium*, 1997, Istanbul Biennial, Istanbul, TR.

Left: Czekalska + Golec, *Avatar 1*, Gold Standard 583, 1996.

Czekalska + Golec produce artworks geared towards improving animals' lives, whether by offering migrating birds habitat far from predators or human beings alluring tools for picking up and transporting tiny insects.

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Urban Infrastructure / Environmental Justice

Some artists work predominately amidst urban infrastructure, inevitably exploring issues of environmental justice. A city's compacted scale often makes it ecologically efficient, but pollution (water, land, air) is never distributed equally. Not only pollution but access to information, better accommodations, efficient public transportation, more green space, and enterprising opportunities are especially pressing concerns. As this section demonstrates, artists initiated the copyleft revolution, heretofore primarily associated with software development, as a means to advance urban infrastructure, empowering Europeans to customise their local environments.

Studies have shown that [the] quality of life improves when you have areas very near where you can be outdoors. The general life quality in a neighbourhood is better if you have more small, green spaces, say 100 metres from your main door than if you have one big park that is a little bit further away. Of course, the distribution of possibilities in a more equal way is important. This also touches on issues of spatial politics and the idea of social and environmental justice, that resources are equally distributed.

— Nis Rømer, 2014.¹

The Copyleft Revolution

Copyleft uses copyright law, but flips it over to serve the opposite of its usual purpose; instead of a means of privatising software, it becomes a means of keeping software free. The central idea of copyleft is that we give everyone permission to run the programme, copy the programme, modify the programme, and distribute modified versions –but not permission to add restrictions of their own. Thus the crucial freedoms that define “free software” are guaranteed to everyone who has a copy; they become inalienable rights. Richard Stallman, *Open Sources: Voices from the Open Source Revolution*, 1999

It goes without saying that the “World Wide Web” has democratised (as well as warped and manipulated) information on an unprecedented level. But along with the Internet came another kind of revolution, inspired in part by the decentralised and voluntary way coders developed the Linux operating system, and apparently every other software system since the 1980s. In contrast to typical 20th Century models where knowledge (including technology, research, and markets) is owned, sold, and legally protected, Helsinki-based **Linus Torvalds** launched the “Linux kernel” in 1991, a free operating system available for use on Intel x86 architecture. As supercomputing communities began transitioning toward less expensive computers in the mid-90s, programmers began to modify Linux, of which some version currently supports roughly 80% of smartphones, 97% of servers, 95% of animation software, and most government computers.

What's most impressive is the way this “new” business model, which likely required 8000 “man hours” to generate 30 million lines of code (less than 20% of Linux coders are actually volunteers) by 2001 for “Red Hat Linux,” saved some \$1.48 billion over what it would have cost had it

been developed privately in the United States. Of course, costs saved were rather shared costs (time, know-how, and paid wages) contributed by actual user-developers.

As a result of the success of Linux and similarly self-organising business ventures, where actual users pool their knowledge and universally share tools, so as to efficiently modify software for particular applications, the “Open Source Initiative” was launched in 1998 “to encourage the use of the new term and evangelise the principles [to which] it adhered.”² In 2001, the “Creative Commons” released its copyright license *for free*, enabling authors' protection of their images, texts, and projects posted online, thus encouraging users to study, download, share, and in some cases modify online works for noncommercial purposes. By 2015, MoMA acquired CC's logo and some 1 billion works had been licensed as part of the commons!

Contemporaneous with these historic business developments, artists and museums were brainstorming similar strategies for “knowledge sharing” regarding ecological alternatives. As **greenmuseum.org** co-founder **Sam Bowers** put it, “For a global movement to take off, people need to know about it!”³ Eager to share its know-how, **N55** (since 1994) started posting “how-to-build” manuals at n55.dk around 1997, inviting ordinary people anywhere in the world to replicate their efforts, so long as they credit N55. When one reads N55 instructions, one realises how clearly they have thought through every aspect of their designs. Most designs carry the command, “This will be maintained by the people using it.” This point reiterates their view that built designs belong to and should be governed by actor-recipients (users) rather than actor-producers (artists).⁴

Realising the dearth of reliable ecological material out there (or *not out there*), **Nils Norman** (b. 1966) created *The Gerrard Winstanley Radical Gardening Space Reclamation Mobile Field Centre and Weather Station (European Chapter)* (2000) as

public art, and actually built it for public use. If this sculpture's title sounds a little bombastic, it's for good reason, since there's actually a lot going on here despite its being a little mobile library transported by a bicycle.

Norman's bike's namesake is Gerrard Winstanley, who founded the "original" Diggers, 17th Century "pirate farmers" who actively resisted that era's enclosure movement, whereby land was transferred from the commons to private land-holders. In, 1649, a "band calling themselves the Diggers started to cultivate an open hill in protest of rising food prices and unemployment."⁵ I write "original" Diggers, because an identically-named "anarchist guerrilla street theater group" performed in the Haight-Ashbury neighbourhood of San Francisco, US from 1967-1968.

In distinct opposition to the 17th Century "Levellers," who aimed to "level the laws and maintain the right to the ownership of real property itself," the "True Levellers," as Winstanley's

followers called themselves, "sought to level the ownership of real property" altogether. Taking a cue from Acts 2:44-45, where the Apostle Paul says, "All who believed were together and had all things in common; they would sell their possessions and goods and distribute the proceeds to all, as any had need," Winstanley advocated sharing the commons and distributing it as needed, a view that seems to have gone in and out of fashion every couple of generations over the past five centuries.⁶

The first thing one notices about this library is its select set of books, a working desk, a solar-powered copy machine, and a modest weather station. Unlike a book exchange or an actual library, these books are not for the taking; only their ideas and copies of pages of interest to copiers, who may one day figure out how to implement them. I do worry, however, that the handy copier, whose millennial-era solar battery stores only enough energy to make one copy at a time, may actually compel people to steal books. Either way,



N55, *D/Y Manuals*, 1997-present.

One year before the Open Source Initiative was launched in 1998, N55 started availing "how-to-build" manuals for their designs at n55.dk, enabling users the world over to replicate their prototypes, so long as they credit N55.

Nils Norman, *The Gerrard Winstanley Radical Gardening Space Reclamation Mobile Field Center and Weather Station (European Chapter)*, 2000, Galerie für Landschaftskunst, Hamburg, DE.

Around the same time that the computer software world launched the Open Source Initiative, eco-minded artists were developing similar strategies to promote ecologically-oriented projects, lifestyles, and innovations. greenmuseum.org co-founder Sam Bowers put it succinctly: "For a global movement to take off, people need to know about it!"



Norman's bicycle trailer *cum library* perpetuates the "commons in action," whereby information related to experimental urban gardening, farming, horticulture, weather, DIY culture, alternative city design, and city gentrification is available for free, but only on an *as needed* basis.⁷ Most important, his design is user-friendly, lockable, weatherproof, and road-worthy. According to Norman, "It has been designed to travel between community gardens/allotments, town fairs, protest camps, and schools, where it is opened up and made ready for action."⁸

Artist groups like artist-activists **Temporary Services** (since 1998), eco-artists **eco-art dialogue**, exhibitors-educators **ecoartspace** (since 1999), and the online museum greenmuseum.org (since 2001) started generating online registries chock full of artists' projects deemed relevant to their purposes. Possibly inspired by the Open Source Initiative, medievalist and uber-librarian **Bernard F. Reilly** realised how the Internet would transform museums as early as 2001 when he wrote:

If there is truly a new museum for the 21st Century, the Web is where it will be built. Unlike the old model, it will not be a single collecting institution, but a partnership of several cultural organisations with very different missions.⁹

In 2002, the Contemporary Arts Center in Cincinnati, US became one of the first museums to release an entire exhibition catalogue, *Ecovention: Current Art to Transform Ecologies*, as a freely-available "website version" (PDFs were not yet in public domain), hosted by www.greenmuseum.org, where it lives today. As a result, interested readers translated parts of *Ecovention* into various languages and uploaded it onto new portals, bypassing the need to request the author's permission, hire a translator, secure a publisher, or involve a printer. Interested readers made the translations themselves and happily shared whatever information they deemed important with their linguistic peers.

Two years later, **Superflex** published their beer recipe online, crafting the world's first "open source beer." To my lights, Superflex's *Free Beer* campaign (since 2004) always seemed more an artworld stunt to draw attention to the potential of the "creative commons" than an earnest mechanism for distributing free beer, since "free beer" is rarely an artworld concern, so long as beer sponsors are on board. As I suspected, Superflex consider *Free Beer* and "free beer" to have different objectives.

Free Beer is a beer which is free as in free speech, not in the sense of free beer. The name plays on a well-known quote by free software activist Richard Stallman: "Free software is a matter of liberty, not price." To understand the concept, you should think of 'free' as in 'free speech', not as in 'free beer'. Originally named Vores Øl (Our Beer), the beer was conceived in 2004 by SUPERFLEX and students from [IT-Universitetet i København]. The project applies modern free software/open source methods to a traditional real-world product. The recipe and branding elements of *Free Beer* are published under a Creative Commons (Attribution-Share Alike 2.5) licence, which means that anyone can use the recipe to brew their own *Free Beer* or create a derivative of the recipe.¹⁰

Soon after Superflex launched their open-source beer recipe, which they have since "relaunched" at various art functions around the world over the years, they set up COPYSHOP, first in København, DK (2005-2007) and then in Knoxville, US (2007-2008). An actual shop, people could buy "modified originals, improved copies, and political anti-brands," in other words, pirated copies of products that Superflex felt could be improved upon or were just *too good* to be protected by international property rights.¹¹ Two examples included nonsweatshop high tops (think Converse meets American Apparel (since 2003)) and Mecca Cola,

which distributed 20% of its profits to Palestinian charities (think "cola" meets Toms Shoes (since 2006)). COPYSHOP's motto, "If value, then COPY" signals the copier's power to attribute value by selecting which products to appropriate and adapt! In 2009, they printed COPY (inverted in black) over Barbara Kruger's iconic red "I SHOP therefore I am" to create "I COPY therefore I am."

In light of several recorded brushes with the law over *Copyshop* products, Superflex have since become a case study, read by law students learning "new directions in copyright law." Here's a passage from one such textbook:

The ideological stance of the Copyshop project is not a secret. It is stated plainly that its purpose is to challenge the new global order of intellectual property rights. Not surprisingly, Superflex has already faced several threats of legal action. The most recent battle has been between Superflex and a manufacturer of casual wear. ...Supercopies are not meant to be taken for 'originals' (rather supercopies are 'new originals'), the shirts that Superflex created are artworks in the Platonic sense. They are second-degree imitations.¹²

Being artists at heart, and not retailers, it's hardly surprising that Superflex kept ratcheting the stakes up a notch, escalating all of this "sharing" to the nth degree in their attempt to test how far the borders of this seeming jackpot could be erased; that is, until it sort of caved in on itself, engendering legal issues. Luckily, no arrests were made... **Cyprien Gaillard**, yet another artist who tested the limits of free beer until it caved in on itself presented *The Recovery of Discovery* (2011), a beer pyramid made from 3000 cases of Efes beer at Kunste-Werke in Berlin. After signing waivers, participants were "free" to climb, open, and consume as many beers as they liked, causing the pyramid's ultimate collapse. This work "opened up" additional notions of free beer.

There is one final point worth mentioning before moving on. Although there is not enough room here to discuss the many differences between "green designers" and "environmental artists" in detail, there does seem to be one main attitudinal difference. Namely, environmental artists seem to get satisfaction from originating some idea, building the alpha test to see if it works, tweaking it a little so it works even better, enacting the beta test to grasp how others use it, and then suddenly abandoning the project altogether; leaving its financing, development, manufacturing, marketing, and distribution to others to figure out down the road! Because no artist wants to be "ripped off," especially by some "no ideas" corporate predator, large or small; the "creative commons" license proves appealing. Moreover, few artists want to be stuck doing the same thing for the rest of their lives, even if it promises a boat load of dough. And environmental artists, more so than green designers, typically perform their own alpha tests, so by the time the beta test is in play, most of the kinks have been worked out.¹³

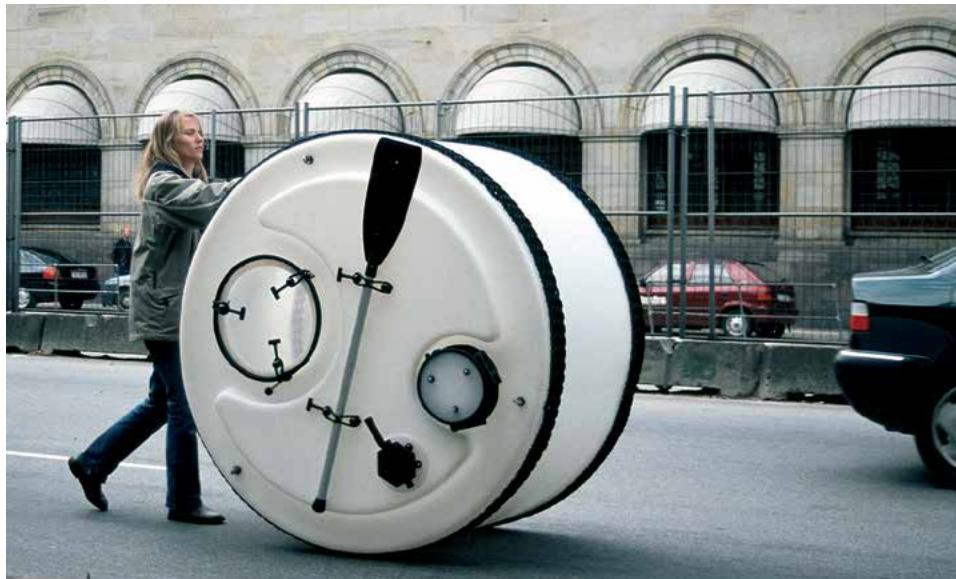
Copyleft Dwellings

Because only a handful of visual artists have architecture degrees, it's not surprising that there are so few ecoventions in terms of "ecological" urban housing, beyond whatever artists have done in the way of alpha tests geared toward experimenting with green roofs, backyard farms, habitat corridors, grey-water reclamation, passive solar, off-the grid energy systems, stream reclamation, pond life, etc. To stress the importance of people's capacity to adapt to their environment, **Ugo La Pietra** strung a banner with one of the Situationist International's many slogans (translated into Italian) *Abitare e Essere ovunque a casa propria* (Living is being at home everywhere) across a street in Giulianova, IT in 1968. Capitalising on the view of the street as one's living space, he publicly shaved his face as performance art (1979) in Linz, AT and actually installed outdoor living rooms furnished with his

over-sized artistic options in Milano (1989) and Cursi (1998). He remarks,

I have always thought that human beings guarantee their own survival through the modification of the environment in which they live and work, and I have always believed that living in a place means that I can understand, love, hate, [and] explore it... There has never been a territory in which I recognised myself and my past. I was born in a small village in the south and I have always lived in the city. The city is therefore the place where I have tried to expand my personality. It is the place in which I have often moved like an explorer moving through a territory to be conquered.... The urban environment is thus the basis for almost all of my studies....¹⁴

In the early seventies, La Pietra initiated an ongoing series of photomontages that critically explore the roles played by city administrators, urban planners, architects and the public in producing the city's meaningful features. Despite his having earned an architecture degree, he has mostly registered other people's building activities, whether very basic, "jerry-built" shacks adjacent urban farms or monumental skyscrapers and historic monuments. His seventies-era focus on urban farms (the series *Recupero e reinvenzione*) highlighted their signaling the creativity and freedom of some individual who manifests his/her desired world over and above its providing a supplemental food source. By contrast, **Paul Chaney** and curator **Kenna Hernly** initiated **FIELDCLUB** (2004-2012), a 1.6 hectare small-holding near Cornwall, which necessitated both their building a home for shelter and cultivating the surrounding land for food. Given FIELDCLUB's focus on "off-grid living, self-sufficiency, and agrarian reform," it's rather exemplary of food security, so it's addressed in Section Seven, along with La Pietra's *orti urbani* (urban gardens) photomontages (1969-1976).



N55, N55 SPACEFRAME, 1999, atop FLOATING PLATFORM, 2000, København harbour, DK.

Left: N55, SNAIL SHELL SYSTEM, 2001, København, DK.

Capable of being sited anywhere, N55 opted to site N55 SPACEFRAME in the harbour atop their floating platform. SNAIL SHELL SYSTEM is a kind of trailer-free, houseboat assembled from off-the shelf parts, which the user rolls through the streets to reach the desired entry point.



N55, WALKING HOUSE, 2006-2008,
Wysing Arts Centre, Bourn, UK.

Right: Assemble, *Granby Four Streets*
Community Land Trust, Since 2011, Liver-
pool, UK.

Copyleft dwellings are shared creative ventures between "actor-producers" (artists) and actor-recipients (users). Architecture firm Assemble not only train clients to build their designs, but they established the Granby Workshop, availing sales of Liverpool-sourced, designed, and hand-made homegoods. Invited to collaborate with Romani travellers in Cambridgeshire, UK; N55, in partnership with Øivind Slaatto and Sam Kronick, devised an off-the-grid WALKING HOUSE inspired by Romani caravans.



George Steinmann's buildings such as:

Tallinn Art Hall, 1992-1995/present, Tallinn, EE; a building and bridge in the Swiss Alp's poorest mountain village, 2004-2006/present, Saxeten, CH; Centre for Sustainable Forestry, 1997-2006, Komi, RU; *Kunst ohne Werke aber mit Wirkung* (Art Without Objects but with Effect), 2010-2013/present, Bern, CH; and *Mittendrin am Rande* (In the Midst on the Margins), 2012 (not yet built), Vilm, DE are "walk-in sculptures" meant to cue spectators to be "mindful of nature when looking at sculpture," so their impact is discussed in greater detail in Section Nine.

N55 have also created and built several designs for affordable, efficient urban dwellings whose construction instructions can be downloaded from their website. They first created N55 SPACEFRAME (1999), a low-cost, moveable lightweight living unit for 3-4 persons. According to their manual, "the construction can be erected by anybody in a short time....All the struts in the construction are of equal length, ensuring an economic production with few different components. The octet truss is among the structures in which one obtains the greatest strength using the least materials."

After erecting N55 SPACEFRAME, they built FLOATING PLATFORM (2000) to support an N55 SPACEFRAME positioned in the harbour, and SNAIL SHELL SYSTEM (2001), a lightweight, trailer-free "houseboat," assembled with off-the-shelf components. N55 next added MICRO DWELLINGS (2005) to their repertoire of moveable and recombinant housing modules that function on land, on water, or in water.

While giving a workshop at the Metropolis Laboratory in København, N55 fabricated the leisure-oriented URBAN FREE HABITAT SYSTEM (2008), a 3.5m diameter geodesic sphere tethered to the ground like a tent, which calls for recreational activities like climbing or sleeping in suspended hammocks amidst hanging plants and kerosene lanterns. They envision users rolling this habitable

ball from place to place, covering it with plastic when one wants: shelter from the elements, a greenhouse, an exercise facility, a schoolhouse, or a pop-up night club. In fact, the notion of "free habitat" specifically refers to its versatility as a system.

Traditional urban planning aims to inject cities with places for housing and culture of a predefined type. Little power is given to the residents to make decisions about their own environment. Consequently, the public space in most western cities and the urban landscape as such is dominated by concentrations of power and their commercial interests. All human needs are hijacked to make a profit.¹⁵

During this period, N55 collaborated with Romani travellers in Cambridgeshire, UK on a project commissioned by Wysing Arts Centre. Inspired by yesteryear's gypsy caravans, N55 devised their most famous prototype to date, WALKING HOUSE (2006-2008), a modular, all-terrain, self-sufficient peripatetic dwelling, built in collaboration with København-based designer Øivind Slaatto and artist Sam Kronick. In addition to moving itself, this "superhouse": accesses energy from solar cells and small windmills, collects rainwater, uses solar energy to heat water, attaches to a greenhouse, uses a composting toilet, and accommodates a wood burning stove (for CO₂-neutral heating).

A cursory review of descriptions of N55 dwellings (walking, floating, rolled, moored, tethered, and storables) already indicates their prime mover, "mobility." Ever since N55 formed a collective, they have actively strategised ways to avoid being colonised by real estate investors who routinely exploit artists' sweat equity.¹⁶ In a 2001 interview with Temporary Services co-founder Brett Bloom, N55 co-founder Ion Sørvin (b. 1964) remarked:

At the moment the N55 response to [gentrification] is to be more mobile, to move around and do things with a local consequence. The family of LAND-related projects (ROOMS, SHOP, WORK) and the YTEICOS project could be seen as ways of creating a large, dynamic, collective that would enable persons to "live together" and use "small group behaviour and ethics" on a larger scale. If you look at a small group, like a village, a family, or friends, they are sharing a lot of things without the use of money or many rules.¹⁷

The 2015 Turner Prize was awarded to **Assemble** (since 2010), a London-based collective of 18 architects who work "across the fields of art, architecture, and design." Assemble "champion a working practice that is interdependent and collaborative, seeking to actively involve the public as both participants and collaborators in the ongoing realisation of the work."¹⁸ It's noteworthy that some artworld members seem a little freaked out that some "group," and not a visual artist, had won UK's top visual art prize. even though none of the artists discussed thus far in this section have "autonomous" practices. They are all either members of small collectives or routinely collaborate with others. As I've tried to stress, working collectively not only augments "know-how" but sharing duties saves time, money, and other valuable resources. If *Ecovention* contributed only one new view to the history of art, it was that unlike earlier artworks, ecoventions always involve collaborators. In the book's very first two pages, I noted:

Of course, artists don't produce [ecoventions] on their own. They collaborate with community members and local specialists such as architects, botanists, zoologists, ecologists, engineers, landscape architects, and urban planners to realise and evaluate their scientifically complex projects. Local citizens' roles as stakeholders is of paramount importance to an ecovention's survivability, since

citizens are the stewards who will protect and maintain the ecovention once it's built.¹⁹

So why is the artworld so freaked out about Assemble's winning for their Granby Workshop project in Liverpool? The most obvious answer is that community-arts critics, like **Claire Bishop**, see this as yet another example of governments manipulating/rewarding artists (or architects in this case) who step up and complete/fix projects/problems that government agencies either neglected or have poorly administered. In this particular case, the council acquired many of the houses for demolition following the 1981 Toxteth riots, but failed to follow up on their redevelopment plan. Hundreds of people were moved out of the area, leaving their empty homes to fall into disrepair over the years. Recently, local citizens formed Gransby Four Streets CLT, a Community Land Trust, to constructively develop this urban blight. In this case, community members, rather than the government, hired Assemble to relieve this affliction.

As the criticism goes, artists who do the government's bidding are not only not free, free that is to pursue their preferred avenues of art-making, but they are complicit with governments who outsource their responsibilities to artists (or anyone willing to fix the problem). Thus, art loses on all fronts: 1) artists lose funding to make their best art, 2) the government funds/rewards only art that fits its agenda/needs, and 3) art history plays second fiddle to community-enrichment schemes. Hardly new issues, they are the same concerns that led **Robert Smithson** to opt to highlight blight, while driving **Robert Morris** out of the restoration business altogether, once he realised its absurdity:

[A]rt was going to cost less than restoring the site to its "natural condition." What are the implications of that kind of thinking...that art should be cheaper than nature? Or that site-works can be supported

and seen as relevant by a community only if they fulfill a kind of sanitation service.²⁰

It's no small wonder that one artist described Assemble's win as the "death of the Turner Prize."²¹

And here's the rub. In some ways, the critics' worries/complaints/criticisms are all legitimate, especially since designers and architects are specifically trained to work *with* and *for* clients, something that artists may or may not want to do, depending on how they view their practices. Even artists who regularly respond to RFPs (requests for proposals), whether for public works, public art, or ecoventions, with proposals that they spent months developing alongside collaborators, including the commissioning clients; might view their proposed projects as *their* particular initiative, which means that their "will" is rather *in play*.

Recall **Lois Weinberger's** *Hyriya Dump* pitch, discussed in Section Three, for which he proposed that only local users could decide what the landfill should become. What makes his resolution *surprising* is the way he opted to exchange his will with that of the site's future users, something that seems unusual for artists, though certainly not architects. In fact, we would be comparatively horrified were Assemble to override whatever Gransby Four Streets CLT decided. In fact, what went wrong when the council was in charge some 35 years ago was that they imposed a top-down scheme, treating renters more like chess pawns than actual stakeholders.

What makes Assemble unusual as architects is that they often help their clients strategise innovative funding schemes, train their clients in construction and gardening, and encourage clients to do as much of the construction/building as possible. This certainly makes them different than those architects who are great at design, but don't necessarily have the requisite building or gardening experience to do the work themselves, let alone train others to do so.

Amsterdam's 3D Print Canal House

(2015-2018), designed by local architects **DUS**, is still being printed by a KamerMaker (a large-scale Ultimaker) located at Amsterdam Noord, NL. Yet another example of "green design" converging on an ecovention, this building project has required: engineers to fabricate models for new structures, programmers to develop new printing software, designers to develop extra-large 3D printers, and material scientists to develop various bio-based recyclable, yet durable materials that are simultaneously printed and tested. One of the great hopes for this construction technique, which employs extrusion technology, is that 3D-printed buildings can easily be melted down and their materials recycled and reused to print new homes as needed. Printed *in situ*, 3D-printed buildings are expected to eliminate transportation costs, cheap foreign labour, and construction waste. Currently, 80% of the materials, developed by German manufacturer Henkel, used to print the house are bio-based (potato starch or hemp are common sources). Additionally, Henkel have developed a special lightweight foaming eco-concrete to fill in hollow shafts for added structural support.

The mad genius behind the KamerMaker is none other than **Joris Von Tübergan** (b. 1977), Creative Director of the Protospace at Utrecht's Fablab. His popular 2010 "RepRap masterclass," which showed people how to build their own open-source 3D printers, ultimately led to the development of the Ultimaker, the world's leading desktop 3D printer. But what's most promising here is not a 3D-printed house (again, I see this more as a publicity stunt....even President Obama visited it), but the opportunity to fund the development of new tools (XL printing) and to test new printing materials, so as to generate an infinity of applications. Because 3D printing software is open-source, users can create whatever products they need *now*, which could include machine parts printed in the middle of a jungle or specialty tools, whose demand is so small

Left: N55 SMALL TRUCK, 2005.

Centre: N55 XYZ CARGO VEHICLE, 2012.

Far right: N55 XYZ CARGO FOURWHEELER, 2015-2016.

Since 2011, N55 have introduced seven different XYZ SPACEFRAME VEHICLES. N55's latest model transports up to four people.



that corporations could never afford to manufacture them. Once one is faced with the opportunities afforded by 3D printing, one soon realises how every tool was decided for us, and how absurd this must be for 90% of the consumers who live very far away from those who pretend to design others' tools! Heretofore, advertisers employed branding and marketing to narrow the gap between faraway designers' assumptions about consumers and the local users' actual needs and expectations.

Copyleft Energy

As briefly noted in Section Two, **Joseph Beuys** travelled to New York City, Chicago, and Minneapolis, US; presenting his *Energy Plan for Western Man* (1974), a year after OPEC's famed oil embargo against the US for supporting Israel in the Yom Kippur War. Although Beuys addressed energy, his "energy plan" concerned creativity and people

power, not renewable energies like solar, wind, geothermal, or biodiesel. Forty years on, fossil fuels are not only scarcer, but are known climate-change contributors. Thus, the efficient deployment of human energy is just as important as alternative energy, and certainly more relevant to city dwellers than affordable, easy access to petrol or jet fuel.

Superflex were among the first artist collectives to enter the artworld's very own "alternative fuels" race. By 1996, they had already launched their two-chamber biogas units for use in Africa. Working with African and Danish engineers, including **Fredy Bruzelus** and **Jann Malal**, they constructed a simple, portable biogas unit. When organic materials rot in airless tanks at 20-40°C, anaerobic digestion occurs, and bacteria convert organic matter into combustible biogas (methane, carbon dioxide) and fertiliser (ammonia). Working in cooperation with the African organization



Sustainable Rural Development, Superflex first tested their biogas system on a small farm in Tanzania in 1997. The daily dung from two or three cattle produces about three cubic metres of gas per day, enough energy to run a lamp at night and to meet the cooking needs for a family of eight to ten. One cubic metre of biogas corresponds to .6 liters of diesel fuel. Energy generated by the biogas system can be used to run stoves, lamps, and motors, to produce electric power, or to pump water. A few years later, they positioned one at *the land*, outside Chaing Mai, TH.

In 1999, N55 built a SOLAR POWER STATION that supplies 600 watts of energy, the equivalence of powering four 12W light bulbs and a 12V DC outlet for a sound system. Of course, no one could have imagined back then how people's electricity needs would grow exponentially over the next decade as laptops, digital cameras,

digital frames, smartphones, and tablets came on board. Since N55 co-founder Sørvin can't work fast enough to countermand increased energy demands, he recommends scaling down.

It's getting more and more clear to us how: we all need to: scale down consumption, take up less space, share more, repair more and produce as much of the things that we need in our everyday life locally. It's also crucial to develop systems for fair distribution of raw materials and our planet's resources in general. The XYZ CARGOs are an important part of N55's attempt to find ways of living in compliance with all this.²²

To share more of daily life's resources and costs, N55 built an off-the-grid *Communal Bakery* (2011) in Rotterdam, NL.



Marjetica Potrč and Ooze (Eva Pfannes & Sylvain Hartenberg), *The Wind Lift*, 2014, Building materials, energy infrastructure, "Lookout" Folkestone Triennial 2014, Folkestone, UK. Structural Engineering: Atelier One. Supported by the Creative Foundation Folkestone. Photo credit: Eva Pfannes and Marjetica Potrč. Courtesy of Marjetica Potrč and Ooze (Eva Pfannes & Sylvain Hartenberg).

Right: N55, SOLAR POWER STATION, 1999.

For nearly two decades, N55 have exploited solar energy, while Marjetica Potrč and Ooze have used wind turbines ever since the 2004 Liverpool Biennal. Most recently, they used wind to power a lift carrying people 25m high to view the Folkestone Harbour.





Upper left: N55, *LAND*,
2000-present, Tulcea, RO.
 $N45^{\circ}09'36'' E29^{\circ} 41' 24''$
Area: $20m^2$.

Upper right: N55, *LAND*,
2000-present, Varde, DK.
 $N55^{\circ}41'10'' E08^{\circ} 31' 25''$.

N55, *PARK CYCLE SWARM*,
2013, "Participate: Baku
Public Art Festival," Baku,
AZ. Collection Design
museum Gent, Gent, BE.

Over the past decade, N55 have regularly developed vehicles that efficiently exploit human energy. In 2005, they introduced SMALL TRUCK, an easy way for people to transport up to 300kg, get some exercise, and share their vehicle when not in use. Since 2011, they've ramped up actor-recipient options, introducing different models of XYZ SPACEFRAME VEHICLES every year: XYZ ONESEATER (2011), XYZ TWOSEATER (2012), XYZ CARGO VEHICLE Cincinnati (2012) (a utility trike designed in collaboration with Cincinnati community farmers to transport produce, soil, and seeds); XYZ CARGO TRIKE with motor (2013), XYZ CARGO coffee-cycle (2013), the super-sleek XYZ CARGO BIKE (2014), and the XYZ CARGO FOUR-WHEELER (2015-2016), which can transport up to four people! Not only do N55 print parts made from PLA biodegradable plastics on 3D printers, but they launched XYZ ROBOTICS KIT (2016) to complement N55 ROCKET SYSTEM (2005), thus spawning an artworld "space race" alongside Tomás Saraceno's Aerocene (since 2016).

One of N55's first-ever ecological projects was CLEAN AIR MACHINE (1997), so it's hardly surprising that in the wake of Volkswagen's getting caught cheating on emissions tests for diesel cars, N55 are fast at work on BICYCLE THAT CLEANS CITY AIR, a new vehicle that employs an earlier technology to scrub diesel particulates from the air as people cycle around town. Given Europe's huge problem with diesel particulates (a recent EU report blamed diesel for some 500,000 premature deaths a year in Europe), everyone, especially pedestrians, will view N55's ingenious vehicle as a welcome relief.²³ The next step is to make them the requisite model for city's bike-rental programmes.

Working in collaboration with Rotterdam architects **Ooze** (Eva Pfannes and Sylvain Hartenberg), Marjetica Potrč installed *The Wind Lift* (2014), an elegant wind-powered passenger lift taking people to the top of the 25m-high Folkestone Railroad viaduct to experience the view of

the Folkestone Harbour, UK. Their integrating wind power (powered by vertical blades) with a panoramic view perfectly integrates human beings with their environment. Hardly her first time to employ renewable energies, Potrč has often tapped solar, wind, or solar-wind hybrids. For her contribution to the 3rd Liverpool Biennial (2004), she strapped a wind turbine onto the 14th floor balcony of Bispham House, one of Liverpool's twelve remaining social high-rise buildings, to power two families' energy needs. In 2008, she added *Lookout with Wind Turbine* to the loggia of the Vriza apartment in Amsterdam's Piaraeus Building, providing electricity for the apartment as well as an observation deck. When wind turbines purchased for use in Oslo, NO failed to gain authorisation, she found a way to repurpose them to provide electricity to communities in Rajasthan, IN and Detroit, US, as a hybrid wind turbine/solar panel system for the Catherine Ferguson Academy.

Copyleft Public Space

N55 propose the implementation of systems that would allow persons to design the public places they inhabit and share these places with others, regardless of anyone's financial situation. Using such systems, people would be able to create free places to stay and meet, cook and eat, etc., where they are most needed.²⁴

In 2000, N55 started re-conceiving public space, first with PUBLIC THINGS, a multi-functional, multi-layer platform they built in Toulouse, FR. According to their website, "PUBLIC THINGS can be placed at different spots in public areas, such as streets, squares, public buildings, parks, or roadsides. Anybody may take initiatives to expand PUBLIC THINGS with more functions." N55's multi-component sculpture: allows for information in the form of booklets, food, or posters to be dispensed to the public; provides a public address system;

illuminates the dark; offers a kitchen, tenders a toilet, proposes sound; proffers furniture, including a bed; grants a foundation, and most important, has a transformer to meet electrical needs. That same year, N55 introduced LAND (2000-present), an easily assembled geodesic cairn that can be planted anywhere, signaling to passersby the availability of freely accessible land. LAND is currently situated on thirteen locations in seven European countries (NL, FR, DK, RO, NO, CH, and SE) with four more in the US.

Invited to contribute a work for "Participate," N55's **Till Wolfer** collaborated with **John Bela** of San Francisco's Rebar Group to update Rebar's 2007 Parkcycle in the context of N55's SPACEFRAME VEHICLES. Thus was born PARKCYCLE SWARM (2013), four human-powered mobile gardens that generate public space when four astro-turfed platforms merge to create a larger recreational space where people can relax and be together. Most promising is XYZ OPEN CITY (2013), an open-source, modular system for facilitating shared functions in public space, which N55 first presented in Groningen, NL. With XYZ OPEN CITY, people can make almost anything happen.

The XYZ OPEN CITY system can be used to build anything from urban gardens to fully functional insulated housing. Building materials can be new or recycled. XYZ OPEN CITY constructions can be dedicated to a specific purpose like for example, an OPEN POWER STATION based on solar panels and/or wind turbines or it can form multifunctional buildings providing a variety of facilities. ...The XYZ OPEN CITY system can be seen as a do-it-yourself urban planning tool; an alternative to the top-down urban planning that dominates most cities in the world. N55 encourage persons to build their own XYZ OPEN CITIES and hereby influence their local urban environments.²⁵



Urbaniahoeve, *DemoTuinNoord*, 2011-present, Amsterdam Noord, NL.

Founded in 2009 with the view to make "food free for all," Urbaniahoeve's *DemoTuinNoord*, located on a former firehouse parking lot, proves just how rapidly (five short years) food deserts can be transformed into edible cities.



Marjetica Potrč and Ooze (Eva Pfannes & Sylvain Hartenberg), *Théâtre Evolutif*, 2011, Building materials, water-supply infrastructure, vegetable garden and live animals, "Evento 2011: L'art pour re-evolution urbaine," Place André Meunier, Bordeaux, FR. In collaboration with Bureau d'Etudes. Supported by the French Ministry of Culture and Communication (DRAC Aquitaine), Xylofutur, Bricorelais, and the Mondriaan Foundation. Photo credit: Ooze (Eva Pfannes & Sylvain Hartenberg). Courtesy of Marjetica Potrč and Ooze (Eva Pfannes & Sylvain Hartenberg).

Right: Marjetica Potrč and Ooze (Eva Pfannes & Sylvain Hartenberg), *The Public Space Society*, 2012, Building materials and fabric, public discussions and workshops, "Art and the City 2012," Stadionbrache Hardturm, Zürich, CH. Supported by the Municipality of Zürich, CH; Reto Bonomo, Zürich, CH and Tiggelovend-Kok BV, Etten, NL. Photos by Ooze (Eva Pfannes & Sylvain Hartenberg). Courtesy of Marjetica Potrč and Ooze (Eva Pfannes & Sylvain Hartenberg).



In 2009, **Debra Solomon** initiated the nonprofit **Urbaniahoeve**: Social Design Lab for Urban Agriculture to demonstrate how edible cities could defeat the surfeit of urban food deserts. With the motto “Free Food for All,” Solomon envisions available labour joining forces with vacant lots, driveways, and yards to implement agro-forestry around cities, empowering people otherwise lacking access to food to grow their own vegetables, fruits, nuts, mushrooms, and herbs. She remarks that urban farms rarely compete with market farmers selling fresh produce, since the citizens who take her courses and volunteer in her gardens tend to inhabit food deserts. Particularly focused on using permaculture practices to transform land into biomass, Urbaniahoeve (Dutch for “the city as farm”) has employed agro-forestry to create food-system infrastructure in public spaces in Den Haag (*Foodscape Schilderswijk* since 2009), Amsterdam Noord (*DemoTuinNoord* since 2011), and Nieuw-West (Amsterdam) (*Foodscape Wildeman* since 2013). Not only does agro-forestry accommodate most cities’ lack of direct sunlight, but cities desperately need more trees that cool in summer, warm in winter, store rainfall in their roots, transpire water back into the atmosphere, contribute biodiversity, and attract pollinators.

She additionally credits healthy soil with carbon sequestration and rainfall absorbency, thus solving two of the city’s biggest problems: heat sinks and flooding. Agro-forestry sequesters both water and carbon, as healthy soil with sufficient amounts of organic matter (SOM) increases water and nutrient retention, and thus improves soil structure, reduces erosion, provides greater ecosystem functioning, and enhances the water quality of both surface and groundwater. SOM reduction impacts rainfall infiltration, as the soil cannot absorb sufficient moisture to mitigate flooding, which leads to erosion and nutrient leaching.²⁶ Solomon thus pictures a city, whose roofs, terraces, backyards, and parking lots support food-system

infrastructure planted on 35cm of soil, thus transforming the city into a lung.

Working in tandem with Rotterdam architect-planners Ooze, artist-architect Marjetica Potrč has actively engaged communities in discussions of public space with the view that actual users are most likely to discover and develop public space that best fits their needs.

What kind of agora- what kind of shared gathering space- do we want for today, and what kind of space do we want to leave behind for the coming generations? *The Public Space Society* research question

Marjetica Potrč and Ooze have physically explored this question with citizens of the Saint Michel neighbourhood of Bordeaux, FR; Zürich-West, CH; and Den Haag, NL. In 2011, Saint Michel residents participated in the design and use of the ‘open roof’ area at Place André Meunier, enacting their city charter’s vision of a sustainable city where people are the most valuable resource. Entitled *Théâtre Evolutif*, this pilot project explores how to implement a bottoms-up approach to urban design in expectation that the neighbourhood will soon be gentrified. The actual open roof structure was chosen to symbolise one of the basic architectural archetypes- a man is a tree is a column for the house, thus the Saint-Michel residents are themselves the pillars of their neighbourhood. The project also includes a water-supply infrastructure that features a drinking-water station and open toilet for the public.²⁷

In 2012, Potrč and Ooze helped Stadionbrache Hardturm Zürich initiate *The Public Space Society* in Zürich-West, the city’s largest redevelopment area. Inspired by the Swiss notion of “Genossenschaft” (society), *The Public Space Society* attempts a new model of public space that considers all of the pertinent parties: the landowner, users, neighbours, visitors, and citizens of Zürich. A work in progress, markers (Baugespann) placed

on the site, temporarily-leased by members of a local gardening society, demarcated the location for public discussions concerning the shape of the district's future square.

In 2013, Potrč and Ooze initiated *The Commons Project* in Den Haag, NL to find use for two unused sites near the Gemeentemuseum Den Haag, a woodsy area in a former dune forest and an empty skyscraper built by J.J. P. Oud in 1969. The participants built a platform in the woods, whose footprint matched that of the building, where they met for five months to discuss and reinvent the idea of the commons. Sharing Winstanley and the Diggers' vision (from five centuries earlier) to preserve the commons, they organised workshops, lectures, fairs, and an open public court in order to scheme ways to reinstate the common, which was long ago supplanted by private and/or state-owned spaces.

Copyleft Enterprises

Inspired by 2015 UN International Year of Soils, Debra Solomon and **Denis Roio** collaborated on the research project "Entropical" (2015). Comprised of four artworks *Realbotanik*, *En Necromasse*, *Seven Layers*, and *Resist-Exist*, this installation explores the economics of nature in relationship to the value of abstract mathematical algorithms used in computer software. One immediate goal was to find a link between computer software and the rhizosphere, the earth layer surrounding plant roots. Waste heat generated 24/7 by computers crunching calculations for the bitcoin industry is used to grow oyster mushrooms on mycelium-inoculated cardboard mats, which urban farmers later insert into their gardens both to produce edible mushrooms and to generate more topsoil, as the fungi composts whatever is in its midst. The second work comprises Solomon's five silk screens featuring various forms of necromass, the dead material decomposed by fungi and

bacteria. For *Seven Layers*, they draw analogies between Permaculture Consociations and Open System Interconnection (OSI model). Derived from the way the Latin *esistere* (existing) nestles into *resistere* (resisting), Solomon's fourth work "evokes the empirical, yet invisible pragmatism and resilience of nature in continuously adapting and transforming itself."²⁸

Soft Green Light: Open System Model advances Kinga Kiełczyńska's theory that Polska's greenhouse economy (flowers, fruit and salads grown for domestic consumption), which sprouted in the seventies and eighties, inspired communism's demise. As noted above, open systems allow for inputs of energy, matter, and information, thus greenhouses are open systems. Before 1989, the greenhouse economy brought untold wealth to greenhouse owners, who were disparaged as *outlaw* "steam men," yet secretly admired for their ingenuity. According to Kiełczyńska, greenhouse prosperity prompted Poles to envision self-organised, upstart enterprises as viable alternatives to state-controlled, top-down economies. With communism over, however, the greenhouse economy that thrived on the earlier economy's inadequacies disappeared as mysteriously as it first appeared, leaving Warszawa's greenhouse district, located in Kępa Zawadowska some 5km from Wilanów on the river bank, to fall into disrepair. Some greenhouses were torn down, others dismantled and repurposed, but many were abandoned, leaving their ghostly remains to serve as monuments to the tiny micro-economy that sabotaged the giant centralised economy from within. So as not to forget the role played by greenhouse prosperity, Kiełczyńska leads tours of the abandoned greenhouses and presents lectures linking communism's collapse to the capacity for open systems to open up heretofore unimagined possibilities. 



Kinga Kielczyńska, *Soft Green Light: Open System Model*, Warszawa, PL.
So as not to forget the significance of "greenhouse prosperity" for the fall of communism, Kinga Kielczyńska conducts tours of abandoned greenhouses located in Kępa Zawadowska, some 5km from Wilańow on the river bank and presents talks about the capacity for open systems to open up imaginative possibilities.

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Reclamation and Restoration Practices

Several artists have developed and implemented novel strategies for purifying water and reclaiming soil, which inadvertently improves air quality. Such artists' initiatives have provided the fields of ecological restoration and landscape architecture inventive prototypes that have since been developed into models and copied across the globe.

The act of imagining somehow makes it real....And what is possible in art becomes thinkable in life.

— Brian Eno

Preserving and Reclaiming Meadows

Meadows evolved as a result of centuries of forest clearing. Whether maintained by grazing livestock or the farmers whose flocks graze there, meadows support microscopic life, plants, various insects, invertebrates, as well as reptiles, amphibians, mammals, and birds. As the **Harrison Studio** have remarked, "Here the harvest preserves two systems, one cultural and the other ecological, each helpful to the other's well-being."¹

In 1986, **herman de vries** purchased a 4000-square metre parcel of land adjacent his property in Eschenau, DE in order to protect the meadow grasses, mixed shrubs, and young trees of *die wiese* (the meadow) growing along a gently sloped hill from agriculture and real estate development. Once covered by a great forest, many small meadows used to surround this village, interspersed between patches of forested lands, but economies of scale have encouraged the farming of local lands. de vries laments, "here as in so many

other parts of western europe, [this] has led to the grubbing out of hedgerows, copses, and small orchards, and of the many wild shrubs and trees of all kinds that they sustained in the varied landscape and open countryside in previous times. *the meadow* was at the time of its purchase simply a demarcated plot, continuous with and indistinguishable from the denatured landscape around it."²

A decade after de vries quietly purchased a meadow neighbouring his property, ensuring that it would remain *as is* (somewhere between an under-valued dynamic meadow and an invaluable artist's action) in perpetuity, the Harrison Studio created *Future Garden, Part 1: The Endangered Meadows of Europe* (1996-1998), for which they transplanted a 400-year old meadow from Deutschland's Eifel region atop the Kunst-und Ausstellungshalle der Bundesrepublik Deutschland in Bonn, DE, creating a 3600 m² field of colour, whose images have captured people's imagination regarding the significance of meadows ever since. Not only did



Harrison Studio, *Future Garden, Part 1: The Endangered Meadows of Europe*, since 1997, Rheinauenpark, Bonn, DE.

The Harrison Studio transplanted a 400-year meadow from Deutschland's Eifel region to a Bonn park, thus offering a model reclamation strategy.

this artist's action save a section of the ecosystem that was about to be destroyed because more homes were being built, but they conserved diversity by adding a wet meadow, a dry meadow, and a stone meadow. Working with local botanists, the Harrisons selected a site along der Rhein (Rhine River) in Bonn's Rheinauenpark, and later moved, reconstructed, and thus reclaimed this meadow. The Harrison Studio called this *Future Garden, Part 1*, because they consider this reclaimed meadow a model for a future forest, future estuary, or future lake (effectively *Future Garden, Part 2*). Transplanted in Rheinauen Park (since 1997), *Future Garden, Part 1* has offered for two decades already, a biologically-diverse alternative to an otherwise monocultural European urban park.

In 2012, Landlife commissioned **Rebecca Chesney** to create *I'm Blue, You're Yellow*, a two-acre meadow sited at Everton Park in Liverpool, UK. The commission itself was a direct result of research she had conducted while in residence at Yorkshire Sculpture Park (YSP) 2010-2011, where she first proposed creating habitat to support local bee and insect populations. YSP couldn't accommodate her proposal, so the more urban Everton Park was identified as an appropriate candidate for a species-attracting meadow intervention, where the meadow is free and publicly accessible all summer. During the first year, most of the blooming plants were annuals, since the perennials had yet to be established. Each year, a carpet of blue greets a sea of yellow. . One imagines that one day there will be a bit of both, as visiting birds and pollinators carry seeds beyond their borders, blending both sides. In actuality, the blue and yellow sides increasingly bloom out of sync, changing the meadow's overall effect. Chesney recalls the meadows' development over its first years:

In the first year with annuals they flowered at the same time in late summer. In 2013 and 2014, they more or less flowered at the same time, however the

yellow side came up first and was at its best before the blue side came up, and flowered longer into the season. By 2015, the yellow side came up and was blooming by April/May and as it was fading the blue side came up and flowered longer into the season. This year is the same too.³

Despite the meadow's surprise outcome, Chesney articulates this cloud's silver-lining. "Although this means the visual aspect of the meadow doesn't exist anymore in its original form (blue and yellow together), it has lengthened the flowering time over the year from April to September."¹⁴

In 2012, student-biologist **Emily Morris** monitored insect activities as a result of the meadow's arrival and each side's flowering species and potential pollinators are listed here:

Site 1 (Blue)	Site 2 (Yellow)	Meadow Pollinators
Cornflower	Corn Marigold	Apus mellifera (honey bee)
Viper's Bugloss	Meadow Buttercup	Bombus pascuorum (bumblebee)
Spear Thistle	Lady's Bedstraw	Eristalis pertinax (hoverfly)
Great Knapweed	Lady's Primrose	Eristalis arbustorum (hoverfly)
Lesser Knapweed	Birds Foot Trefoil	Helophilus pendulas (hoverfly)
Field Scabious	Toadflax	
Meadow Cranesbill	St. John's Wort	
Chicory	Kidney Vetch	
Selfheal	Sunflower	
Lupin	Creeping Buttercup	
Bush Vetch	Brassica sp.	

Morris' field survey was designed to determine whether pollinators gravitate towards particular flower colours, a study made possible by Chesney's adjacent blue and yellow fields. Gathering data over five-consecutive days, Morris randomly-sampled one-metre square quadrats, whose visiting insects she would count for one-minute periods. After surveying 11 quadrats on one side, she would sample another 11 on the other side, and then switch back, to keep the conditions

as similar (sunlight) as possible. What Morris discovered conformed to previous studies. The Corn Marigold attracted four of the five pollinators (honey bees and three species of hoverflies), while bumblebees were drawn to blue flowers like the Cornflower, Viper's Bugloss and Spear Thistle. Being generalists, hoverflies and honey bees tend to flit from side to side, showing little preference. Morris suggested that the popularity of the Corn Marigold could be due to its offering greater resources in the way of nectar and pollen, but she said more research was needed to determine the exact quantity and quality of these resources.⁵

In 2014, ecologist **Brian Robinson** counted insect species inhabiting the meadows. He discovered "10 bee species, 5 butterfly species, plus sawfly, 7-spot ladybird, common ant, 6-spot burnet moth, and hoverflies. Plus, a local bee keeper positioned his hives near the site and produced 'postcode' honey."⁶ No doubt, this meadow's story has just begun and it will be fascinating

to one day read about its twenty-year transformation, as it interacts with surprise visitors.

As part of **Touchstone collaborations'** *Renaturing the City* programme, which explores "how living food and water cycles re-connect and regenerate our rural and urban habitats," **Flora Gathorne-Hardy** and **Miche Fabre Lewin** developed a 2012 planting plan for the edges of Romford Ring Road. "*Renaturing the City* inter-weaves three streams: community and culture- convivial encounters with food, soil, and water; design and infrastructure- practical solutions to inspire and support living cultures seeking balance with nature; and research forums and education exchanges, which explore arts-led methodologies and collaborative enquiry."⁷ This project drew upon Gathorne-Hardy's experience, some four years earlier, of walking the Romford Ring Road to map every plant and pocket of vegetation along the way to get a better sense of "where and how trees, shrubs and wildflowers" grew, as part of a collaboration with What If: Projects Ltd.

Rebecca Chesney, *I'm Blue, You're Yellow*, since 2012, Everton Park, Liverpool, UK. Left: 2012 Right: 2015.

To attract urban bees and insects, Rebecca Chesney planted a two-acre meadow in an urban park in Liverpool, UK. Having grown out of sync, the blue side now blooms later than the yellow, which is why the meadow appears entirely yellow in the righthand image. For good, the meadow is in bloom for longer periods.



and London's Borough of Havering. Describing this methodology as "letting the plants lead," extant plants led her to the best spots to recommend planting new ones. After developing a ring-road planting scheme, Touchstone collaborations worked with local residents to revive St. Edwards Churchyard, the ring road's only public green space. They also invited local participants to taste cordials made from herbs and wild flowers and planted *Fruits of the City*, a garden comprised of orchards, flowers, grass and herbs, enabling people to gather for community events.

Revitalizing Wetlands/ Restoring Agricultural Land

Between 1998 and 2014, herman de vries created *watergoed*, a large-scale plan to transform a section of agricultural land into a nature reserve in the freshwater wetlands and marsh area called Weerribben, in the north-west Dutch province of Overijssel. In *Art Nature Dialogues*, John Grande called this a very real example of how artists can transform reality, actually making a difference in the real world. Agreeing with Grande, de vries remarked that the transformation of six square kilometres of agricultural land below sea level into wetland nature would not be possible without biological, historical, and hydrological research. de vries continues, "plant sociology and the succession of plant associations i have studied are particularly important to integrating a successful variable transition between the two existing nature reserves there. i think this is a good example of a fusion between art and science."⁸ In de vries' own words,

some parts of the shallow wetlands will gradually rise as a result of plant deposits. in this process the water level will be raised further to an even more natural situation. after 80-100 years, the area will probably have grown into one extensive older marsh as a result of succession. the terrace layout is designed according to a block pattern that employs plots of

150 by 150 metres. the level of each block will not be determined subjectively but [with the use of] a scientific random method (objectivisation through randomness has played an important role in my work since the 1960s). between the blocks, an irregular ditched network will be created that is also designed using the random method. this creates a water labyrinth for canoes and also- as a result of the irregular influx of external water- a greater ecological diversity. at one location a linked area of several blocks will be reserved for expanding reed cultivation. this is a regional tradition that is closely related to nature. an existing forest will be made more attractive for hikers and made accessible for small boats. at some spots the landscape will be enlivened by facilities for small ships, hikers, cyclists, and in other ways....extensive foot paths will be laid out...all asphalted roads for agricultural transport and motor vehicles will be removed form the new nature reserve. ...i view this entire work as an integration of concrete art, various scientific disciplines, and philosophy.⁹

In 2010, Marjetica Potrč worked with Ooze (Eva Pfannes and Sylvain Hartenberg) to create *Between the Waters: The Emscher Community Garden* (2010/2013), a sculpture meant to demonstrate how nature-based infiltration can be part of a high-tech system for purifying Die Emscher, one of Europe's most polluted rivers. No longer in operation, a pump once drew water from the river into a septic tank, where it coursed through a constructed wetland, a rainwater-harvesting roof, water storage bags, and finally a fountain located above der Rhein-Herne- Kanal where visitors could access drinking water. Most important, this mini-water treatment plant provided clean water for a community garden.

In 2012, Potrč and Ooze created *Source de Friche*, a wetland atop a Bruxelles/Brussel waste-land, a former Shell Oil industrial site where pooling water remained polluted, even though the site had previously been "decontaminated." The polluted



Marjetica Potrč and Ooze (Eva Pfannes & Sylvain Hartenberg), *Source de Friche*, 2012, Building materials and water-supply infrastructure, "GARDEN-Parkdesign 2012," Bruxelles, BE. Supported by IBGE Environnement. Photos by Ooze. Courtesy of Marjetica Potrč and Ooze (Eva Pfannes & Sylvain Hartenberg).

"*Source de Friche* was a constructed wetland that provided drinking water in an urban wasteland. It was situated on half of a former Shell Oil industrial site, where water had accumulated in a large depression. Although the site had been decontaminated, the water remained polluted. In the project, the polluted water was processed through a constructed wetland, a system that uses helophyte filter plants for purification. In this way, nature's ability to restore itself was on display. [A]lthough the water was purified, it did not meet all European regulations for drinking water for humans, so the artists labelled it as water 'of drinkable quality exclusively for non-humans'. The project thus addressed the issue of water as the world's most precious natural resource in the 21st century."¹⁰

water courses through a constructed wetland, whose helophyte filter plants both purify and display the process. Although the resulting drinking water fails certain European regulations (making it unsuitable for humans), Potrč and Ooze consider it of drinking quality, and thus labeled it water "of drinkable quality exclusively for non-humans."¹¹

Repurposing Industrial Sites

In 1983, the Cultural Department for the City of Hamburg held a DM 400,000 competition concerning "Stadt-Natur-Skulptur" (City-Nature-Sculpture), inspiring artists to suggest sculptures for urban sites of their choice. As briefly mentioned in Section Two, **Joseph Beuys** proposed *Gesamtkunstwerk Freie und Hansestadt Hamburg* (1984), a "citywide" restoration project for Hamburg nearly a quarter of a century after he had performed his first action there in 1962. Beuys chose Altenwerder spüfeldern, a spoils pile adjacent a former fishing village outside Hamburg, whose inhabitants had been forcibly relocated and its traditional buildings demolished following a 1973 Senate resolution. After that, sand and silt poisoned with heavy metals (cadmium, lead, and mercury) dredged from die Elbe were regularly dumped on the floodplains, a practice regarded as considerably cheaper than carefully disposing of it, even though this practice contaminated the groundwater, poisoned the land, and leached metals into the watershed as a result of dumping 2.5 million m³ dredged dirt on a floodplain. As a result of this thoughtless destruction of the natural environment, which engendered unforeseeable health hazards, numerous public protests had occurred since the 1970s, which obviously caught Beuys' attention. He declared it Hamburg's greatest environmental problem.

Beuys called his winning proposal a "gesamtkunstwerk" because he envisioned it requiring an ecological overhaul of Hamburg city-state's political and economic system (from politicians to administrators) that had legitimised



Marjetica Potrč and Ooze (Eva Pfannes & Sylvain Hartenberg), *Between the Waters: The Emscher Community Garden*, 2010, Building materials, energy and water-supply infrastructure, vegetable garden, EMSCHERKUNST 2010, Emscher Island, Essen. DE Photo Credit: Roman Mensing. Courtesy of Marjetica Potrč and Ooze (Eva Pfannes & Sylvain Hartenberg).



so much environmental damage in the first place. Beuys proposed planting fast-growing trees, shrubs, and grasses to bind toxins and retard the continued seepage of metals from the spoiled soil to the groundwater. He envisioned installing a one-ton basalt column from his *The End of the 20th Century* series (1982–1983), thus marking the zone as art. He recommended spending the whole of the prize money on creating a Hamburg-based forum where politicians, administrators, academics, cultural representatives, environmental groups, and companies could come together to ecologically-transform the city-state, leaving the “art-part,” the column and restoration of the spoils pile, to be privately funded. Beuys’ emphasising the creation of a forum, whereby people have their own place to determine their shared future (what Beuys termed “social

sculpture”) anticipated artist-initiated approaches to urban infrastructure discussed in Section Five, as well as **George Steinmann**’s forums for sustainable forests (RU) and water (CH) discussed in Sections Two and Nine, respectively.

Two years before Beuys’ death, however, Hamburg’s then mayor vetoed Beuys’ proposal. His estate conserved its documentation, as well as elements destined for “use” as part of his strategy to restore a heavily polluted, sandy wilderness with fast-growing plants, transforming this “death zone” into an art zone. Beuys’ proposal anticipated phytoremediation, discussed below in detail. *Therapeuticum* (1964) and *Ackereinsaat zur Regeneration* (Agricultural Seed for Regeneration)(1979), two drawings that were likely inspired by anthroposophist **Rudolf Hauschka**’s plant research, certify Beuys’ awareness of plants’ capacity to reclaim soil.¹²

Most art historians view his initial strategy to grow plants as a temporary action meant to be displaced by the forum members' eventual decisions.

Beuys' approach actually reveals something very important about "social sculpture" that seems to have been lost on social-sculpture practitioners over the years. Even if the addition of plants to the spoils pile was only ever meant to be a temporary solution, one that would eventually be overridden by whatever plan Hamburg's future "forum for ecological transformation" would devise, it is important to recognise that Beuys led with an action. Absent a stop-gap measure, there was the off-chance that if the forum: never found a resolution, fell apart before a plan could be implemented, or couldn't find the funds to implement the desired plan, then the necessary change would not occur.

Those who interpret Beuys' social sculpture as "talk now and act later" seem to have it backwards, since he tended to act first and then talk, so as to reflect upon his actions. If one takes his 1974 "Energy Plan for the Western Man" lectures seriously, we see that his "energy plan" concerned "people power," not petroleum or renewable energies. Beuys' avowal of people power was meant to be liberating, granting people the right and confidence to be self-determining, yet another reason his emphasising the need for a public forum was genius. He recognised that the problem (and its resolution) was effectively a people problem to be solved by participants who had a stake in resolving the problem, not some outside professional, whose "fix" would once again be countermanded if the local stakeholders' attitudes were not also transformed in the process. If the people power failed and accomplished nothing, a stop-gap measure was already in place, but the people were free (and heartily encouraged) to find a way to exceed his provisional efforts.

Beuys' infamous claim that everyone is an artist (however metaphorical...and stolen from **Novallis**) was not only a useful tool for inspiring

participants to believe in the power of "direct action," but it granted everyone the right to creatively tackle what was at its roots an "aesthetic" problem (this contaminating eyesore). But he certainly didn't just leave Earth's fate in local chatterers' hands, as most contemporary versions of "social sculpture" insinuate. For Beuys, the social (people power) serves procedural (makes it work), not merely processual (the happening) ends, so its outcome is political, even if it was achieved via social (debate, conversation, and discussion), not political means (parties, representation, and elections).

Primarily known as a land artist, **Herman Prigann** (1942-2008) initiated a few ecoventions mid-career, most noticeably *Ring der Erinnerung* (Ring of Remembrance) (1993) on the former east-west German border and *Die gelde Rampe* (The Yellow Ramp) (1994), created on a former lignite mine near Cottbus, DE for the Third Biennial for Land Art. Planted with yellow-flowering plants such as Broom, St. John's Wort, mullein, lupine, and sun flowers, the 220-metre long, 4-6 metre wide ramp, which leads to a 12-metre diameter observation deck, blossoms every summer to form a golden stripe along its edge. For the remembrance ring, Prigann used dead tree trunks and earth to create a circular ramp leading to this site damaged by acid rain. Concrete slabs engraved with the words *Aer, Aqua, Fauna, Flora, and Terra* are placed at four entrances and the centre, while the ramp is planted with brambles that will one day completely cover the site, leaving the site to become integrated into the mixed forest once the rotting wood decomposes back into the Earth.¹³

Like many artists, Prigann was not interested to restore industrial sites to be used as leisure parks. He rather wanted to grant public access to degraded sites, while keeping their history in tact. As **Malcolm Miles** tells it,

[M]odern industry was despoiling—as mines, chemical works, ironworks and so forth damage their



Mel Chin, *Revival Field*, 1992, Floriade, Zoetermeer, NL.

Following the success of Mel Chin's *Revival Field* in St. Paul, US, he was invited to create a similar work for Floriade, the "World Fair" of horticultural exhibitions, held every ten years in Nederland.



sites- and beneficial, providing work and contributing to aspects of living which are taken for granted. He ensured that local people were employed and used waste materials such as concrete slabs and masonry. But, also repeatedly, he used plants, of the various species growing naturally in the area to grow on, then over, and eventually to more or less obliterate his earthworks.¹⁴

About a thirty-minute walk due south of Torino Porta Nuova train station stands **Parco Arte Vivente** (opened in 2008), a dynamic sculpture park featuring mostly living sculptures sprouting on a former Framtek factory, which once manufactured vehicle springs for Fiat. The brainchild of one-time arte-povera artist **Piero Gilardi**, this continuously evolving 23,000 m² park designed by landscape architects **Gianluca Cosmacini** and **Alessandro Fassi** presents thematic exhibitions indoors in addition to commissioning projects outdoors. Long-term outdoor works include **Dominique Gonzalez-Foerster**'s "upside down" landscape *Trèfle* (Trefoil) (since 2006), **Andrea Caretto** and **Raffaella Spagna**'s inverted greenhouse cum open-air urban

farm (since 2009) adjacent a humus-producing composting sculpture, **Gilles Clément**'s 500m² *Mandala Garden* (since 2010) meandering across the building's rooftop, the bird-inhabiting food source *Corpo Vegetale* (Vegetable Body) (since 2011), **Critical Art Ensemble**'s *Catanuche caerulea* species reserve (2011), and **Terra Terra**'s bread oven pergola *Focolare* (Hearth) (since 2012).

Unspoiling Soil

In 1990, **Mel Chin** (b. 1951) began to collaborate with USDA senior research scientist **Rufus Chaney** on *Revival Field* (1990-1993), the first ever US experiment to test the heavy-metal absorption rate of 96 hyperaccumulators (plants known to absorb metals from soil) planted on a toxic dump in St. Paul, US. Soon after, he was invited to carry out a similar project during Floriade 1992 (Nederland's decennial horticulture festival hosted by different cities) in Zoetermeer, NL. A decade later, Chin arranged for the transfer of new varieties of hyperaccumulators to another collaborator, **Dr. Volker Römfeld** at Hohenheim University, Stuttgart, DE. One of the factors motivating this particular test on German



Georg Dietzler, *Self-Decomposing Laboratory*, 2002, Biennale Balticum, Rauma, Fl. Bottom: Autumn 2003.

In addition to having tested and encouraged phytoremediation, several artists have successfully demonstrated that oyster mushrooms decompose PCBs (polychlorinated biphenyls) from contaminated soil.

soil was the fact that several German environmental factions, most notably the Green Party, doubted the validity of the original science, whose confidentiality (part private industry and part government research) seemed notoriously suspect. Fortunately, Chin and Römfeld projected long-term tests to further the science in Deutschland on public lands and in Hohenheim University plots. The German field was supposedly replanted in 2002.¹⁵

Given the environments in which oyster mushrooms thrive, especially the hardwoods they inhabit, they were suspected early on to prove useful for waste management, especially agricultural waste, wood by-products, coffee residues, etc.¹⁶ In 1993, **Georg Dietzler** initiated experiments to use ordinary oyster mushrooms to rid contaminated soil of PCBs (polychlorinated biphenyl) by decomposing the chemicals. Similar in practice to Chin's using plants to uptake heavy metals from contaminated soils, Dietzler suspected that the oyster mushroom mycelium would break down the chemical structure of highly toxic PCBs into non-toxic substances without enclosing the toxins in their fruit.¹⁷ In the process of decomposing dry straw, 50% by mass is liberated as carbon dioxide, 20% is lost as water, 10% is converted into dry mushrooms, leaving 20% as "spent" compost, which can be fed to cattle, chickens, and pigs; applied as new soil; used to create compost; and to cover garbage land fills.¹⁸

One of Dietzler's most ambitious projects was a *Self-Decomposing Laboratory* (1999-2000), an oyster mushroom experiment originally scheduled to take five to ten years to complete. Although it typically takes only eighteen months for oyster mushroom mycelium to break down contaminated soil toxins, he projected that it would take an additional five to ten years for this large-scale laboratory to totally self-decompose. Concerned by the laboratory's changed appearance, which was totally to be expected since it was undergoing decomposition, Ludwig Forum Director **Hans**

Becker had the sculpture dismantled only one year into Dietzler's long-term experiment.

Urbaniahoeve's **Debra Solomon**, who also works with oyster mushrooms, planted various herbs in large-scale letters, each made with contaminated soil to form the words *THE SHIP-WRECK* (2011), thus testing each plant's natural properties and chemical dynamics for the purpose of repairing polluted sites and soils. For example, Urbaniahoeve planted the "T" with spinach, "H" with mustard, "E" with clover, the "S" with phacelia, "H" with spinach, "I" with clover, "P" with mustard, and so forth. As she notes, "some plants excel at accumulation," while "others do not." Focused on urban food-forests, she's particularly knowledgeable about unspoiling urban soil. She thus recommends "thoroughly carpeting the beds" of urban orchards with nectar-rich groundcovers, which tend to absorb toxic metals from the ground, unlike fruit trees. By planting particular plants that "restore health over time by generating enzyme fields that spawn flurries of microbial activity around their roots," Urbaniahoeve have added a third technique, which they call "the shipwreck contains the ship," since they use polluted urban soil as a "means to its own solution," rather than looking for strategies for removing the contamination.¹⁹

Water Purification

Sewage. During **Hans Haacke**'s 1972 exhibition at Museum Haus Lange, Krefeld, DE. he exhibited *Rhinewater Purification Plant*, which is perhaps his most influential ecological artwork. By displaying Krefeld Sewage Plant's murky discharge, supposedly treated enough to be returned to der Rhein, Haacke brought attention to the sewage plant's role in degrading the river. By pumping the river water through an additional filtration system and using the surplus water to water the museum's garden, he introduced grey-water reclamation. Moreover, the "presence of a large fish bowl and the picture-window view into the wooded

landscape served as a point of contrast between a life-supporting ecosystem and one on the verge of collapse."²⁰

From 2007-2009, **Jackie Brookner** (1945-2015) worked on *Veden Taika* (The Magic of Water) to create floating islands in large lagoons that were once part of the Salo Municipal Sewage plant, but have since become Halikonlahti Bird Pools in Salo, FI. She realised, "The birds need nesting areas separated from surrounding land so that the eggs and young birds will be protected from small [land] mammals."²¹ Due to the lagoons' prior use in treating wastewater, they still contain oils and fatty organic pollutants, as well as heavy metals. *Veden Taika* thus features three islands: the largest offers bird-nesting sites, while the smaller two clean the water via phytoremediation. To build the islands, she worked with 20 students from the local technical high school to create the islands' lightweight "fake" rocks. The local parks commission and community members helped locate, collect, and plant the appropriate plants. To figure out "how, what, where," she relied on local hydrologists, ecologists, and limnologists (lake specialists). Most important, the work is being monitored so that its success/failures are quantifiable.

Swimming Pools. Given the popularity of swimming in ponds and lakes, it's difficult to imagine why it has taken so long for communities to switch from expensive, high-maintenance chlorine systems to natural infiltration for keeping swimming pools safe from bacteria. In 2001, Brookner created *The Gift of Water*, massive moss-covered hands that serve as the final cleansing portal for naturally-filtered water being returned to a pool in Grossenhain, DE. Having already passed through wetlands, the water creates a fountain-like spray as it passes over the hands, which Brookner built locally. Like Chin's hyperaccumulators, Brookner's mosses adsorb and absorb heavy metals (lead, copper, gold, and mercury), as well as other

Right: Jackie Brookner, *The Gift of Water*, 2001, Grossenhain, DE.

Below: Ooze (Eva Pfannes & Sylvain Hartenberg) and Marjetica Potrč, *Of Soil and Water: King's Cross Pond Club*, 2015–2016, Building materials, soil, water, plants, natural filtration, King's Cross, London, UK. Commissioned by King's Cross Central Limited Partnership, "The Relay Art Programme," curated by Stephanie Delcroix and Michael Pinsky. Advised by the KCCLP Arts Advisory Panel. Photo credit: John Sturrock. Courtesy of Marjetica Potrč and Ooze (Eva Pfannes & Sylvain Hartenberg).

Several artists have encouraged communities to create gorgeous, garden-like swimming pools, whose water courses through constructed wetlands, providing natural water-filtering systems.



pollutants found in air and water. Some moss are so sensitive that they are used to indicate pollution levels. Brookner imagines her moss-covered sculptures being installed the world around to filter agricultural runoff, stormwater runoff, wastewater, and other kinds of urban pollution.²²

Marketed as “an art installation you can swim in,” *Of Soil and Water: King’s Cross Pond Club* (2015) was created by Ooze in collaboration with Marjetica Potrč in London, UK. Ten metres wide and forty metres long, this oblong pool is surrounded by pioneer plants, wild flowering grasses, and bushes. The pool water is treated with wetland and submerged water plants that filter, clean, and sustain clear water.²³ According to Potrč, the “project is based on the idea of living in balance with nature and underscores the importance of soil and water, two natural resources we vitally depend on but often take for granted.”²⁴ Although 2015 UN International Year of Soils goes unmentioned, it cannot be a coincidence that this 2015 work’s title mentions both soil and water.

Surface Water. Increasingly concerned by issues of water scarcity and water privatisation effecting developing nations, **Studio Orta** (co-founded in 1992 by **Lucy** (b. 1966) and **Jorgé Orta** (b. 1953)) took a cue from Haacke’s 1972 action. For their 2005 solo exhibition “Drink Water,” a La Biennale di Venezia collateral exhibition at the Fondazione Bevilacqua La Masa, Studio Orta presented *OrtaWater*, their first water-purification prototype, enabling visitors to drink tap water sourced from the otherwise filthy Canal Grande visible outside. Pumped from the canal to the gallery sited on Piazza San Marco, canal water was channeled through a “network of pipes suspended from the sculptures,” filtered, purified, and dispensed to the public via faucets. Spectators could also take potable canal water home in editioned *OrtaWater* bottles.²⁵

Co-commissioned by the Boijmans van Beuningen in Rotterdam, NL, the very next year

Studio Orta pumped water from Rotterdam’s Emmersingel Canal throughout the museum, where it was cleaned and dispensed using their 2005 prototype. In 2007, Studio Orta visited Beijing to research water issues, inspiring them to develop an even grander water-purification scheme. During the 9th Shanghai Art Biennale, they used this newer system to filter and purify water sourced from the Huangpu River in 2012.

Invited to create a pedestrian bridge over a stream in Trekroner, a new Danish town, **Nils Norman** worked with landscape architect **Ib Asger Olsen** (1935–2013) to build a bridge that not only links Roskilde University to Trekroner, but provides much-needed public space. This wooden pedestrian bridge traverses two manmade islands, whose encircling reeds filter rainwater run-off flowing from a settling pond (“lake”) into the stream.

Originally, one big lake was planned for Trekroner, for the rainwater run-off from all the concrete roads and parking lots they built. That is of course the necessity of a large build- you need to prevent flooding. The water has to go somewhere. They planned this big lake, which would feed off to a small stream and down to the fjord. . . . The two islands were the edge effect. With the two islands, you have more water to land ratio, so you are creating more edge. The main lake was landscaped in a municipal style with very neat edges and manicured lawn around it. My idea was that when you got to the bridge you would see reeds growing along the edge and the area would become much more “wild” looking. . . . The reeds also act as a filter for rainwater run-off from the new parking spaces and roads. . . . By creating more of a social process through dialogue, I managed to change the municipality’s mind.²⁶

In 2013, **Vera Thaens** exhibited her prototype for a portable greywater reclamation system, which uses garden plants to filter water for home use, at Z33 in Hasselt, BE. In 2016, she constructed

an unusually sophisticated water-treatment system in her “backyard studio,” where both brownwater (toilet discharge) and greywater (dishwasher, sink, and washing machine water) circulate through various plant beds, which capably absorb and remove hormones, a feat that defies the current capability of public wastewater systems across Europe. Concurrently, she harvests rainwater and cleanses it using plants, before storing it in an underground cistern. With her system, rainwater circulates through ridged troughs that agitate the water enough to simulate the memory of water, arising from river water stimulated as it courses over rocks and winds along the riverbed. Thaens considers it important to simulate the flow of water in a riverbed, since matter is simply “pockets of energy, vibrating at a certain frequency,” so altering its material properties requires recreating a river’s vibrational frequencies.²⁷

Groundwater Protection

It’s hardly surprising that gravel pits typically sit upon the purist of water sources. One might imagine that this is so since rainwater seeping into an underground reservoir via gravel approximates “gravel filtration.” Truthfully, groundwater and gravel go hand in hand as gravel quarries often lie in ancient river beds, which is why when the water table is higher than the pit, it naturally fills with water to become a pond or a lake.

During the 1980s, Finns living near an abandoned gravel pit approached **Osmo Rauhala** to discover artistic options to preserve and/or highlight the existence of strata, layers of rocks beneath the abandoned Pinsiö gravel pits that protect the aquifer holding Central Suomi’s purest drinking water. Opting “to landscape this extensive gravel pit area by creating an integrated environment made up of several permanent large-scale artworks, the City of Nokia and the town of Hämmeenkyrö partnered with the Academy of Fine Arts in Helsinki in order to organise an international art competition

for landscaping the gravel pit in Pinsiö village. This was the very first time in Suomi and among the first places in the world where it was suggested that environmental damage be restored by public artworks.”²⁸

The best known artwork to arise from this international competition is by **Agnes Denes** (b. 1931). Her 28-metre tall manmade mountain *Tree Mountain- A Living Time Capsule* (1992/1996-present) hosts 11,000 Finish Pines (Silver Firs), a declining species, planted to form a spiraling pinecone/sunflower pattern meant to last 400 years (the age when the trees will die). A testimony to its commitment to alleviate the world’s ecological stress, Suomi announced its plan to construct Denes’ mountain during the 1992 Earth Summit in Rio de Janeiro.²⁹ This project’s long-term success is partly ensured by its bottom-up structuring, whereby 11,000 custodians have committed to care for these trees for 400 years. Each custodian’s commitment is acknowledged by an inheritable certificate, to be passed on to twenty or more future generations. Even that era’s Icelandic President Mrs. **Vigdís Finnbogadóttir** and British Prime Minister Mr. **John Major** agreed to host trees, lending Denes’ project far-reaching support.³⁰

More than fifteen years later, **Strata Scheme**, the citizen-initiated environmental art programme responsible for situating artworks in the vicinity of Pinsiö gravel pits, has not only developed the infrastructure to maintain its local art treasures, but it recently invited artists to propose projects that join art, nature, and food.³¹ Unlike *Tree Mountain*, Strata’s two other large-scale environmental wonders appear comparatively useless, perhaps because they lack restorative capabilities. Still, their presence protects groundwater from degradation due to development and mining. **Erik van Hoorn**’s *Bowl & Kuhilas* (1998) features two sculptures formed from birch trees growing towards the light and situated in roundabouts. **Nancy Holt**’s *Up and Under* (1993-1998)



Nils Norman and Ib Asger Olsen, *Trekkoner Bridge and Islands*, 2004–2006, Trekkoner, DK.

In response to a new city's having built a lake to collect rainwater run-off from roads and parking lots, Nils Norman proposed building a bridge over islands that could both cleanse the runoff before entering the fjord and provide much needed public space. By adding two islands encircled with tall reeds, Norman multiplies the "edge effect," thus improving the lake's biodiversity potential.



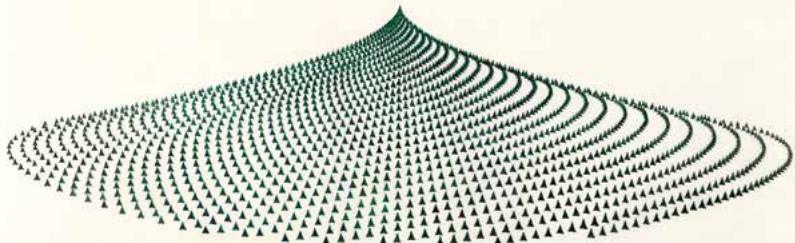
Vera Thaens, *Greywater Reclamation prototype*, 2013, "Space Odyssey 2.0," Z33, Hasselt, BE.

In 2013 Vera Thaens tested her first generation greywater reclamation system, which she has since expanded to fill her backyard.

Right: Agnes Denes, *Tree Mountain- A Living Time Capsule-11,000 People, 11,000 Trees, 400 Years, 1992-1996/ present, Ylöjärvi, Fl.*

Below: Jackie Brookner, *Veden Taika* (The Magic of Water), 2007-2009/ present, Salo, Fl.

Being seventy-two percent forested, Suomi's landscape is highly protected from human incursions, yet this nation has become Europe's most visible player in the art-ecology movement, first with *Tree Mountain* and more recently with *Veden Taika*. Aalto University in Helsinki offers two different master's degrees- Environmental Art (art) and Creative Sustainability (design).



Copyright Agnes Denes, courtesy Leslie Tonkonow Artworks + Projects, New York.

is a curving, grass-covered tunnel sited in a sand quarry. Rather than offering solar or lunar alignments, Holt's work aligns with true north (the North Star known as Polaris), so it provides a visual guide, and its presence prevents drilling to occur in the aquifer hidden below. Given the way mining has destroyed so many of the world's rocky aquifers, I imagine preserving this aquifer is no small feat.³²

In addition to underground aquifers housing large volumes of groundwater, Europe has a history of public wash-houses (known as *les lavoirs* in France) that were typically sited near springs or over rivers. The website www.lavoirs.org website lists 13,540 existing structures in France alone with 167 more awaiting validation. Abandoned in the mid-20th Century, most have

fallen in disrepair, placing adjacent sources at risk. There's thus a national and artistic move underfoot to restore and protect these fragile structures, given both their ecological significance and their importance to France's cultural heritage. In 2014, **Deborah Bowman** and **Patrik Marty** initiated the three-year project *Eau de Vie: Lavoirs in Pujols sur Dordogne*, FR to bring attention to these lost treasures. Since 2004, dozens of artists have been invited each year to install their works in about a dozen lesser known locations around Pujols, as part of the annual exhibition "Artistes et Patrimoine," held in conjunction with journées européennes du patrimoine (European Patrimony Day). 

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Food Security

Several artists have developed and implemented innovative plans for growing food in neighbourhoods that are otherwise food deserts. Projects discussed in this section are focused on innovations in food production, rather than biodiversity or urban infrastructure as discussed in Sections Four and Five. Such artists' initiatives have helped to change public officials' attitudes regarding the city's food-production potential, the optimal use of green space, the availability of people power in exchange for well-being, and the potential to diversify the purposes and capacities of rural, suburban, and urban communities.

It is always hard to say how an artwork impacts society. For example, you see [the] huge urban gardening movement, and many artists have been working with this to great effect. It is no longer a marginal kind of thing. I think that has an effect in how we live in and shape our world. Demonstrating that you can change things in your own environment has a kind of liberating effect. **Public space becomes something that you can touch.**

— Nis Rømer, 2014¹

Registering Farms

In Section Four, I discussed the way both **Hans de Vries** and **herman de vries** registered biodiversity, and exhibited their registrations as art, either in the form of de vries' early sixties bird-sound and late-seventies waterfall recordings, or de Vries' early seventies farm-activity booklets, graphed cow schedules, and plant-juice rising pictures. I now introduce a handful of Italian artists who set out to capture their own farms or those of others present in their urban milieu, which can be seen as an extension of the same artistic tendency that led that era's Dutch avant-gardists to record nature's diversity and rural activities. Whether one calls it "micro-emotive" or conceptual art, several Italian artists felt compelled to cultivate and register urban farms around Firenze, Roma, and Milano. As noted in Section Four, that era's Italian and Dutch avant-gardes were actually linked. Inspired by **Piero Gilardi**'s 1968 essay on micro-emotive art published in the Stedelijk's *Museumjournaal*, **Ger van Elk** organised "Micro-Emotive Art" (1969) for Gallery **Riekje Swart**, Amsterdam, NL, a show concurrent with **Wim Beeren**'s "Op Losse Schroeven: Situaties en Cryptostructuren" at the Stedelijk Museum.² Beeren's catalogue even credits Gilardi with having involved van Elk, **Marinus Boezum**, and **Jan Dibbets** in his exhibition, though of course those artists primarily worked indoors, unlike de vries, de Vries, and the Italians discussed next, whose studios were notably out of doors.

Meanwhile, **Ugo La Pietra** spent nearly a decade documenting unauthorised kitchen-gardens cropping up across Milano. Part of an ongoing series *I gradi di libertà* (Degrees of Freedom), his *Recupero e Reinvenzione* (Recovery and Reinvention) (1969-1976) comprised photographs, drawings, and observations that he produced while surveying the otherwise invisible activities of squatter farmers temporarily occupying spots here and there. As noted in Section Five, such agricultural initiatives interested La Pietra because

they offered evidence that creativity and freedom still existed. His focus dovetails with **Nis Rømer**'s description of the liberating effect of changing "things in your own environment," though of course, urban farms also serve a practical function in terms of supplementing local diets.

In 1973 **Gianfranco Baruchello** initiated *Agricola Cornelia S.p. A.* (1973-1981), an experimental farm-studio situated amidst a barren wasteland, located 6km north of Roma. Over the next decade, he conducted various experiments both with growing food and with food itself. For example, two works *Controlle iniziale 1* and *2* (1973) resulted from his having placed putrefying meat in plastic sacs and then periodically checking their decomposition status. A beekeeper, Baruchello was particularly interested in the flavor of sweetness, in particular honey's role as a waste product or residue in relationship to the theme of death, ideas he explored in *Come convivere con la morte* (How to Live with Death) (1978-1980). Like Hans de Vries' *Actions Because of Climactic Conditions (For One Year)*, Baruchello produced *// Grano* (The Wheat) for which he documented wheat's growth from 25 May to 25 June 1975, including the impact of the field's meteorological conditions (rain, wind, sun) on its eventual harvest. In works like *Mais Dopo*, *Barbabietola*, *Ovini* and *Bovini* (1975-1976), he registered everyday actions like harvesting corn, cultivating beets, raising sheep, and keeping cattle. His related photo-text works transformed farm life into conceptual art.

"Earthrise" (2016) curator **Marco Scotini** credits La Pietra with having recorded "urbanised man," remaking the regulated city into his own space by creating spontaneous paths through unauthorised areas of greenery, living from urban kitchen gardens, or reusing consumer waste in inventive ways. With his "marginalised traces [that] provide concrete indications for an alternative management of the urban," La Pietra's drawing and photo-montages from that era honour anonymous "urbanised men" for their contributions to both

collective and individual reality.³ Scotini adds, "These marks represent the results of an analysis aimed to discover the degrees of freedom that still exist within the urban system, where every alteration, even the minimal one, can reveal a repressed desire of invention and a creative attitude which still persists in individual behaviours."⁴ He notes La Pietra's aversion to "research," as it tends toward one ideal solution. La Pietra rather intended his research to be as free-ranging in its approach as were subjects under his study. Like most ecovention initiators who eschew "best practices" in favor of a plurality of possible solutions, La Pietra aimed to capture:

a plurality of relationships, a plurality of bifurcations, the coexistence of possibilities waiting to be put into practice....to identify the physical and formalised traces within the regulated city, such as spontaneous paths through unauthorised areas of greenery and urban vegetable gardens....an alternative within the very use of the city that is dependent on the way in which it is managed....a logic freed from pre-established formats.⁵

Charmed by his discoveries, La Pietra made the film *La riappropriazione della città* (1977) to document what no doubt must have seemed like Italian society's last vestiges of freedom and creativity during the "Anni di piombo" (years of lead). His peaceful, open-ended exploration balanced the efforts of those of his generation whose search for freedom had led them instead to join para-military groups (Brigate Rossi, Lotta Continua, Potere Operaio) bent on targeting police, politicians, and industry leaders deemed authoritative, capitalistic, or insensitive to workers' needs. Most of the radicals could only dream of or theorise the autonomous living experiences that La Pietra cherished and immortalised in his art.

Three decades later, **Paul Chaney** and curator **Kenna Hernly** initiated **FIELDCLUB** (2004-2012), a 1.6 hectare smallholding focused on "off-grid



Ugo La Pietra, *Baggio* (above) and *Rozzi*, 1969/1970, 70cm x 50cm from *Recupero e Reinvenzione* (Recovery and Reinvention) (1969-1976). Courtesy Studio La Pietra, Milano, IT.

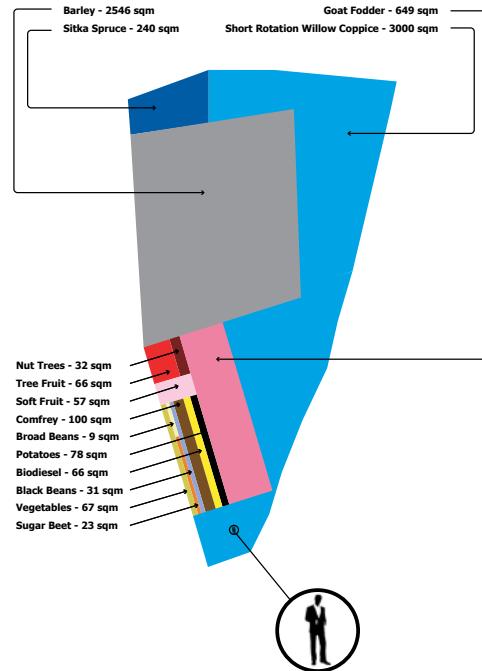
Ugo La Pietra spent nearly a decade registering the creativity and innovation characteristic of unauthorised *orti* (kitchen gardens) cropping up across Milano, IT during the early seventies.



Paul Chaney, *FieldMachine 1.0*, 2004, computer console and output, "Lizard Exit Plan," 2014, Kestle Barton, Cornwall, UK.

Facing: FIELDCLUB, *Before and After*, 2004-2012, Cornish Peninsula, UK.

Paul Chaney and Kenna Hernly developed *FieldMachine 1.0*, the first generation of customisable software that calculates how to proportion land to cultivate inhabitants' diets. With this software, they determined how their land should be allocated to grow the vegetables, cereals, beans, fodder, and wood they would need in order to live as subsistence farmers for several years.



"living, self-sufficiency, and agrarian reform" in southwest England. This project not only involved the intensive cultivation of a 6968 m² parcel of land and the creation of a 9219 m² meadow, but it required the Fieldclubbers (as Chaney and Hernly were sometimes called) to construct their own shelter. In 2006, they completed *Local Bender*, a home built from green hazel sticks harvested within walking distance of their property and recycled construction materials such as windows, doors, floors, and tarps for a roof. By definition, a bender is a makeshift shelter constructed by placing tarpaulin or plastic sheeting over bent saplings or woven branches. Because their shelter's shape, scale, and appearance were constrained by construction materials available for recycling, the bender's design blueprint followed its construction. Since every bender's shape, scale, and appearance would be similarly constrained, even

benders built with their blueprint would be particulars, making them all *local* benders.

Anyone can use their customisable software *FieldMachine 1.6*, which is currently available at fieldmachine.fieldclub.co.uk/group/Demo, to "design, create, and interrogate, an exemplary *Unit*, a system of low-impact self-provision predicated on the hypothetical division of available UK land between the current UK population. The problematic complexities encountered during the physical application of this theory at FIELDCLUB's site led to a large body of projects, practical research, and Neo-Agrosophy- a weird fusion of agriculture, futurology, and contemporary philosophy."⁶ Simply put, *FieldMachine 1.6* enables users to input daily calorie quotas and diet preferences to determine exactly how much land is required and how plots must be proportioned to produce the particular





Fernando García-Dory,
A Shepherds School,
2004-present, Urrielles
Mountains, ES.

The same year FIELD-CLUB launched their farm, Fernando García-Dory established *A Shepherds School* to preserve local jobs and cheese traditions.

inhabitants' food using "low-impact, zero-carbon food/fuel production systems."

To customise one's land usage, one simply enters the daily proportions of one's diet from a selection of locally-cultivatable crops including wheat, barley, rye, broad bean, black bean, rapeseed oil, vegetables, soft fruit, tree fruit, walnut, sugar beet syrup, milk, butter, egg, chicken, lamb, or beef. Any crop can be added to the software, allowing any habitat or location to be modelled. In Chaney and Hernly's case, they estimated using 28% of their land to provide fodder for goats (to make meat/cheese), 18% to produce cereal crops, 1% to produce biodiesel, 1.4% to grow compost materials, 46.7% to generate firewood and construction timber, plus 5.2% to grow vegetables, fruits and nuts (to secure daily protein, carbohydrate and fat requirements). That said, the goats never arrived.

The parcel they purchased had previously been used as pasture, and had been cut annually for hay, but fertilisers had not been added for several

years, so it was undergoing "organic conversion," yet its overall fertility had been deliberately diminished to improve its suitability for a greater variety of wild grasses and flowers. To protect their crops against wind, they grew woodland plants, coppices, and hedgerows sporting edible berries, on their property's outer edges.

Fieldclubber's daily activities of preparing, cultivating, and harvesting land brought them into competition with slugs, inspiring three different kinetic gadgets suitable for killing slugs, the last one being remotely activated. Recalling Hans de Vries' *'t dooiebeestenboek* (The Dead Beast Book) (1971), Chaney registered his interactions with pigs, voles, and birds, eventually allocating a bit of land for a graveyard where he memorialised each animal's death, whether accidental (two magpies, abandoned baby shrews, two voles, and a blackbird) or deliberate (rats and mice caught with traps). All the while, they hosted public lectures and workshops on topics related to their daily life experiences. They have since

adapted the *FieldMachine* web tool to perform what they call “hypothetical reterritorialisations,” enabling communities in Cornwall, UK (2016), Donetsk, UA (2012), Haifa, IL (2012) and St. Ives, UK (2011) to grasp how local diets determine land use, which inevitably transforms the land to accommodate human aspirations.

While Fieldclubbers struggled to sustain food and warmth on the Cornish peninsula, seemingly in the middle of nowhere, **Fernando García-Dory** took up a similarly pastoral approach, opening *A Shepherd School* (ongoing since 2004) in España’s northern Urrielles Mountains in order to preserve local jobs and cheese traditions. Given the vulnerability of sheep and goats to wolves, he worked with shepherds and a biologist in 2006 to develop a solar-powered “flock protection system.” The lead female sheep wears a bell-like sensor that emits an ultrasound signal when she starts to run, thus disturbing nearby wolves and canidae, many of which are protected species. In 2007, he organised a “world gathering” of nomadic and “transhuman pastoralists,” bringing together some 200 representatives of nomadic communities from around the world. In 2010, he worked with Grizedale Arts to create a *Cheese Production Mobile Unit* (CPMU), or Mobile Dairy School, enabling attendees to gain skills that both diversify local products (adding butter and cheeses) and augment shepherds’ incomes. In 2011, he developed CPMU2 as part of *Vorratskämmer* (Pantry), **Myvillages’** contribution to “Über Lebenskunst,” a week of festivities and lectures in Berlin, DE, organised by Haus der Kulturen der Welt to explore “good living,” during which Myvillages fed 8000 attendees.

Edible Art

In 1971, four Italian architects (**Giorgio Birelli, Carlo Caldini, Fabrizio Fiumi, and Paolo Galli**) working as **Gruppo 9999** (1967-1972) won MoMA’s “Competition for Young Designers” with *Vegetable Garden House*, originally created for the discoteca

Spacetime Electronic in Firenze, IT. Rather than refabricate it, MoMA Curator of Design **Emilio Ambasz** exhibited black and white photographs of it in MoMA’s 1972 exhibition “Italy: The New Domestic Landscape.” According to Marco Scotini, Gruppo 9999’s structure took its cues from the cyclical use of energy, and sought “to offer a reciprocal, bi-directional architecture, establishing a new relationship between man, nature, and technology... [one that] imagines a mankind that by respecting its role as an integral part of nature, rereads its relationship with the environment in light of the reciprocal rediscovery of the same.”⁷ To this end, they built an “air bed,” an inhabitable space “perfumed with natural essences” where people could recline while smelling the various vegetables growing around the cultivated bed of fertile soil. Like **Jean-François Paquay**’s edible environments discussed in Section Four, *Vegetable Garden House* is an “eco-device that transcends the dichotomy between work and leisure, production and consumption.”⁸ To prolong its practical opportunities, its users must re-work and re-make the space *ad infinitum*. Like the projects discussed under Copyleft Public Space in Section Five, Gruppo 9999’s *Vegetable Garden House* offers a work-in-progress whose eaters/smellers constantly renegotiate its potential, transforming consumers into actor-recipients.

That very same year, **Hans Haacke** exhibited *Gerichtetes Wachstum* (Directed Growth) (1972), green beans growing indoors as part of his exhibition at Museum Haus Lange, Krefeld, DE. This edible sculpture recalls his bean stalks growing the year before in the Solomon R. Guggenheim Museum’s built-in planters, which the public never saw, because then director **Thomas Messer** cancelled his solo exhibition during installation. As discussed in Section Three, Haacke’s earliest works revolved around systems. His 1965 manifesto called for art to be: non-stable, indeterminate, environment-dependent, reacting to light and air, playful, living-in-time, articulating something

Top: Gruppo 9999,
Vegetable Garden House,
1971, Spacetime Electronic,
Firenze, IT.

Hans Haacke, *Gerichtetes Wachstum* (Directed Growth), 1972, Museum Haus Lange, Krefeld, DE.
Courtesy Paula Cooper Gallery, New York, US. c/o Pictoright Amsterdam 2017.

The same year Gruppo 9999 built a hanging garden for sensing plant aromas at Space Electronic in Firenze, IT, Hans Haacke grew beans in the planters of the Guggenheim Museum in New York, US (until his exhibition was cancelled). A year later, Haacke successfully exhibited beans flourishing at Museum Haus Lange.



natural, among other things. Despite being grown indoors, his edible sculptures (experiments with growing beans, chickens and ants as food) fulfilled all aspects of his manifesto, yet this body of work is strangely overlooked, perhaps because these foodstuffs were never actually harvested, let alone grown to be eaten.⁹

Although Haacke exhibited various mechanisms for food production (incubators, bean poles, and colonies), none were farms, since their connotations (beyond being systems) are so diverse. His interest to display chickens, beans, and ants resulted from his more basic inquiry into social systems (group behaviour), whose growth patterns arouse references to economic models, political structures, and ecological systems. Incidentally, he exhibited *Chickens Hatching* (1969), eight incubators, each replete with dozens of fertilised eggs, the same year that Jannis Kounellis' *Dodeci Cavalli Vivi* (Twelve Living Horses) transformed Galleria L'Attico di Roma into a noisy, smelly stable!

As noted in Section Four, **Åsa Sonjasdotter** has been exhibiting potatoes as art since 2005. Since 2009, she has cultivated potatoes in sacks (apparently her preferred method) in Berlin's Prinzessinnengarten, where in 2010 she first worked with gardeners to breed new potatoes, including varieties that perfectly suit that garden's micro-climate. That same year, she planted and served fifteen different potato varieties, harvested from a patch adjacent the Los Angeles County Art Museum in Los Angeles, US. Awarded Le Prix COAL Art et Environnement 2014, she planted *Haute Diversité: par le prisme de la patate* (2015), which featured ancient varieties that had been cultivated in Paris' Jardins du Luxe before the French Revolution. Apparently, a volcano eruption in Ísland during the late 18th Century disrupted Paris' climate enough to effect food production, eventually causing the political shift that sparked the revolution. Sonjasdotter recruited eight community gardeners and regional farmers to grow her

Paris list's twelve heirloom varieties, which they harvested and sold during her two-week "market-exhibition" held at Centquatre-Paris.

For the 2014 environmental art exhibition "Green Light District" at Budafabriek in Kortrijk, BE, **AnneMarie Maes**, founder of the Brussels Urban Bee Laboratory (BUBL) (since 2009), created *The Invisible Garden / l'Orto Invisible: Naturalistic Observations and Hidden Memories* in partnership with **VELT** (Society for Ecological Living and Gardening), Het **Provinciaal Technisch Instituut Kortrijk** and **Campus tuinbouwschool**. To create a "mini-version" of her 700m² *Edible Forest Garden* (BUBL's Open Air Laboratorium on a rooftop in the heart of Bruxelles/Brussel), she employed permaculture techniques indoors and quartered a 200m² gallery into: a medicinal herb garden, a Mediterranean garden replete with several very large olive trees, a winter vegetable garden sprouting four varieties of colourful cabbages plus numerous Brussels sprout stalks, and an edible forest garden with bee-friendly trees, shrubs and ground cover; all magically growing in mounds of soil plopped directly on the floor! Discretely positioned monitors and speakers broadcast video and sound recordings of otherwise invisible garden activities, keeping the plants company.

Low-Hanging Fruits

One of the biggest debates these days among urban planners concerns the role of public space. In Section Five, I discussed numerous ways artists have wrested public space away from city authorities, enabling users to decide for themselves how to collectively transform public space into meaningful places. In addition to urban planners trying to identify a particular site's actual users, so as to determine which functions the public space ought to offer; there is the particularly thorny issue of programming green space. Should it be a high-maintenance formal garden that pleases the majority of people? Or should the green space be sustainable, that



AnneMarie Maes, *The Invisible Garden/Orto Invisible: Naturalistic Observations and Hidden Memories*, 2014, "Green Light District," Buda-fabriek, Kortrijk, BE.

Far right: Åsa Sonjasdotter, *Haute Diversité: Par le prisme de la patate*, 2015, Centquatre-Paris, FR.

In 2014, AnneMarie Maes demonstrated agro-forestry indoors, replete with olive trees and vegetables that were harvested and for sale in the museum store. Months later, Åsa Sonjasdotter recruited French farmers to cultivate ancient potato varieties, which were sold during her 2015 market-exhibition.





is, planted with native species that are especially adapted to that area's climate, like low-maintenance meadows, heaths or a field grown from ornamental grasses, all of which risk to be dismissed by passersby as wild and unkempt? If the passersby feel, however, as though they are stakeholders in the decision process, they will be more likely to accept and to publicise the benefits of low-maintenance urban meadows, however artificial they may seem in the context of the city, as opposed to the country, where they provide animal food. With a little coordination, the city meadow could feed animals inhabiting urban horse farms or nearby petting zoos.

And this brings up even thornier questions concerning edible landscapes. What if all of the beautiful fruits get eaten? Who is responsible for preventing hungry homeless people, a roving band of soccer hooligans, or migrants camping out in the park from ransacking the edible landscapes? Do urban orchards warrant protection? All legitimate questions and concerns, the most

automatic (and illegitimate) response has been (up until now) to never even consider such possibilities, so as to prevent such unwanted outcomes from occurring. A counter-point could be whether it's morally responsible to use public space to grow inedible ornamental fruits. Truth be told, if everyone actually had sufficient food sources, no one would perceive edible landscapes as being threatened, save perhaps by the same trouble makers who stand ready to destroy property, whether abandoned buildings, signs, trash cans, bus stops, and even trees. On one hand, the very fact that city administrators worry about the fate of edible landscapes indicates that food security is a problem, so perhaps edible landscapes can play a vital role in signalling the prevalence of poverty, hunger, and nutrition.

Upon learning that most of the fruit trees adorning Portugal's city streets are ornamental (colorful though bitter), **Moirika Reker** immediately recognised that spaces now hosting ornamental





Above: Moirika Reker, *Fruta à Mão*, 2014-present, master plan, Lisboa, PT.

Right: Søren Dahlgaard, 2002-present, shade houses, Hibalhidhoo, MV.

Eager to find ways to improve public access to food, both Moirika Reker and Søren Dahlgaard have intervened on local food systems to avail their community's low-hanging fruits, which would otherwise remain overlooked.

trees could one day grow edible fruit trees instead. She thus sought a European Cultural Foundation grant to develop *Fruta à Mão* (Fruit in Hands) (since 2014), an ongoing project that initially aims to transform part of Quinta dos Lilases, a Lisboa city park, into a 2500m² edible orchard with more applications to come. As Reker remarks, "The point of our orchard is not to just add a few trees with fruits, but to create an impact that demonstrates the potential for fruit in the city, proving that productive trees: are no less beautiful than ornamental ones, can contribute an aesthetic experience for the city along with producing food (and reminding urbanites that all food need not be bought), and can transform public space into a commons."¹⁰

One interesting idea to come out of Reker's meetings concerns the possibility of grafting edible varieties onto existing ornamental trees, so that they can keep their value. Incidentally, the illegal variety, "guerrilla grafting" has recently become a popular activity in San Francisco, where it is classified as vandalism, despite the guerrilla



grafters' noble causes. It turns out that the main worry in San Francisco is not inviting people to steal fruit, but ripe fruits dropping on the ground, getting crushed, and either messing up the sidewalk or causing a fall. Guerrilla grafters (since 2011) insist that a steward checks up on each tree regularly, so that grafts can flourish, hopefully prompting constructive conversations about the need to transform cities into food forests.

Although **Søren Dahlgaard** sometimes performs silly antics like making newspaper sausages, painting dressed as a knight sporting baguette armour, or displacing terrariums with over-yeasted bread dough, he has also enacted humourous actions with serious consequences, such as his breathing rooms (2008) and *Mobile Hedges* (2011), both of which temporarily cordon off space. In 2002, Dahlgaard moved with his family to Hibalhidhoo in the Maldives, a country comprised of 1200 atolls whose sandy soil, extreme temperatures, salty groundwater, and limited water supply has made industrial farming historically unsustainable.



Søren Dahlgaard, "Growing Vegetables on a Coral Island," 2011, Århus Kunstabning, Århus, DK.

Variations of this exhibition travelled as "The Farm," 2012, National Art Gallery, Malé, MV; and "Growing Vegetables on a Coral Island Hibahidoo," 2015, CCA Andratx, Mallorca, ES; enabling the public to learn more about Søren Dahlgaard's innovative farming practices.

Absent successful large-scale farms, most food for tourists is imported at a cost to both the economy and environment. Maldivians, however, have operated "homegardens" for hundreds of years, each producing a wide variety of tropical fruits, vegetables, timber, and cereals, totalling about 150 species.¹¹

Over a period of two years, Dahlgaard worked in collaboration with scientists, Ministries of Agriculture, importers, engineers, and a dozen local inhabitants, to build numerous shade houses filled with cucumbers, eggplants, lettuces, peppers, tomatoes, cabbages, pumpkins, and various fruits, which they sold to hotels on Baa Atoll, some 100km northwest of Maldives' capital Malé (reachable in 6-8 hours by boat, 2-3 hours by speedboat and 30 minutes by seaplane). The tourist industry typically imported fresh food by air from "Australia, Singapore, Dubai, and Deutschland," with 30-40% arriving spoiled (presumably during transport) from India and Sri Lanka.¹²

This is a great example of an artist with a business plan, whose counter-intuitive, "pie in the sky" harebrained scheme is only possible as art, though this might not have been the case had he performed this practical action ten years earlier when neither farming nor practical actions were deemed artistic realms!¹³ Most amazingly, only two years later, overall imports of foods that they grew, such as chilli, watermelon, squash, cucumber, pumpkin, and aubergine, declined 35%, as a result of multiple enterprises working together.

In response to Århus Kunstbygning's open call for exhibitions reflecting the theme "Imagine: Towards an Eco-Aesthetic," Dahlgaard exhibited "Growing Vegetables on a Coral Island" (2011). Eager to demonstrate recent developments in agricultural technologies, he transformed the main gallery space into a greenhouse, managed by a local gardener, who tended hundreds of chili, cucumber, and tomato plants, as pollinating bees flew from plant to plant. He thus got the opportunity to influence Danish farmers, by

sharing technologies that he had already tested, while boosting his Maldivian harvest. He envisions European cities adopting irrigation systems, grow lights, and pollinating bees to become farms.¹⁴ During the exhibition's last few weeks, the greenhouse generated more food than the centre's café could serve, so they boxed and distributed excess veggies for free.

Not surprisingly, the gallery's humidity rose dramatically as a result of the hundreds of transpiring vegetables. When engineers decided that high humidity levels risked to damage the wooden building, they installed three large de-humidifiers for the exhibition's duration. As one might expect, indoor farms pose a host of potential problems for museums, ranging from dust and/or insects contaminating a building's air ducts to increased electricity bills due to grow lights or the running of de-humidifiers, and rising humidity levels. That said, erecting a temporary greenhouse adjacent the museum offers a low-cost way to manage such inconveniences, while affording the public access to profitable agricultural innovations.

Most important, local farmers interested to learn about novel farming practices could visit Dahlgaard's public exhibition. One of the greatest advantages of ecovention exhibitions is that they grant the public access to technology ordinarily hidden in journal papers, university courses, or academic conferences. In reflecting upon his Maldivian farming experience, he notes its impact:

With a growing population and a growing tourism industry in Maldives, this means local farmers were growing significantly more vegetables and fruit and this can in part be credited to the farm trial results from [our] Hibahidhoo farm, and by sharing the knowledge and findings with interested farmers. [I contributed] to an ADB (Asian Development Bank) report on Commercialisation of Agriculture in the Maldives in 2004-2005 and exhibited at the NAG (National Art Gallery) in Maldives in January 2012.¹⁵



Agnes Denes, *Wheatfield*, 1982/2015, 5-hectares, Milano, IT. Fondazione Riccardo Catella, in partnership with Fondazione Nicola Trussardi and Confagricoltura.

Right: Agnes Denes in collaboration with EXYZT, *The Dalton Mill*, 1982/2009, London, UK, "Radical Nature," Barbican Art Gallery, London, UK. Photo Credit: Eliot Wyman.

Nearly three decades after people helped Agnes Denes plant a wheat field at the foot of Manhattan, European institutions invited her to re-instate this historically significant work in two different contexts—one dealing with the fine line between culture and nature, and the other addressing the importance of feeding the planet. In London, the experimental architecture collective EXYZT transformed an abandoned garden into a summer retreat, replete with a rural windmill. In Milano, Denes' wheatfield seemed to stretch from Stefano Boeri's *Bosco Verticale* to the Regione Lombardia skyscraper posting an enormous sign, "Lombardy, Feeding the Future Now." Once harvested, passersby shared in the bounty of freshly cut wheat and were encouraged to replant the seeds.



In many ways, Dahlgaard's outlandish Maldivian enterprise recalls **Agnes Denes'** *Wheatfield- A Confrontation* (1982), the massive wheat field, planted atop Battery Park Land Fill on Manhattan's lower tip, which seemed no less an "impossible dream" until she and her friends actually harvested it. She has since twice recreated this wheat field, first for "Radical Nature" (2009) in London, UK and next, adjacent Milano's brand new Porta Nuova neighbourhood in conjunction with Expo Milano 2015, whose theme was "Feeding the Planet, Energy for Life!"

Farming Communities

I next juxtapose farms implemented by artist-farmers working *alongside* the public (farming communities) with those organised by artists *for* particular constituents (community farms). In most cases, farming communities involve an open roster of temporary members, depending on who is available at any given time to participate as the "farming community," whereas community farms engage members of a particular community that has commissioned some artist(s) to carry out particular activities. Sometimes, such projects originate as "anyspacewhatevers;" that is, their goals, strategies, methodologies, recruitment policy, etc. begin as open-ended agendas that participating members negotiate (and re-negotiate) along the way. Absent a specific roster, farming communities typically operate in the open, either occupying, squatting, or legally-accessing spaces, and thus tend to challenge notions of ownership and property. Community farms, by contrast, are often linked to a particular property, which is typically owned by a particular group and is thus not open to the public.

For participants to earn/retain the right to sell/consume whatever foodstuff they have produced while working on urban farms of either stripe, food must be valued as "property," that is something that is either grown for or belongs to some "target group," otherwise stewards won't

co-evolve. With public spaces, however, everybody considers themselves an owner, worthy of sharing in the bounty, which is why access must be accompanied by the duty to care, otherwise farming communities devolve into chaos.

Urbaniahoeve, discussed in Section Five, represents a third option, whereby food is on one hand exchanged for participants' farming services, yet is also freely available to those who need food, but haven't participated for whatever reason. Urbaniahoeve's goal to transform cities into farms availing "free food for all" first requires recruiting, training, and keeping as many participants as possible inspired (farming communities), but also requires the citywide sharing of the fruits of participants' labours, since part of its mission is to be a citywide community farm. Hardly an anyspacewhatever, whose mission, membership, harvest, and farming techniques are regularly renegotiated by its participants, Urbaniahoeve is led by **Debra Solomon**, an artist whose urban farming blog culiblog.org features 500 articles and once had around 30,000 monthly followers.

Solomon has purposely honed Urbaniahoeve's mission around agro-forestry, the technique she considers most appropriate for cities interested to optimise food production, since trees cool cities in summer (warm them in winter) and sequester carbon. Doing so, however, requires that Urbaniahoeve participants feel both pride in their efforts toward enacting its mission and stewardship on behalf of the entire city, thus offering participants a sense of ownership on par with community farms that divide their bounty among their member farmers. However, Urbaniahoeve's impact, scale, and applications elsewhere (in cities across the globe) will be the participants' doing, making its long-term potential no less negotiable than some agenda-free anyspacewhatever.

In 2001, **Nils Norman** designed, built, and commandeered *Geocrusher: The Mother Coach. Zone: Earth* as part of his solo exhibition at The



Nils Norman, *Eetbaar Park*, 2008-2010/present, Zuiderpark, Den Haag, NL.

Below: Debra Solomon, *Food-scape Schilderswijk*, 2009-2010/present, Den Haag, NL.

Invited by Stroom to work with local residents to create urban farms, Nils Norman opted to work with members of Permacultuur Centrum Den Haag to create two permaculture gardens located in South Park, while Debra Solomon worked with inhabitants of Schilderswijk to create four agro-forestry gardens for growing fruit trees, berries, and herbs.



Institute for Visual Culture in Cambridge, UK. This redesigned bus featured a reading room wired for Internet access (pre-wifi) and a solar-powered photocopier, with books on city gentrification, radical gardening, experimental city design, eco-activism, alternative energy, and self-sustainability, as well as a built-in greenhouse growing a variety of “indigenous vegetables, fruits, and flowers all watered by a rainwater filtration unit located on the back of the bus.”¹⁶ According to Norman, his “mobile propaganda machine” visited “museums, gardens, schools, and town squares around the UK, as well as in Berlin and Bonn [in 2001]. In 2002 [it travelled] to the **Galerie für Landschaftskunst** in Hamburg, [DE]; the Rooseum in Malmö, [SE]; Stroom in [Den Haag, NL; CH and back to] the UK.”¹⁷ Around that same time, Norman started strategising with **Simon Bill, Emily Pethick, and Sara Staton** on ways to grow both perennial and edible plants in a large unused garden at a South London primary school with the goal to transform it into a large “outdoor classroom and playground where children could also eat.”

So far as I know, Norman’s millennial proposals for a school garden, an “edible round-about” for the St. James Barton Roundabout in Bristol, UK depicted in *The Edible Forest Garden Park and Monuments to Civil Disobedience Adventure Playground* (2001), or *Moltke Strasse Redesign as Food Co-op* (2002) for Köln, DE never came to fruition. As noted in Section One, he may not even have envisioned building them. In a 2002 *Artforum* interview with **Jennifer Allen**, he remarked how his works from the late nineties and early aughties:

were meant to be more about trying to develop interesting methods of distributing propaganda and information within the hideous boredom of commercial space. I was trying to rethink the way certain spaces and models are locked into business-as-usual capitalism. The “white cube” school of corporate art dealing and its global manifestation in

a Chelsea warehouse “style,” for example, is a model that should be radically reconsidered.¹⁸

What have definitely “come about,” however, are changed views regarding public space’s possibilities. And no doubt, the distribution of Norman’s many proposals has helped people to imagine different uses for public space. Today, city officials recognise: both the city and buildings’ potential for sourcing fresh produce, the round-about’s possibility as a cultivated field, the importance of schoolyard kitchen gardens, etc. In light of his “mobile propaganda machine” and his dozens of drawings that envision better living (his “utopian thinking” as a critical tool), it’s no wonder people sometimes erroneously describe Norman as an “activist,” a moniker he rebuffs. In a 2013 interview with **Bonnie Fortune**, he clarified,

I wouldn’t call myself an activist. I think there is a certain form of activism in education and for me education is a really important part of my practice. I see it as part of my praxis, not a separate money job. It is actually what I do as an artist. But, saying that, education is not an “art project.” I feel it’s important to make that clear.¹⁹

Finally, a 2008 Stroom commission, sponsored by Den Haag’s “Foodprint” programme, led Norman to work with **Peter de Rooden** (of Stroom) and **Menno Swak** (a founding member of Permacultuur Centrum Den Haag) to identify two appropriate sites for the two edible parks comprising *Eetbaar Park* (since 2010). *Herweijerhoeve, Zuiderpark* is a nearly .81 hectare permaculture farm that is located in the South Park and functions as a demonstration garden where urban farmers can generate new permaculture ideas. The second is located at the entrance to the Amateur Market Gardener’s Association, a community garden based on the allotment model.²⁰ Both parks were designed by permaculture design students and

planted by local residents. Although the second garden is located adjacent an allotment garden, it is rather a “permaculture answer to the allotment: a community garden where produce would be gardened collectively, rather than in staked-out, individual plots.”²¹

Given that educational outreach is central to permaculture practices, permaculture farms typically farm communities. That is, they constantly recruit, teach new skills, encourage experimentation, and work hard to keep farmers and gardeners of all levels of dedication and interest in the game, inspiring them to strive for far more than whatever their labour has earned. Permaculture’s core values entail earth care, people care, and fair share, so its practices extend far beyond growing food.²² No wonder Norman considers *Eetbaar Park* a copyleft prototype for public space like those discussed in Section Five. He adds, “The *Edible Park* explores what an alternative, or counter, public space might look like, and asks if it is possible to collectively develop a public space that bucks the dominant trend towards the privatisation of everything – a space that is not surveilled or designed to control consumers. It offers another way of looking at the production of social space, our parks and shared urban spaces.”²³

While Norman developed *Eetbaar Park*, Stroom also funded Debra Solomon’s *Foodscape Schilderswijk*, four agro-forestry gardens based on permaculture practices and planted alongside inhabitants of Schilderswijk, a Den Haag neighbourhood known for high unemployment rates and poverty (70% of the population). With agro-forestry, one starts by adding the largest plants (the trees) and then continuously adding smaller and smaller (“softer”) plants. Once the nut trees start to thrive, fruit trees are planted, and then berries, mushrooms, herbs, flowers, etc. For her own agro-forestry demonstration garden, situated behind a building housing artists’ studios in Amsterdam Noord, she planted hazelnut trees in 2011, followed



Nis Rømer in collaboration with Carsten Hoff, *Rooftop Garden*, 2008, København, DK.

Below: Vera Thaens, *Survival Unit*, 2012, “Spoor,” Stationplein, Borgloon, BE. For *Rooftop Garden*, Nis Rømer and Carsten Hoff rigged the irrigation system such that water collected in the building’s spouts could be pumped around in gutters to water plants on top. With *Survival Unit*, Vera Thaens and friends grew “0km” vegetables and herbs in plastic litre-bottles to demonstrate an easy way to eliminate energy spent on transporting produce.



by grape vines, pear and apple trees in 2012, and finally berries in 2013, which coincided with her fruit trees' first harvests.

One issue that routinely dogs urban permaculture farmers who aim to transform especially visible public spaces (like parks, alongside public buildings, and adjacent libraries), though not invisible private spaces (hidden behind doors, fences, walls, etc.), is the notion of aesthetics. Even people who are keen to eat Okm food produced by urban farms can find themselves surprised by the appearance of the grounds, let alone the small critters and insects they attract. People typically imagine far more sanitised places for food production.

Solomon's critics have mistakenly framed her efforts to create low-maintenance, highly productive, collectively-farmed gardens based in agro-forestry as her forcing her vision onto others. As discussed in Section Five, artists typically have their own visions that they hope others will respect/grasp/adopt, while designers tend to accommodate clients' visions. It thus seems that Solomon is within her right as an environmental artist to look for stakeholders who share her vision, or are curious enough to try it, so her ideas can be tested and developed further. Since she must secure her own funding, she is effectively her own client. Were Solomon to farm however others wanted her to do, she would never have had the opportunity to develop into an agro-forestry whiz. Similarly, if some painter spent all of his/her time on commissioned portraits, he/she would have little time left to perfect his/her abstract painting skills, a worry that doesn't concern those green designers whose jobs don't require them to actually have the skills of a master craftsman.

Even though agro-forestry gardens are: more attractive than allotment gardens, more ecologically-sound since perennials predominate, far more sustainable than formal gardens, and places where people grow food together and teach one another high-skilled jobs, the Den

Haag government opted to pave over one of her gardens and even tore out fruit trees that her team had planted adjacent a public library, replacing them with brick paths, leaving only two of four Schilderswijk farms available for community use. Even so, Solomon remains determined to create "connecting corridors" to link Den Haag's green spaces, a project I imagine Amsterdam Noord funding in a heart beat.

Given that **Nis Rømer** trained as an architect/urban planner, it's no wonder that he has been engaged in so many collective practices, including a few that address environmental justice and community development, and others focused on self-organised public space and gardening/farming issues such as soil. In addition to having contributed to **Free Soil's** (2004-2011) extensive blog that broadcasts numerous artists' environmental and sustainable-art related activities, he has organised tours and curated/participated in numerous urban farm-related exhibitions as part of **Gåafstand (Walking Distance)** (since 2005), **Field Work** (since 2006 with Lise Skou), and **Publik** (since 2006). To publicise the practical importance of urban farming, he curated "Hot Summer of Urban Farming" (2006) for Publik, which prompted a slew of inspiring demonstration projects by **Camilla Berner, Gillion Grantsaan, Nance Klehm, Marie Markman, Jonas Maria Schul, Åsa Sonjasdotter, Hartmut Stockter, and YNKB**.

Even if Publik (or Rømer as "Hot Summer of Urban Farming" curator) never intended to lure people into the urban-farming orbit (the act of farming communities), the widespread success of such projects tends to have this effect once passersby feel empowered to: imagine their own future contributions, explore the multitude of urban farming methods and outcomes, and realise urban farming's capacity to handle myriad social and psychological ills. Urban farming's purview begins with more basic issues like food security, mental health, unemployment, and urban isolation, but



Elżbieta Jabłońska, *Nieużytki Sztuki* (*Art Wastelands*), 2014, PL.
Clockwise from top left: Instytut Sztuki Wyspa, Gdańsk, PL;
Królikarnia Muzeum Rzeźby im. Xawerego Dunikowskiego,
Warszawa, PL; Galeria Labirynt, Lublin, PL; Królikarnia Muzeum
Rzeźby im. Xawerego Dunikowskiego, Warszawa, PL, Instytut
Sztuki Wyspa, Gdańsk, PL.

During the Summer of 2014, Elżbieta Jabłońska managed to inspire nine different museums to sponsor urban farms, enabling cultural institutions to farm communities. Three are featured above.



Marjetica Potrč, *A Schoolyard in Knivsta: Fruit and Energy Farms*, 2008-present, The Thunmanskolan High School, Knivsta, SE. Project by Marjetica Potrč and Stealth (Ana Dzokic, Marc Neelen) in collaboration with Ingall Nahrungbauer (A5 Arkitekter) Commissioned by the Swedish National

Public Art Council and the Municipality of Knivsta. Photo Credit: Marjetica Potrč. Courtesy of Marjetica Potrč & Stealth (Ana Dzokic & Marc Neelen).

Below: Marjetica Potrč, *Siena: Urban Agriculture*, 2003, Building materials and energy infrastructure. "Arte all'Arte 8 Project"

Associazione Arte Continua, San Gimignano, IT. Photos courtesy Associazione Arte Continua. Photo Credit: Marjetica Potrč.

Since 2003, Marjetica Potrč has worked with communities across Europe to set up self-sustainable urban farms to grow healthy food and prompt community cohesion.



often blossoms to impart a sense of well-being, purpose, and connectedness.

Working with project SOUP, Rømer and architect **Carsten Hoff** created *Rooftop Garden* (2008), a 100m-hanging garden atop a former grocery store, for kids to grow vegetables and herbs. As part of a thirty-year tradition of community gardens in the København commune of Urbanplanen, local residents helped plant and harvest wooden troughs, whose irrigation system used “reverse gutters” to collect water from the building and pump it around in the gutters, whose small holes simulated rain. Primarily focused on public art, Publik have hosted forums for debating what public art ought to be in order to expand public art’s boundaries, and have initiated numerous urban farming projects in addition to the aforementioned exhibition. Repeat participants in Publik’s exhibitions have involved Camilla Berner, Gåafstand, **Eva Koch**, **Parfyme**, **Katya Sander**, Åsa Sonjasdotter, Hartmut Stockter, and **Superflex**. Rømer remarks, “When I am most optimistic I think artists can invent new ideas, and also public policies.”²⁴

For the 2011 outdoor exhibition “Spoor” (Track), eighteen artists situated outdoor sculptures



along a former “fruit route” in the eastern part of Belgium. Keen to demonstrate how easily one can grow Okm herbs and vegetables, thus eliminating transportation energy and costs, **Vera Thaens** and friends built *Survival Unit*. They filled hundreds of repurposed one-litre plastic bottles (turned upside down) with soil and seeds, which they hung on the posts of a dilapidated concrete wall, positioned adjacent the train station in Limburg, BE, one of that region’s most visible spots.

These days, there are more artists than I can count who advocate urban farming for as many reasons as there are artist-farmers. Each artist-farmer does what he/she can to recruit participants in as many places as possible, yet one Polish artist, **Elżbieta Jabłońska**, led a nationwide urban farming campaign, implementing *Nieuzytki Sztuki* (Art Wastelands) in nine cities, qualifying her as an “urban farming evangelist” (if there is such a thing). She managed to involve enough local farming whizzes to direct/train interested participants, who each signed contracts to lease patches for one season on twelve plots linked to local cultural institutions in Białystok, Gdańsk, Łódź, Lublin, Olsztyn, Tarnów, Warszawa (3), Wrocław (2), and Zielona Góra. Of course, her critics decried this mass sprouting of allotment patches as just another “hipster project,” soon to die out along with the “neglected and drying plants...,” but at least during 2014 there were widespread opportunities to train interested participants and to encourage the flourishing of Okm food.

What was Jabłońska’s particular justification for encouraging urban farming? She had hoped that cultural institutions could develop relationships with whomever signed up to tend the gardens, enabling urban farms to attract new audiences for art just as *Nieuzytki Sztuki*, the living sculpture simultaneously recruited urban farmers.²⁵ Interviews transcribed in the book *Nieuzytki Sztuki* indicate that few participants actually ever met the artist and those who understood that it was

an art project were more interested in its food and social aspects than its art component. In an interview titled “Cooperation is What Matters Most,” **Eleonora Bojanowska** conveys what participants most appreciated. Their sentiments totally echo **Sakarin Krue-On’s** motivation for planting the rice field during documenta 12, which reflected his simple desire to work cooperatively to accomplish something remarkable, as noted in Section One.

On another note, **Agnieszka Tara-siuk**, curator of Królikarnia Muzeum Rzeźby im. Xawerego Dunikowskiego (one of nine institutions hosting farms), described the importance of Jabłońska’s urban farming initiative as follows.

Looking at what Ela does, I can sense a determination to honour the actions and spaces that are marginalised: the so-called female domain-household, mundane, generally not considered prestigious in any way. She is consistent in displaying the charm and the importance of these works. . . . I must admit I expected a far worse development of the [sculpture museum’s] situation. . . . I suspect that our cleaning ladies also water[ed] the plants out of their good hearts, which is against the regulations. Still, this is another demonstration of a social reaction, because, in the end, we are all part of this community.²⁶

Tarasiuk’s comment about the cleaning ladies “taking part,” at the risk of doing something “illegal,” since it extends beyond their contracted duties, recalls MIT Gallery janitors going beyond the call of duty to keep Haacke’s *Grass* (1967) alive, as mentioned in Section Three.

Community Farms

With community farms, artists are brought on board to serve an already identified need (to create a community farm), whereas farming communities recruit and train an unpredictable number of future farmers, who will sustain multiple grass roots movements. As with Jabłońska’s *Nieuzytki Sztuki*

just discussed, the “art part” for farming communities concerns artists’ novel recruitment strategies, their innovative farming practices, and reported outcomes, which typically inspire further conversation and incessant debate. With community farms, the “art part” is more difficult to capture since once the community farm is built, “mission accomplished.” Some artists have found ways to translate such activities as art, mostly by making artworks from documents of community activities or by leading communities to rethink community farming, but doing so often requires finding ways to convey their particular contributions to such otherwise invisible processes.

Over the past decade, numerous communities have invited **Marjetica Potrč** to help them implement their desired farm. Working alongside numerous partners such as architects, landscape architects, and citizens, she has helped launch community farms in seven European cities from Siena, IT to Murcia, ES; Knivsta, SE; Nieuw-West (Amsterdam), NL; Venezia, IT; Essen, DE; and Aubervilliers, FR. These exemplary communities regularly welcome environmental art projects. For *Siena: Urban Agriculture* (2003), she created a publicly visible hydroponic garden atop a privately-owned building to demonstrate an urban food system. To collect rainwater for irrigating fields at high risk of desertification, she created *A Farm in Murcia: Rainwater Harvesting* (since 2007) enabling an organic farm to continue rebuilding soil fertility and protect the water supply. In 2008, she collaborated with **Stealth** on the design for *A Schoolyard in Knivsta: Fruit and Energy Farms* (2008-present), which hosts fruit trees and a solar-wind hybrid system, and generates energy for the larger community. As Potrč points out,

This example of values based on sustainability illustrates the empowerment of the Knivsta community, which has recently gained independence from the Uppsala Municipality. Also, in keeping with

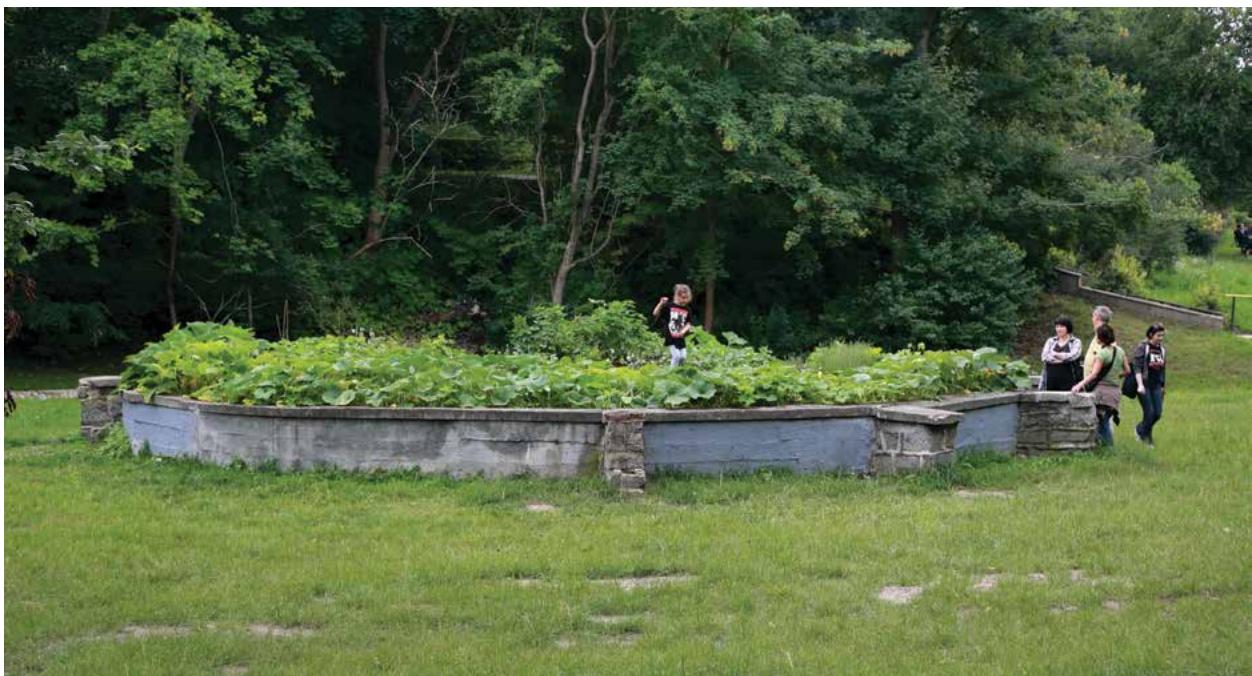


Vera Thaens, *Farming with Magnets*, 2014, Thor Park Waterschei, Genk, BE.

Eager to generate healthy soils, Vera Thaens employs magnetic energy to protect plants from disease, insects, and frost, eschewing chemical fertilisers altogether.

Below: Parque nô,
KOMPOSTEX, 2013, Elbląg,
PL.

Parque nô's attempt to introduce a system for collecting organic waste door-to-door led instead to this urban farm's sprouting in an abandoned park planter.



AnneMarie Maes, *Transparent Beehive*, 2012, Surveilled and bugged transparent hive. In collaboration with Brussels Urban Bee Laboratory.

Far right: N55 and Anne Romme, SPACEPLATES GREENHOUSE, 2011, 4m aluminum and acrylic. South Bristol Skills Academy, City of Bristol College, Bristol, UK.

Unafraid to experiment with new technologies, today's ecologically-oriented artists adopt and adapt new technologies as soon as they become available.



Swedish tradition, the schoolyard is open to the general public and is used as meeting place for citizens. Thus it draws attention to several key 21st-century paradigms: self-empowerment, self-sustainability, and the new balance between the urban and the rural.²⁷

For The Cook, the Farmer, His Wife, and Their Neighbour (2009-2010), Potrć worked with **Ooze (Eva Pfannes and Sylvain Hartenberg)** to help Nieuw-West (Amsterdam) inhabitants transform an unused lot into a community kitchen garden. In 2010, Potrć and **Marguerite Kahrl** found a way to collect rainwater off of greenhouses on Sant'Erasmo Island in Laguna di Venezia, used by farmers to water crops growing inside. Several years later, the plastic roof collapsed in a storm, but she believes that is has since been repaired.²⁸ In 2010, she collaborated again with Ooze on a

community farm that provides food and cleanses water drawn from die Emscher (discussed in greater detail in Section Six). Since 2011, the multi-cultural residents of the Paris suburb Aubervilliers have used *La Semeuse*, located in the courtyard of Les Laboratoires d'Aubervilliers, as a platform for exchanging seeds, plants, knowledge, and ecological practices related to urban farming, as well as to raise awareness about the importance of biodiversity and sustainability.

In 2013, Warszawa activists began to protest the city's plan to demolish the remaining 28, charming "Finnish" houses (out of 200 "pre-fab" bungalows built ca. 1945) in the Jazdów neighbourhood near Centrum Sztuki Współczesnej Zamek Ujazdowski. The next year, a group of artists started farming a plot adjacent an abandoned bungalow, as a way to encourage the city to recognise its value. When the city decided to rent houses to non-profit



Paul Chaney, *Breast Plough'o'metric*, 2014, FIELDCLUB, Cornish Peninsula, UK.

N55, *Small Fish Farm*, 2003, København, DK.

Paul Chaney's *Breast Plough'o'metric* measures how many calories are burned doing farmwork, while N55's portable fishery invites people living adjacent rivers and lakes fish for life.

groups, instead of demolishing them, the artists opted to rent an even larger parcel of land and built **Hoe and Sun Community Garden** (since 2015). In 2016, this community garden opened the School of Urban Gardeners, which the International Network for Urban Agriculture awarded second prize in the category of "food justice."

Just as artist-farmers joined forces with Warszawa activists, **Touchstone collaborations** joined forces with 24 community-farming and soil advocates, who were keen to protect the "Blue Finger" (a 20km by 500m strip of exceptionally-fertile soil running alongside the M32 north of Bristol, UK) from being paved over to make a new MetroBus stop. In 2012, this consortium of 24 stakeholders with 16,000 plus members became the Blue Finger Alliance. Co-founded in 2010 by **Miche Fabre Lewin** and **Flora Gathorne-Hardy**, Touchstone collaborations have many years of

experience creating both edible and medicinal urban farms. During their three-month residency, they helped the alliance develop a plan to market the Blue Finger's value, so that outsiders could appreciate its significance as: 1) precious, productive soil (most is rated Grade 1 agriculture), 2) cultural heritage in terms of its having been Bristol's market gardening quarter for two centuries, 3) a vital food source for thousands of Bristol citizens that complements Bristol's "Good Food Action Plan 2015-2018," and 4) a purposeful form of outdoor recreation for still thousands more.

[As of May 2016], the MetroBus route has gone ahead, with much destruction, despite opposition. However concessions were gained. Blue Finger Soil is better recognised. Some Blue Finger Soil is to be dedicated to community food production backed with a 999-year lease from Bristol City Council.

N55, SHOP, 2002,
Centre for Contemporary Arts, Glasgow,
UK.

Far right: 431arts, *My Private Supermarket*, 2008, Frankfurt, DE.

N55's SHOP and 431art's *My Private Supermarket* offer passersby accessible systems for sharing and exchanging excess goods, including excess food.



Actions to protect Bristol's soil are also written into Bristol's Good Food Plan. In fact, it's all over the plan. Whereas soil is mentioned once in the previous plan, it's mentioned 42 times in the current one.²⁹

Soil Amendments

Anticipating the millennial "gardening revolution," N55 created *Soil Factory* (1998), perhaps the first ever system devised specifically for office environments to compost green (kitchen and garden scraps) and brown waste (paper and cardboard). N55 explain further:

A person living in a city produces approximately 100 kilograms of organic household waste per year. By using this material in the *Soil Factory* or similar systems, it can be transformed into soil. Although it is not the most efficient system, vermicomposting is a simple and cheap way of composting. The

decomposition is done partly by worms, partly by other organisms and microbial processing. The worms' digestive tracts perform efficient microbial and chemical transformation, and their activities provide the mechanical work also necessary for the composting process: mixing, draining, and aeration.³⁰

Hardly the first artists to employ soil as an artistic medium, **Free Soil** (2004-2011) collaborators **Amy Franceschini** (US), **Stijn Schiffeleers** (BE), **Jony Taylor** (AU), and **Nis Rømer** (DK) were likely the first *international* collective organised to globally publicise soil's significance globally via the many exhibitions in which individual members were invited to participate. During dOCUMENTA(13), **Claire Pentecost** exhibited *Soil Ingots* (2012), a new commodity cast from rich compost; meant to vie for crude petroleum's economic influence. To bolster her position, she lists scores of cases



whereby multinational corporations have recently purchased (colonised via “free” markets) rich farmland in developing nations, filling farm-owners’ coffers with buyers’ increasingly useless currency, namely hard cash. Were cash as valuable as soil, companies could presumably acquire soil-rich assets on their home turf.

As part of their contribution to “Awakening” (2013), the artist collective **Parque nō** (since 2011) introduced KOMPOSTEX, for which they (**Maciej Łepkowski**, **Krzysztof Herman**, and **Kuba Słomkowski**) originally planned to go door to door in Elbląg, PL either handing out compost collection buckets or collecting organic mass to build a compost pile.³¹ When they learned that komunalny Centrum przetwarzania odpadów (the municipal waste treatment centre) had already initiated a compost collection service, they opted to work with community members to create a community

meeting place centred around growing vegetables for public consumption in a then unused concrete flower planter in Dolinka Park. In lieu of adding animal waste as fertiliser, **Vera Thaens** adds natural components that augment soil’s paramagnetism, thus strengthening the soil’s capacity to hold a magnetic field. To “boost soil fertility and plant growth,” Thaens employs electroculture (magnetic and electric forces).³² Not only do plants grow larger and faster more cheaply, but magnetic energy protects plants from “disease, insects, and frost.”³³ In 2014, she grew potatoes above ground, covered by soil pyramids stimulated by paramagnetism, in Genk, BE.

To publicise the importance of healthy, clean soil, and soils’ relationship to place, **Future-farmers** (since 1995) organised *Soil Procession* (2015), a public parade in Oslo, NO, inviting people to march with soil collected from their property to

a communal site where they dumped it all together in a show of solidarity, thus marking 2015 International Year of Soils. Incidentally, one of Future-farmers' most successful projects, the training of selected candidates and implementation of fifteen urban farms throughout San Francisco in 2008, was supposedly inspired by a mid-aughties program in Gent, BE that awarded citizens up to €5,000 to create urban farms.³⁴

Nifty New Technologies

Initiated by AnneMarie Maes, **BUBL**, an independent collective of international artists, scientists, beekeepers, technicians, and creatives electronically monitors bees with a view to better understanding colony-collapse disorder. As part of the 2014 Brussels Electronic Arts Festival held at BOZAR, Maes exhibited BUBL's transparent beehive fully wired with microphones and cameras, thus publicising colony-collapse disorder, while enabling visitors to experience a 15' soundtrack edited from recordings made over one complete season. This beehive records the bees' vibrations, their movements, and the build up of beeswax. Additional sensors monitor temperature, humidity, and other microclimate factors. First exhibited during OKNO's 2012 Time Inventors Kabinet (TIK) Festival, this hive housed a live colony that collapsed in 2013 due to the invasion of the waxmoth. OKNO (since 2007) is an artist's collective that works on the border of new media and ecology. Since 2011, Maes has observed *Urban Corridors* by tracking actual bee flights between urban farms and nectar sources to discover existing ecological corridors (honey bee trails) in order to better understand how to increase a city's sustainability, while involving citizens in this process.

During the "One City Campaign," København, DK, N55 (in collaboration with architect Anne Romme) introduced SPACEPLATES GREENHOUSE (2011), which they installed the next year in Bristol, UK and presented during the International Conference Structures and

Architecture at the Universidade do Minho in Guimarães, PT. Following the principle of using uniform parts to construct SPACEFRAME VEHICLES, as discussed in Section Five, N55's SPACEPLATES building system employs "pure plates" that connect together, thus taking advantage of tension and compression to make a curved overall frame that minimises costs and resources used, while maximising strength. They claim that any scale of structures can be built, whether for living, gardening, or production purposes.

In addition to Paul Chaney's having devised *FieldMachine*, the computer program described above which determines how much land must be allocated towards growing natural resources needed to support eaters' complete diets, he created the *Breast Plough'o'metric* (2014), a tool used to plow land that calculates calories burned while performing farm work, which he demonstrated during the 2015 Art of Soil Symposium at CREATE Center in Bristol, UK.

Soil Alternatives

In addition to being water- and energy-intensive, hydroponic farming typically requires nutrients to be added to the water to encourage growth, and thus tends to produce less nutrient-rich foods than vegetables and fruits grown in soil. As a result, hydroponics is hardly the "silver bullet," people once imagined it to be. That said, when artists were starting to rethink ways to grow Okm fresh food for city inhabitants, the most obvious solution was to grow it directly, all-year round, in users' dining rooms. As a result, N55's sleek and chic *Home Hydroponic Unit* (1997), built to supplement a family's daily needs, has been a standout DIY prototype from the onset, ready to be installed inside everyone's home. Despite the many questions artists have raised regarding the sustainability and carbon footprint of hydroponic systems, hydroponic technology remains the latest media darling, inspiring the US Pavilion at EXPO Milano 2015; Singapore's super-productive "A-Go-Gro,"

continuously rotating A-frame structures; and the patented Tower Garden® aeroponic technology, which claims to use 90% less land and water and takes only half the amount of time as traditional organic farming to grow. All are amazing innovations designed to overcome each locale's particular demands and conditions.

Two other N55 inventions have proven less controversial. Using N55's *Small Fish Farm* (2003), people can grow all sorts of fish from pike, zander, trout, and salmon to tilapia, catfish, grouper and milkfish, but they remind users to regularly feed the first four, which are carnivorous, and not to place more than two per square meter when stocking the floating fish farm. What's great about N55's *City Farming Plant Modules* (2003) is that they absorb rainwater runoff, override impervious surfaces with greenspace, and provide planters for restaurant

herbs. Similar in effect to N55's SHOP (2002), 431art's *My Private Supermarket* transformed an abandoned kiosk into an art kiosk for sharing jam, letters, butterflies, etc., first in Frankfurt, DE (2008) and then in Kassel, DE (2012).

As Martin Doll points out, *My Private Supermarket*:

simultaneously addresses a number of subjects. With their different thematic accents, the individual elements span a number of issues: the increasing consumption of expensive organic groceries and the now mostly extinct practice of growing one's own food, the nonstop homogenisation of shopping venues and the absence of small retail shops, and the difference between collecting items as a leisure activity and as a matter of survival.³⁵

Section Notes

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3. Marco Scotini. "Earthrise" wall label. Parco Arte Vivente. Torino, IT. Visited 30 January 2016.
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Climate Change

Without a doubt, climate change is the media's favorite environmental topic, primarily because its consequences stand to do the most damage: erase cities and coasts, eliminate species, boost pestilence and disease, prompt desertification, and wreak havoc on food supplies, etc. In light of land art's popularity (since the 1960s), artists have been deploying artistic means to redress land use and healthy soil for decades, but they have only recently devised strategies to mitigate against global warming, though they have been publicising its impact, including melting glaciers, rising oceans, and habitat loss for decades. Climate change's monumental scale eclipses all other environmental hazards, which are comparatively local in scope.

Only when people are in a position to use their own creative potentials, which can be enhanced by an artistic imagination, will a change occur.... Art can and should strive for an alternative that is not only aesthetically affirmative and productive but is also beneficial to all forms of life on our planet.

— Rasheed Araeen, "Ecoaesthetics. A Manifesto for the Twenty-First Century," 2009

Our Carbon Foot Print

Given the massive amount of scientific resources currently deployed to track and tackle global warming, plus the fact that nearly every ecovation described thus far doubles as a vital tool for combatting global warming, it may seem a little redundant to dedicate an entire section to climate change. If climate change is the inevitable result of human beings having lost their connection with their home, planet Earth, almost *any* action that facilitates spectators' access to nature stands to mitigate against climate change. But ecoventions go even farther, requiring inhabitants to take what **Joseph Beuys** termed "direct action" to reduce global warming. That literally means: plant trees, reclaim rainfall, restore wetlands, conserve meadows, or produce healthy soils to sequester carbon. Artists' particular strategies discussed until now have been endless in scope, variety, and magnitude, so this section rather explores specific paths artists have taken to address global warming. Section Nine introduces unusual strategies initiated by artists to amend "broken" relationships, in the context of local environments, inevitably inspiring human beings to reconnect with their home Earth.

In 1961, carbon represented 36% of the total global footprint, but these days it comprises 53%. Gains made over the past 40 years in biocapacity have been offset by a population explosion, which remains the single greatest threat to food production, as well as the strongest argument for keeping food production as local as possible, even in cities. The World Wildlife Fund's *Living Planet Report 2014*, which ranks nations by ecological footprints, lists België/Belgique/Belgien fifth, behind Kuwait, Qatar, United Arab Emirates, and Danmark. European nations with the lowest footprints include România, Magyarország, and Bulgaria.¹ Some suspect that over time, their ecological footprints will expand to match the rest of Europe. No wonder Europe has made concerted efforts to reduce each member's footprint.

Ever since COP1 first took place in Berlin (1995), numerous European cities have hosted COP meetings: Genève (1996), Bonn (1999), Den Haag (2000), Milano (2003), Poznań (2008), København (2009), Warszawa (2013), Paris (2015), and Bonn (2017), enabling thousands of delegates from nearly 200 countries to voice their particular concerns/needs, while devising a workable strategy en masse, using a long-term process meant to provide the smallest, poorest nations a voice on par with that of their wealthier peers.

The terms "global warming" and "climate change" are often used interchangeably, yet each refers to a different phenomenon. The former characterises "the long-term trend of a rising global-average temperature," while the latter "refers to the changes in the global climate which result from the increasing average global temperature," such as "changes in precipitation patterns, increased prevalence of droughts, heatwaves, and other extreme weather."² Simply put, global warming causes climate change. And because of this causal relationship, 196 nations jointly signed a 2015 treaty committing each nation to reduce greenhouse gas emissions enough to prevent the Earth's atmospheric temperature from rising 1.5°C over pre-industrial levels by 2100.³ Contrary to popular belief, the term "climate change" has been in use since the mid-fifties, while the term "global warming" gained currency in the eighties. One of the earliest mentions of the term in the scientific literature was a 1971 letter published in *Science* magazine by Earl Barrett and Paul Gast under the heading "Climate Change."⁴

The burning of fossil fuels to power vehicles, charge electric plants, manufacture steel, and produce fertilisers and pesticides, has long been considered the primary component of our carbon footprint, inspiring artists to develop alternative energy plans. Not only have anti-oil artist-activists like **Platform** (since 1983), **Art Not Oil Coalition** (since 2004), and **Liberate Tate** (since 2010)

regularly challenged art institutions to cut their ties to corporate sponsorships fueled by fossil-fuel profits (see Section One for more detail), but artists and architects such as 1) **N55**, 2) **Marjetica Potrč/Ooze**, 3) **Tomás Saraceno**, and 4) **Superflex** routinely employ affordable fossil fuel alternatives such as: 1) people power and/or solar energy, 2) solar and/or wind energy, 3) solar heat and Earth's radiation, 4) biogas fuels, respectively (see "Copyleft Energy" in Section Five for greater detail).

To draw attention to the amount of energy expended by air-conditioned buildings the world around, **Tue Greenfort** requested that the target temperature of the building hosting the 2007 Sharjah Biennial (AE) be raised 2°C, enabling the money saved to be donated to the environmental organisation Nepenthes to purchase rainforest in Ecuador.⁵ Given this otherwise invisible artwork's potential to demonstrate air conditioning's economic costs and environmental impact, it proved an apt contribution to a biennial exhibition titled "Still Life: Art, Ecology, and Politics of Change." Seven years later, he exhibited a second version of *Exceeding 2°C* during the exhibition "7 000 000 000" at Espai d'art contemporani de Castelló (EACC), though this time he lowered the temperature 2°C and used the money saved due to reduced heating to "purchase an area of Ecuadorian rainforest through the NGO Acciónatura."⁶

Since 1997, **Studio Orta** have presented around forty *70 x 7 Meals, Acts I-XXXIX*, long-table meals held in mostly urban spaces that bring attention to various ecological issues, such as the need to: eliminate food waste (Paris 1997 and Wien 1999), boost biodiversity (Torino 2008), purify water (London 2005 and Leiden 2015), protect pollinators (Bury St. Edmunds 2012), promote heirloom varieties (Philadelphia 2013), reinstate farmers markets (Peterborough 2015), and conserve wildlife (Milano 2016).

When people perform energy audits, they typically focus on water and energy consumed

during the stages of food production, such as fertiliser and pesticide manufacture, seed sowing, crop harvesting, fodder production, animal housing/processing, and produce/meat transportation. What usually remains "off the table," and thus unaccounted for is the energy expended during meal preparation such as energy to: transport food from markets to home, safely store food, pump water to rinse produce, cook food, heat water to wash-up afterwards, and transport diners to restaurants or parties. Of course, people power and renewable energy could power most of these tasks.

Bearing this in mind, Studio Orta designed their 31st *70 x 7 Meal Act* to reveal hidden energy costs and to elaborate upon ways to minimise resource exploitation. For *70 x 7 The Meal Act XXXI* (2009), Studio Orta collaborated with Plymouth-based artists **Jo Salter** and **Ann-Marie Culhane** to test environmentally sustainable "methods of cooking, preparing, and sharing foods."⁷

Serving as a backdrop to the meal, giant blackboards were covered in illustrations by **James Mankiewicz**, who visually translated the carbon footprint of all the elements of the meal. During the performance, the **Groundwork Organisation** calculated every mile from the transport used by the guests attending the meal to the ingredients and provenance of the dinner service, providing unusual and insightful information throughout the evening.⁸

In 2012, **Vera Thaens** positioned a large sculpture in public to inspire Belgians to connect the dots between food, transportation, and climate change. Doubling as a prototype for a sustainable enterprise, her installation *7,1*, sited on Sint-Maartenplein in Sint Truiden, one of eight fair-trade towns in Limburg Province; featured a green roof growing atop a market stall that not only sprouted hundreds of herbs on top and along its edges, but housed a solar dryer to process the herbs into spices. For Thaens, *7,1* demonstrates the "principle

Vera Thaens, 7.1, 2012,
Sint-Maartenplein, Sint-
Truiden, BE.

Vera Thaens demonstrated a “short-chain system” that combines spice cultivation, harvesting, production, and marketing under one roof, thus significantly reducing her enterprise’s carbon footprint by eliminating the need for multiple transit ports.



of short chain,” whereby the cultivation, harvesting, processing, and marketing of locally-produced spices occurs in the space of 12 m², rather than in four different ports across the world, as is typically the case. Thaen’s title 7.1 quite literally refers to the average Belgian’s “over-sized” ecological footprint (7.1 hectares), specifically the amount of land required to produce each resident’s resources, as well as to process his/her related wastes, including the area of forests required to absorb carbon dioxide emissions that the oceans cannot absorb.⁹

Inspired by ideas originally developed by **Louise Rooney** and **Catherine Dunn** during **Rob Hopkins'** 2005 permaculture course at Ireland's Kinsale College of Further Education. Hopkins and **Naresh Giangrande** founded the Transition Network movement in Totnes, UK the following year. Given Totnes' commitment to “increase

community well-being, to expand the local economy, to take responsibility for the impact [they] are having on the ecosystem and other people, and to find ways of living that are in line with Earth’s natural systems,” people now call it “Transition Town Totnes.” As featured in the 2015 film *Demain*, Totnes was the first community to mint its own currency, the Totnes Pound. To reflect their transitioning toward self-sufficiency, and away from peak oil, climate destruction, and economic instability, “transition towns” have sprung up in 35 countries on three continents.¹⁰ Although Transition Town Totnes is not an artwork, its importance as an inventive and inspiring prototype that has inspired citizens across the globe to devise ways to modify lifestyles cannot be over-estimated, reiterating the ways in which ecoventions have influenced communities the world over.

Another nonart project that has made a huge impact is the *Ashden Directory*, a formerly regularly updated UK website that effectively marketed and promoted performing art events focused on climate change. The net effect was to draw attention to myriad new plays addressing both climate change and ways to mitigate against it. According to its website, "From 2000 to 2014, the *Ashden Directory* provided news, features, and a database of over 700 productions."¹¹ Ashdenizen, our companion blog, added commentary on how culture and the performing arts relate to climate change. The database, features, timeline and blog remain online, but we no longer update these sites."¹² The *Ashden Directory*'s role recalls the Edinburgh Art Festival's using theatre to draw attention to the environmental impact of drilling for North Sea Oil during the "Black and White Oil Conference" (1974).

Our Polar Foot Print

Climate activists like **Cape Farewell** (since 2001) and **Tipping Point** (since 2005) have led the way when it comes to educating people regarding the relationship between carbon footprint and global warming, retreating glaciers, and climate change, as well as the impact of habitat loss on polar wildlife. Since 2003, Cape Farewell, begun by artist David Buckland, has organised numerous Art and Science expeditions, facilitating visits by some 350 artists, scientists, and writers to the High Arctic, an 18-day trek through the Peruvian Andes, which Studio Orta joined; and more recently sailing trips through the Scottish isles.

Commissioned by the Bienal de Arte Contemporáneo del Fin del Mundo in Ushuaia, AR to make a work during an Antarctic expedition, Studio Orta settled *Antartica Village-No Borders*, a one-time, wintery encampment. After hoisting its colourful flag composed of recognisable national flags, they pitched 50 patchwork tents, fashioned by a tentmaker who stitched flags and repurposed

shirt sleeves atop domes. The number of domes likely corresponds to the 50 nations that signed the 1959 Antarctica Treaty, which pledges signatories to keep this continent open to all, an attitude that seems remarkably progressive in hindsight. This massive nature reserve, whose extreme climate has deterred human settlement, furnishes Studio Orta an invaluable metaphor for exploring issues forced by climate change, such as rising sea levels, habitat loss, and eco-refugees, and proposes world peace as the consequence of cooperation and respect.

The Antarctic is home to the Earth's most hostile climate conditions. It is the coldest place on the planet, with temperatures as low as -80°C. Its desert of ice is the largest in the world. No permanent settlements exist there, and there is no native population. Yet, it is a wonderful nature reserve, whose glaciers contain 80% of the planet's fresh water and it is the only region on Earth not claimed by any country and [remains] politically neutral. The Antarctic Treaty, which now counts 50 signatory nations, has preserved Antarctica as an area for scientific research with common pacific aims to protect the environment and to encourage international cooperation. Antarctica embodies utopia: a continent whose extreme climate imposes mutual aid and solidarity; freedom of sharing; and collaboration for the good of the planet.¹³

The preservation of this unique community, grounded in mutual aid, sharing, and collaboration, requires active agents committed to protect it, just as stakeholders care for ecoventions once artists return to their homes. To garner permanent support for this utopic place, Studio Orta issued the *World Antartica Passport* (since 2008), which is distributed via their *World Antartica Passport Bureau*, versions of which have appeared at: COP21 Grand Palais, Paris, FR (2015); Parc de la Villette, Paris, FR (2014); Sicli, Genève, CH (2014); and Le Portique,

Le Havre, FR (2014). These structures facilitate the transfer of one's individual national identity to that of collective world citizen, whose collective body now numbers around 50,000 community members. "During COP21, the Studio Orta Team engaged with each visitor, one by one, signing up family members, militants, indigenous peoples, businessmen, entrepreneurs, activists, artists, government ministers, negotiators, journalists," including the great-granddaughter of Antarctica explorer Captain Scott.¹⁴

Despite the opportunity for the *World Antarctica Passport* to unify world citizens keen to thwart climate change and to protect this *unworldly* Antarctica, I worry that photographs and videos produced as a result of polar expeditions, even those meant to spark empathy for remote quarters, could have unintended consequences. That is, exhibited images risk to exoticise, if not advertise these extraordinary landscapes, making trips to polar locales a status symbol of sorts. This is especially worrisome since the audience for such artworks typically includes wealthy collectors who might suddenly feel inspired to organise bi-polar expeditions (combines Arctic and Antarctic trips).¹⁵

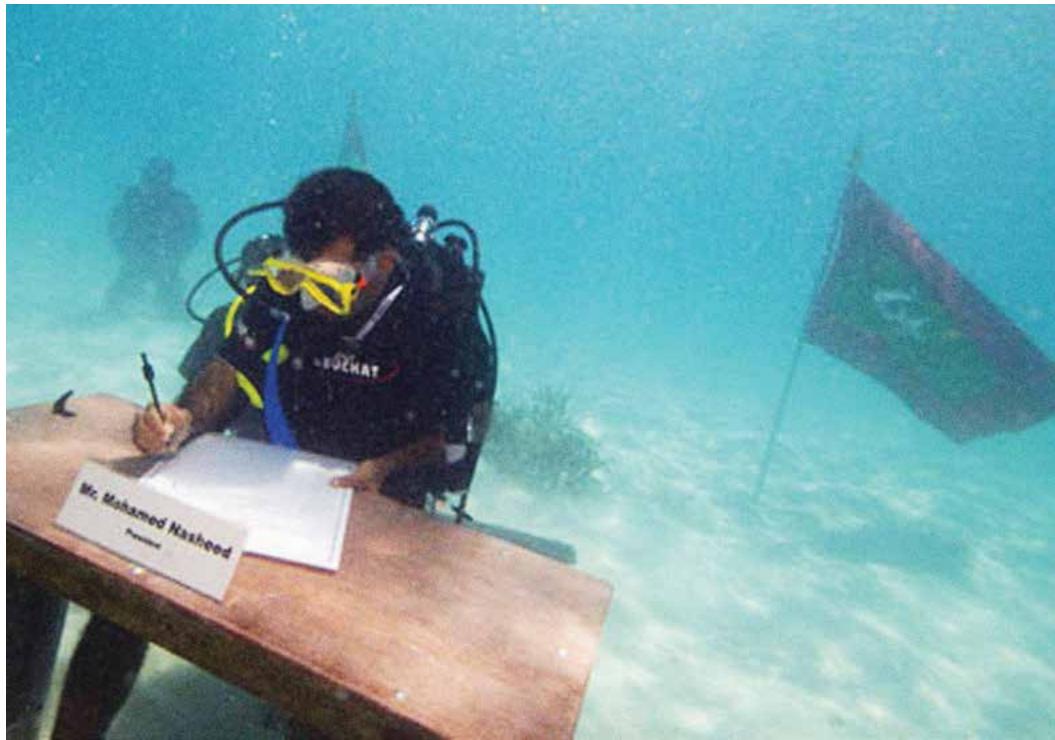
Consider that annual Icelandic tourism has shot up 22% since 2010 and 29% since 2015 (the annual number of visitors amounts to five times the national population); gigantic jumps when compared to the 3.5% increase between 2005 and 2014.¹⁶ According to the World Wildlife Fund, arctic tourism has also witnessed "unrivalled growth" over the past 15 years.¹⁷ At this juncture, one imagines that the next "logical" (ecological) "polar action" would be to designate the poles "off limits." Perhaps a "Spare Our Poles" campaign could deter people from the poles, eliminating the mining and transport of natural resources required to construct shelter for polar tourists.¹⁸

COP15 (2009) and the Escalation of "Climate Change" Exhibitions

One of the most surprising outcomes of more

recent COPs (Convention of the Parties) has been the advent of COP meetings accompanied by art exhibitions focused on "climate change," as well as the preponderance of touring exhibitions focused on climate change, beginning in 2002 with "Climate: The Experiment with Planet Earth," originated by the Deutsches Museum in Berlin, DE. In 2006, Cape Farewell organised "Art and Climate Change" for the Natural History Museum in London, UK. Featuring artworks by fifteen artists such as **Heather Ackroyd & Dan Harvey, Kathy Barber, David Buckland, Peter Clegg, Siobhan Davies, Gautier Deblonde, Max Eastley, Nick Edwards, Antony Gormley, Alex Hartley, David Hinton, Gary Hume, Ian McEwan, Michèle Noach, and Rachel Whiteread**, this exhibition travelled for four years to four institutions in Hamburg, DE; Madrid, ES; Tokyo, JP; and Cranbrook, US, touring the genre of "climate-change" art to three continents.

In 2009, Platform curated "C Words: Carbon, Capital, Culture" at the Arnolfini in Bristol, UK. That same year, London's Barbican Art Gallery organised "Radical Nature: Art and Architecture for a Changing Planet, 1969-2009," which included: eight artists featured in "Ecovention: Current Art to Transform Ecologies" (2002) (for greater detail, see Section One) such as Joseph Beuys, **Center for Land Use Interpretation, Agnes Denes, Hans Haacke, Henrik Håkansson, Harrison Studio, Robert Smithson, and Mierle Laderman Ukeles**; relative newcomers **Lara Almarcegui, Anya Gallaccio, Tue Greenfort, and Simon Starling**; plus perennial favourites **Ant Farm, Lothar Baumgarten, and Mark Dion**. To accompany COP15, **Anne Sophie Witzke** curated "Re-Think: Contemporary Art and Climate Change," an exhibition featuring works by Nordic artists **Eric Andersen, Lise Autogena, Olafur Eliasson, Kerstin Ergenzinger, Thilo Frank, Jette Gejl, Greenfort, Håkansson, Elin Handsdottir, Haubitz + Zoche, The Icelandic Love Corporation, Tea Mäkipää, Parfyme, The People Speak, Ruri, Tove Storck, Superflex**, plus



Maldivian president Mohamed Nasheed stunned the world in 2009 when he broadcast a video featuring an underwater cabinet meeting, meant to drive home his flat, island nation's extreme vulnerability to climate change.

non-Nordics **Cornelia Parker, Joshua Portway, Tomás Saraceno, and Fiona Tan**, spread between Statens Museum for Kunst, Nikolaj Kunsthall, Den Frie, and Alexandra Institutet, all in København, DK. To date, no other ecological concern has garnered so much attention from within the artworld and beyond.

COP15's most newsworthy story concerned a video depicting the Maldivian government's holding a 30-minute cabinet meeting underwater (six metres *below* the ocean's surface), requiring all but two government officials to gain scuba accreditation just to enact their first ever dive. Communicating via hand signals, Maldivian President **Mohamed Nasheed**, a well-known climate-change expert and political activist, and his government ministers signed the following document presented under water on white board:

We must unite in a world war effort to halt further temperature rises. Climate change is happening and it threatens the rights and security of everyone on Earth. We have to have a better deal. We should be able to come out with an amicable understanding that everyone survives. If the Maldives cannot be saved today, we don't feel there is much chance for the rest of the world.¹⁹

Following this "action," Nasheed announced his vision for his nation: to become the world's first carbon-neutral nation within a decade and to buy a new homeland should Maldives' archipelago of 1200 islands become submerged.

President Nasheed's electrifying (and ingenious) nonart contribution to COP15 inspired **Søren Dahlgaard**, a Danish artist who had figured

out a few years earlier how to grow vegetables as an experimental enterprise on the Maldivian isle of Hibalhidhoo (see Section Seven for details of this innovative farm), to suggest to Nasheed in 2010 that there be an exhibition at La Biennale di Venezia to showcase artworks by Maldivian artists focused on climate change. Nasheed, who astutely regards climate issues as part-and-parcel with political reality, has been a vocal critic of the way nations tend to arrive at COP with one goal in mind, "to keep their own emissions as high as possible."²⁰

No one could have imagined what would transpire over the next three years before this exhibition finally came to fruition, leaving the lives of Maldives' first-ever democratically-elected leader and its citizens dramatically changed. Meanwhile, Dahlgaard, who first suggested the collaboration with Nasheed's government (2008-2012) in order to generate a mass appeal for this Indian Ocean nation's plight, departed on an odyssey of sorts leading him to face unprecedented, though very real, ethical decisions.

In 2012, members of the former regime forced Nasheed to resign at gunpoint. Since then, many arts organisations have been forced to close, and there are reports of creative practitioners being abused and suppressed. Recognising the need to react to the return of dictatorship, Dahlgaard split from the Maldives Pavilion at La Biennale di Venezia (that he had initiated with climate activist and former president Nasheed in 2010) and established the "Maldives Exodus Caravan Show" (MECS). As a politically-independent and mobile project, MECS represents movement in all respects - physical and mental, political and environmental.²¹

Eventually named a 2013 Biennale di Venezia Collateral Event in conjunction with London's Museum of Everything, MECS found parking in front of Serra dei Giardini, a stone's throw from the Giardini's main entrance. Due to its

dual role as the Museum of Everything's "salon," it hosted a range of high-profile visitors including **Vito Acconci, Peter Fischli, Jean-Hubert Martin, Hans Ulrich Obrist, Andrew Renton, Ralph Rugoff, Jerry Saltz, Donna de Salvo, Roberta Smith, and Marc-Olivier Wahler**. After two months, the Museum of Everything left town, but MECS remained, hosting art videos and performances during the biennale's remaining four months.

By calling his show an "exodus," Dahlgaard captured the wishes of the Maldivian majority who were eager to escape "unprecedented acts of brutality, polarised discourse, and repression of human rights," as well as the increasing reality that rising oceans may one day force them to become eco-migrants. With its highest point at 2.4m, MV is "by miles" the world's lowest and flattest country.

Curated by Dahlgaard, **Elena Gilbert**, and **Microclima**, the 2014 iteration of MECS at Te Tuhi Centre for the Arts in Pakarunga, NZ included texts by Nasheed, **Rirkrit Tiravanija**, and philosopher **Else Marie Bukdahl**; ten games designed by game designers from six countries; music by seven Maldivian performers; nine videos by artists from seven nations; eleven prints by mostly Maldivian artists; an animation; and a live musical performance by New Zealander **Mark Harvey**. The accompanying brochure summarises the exhibition's scope, "Featuring over 30 international artists, the Caravan's diverse programme of works groups various aspects of human rights, collaboration, engagement, public space, creativity as a conversation and response to climate change, and the political plight in the Maldives."²²

What stands out most with Dahlgaard's caravan show is the fact that it includes numerous works by unknown artists, putting into action the original strategy behind the "convention of the parties" to grant typically "faint" voices greater audibility. Most important, numerous artists and exhibitors have looked to MECS as exemplary ethical action, inspiring people to boycott the Biennale of

Sydney as a result of Transfield, its long-standing sponsor, having signed an Australian government contract to manage detention centres for asylum seekers on remote Australian islands.²³ MECS' later ports-of-call have included: Te Tuhi Centre for the Arts, Pakuranga, NZ, 2014; Silent Barn Art Center, Brooklyn, US, 2014; CCA Andratx, Mallorca, ES, 2014-2015; Federation Square, Melbourne, AU, 2015; Centrum Sztuki Współczesnej Łaźnia, Gdańsk, PL, 2015; International Community Arts Festival, Rotterdam, NL, 2017; and Museum De Domijnen, Sittard, NL, 2017-2018.

COP21 (2015) and the Burgeoning "Regenerative Agriculture" Movement

In Section Two, I noted that Joseph Beuys routinely lamented and publicised the thoughtless destruction of wetlands, whose water-saturated bogs host diverse species and cool the climate. Since 1971, Beuys' *Save the Forest* campaigns have been exhibited in museums across the world, inspiring city dwellers across the globe to grasp the environmental necessity of urban trees to sequester carbon and absorb rainfall, a solution that seemed less urgent back then, when the world's population was just half (3.7 billion) of what it is today and only 36% of the world's population inhabited cities, as compared to over 53% today.²⁴ Sharing Beuys' enthusiasm for wetlands, the Harrison Studio proposed that a Dutch water authority let the Krimpenerwaard (an area within the Great Heart of Holland) naturally return to its wetland state. For their artwork, *The Krimpenerwaard* (2000-2007), they proposed that the government cease pumping water from the land, which would cause the water table to rise, thus halting the prior evaporation of invaluable peat moss. They predicted that over time, a lake would emerge to facilitate the replacement of dairy farmers with fishing, tourism, cranberry bogs, and orchards.²⁵ In addition to hosting novel species from insects to bison, peat bogs are the most

efficient carbon sinks, which explains why today's scientists are so focused on wetland conservation.

In Sections Five and Seven, I noted that more recently, **Debra Solomon of Urbaniahoeve** has emphasised the importance of healthy soils to sequester carbon and absorb rainwater, straightforward benefits that permaculture farmers have stressed since the millennium as a way to combat global warming. A rough estimate is that agriculture accounts for one-third of all greenhouse gases emitted worldwide (54% of methane, 80% of nitrous oxide released from fertilised soils, and virtually all carbon dioxide emissions tied to land use).²⁶

It was thus a total mystery to the many followers of COP21 UN Climate Change Conference (30 November- 11 December 2015), which actually coincided with 2015 UN International Year of Soils, that the "official" COP21 agenda neglected soils altogether, leaving little space to discuss the importance of producing and maintaining healthy soils that sequester carbon, bolster nutrients in food, reduce stormwater runoff, and minimise both soil erosion and chemical leaching. Soils' oversight seems especially strange when one learns that fully *half* of the 158 Intended Nationally Determined Contributions (INDCs) "ascribed importance to the agricultural sector. In particular, African and Asian countries are aiming for more sustainable uses of soil and land."²⁷

To "healthy soil" activists the world around, "regenerative agriculture" should have been the hot-button topic dominating COP21, but its significance bizarrely fell on deaf ears, or did it? Truth be told, the Global Landscapes Forum (5-6 December 2015), a side conference addressing "the role of healthy soils in the protection of climate change and food security," transpired in COP21's midst. This "other" conference attracted over 3000 attendees from various sectors, including forestry, water, agriculture, finance, energy, and law. A little-discussed detail has since emerged: signatories from 25 nations committed to "increasing

the organic carbon level of agricultural soils by .4% a year," thus sparking the 4/1000 Initiative: Soils for Food Security and Climate, a voluntary action plan hatched as part of the Lima-Paris Action Agenda.²⁸ **Andre Leu**, president of IFOAM-Organic International, declared this move to be the most exciting news to come out of COP21, but it strangely eclipsed media coverage of this massive UN conference. Leu responded, "By launching this initiative, the French government has validated the work of scientists, farmers, and ranchers who have demonstrated the power of organic regenerative agriculture to restore the soil's natural ability to draw-down and sequester carbon."²⁹

But two questions remain: 1) Why was the media so silent regarding this hopeful news? 2) In light of 2015 UN International Year of Soils, how could "regenerative agriculture" be absent from COP21's official agenda? I sometimes wonder whether climate-change activists who have now fought for several decades to reduce, if not

eliminate, carbon-dioxide emissions are frankly carbon-phobic. Perhaps, the mere mention of the word "carbon," as in carbon sequestration, spins them into a tizzy!

In hindsight, however, it seems odd that "carbon" would prove so caustic, especially since as early as the 1992 "Earth Summit," Suomi announced its plans to build Agnes Denes' *Tree Mountain* "to do its part to alleviate the world's ecological stress," as noted in Section Six. Since then, planting trees in cities, as well as tropical rainforests, has become a popular strategy for offsetting carbon emissions. It's thus especially unreasonable for climate-change activists to neglect healthy soils' crucial role in mitigating against climate change. Perhaps it's difficult for most people to imagine that soil's living matter is capable of sequestering carbon the way tree trunks, branches, and roots do. It's not at all surprising, however, that soil's invisible living matter routinely inspires artists to promote regenerative soil, while

Søren Dahlgaard, *Maldives Exodus Caravan Show* (MECS), 2013/present.

Left to right: Te Tuhi Centre for the Arts, Pakuranga, NZ, 2014; Biennale di Venezia, Venezia, IT, 2013; CCA Andratx, Mallorca, ES, 2014-2015; Silent Barn Art Center, Brooklyn, US, 2014; and Federation Square, Melbourne, AU, 2015.

Not pictured: Centrum Sztuki Współczesnej Łaznia, Gdańsk, PL, 2015; International Community Arts Festival, Rotterdam, NL, 2017; and Museum De Dommel, Sittard, NL, 2017-2018.



its imperceptible features alternatively detract climate-change activists.

COP21 (2015) Spawns ARTCOP21 (Round-the-Globe Collateral Events)

To complement COP21 meetings amongst activists, scientists, government officials, hundreds of art exhibitions, scores of artists' performances, and dozens of broadcasted interviews lent the cause artists' imaginative approaches. In addition to Studio Orta's *World Antarctica Passport* (discussed above) and Olafur Eliasson's *Ice Watch* (2014/2015) (discussed further down), ARTCOP21's website listed 150 collateral events, organised by more than 100 institutions across the globe between September and December 2015, including a "Summit of the Creatives," 25 projects organised by Coalition pour l'art et le développement durable (COAL), and 10 more events co-produced by Cape Farewell. According to ARTCOP21's website, its intentions were vast:

- Include culture in the political agenda of climate change.
- Position the artist as the stakeholder in debates about climate change.
- Mobilise and unite everyone involved in the ecological transition.
- Offer artists a framework of action and expression as part of COP21.
- Take concrete action to mobilise citizens and increase awareness of environmental protection.
- Educate and support participants for better integration of sustainable development in the management and policies of the cultural sector.³⁰

In contrast to activist artists who either warn the public of impending catastrophes owing to climate change or pose practical actions that citizens ought to implement to mitigate against climate change, artist **George Steinmann** participated as an official Swiss delegate to COP21, the first ever



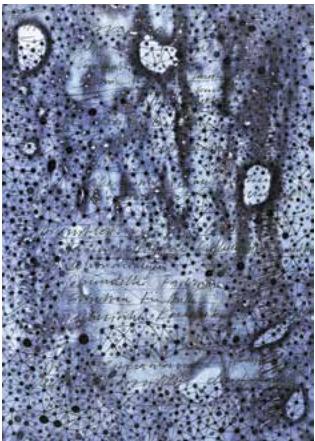
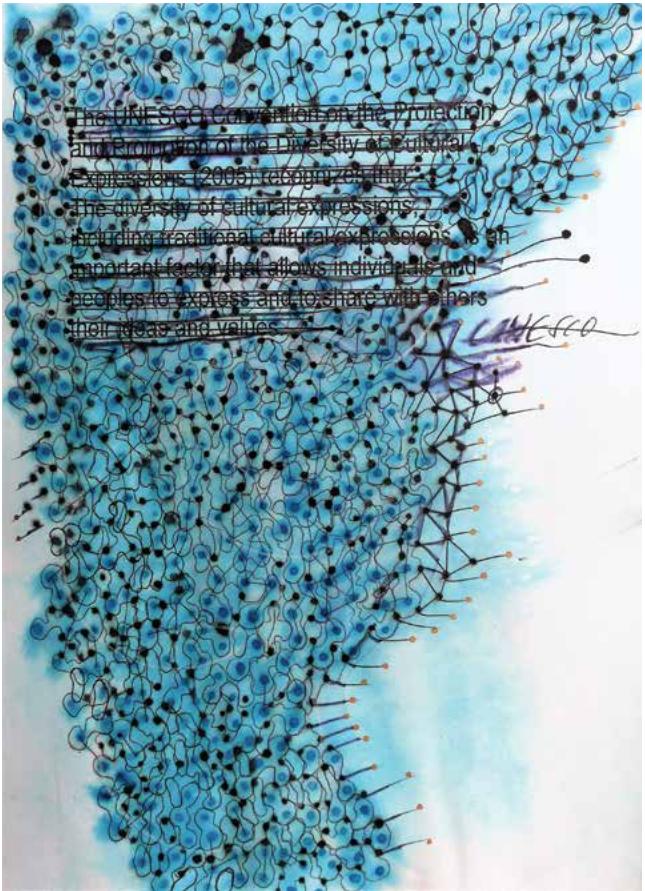


Top: George Steinmann, interview and presentation of *Glacier Blues* video, COP21 at Grand Palais, Paris, FR.
Photo Credit: Marc Johnson.

George Steinmann, *Glacier Blues*, 2015, Still photo from live blues performance, Rohnegletscher/Glacier du Rhône, Swiss Alps, CH. Photo Credit Tabea Reusser.

Right: *Symbioses of Responsibility* (mind maps), 2015-2017, Blueberry juice, tempura, and ballpoint pen on paper.

Photos registered with ProLitteris Switzerland.



"artistic observer" invited to transmit COP21 ideas artistically, rather than as reports, treaties, and agreements. According to **ARTPORT** curator **Anne-Marie Melster's** 2015 press release, "Steinmann will produce sketches, mind maps, drawings, and photographs, which will immediately be posted online and on social media, and will serve as the basis of an exhibition in 2016." During COP21, the Grand Palais presented his "Symbioses of Responsibility" exhibition and his interview is available on youtube.com.³¹

Not only did Steinmann read all three versions of COP21 reports (the 1500+ page document, the 500-page summary, and the "1-pager" prepared for government officials like presidents, prime ministers, and monarchs), he acted on behalf of: 1) the role of art to transform people's attitudes and prompt discussions, 2) the importance of artists working alongside scientists to innovate, and 3) the significance of indigenous peoples, whose livelihoods have already been severely impacted by "climate change" and "resource exploitation," and whose values and concerns tend to be ignored during such massive international gatherings, despite their invaluable knowledge. Steinmann's interest in the indigenous perspective and the importance of knowledge sharing stems from his having spent a decade working alongside indigenous peoples in Komi, RU in order to preserve their "forest knowledge," mapping the locations of edible mushrooms and berries, and notating herbs' healing properties, as discussed in Section Two.

Our Glacial Foot Print

To celebrate the beauty of his native Ísland's glaciers, Olafur Eliasson has photographed scores of glaciers over the past twenty years, beginning with *Glacier Series* (1999). This 6 x 7 grid of glacier photographs indirectly captures climate change, providing an apt metaphor for time, more specifically extremely long stretches of time (several millennia) whose historical stasis has suddenly accelerated due to global warming.

For *Your Glacial Expectations* (2012), Eliasson and Swiss landscape architect **Günther Vogt** reference the glaciers enveloping Kvadrat headquarters in Ebeltoft, DK, "as can still be seen in the site's topography and geology."

Set directly in the rambling meadows, Eliasson's five mirrors form a series ranging from a perfect circle to ever more elongated ellipses. The mirrors reflect the ever-changing sky above and the contemplator's own gaze, as if in the surfaces of glacial pools in Ísland. The sky opens up in the soil beneath the viewer.³²

Many more elements are topsy-turvy. Not only do Icelandic sheep graze on this site, but what appear to be cultivated gardens are rather "slices of unintended wilderness." Finally, fences deny visitors access to this supposed "Garden of Eden."³³

Two of Eliasson's best known sculptures suggest that his interest in giant iceberg chunks is primarily conceptual (how to express time with "time pieces"), as opposed to practical (an "alarm clock" compelling people to reverse or decelerate time). For the second iteration of *Your Waste of Time* (2006/2013), twelve glacier chunks were transported from Vatnajökull (Ísland's largest glacier) and displayed in a solar-powered refrigerated gallery at PS1/MoMA, where they remained in a solid state and thus seemed to be wasting time (suspending time seems more apt). For *Ice Watch* (2014/2015), Eliasson collaborated with Greenland geologist **Minik Rosing** in the harvesting of ice chunks, which were transported and positioned to form a *clock face*, which slowly melted, first in front of Københavns Rådhus and then on Paris' Place du Panthéon during COP21 the following year. Post-COP21, "still-melting" ice chunks were left to signal that global warming remains a concern, even after the conference has ended and its delegates have returned home in time for holiday merry-making.

Some writers consider Eliasson's clock-works to be "physical wake-up calls," sounding the

alarms that climate change is immanent (happening now, not later), which few deny. Problem is, melting icebergs are just the tip of the iceberg in terms of what is in store for planet Earth. Eliasson's silent sculptures thus operate best as time pieces, or ticking-time bombs, whose super-faint alarms are inaudible, especially as compared to the whale of a moan emitted by icebergs recorded in the act of cracking, heading inevitably toward their severance, "meldown," and eventual disappearance.

Eliasson seems to have other ideas in mind, most notably the possibility of *touching* time:

But it is possible to stretch our frame of reference. When we touch these blocks of ice with our hands, we are not just struck by the chill; we are struck by the world itself. We take time from the glacier by touching it. In a sense, *Your Waste of Time* is a "waste of time" because I shipped the ice across the world for it to be on view for a short amount of time, after which it melts away – a nanosecond in the life of a glacier.³⁴

The very same year Eliasson first exhibited ice chunks in a solar-powered refrigerator gallery, **Tavares Strachan** (b. 1979) pulled-off a similar stunt, exhibiting *The Distance Between What We Have and What We Want* (Arctic Ice Project) (2004–2006), a 4.5-ton block of ice, harvested from a river near Mt. McKinley and shipped via Federal Express to the Caribbean.

Unlike Eliasson's ice chunks, Strachan's cube remained off-limits, preserved within a solar-powered transparent freezer, available for exhibitions the world over. Soon after Strachan presented it at Albury Sayle Primary School in Nassau, BA, where he used it to educate children regarding climate-change, it appeared at an off-site project organised by Ronald Feldman Fine Arts and Pierogi 2000 during Art Basel Miami Beach 2006. More recently, Strachan's solo exhibition in the inaugural Bahamas Pavilion featured an ice chunk

from the North Pole and its clone during the 2013 Biennale di Venezia.

If Eliasson has touch in mind, Strachan aims for a powerful fusion caused by the coming together of twin extremes, the surfaces of the Arctic regions and the Earth's equator. According to **Richard Benson**:

The gist of the project is to actually bring the frozen north and the hot tropics into contact, to demonstrate that they're contrasting halves of a single entity, and to then utilise the heat and light energy of the South to maintain the exact opposite condition of sub-zero temperatures. The first part of the project is about the conceptual notion of ice and heat as the poles of our environment; the second part is about the miracles of technology, which can use one extreme of temperature to produce the other.³⁵

In 2007, **Katie Paterson** (b. 1981) recorded the sounds of three melting Icelandic glaciers (Langjökull, Snæfellsjökull, and Solheimajökull), which she pressed onto ice discs that played (as records) until they melted during her 2008 exhibition "Encounters" at Modern Art Oxford in Oxford, UK. Fortunately, she filmed this momentous moment of twice melting ice. According to her website,

Sound recordings from three glaciers in [Iceland were] pressed into three records, cast and frozen with the meltwater from each of these glaciers and played on three turntables until they completely melted. The records were played once and now exist as three digital films. The turntables begin playing together, and for the first ten minutes as the needles trace their way around, the sounds from each glacier merge in and out with the sounds the ice itself creates. The needle catches on the last loop, and the records play for nearly two hours, until completely melted.³⁶ 



Brett Bloom and Bonnie Fortune, *The Alphabet of the Anthropocene*, 2014, Roskilde Museum of Contemporary Art, Roskilde, DE

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Oikos

This section surveys artists who regularly perform blessings, inspire mindfulness, lead rituals, and explore esoteric tactics that are no less necessary than scientific approaches. According to **Lucy Lippard**, the 19th Century industrial and environmental chemist **Ellen Swallow Richards** coined the word ecology from *oikos*, the Greek work for household. Some historians believe that she got it from 19th century German naturalist **Ernst Haeckel**.¹ Here, “Oikos” addresses ameliorative art practices, which typically occur indoors, so as to promote well-being, healing, and/or self-discovery. Ameliorative art practitioners strengthen bonds between human beings in order to foster relationships with non-human beings. Artists discussed in this section believe that fixing the planet first requires inspiring human beings to develop greater self-respect, which coheres with the views of most artists discussed in these pages. In Section Three, I noted that even artists who advocate “doing nothing” consider the *renewal of the self*. a prerequisite for citizens who aim to: act responsibly, transform their environments, or care for other beings. Section Nine artists tend to emphasise this. Since most artists’ actions described thus far double as ameliorative acts, Oikos spins our field full circle, turning this book into an ouroboros of sorts.

Mend an object. When you go through the process of mending, you mend something inside your soul as well.
Think of a “crack” in your own life or the World. Ask for it to be healed as you mend the object.

— Yoko Ono

Renovating our environments can only be successful if we are also committed to renewing ourselves.²

— Vanessa Badagliacca



Ameliorative Art Practices

In *Ecovention: Current Art to Transform Ecologies*, I noted that artists whose works reorient people's preconceptions, perspectives, and extra-perceptual processes double as "agents of perceptual change," altering spectators' conscious awareness of their environments.³ To quote **Ludwig Wittgenstein**, the spectator might respond, "I see that it has not changed; and yet I see it differently."⁴ Consider most people's aesthetic responses to swamps. If they only notice mucky water, dying trees, scattered branches, decaying leaves, slithering snakes, etc., they're apt to yell, "Yuck!" But if someone were to characterise: fallen branches as providing habitat and food, water teaming with "slime" as food for fish and birds, or slithering snakes as exemplary of biodiversity, spectators are likely to appreciate the "yucky" swamp differently, though of course nothing has actually changed. This approach is mostly associated with Section Three's "Valuing Anew" artists, who routinely devise experiences that reframe people's understandings of their environments, effectively altering people's aesthetic appreciations.

Oikos artists, however, employ practices that *physically* transform participants via some combination of body work, meditation, therapy, chanting, shared meals, ritual healing, or memorable gatherings. More generally, everyday acts of healing (and their benefits) include: singing (oxygenate the body), protest (solidarity with others), dance (circulate blood), meditation (purge distractions), martial arts (gain self-confidence), exercise/sports (improve self-esteem), yoga/pilates/tai chi (build core strength), pit stops/breaks (withdraw/regroup), and coffee klatch/tea party (forge connections). In short, such practices have evolved over eons to emend miscommunication, amend suffering and pain, or more literally to mend the gaps in the fabric of society.

Ameliorative art practices nurture, renew, and foster greater human connectedness;

unwittingly preparing participants to regard non-human beings responsibly. That said, artist teams like **Touchstone collaborations**, **Ecole Mondiale** (EM), and **431art** regularly engage participants outdoors in relationship to particular environments, rather explicitly preparing participants to regard non-beings responsibly. Moreover, recruitment plays a significant role here, on par with farming communities, discussed in Section Seven. Art-historical precedents include: **Le Corbusier**, *Pavilion de L'Esprit Nouveau* (1925); **Hélio Oiticica**, *Parangolés* (1965); **Lygia Clark**, *Relational Objects* (1966-1985); **Yoko Ono**, *Mend Piece to the World* (1966/2001-present); and **David Medalla**, *A Stitch in Time* (since 1966). **Christina Grammatiko-poulou** remarks how with Clark's work "breathing and smell become means to create an artwork that not only has the power to alter consciousness, but also to heal trauma.... At the same time, her *Relational Objects* show how the experience of using an object can become more important than the object itself."⁵

Several of Ono's objects actually request help, such as *Mend Piece* (1966/68), which consists of a broken cup, needle, thread, glue and the note, "Ask others to Mend." Artworks that engage actor-recipients in transformative actions include: **Marie-Ange Guilleminot's Paravent** (1997) avails tea and anonymous foot massages, **Lee Mingwei's Dining Project** (1998) facilitates dinner guests, **Patty Chang's In Love** (2001) captures the endurance of family love, **Kendall Bruns' Therapy Sessions** (2003) grants people a listening ear, **Olafur Eliasson's The Weather Project** (2003-2004) provides passersby 24-7 access to sunglow, and **Pedro Reyes' Sanitorium** (since 2011) offers therapy sessions. The last two seem less transformative actions and more satisfying situations.

Ameliorative art practices tend to follow six steps. When participants repeat these steps in different contexts, the circle of actor-recipients expands, spreading through diverse communities

to cover more ground. Seeking to inspire/generate/cause procedural change, 1) some actor-producer proposes an alternative mode of being, which 2) he/she publicly shares with others via an exhibition, workshop, and/or performance, 3) prompting actor-recipients to envision a better world that 4) compels them to implement specific actions, 5) indicative of their newfound capacities, skills, and values; thus 6) engendering greater cooperation and self-empowerment for all involved.

Consider Joseph Beuys' *Overcome Party Dictatorship Now, December 1971* (the action retitled *Save the Forest* (1973)), which is discussed in Section Two. The following six steps happened: 1) Believing that urban forests are integral to city life, 2) Beuys invited students to sweep paths through the local forest, 3) thus generating a public awareness concerning invaluable trees at risk of being demolished to make room for tennis courts, 4 + 5) inspiring artists and the public either to initiate their own actions years later or to help Beuys plant 7000 Eichen in Kassel a decade later, thus 6) simultaneously augmenting everyone's well-being. As Beuys' *Save the Forest* poster declares, "Let the rich beware, we will not yield. Universal well-being [emphasis mine] is advancing."

Most important, ameliorative art practices engender a sense of "We did this together," as discussed in Section One in connection with **Sakarin Krue-On's Rice Field** (2007) during documenta 12. Of course, some might argue that these six steps are rather the recipe for "social sculpture," but as is discussed in Sections One and Six, not all social sculptures are purposeful or goal-oriented, and fewer still play ecological roles. As noted in Section Six, Beuys' brand of social sculpture was not only practical, but he devised stop-gap measures in case the explicitly social features of the "social sculpture" failed to find a new resolution.

Ameliorative art practices are actions intended to transform participants, who emerge better equipped to engage their environment as

a result of some artistic action, yet ameliorative art practices don't necessarily have ecological outcomes. For example, Krue-On's *temporary rice field*, however "ameliorative" its outcome, had a negative ecological impact, since a grassy knoll was replaced by a terraced rice field, which was ripped out only 100 days later, no doubt disturbing both the former and later ecosystems. Had the rice field been left in tact, this novel food source might have doubled as an innovative rainwater catchment system.

Independent of their particular ecological outcomes, ameliorative art practices play an integral role in preparing participants to be responsible caretakers. For the most part, works discussed here noticeably prompted actor-recipients to take ecological actions that they might not have considered had they not participated in the artist-initiated action. By inviting people to be open to their senses ameliorative art practices facilitate eco-minded artists' goals to heal Earth, as they invite actor-recipients to more fully experience their environments, thus reconnecting human beings to nature.

Boosting Well-Being

This six-step process strengthens those skill sets (noted in parentheses) that boost well-being: 1) Envision (imagination), 2) Action (connectivity), 3) DIY Ethos (resource sharing), 4) Teamwork (task completion), 5) Self-empowerment (endurance) and 6) Agency (responsibility), and the cycle repeats, and the circle of players widens. Actions taken to improve skill sets incidentally heal Earth's wounds. 1) Imagination facilitates empathy with nature, 2) Greater connectivity extends "belongingness" to all living things, 3) Resource sharing minimises resources expended, 4) Task completion improves confidence and trust, 5) Endurance engenders long-term vision , and 6) Responsibility is a capacity that transforms immobility into action.

Well-being itself is an intangible, since it's difficult to pinpoint its cause or to measure its



outcome. Aside from diversions and temporary distractions such as humour, bizarre news stories, adventurous trips, or fun parties; it's nearly impossible for unhappy people to suddenly become happy. It thus may seem contrary, if not self-defeating, for artists even to attempt amelioration.

At this juncture, the reader may be thinking, "Isn't it rather superfluous for artists to be so focused on ameliorative practices, since art itself is meant to be *uplifting*?" While there are plenty of people who think museum experiences ought to be uplifting, there really is no proof that experiencing beautiful art (let alone pretty paintings) positively alters one's mood. What seems to improve people's moods is experiencing familiar artworks, which is why art history courses, online video trailers for exhibitions, and repeat visits to the same museum tend to engender positive feelings.

Moreover, one of contemporary art's longstanding goals is to defeat its own conditions, so contemporary art experiences are exactly the very type of events that cannot be expected to "uplift", or cheer people up, so long as artists employ unfamiliar tactics as art. On this level, artistic goals to boost well-being cannot also be part of some goal to "uplift," since in many cases the very strategies employed by artists to transform well-being risk backfiring as art, when selected methods are unfamiliar as artistic practices. Moreover, techniques employed by Oikos artists to rejuvenate, revitalise, or transform participants are meant to inspire respect for, if not reverence for, Earth. One notable example is **Theresa Murak's** *Sculpture for the Earth* (1974), described later in this section.

Rather than uplifting participants *per se*, ameliorative art practices grant participants greater self-confidence and enhance self-respect, leaving the goal of "greater happiness" to trained professionals. Although most individuals value both well-being and happiness; well-being, what people invariably describe as "being comfortable in one's skin," "capably fulfilling one's desires/

needs," "having a purpose," or "feeling connected" seems to be a different aspiration altogether than that of happiness.⁶ Being mood-dependent, one can easily imagine cases where people self-identify as unhappy, yet still score high on well-being, or vice versa.

Seeking a way to sensorially translate Indian chakra teachings regarding the five stages of transcendence, whereby human beings move from "purely corporeal basic needs (earth) to the ability to communicate (air) to existence as a spiritual being (ether)," 431art (founded by **Haike Rausch** and **Torsten Grosch** in 1996) presented *Five Elements* (2001), a multi-media installation that conveys all five stages. Combining audio, video, text, 3D animation, and live performance, they transformed the five elements (earth, water, fire, air, and ether) "into soundscapes consisting of natural sounds, digitally-synthesised sounds, and whispered texts" written by "**Apuleius, Parmenides** of Elea, **Frater Albertus** (alias Albert Riedel)," and **Gautama Buddha**, as well as "excerpts from Chassidic stories."⁷ As **Martin Doll** recalls:

Haike Rausch can be seen on both a large screen and a stage in front of the screen. On the stage, she performs live –everyday actions, such as drinking a glass of water and lighting an incense coil –while the film behind her shows her dancing extemporaneously to various sounds. The various areas of performance are so tightly interwoven with the audible space that they complement each other both in their contrasts and correspondences. Together with the sounds, they produce a composition that reflects the very dynamics of life –becoming change, decay –in a way that makes it possible to experience and understand them anew.⁸

In 2009, **Kinga Kiełczyńska** organised *Ada Bojana Symposium*, an instructive, nine-day retreat for a small group of artists and friends, held at a nudist beach on an island (Ada Bojana) on the

Montenegro coast. For this project, she requested participants to bring something of interest to share with the group. Like an unplanned pot-luck dinner, each day's schedule was easily filled with worthwhile workshops, performances, and group activities. Her selecting a Montenegro isle riffs on Monte Verità, the 350m-high hill in Ascona, CH that was once home to an infamous anarchist colony that had lured dozens of artists and writers a century earlier, most noticeably Nobel Laureate **Herman Hesse**, who eventually settled nearby. According to **Walter Segal**, who lived near Monte Verità during his childhood, the colonists "abhorred private property, practised a rigid code of morality, strict vegetarianism, and nudism. They rejected convention in marriage and dress, party politics and dogmas: they were tolerantly intolerant."⁹ Another of Kielczyńska's intellectual-artistic influences was Black Mountain College (1933-1957, Black Mountain, US), the remarkably democratic art school where visiting

artists, school professors, and students inevitably influenced each other.

In February 2016, EM (founded by **Ive Van Bostraeten** and **Filip Van Dingenen**) carried-out "Fieldstation I: Introduction, Recruitment and Healing Department," a one-day conference with public talks and workshops hosted by LUCA School of Arts Narafi Campus, located at Parc Duden's castle in Bruxelles/Brussel. Given EM's interest to motivate and inspire people's potential for action, their adopted moniker riffs on the initials of the "Ecole Mondiale," a never-realised educational program initiated by King Leopold II in 1902 to train colonial expansionists. "Fieldstation I" introduced the public to lesser known healing techniques like tachyon cocoon and pain-body release, as well as notable alumni including **James Lee Byars**, **Lygia Clark**, **Nicolas Copernicus**, **Albert Einstein**, **Erasmus**, **Pythagoras**, **Viktor Schauberger**, and **Hildegard von Bingen**. During "Fieldstation I," participants experienced various ameliorative



431art, *Five Elements*, 2001, Video, audio, and live performance.

431art's multi-media installation *Five Elements* translates the five stages of existence (earth, water, air, fire, and ether) into art.





Ecole Mondiale (EM), Top: "Fieldstation I: Introduction, Recruitment, and Healing Department." Bottom: *Shamanic Walk*. 2016, LUCA School of Arts-Narafi Campus, Bruxelles/Brussel, BE.

During "Fieldstation I," participants discovered Leopold II's "Ecole Mondiale," encountered EM Alumni, experienced tachyon cocoon and pain-body release techniques, took "shamanic walks", and performed additional actions to heighten their self-awareness.

practices, including partner movements, shamanic walks, shared meals, participatory construction, and individualised activities such as breathing techniques and listening exercises; all enacted with the view to prepare participants to discover and envision heretofore untold possibilities.

In June 2016, EM conducted "Fieldstation VI: I-Carus" on the Greek isle of Amorgos. "Fieldstation VI" consisted of ten days of hybrid healing workshops traversing multiple disciplines, attended by specialists in Qi-Qong, "aquatic biology of the self," tachyon cocoon and pain-body release, music therapy, hypnosis, visual healing, Ayurvedic massage, permaculture gardening, time harvesting and therapy, and Greek cuisine. On a per-class basis, such courses are typically prohibitively expensive, so the idea to select eleven healers from seven countries who take turns teaching and learning from one another transforms each attendee's contribution into a currency that prompts everyone's knowledge to expand ten-fold, boosting well-being to boot.

Working with Water Memory

Several works by 431art are especially focused on helping passersby to assess their assets with the view to enhance their well-being. For *Endorphin 1.1-betarelease* (since 2004), the public encounters several metal shelves featuring 76 bottles filled with transparent elixirs, each labeled with one of seventy different traits such as avarice, bravery, calmness, exuberance, hate, love, smoothness, and wishlessness. Meanwhile, one hears loud drops dripping into a bowl adjacent a contact microphone, creating the audible sense either of elixirs undergoing distillation or feelings being extracted drop by drop. They have presented this work in various venues, such as Helsinki's Muu Gallery (2006) and the window of Frankfurt's Kaiser and Cream Gallery (2009). In light of Lehman Brothers' 2008 collapse and the gallery's financial district location, they temporarily retitled the work *Art*

Supports the Global Stock Market. Both installations were accompanied by a feedback box and questionnaires. At the height of the "Crisis," 431art thus summoned traumatised bank employees to evaluate their "luck-index," with the view that they might realise that they were faring better than they originally thought, thus potentially accelerating their recovery. Elixirs labeled with particular capabilities inspired passersby to undergo self-analyses.

The casual reader might wonder what is the relationship between bottles of water labeled with varying moods, feelings, and sentiments and

people's actual moods, feelings and sentiments targeted by *Endorphin 1.1-betarelease*. Could just looking at a bottle of water labeled "Bravery" or "Wishlessness" actually make one feel braver or less wishful? How long does one have to look at the label before the desired mood actually takes effect or "sinks in?" And does it actually matter that the label is affixed to a transparent bottle of water, or could it be some other liquid like fruit juice, milk, or even an empty bottle?

Two years after 431art started their research, the filmmakers who made *What the*



EM, "Fieldstation VI: I-Carus," Amorgos, GR.

Right: Kinga Kiełczyńska, *Ada Bojana Symposium*, 2009, Ada Bojana, ME.

Numerous artists have organised retreats for participants to share their expertise and to develop additional skill sets.



Oikos



431art, *Endorphin 1.1-betarelease*. 2006,
Muu Gallery, Helsinki,
FI.

Right: 2009, Kaiser
and Cream Gallery,
Frankfurt, DE.

Endorphin 1.1-betarelease invites
passersbys to select
elixirs whose traits
are indicated on each
bottle's label.



Bleep Do We Know!? (2004) introduced the research of Japanese scientist Dr. **Masaru Emoto** (1943-2014), whose before and after photographs of frozen water crystals indicate how human intentions can alter the structure of water molecules. For example, when Emoto taped words like "thank you," "love," "love and appreciation," "happiness" on bottles filled with water, or offered prayers to bottles filled with impure samples, more beautiful ice crystals formed than when crystals were made from ordinary water samples (impure, unblessed, or lacking in intention) or samples collected from rivers and lakes near cities. Emoto's website features photographs of water samples exposed to music, photographs, prayer, negative and positive messages, and "other things" such as an emerald, a Martin Luther King speech, or the essence of a pine

flower.¹⁰ One explanation for Emoto's discovery is that if human beings are 70% water then perhaps intentions, whether felt or expressed, can also alter the water composing human beings, just as words taped to water samples do. Some consider Emoto's findings to explain homeopathy's success. According to **Arjun Walla**,

If positive emotions, words, and feelings can change the physical structure of water, that means that 'self-talk' has a direct affect on the biology of our being. Numerous studies beyond this one show how our thoughts, feelings, and emotions, the things we can't see, are primary drivers of our biological systems. The Institute of Heartmath, along with many others have proved this time and time again. ...In order to change physical structure[s] using consciousness,

we have to understand that our thoughts, emotions, and feelings are directly correlated with the frequency [at which] matter (our being) vibrates.¹¹

431art's discoveries dovetail with Emoto's observations, but the artists push their experiments farther. Not only do they conduct experiments *in, with, and for* the public, rather than behind a university lab's closed doors, but they have found additional applications for their labeled elixirs (watering plants, public tastings), enabling the public to witness actual outcomes. In light of Emoto's research, which has admittedly been contested, it's hardly surprising that 431art have also investigated sound's influence on water. 431art seem to share Emoto's view that "water memory" has both auditory and material components. Water memory typically refers to water's capacity to gather and retain information as it passes through an environment, which includes matter, and even sound for some scientists. In Section Six, I discussed **Vera Thaen's** adding ridges to her rainwater collection troughs, so as to agitate the water as it flows, thus simulating the memory of water coursing through rivers. 431art's artworks explore whether water *transports* or *conserves* sound's "power" as a waveform.

During "Ripenings," 431art's 2008 exhibition at Bellevue-Saal in Wiesbaden, DE; they presented the installation *temporary sculptures*, for which they watered 400 bean sprouts with water that had been subjected to a variety of sounds: classical, hip hop or a combination of the two. They discovered fairly quickly that plants watered with water exposed to *noxious* noises experienced reduced growth. The Goethe University scientist who helped them analyze this experiment's statistics found its outcome surprising.¹² For a related project, they enacted *Schmeck Die Heimat* (2015), inviting ordinary passersby to perceive their environment in a new way, by tasting three water samples, each "flavored" with the broadcasting of different field recordings.

Just as 431art queried passersby as part of *Endorphin 1.1-betarelease*, they later interviewed people between the ages of 10 and 93 about living and/or working in Frankfurt's Mainzer Landstraße to discover how they experience the thoroughfare. For *Lifelines- The Streets Are Full of Gold* (2012), they placed a golden button indicating the vicinity of each interviewee's residence atop a miniature map. According to 431art, the gold reflects the value that each inhabitant contributes to the community, as reflected in the streets.

When invited by the Office of Change to evaluate whether it's ever possible to actually "feel at home," 431art proposed *Dropzone Heimat* (2014) for a development destined to house 15,000 inhabitants along Frankfurt's northern edge. To convey the idea of transplanted seeds randomly taking root, 431art projected computer-generated images of falling samaras, the maple tree's spinning, propeller-like seeds, which naturalist Viktor Schauberger once championed as exemplary of nature's special design, since the wind spins them horizontally as they gently descend vertically. With *Dropzone Heimat*, 431art explored the possibility of becoming rooted and feeling at home, for those who've "been transplanted from somewhere else."¹³

Invited to contribute an artwork for the ara region bern ag (2008-2012) in Bern, CH, **George Steinmann** proposed a two-part project, beginning with a water-advisory board, which met regularly for two years to discuss water issues, and an intervention with spring water from the Lower Engadine Valley at each stage of the new headquarter's construction where water is ordinarily used. This particular "ara," which is the acronym for abwasserreinigungsanlage (wastewater treatment plant), not only cleans sewage and stormwater runoff, but generates carbon-neutral biomethane from biogenic waste and sewage sludge, a renewable energy that is converted into electricity, meeting 24% of the plant's electrical needs, as well as fuel for city buses. Moreover, the building was





George Steinmann, *Kunst ohne Werk aber mit Wirkung* (*Art without Object but with Impact*), 2010-2013/present, Bern, CH.
Photo Credit: George Steinmann. Photos registered with ProLitteris Switzerland.

As his artistic contribution, George Steinmann proposed that a water-advisory board meet regularly for two years to discuss water issues. Additionally, he added spring water at each stage of the new headquarter's construction.

constructed from naturally degradable materials according to the Minergie Eco-P standard.¹⁴ Since well-being is a primary goal for this building, Steinmann calls it *Kunst ohne Werk aber mit Wirkung* (*Art without Object but with Impact*) (2010-2013), thus granting well-being tangibility.

Just as Steinmann fixes his "forest photographs" with blueberry juice and often injects his drawing papers with this healing, anti-oxidant, for which he spent a decade foraging in Russia's boreal Komi Forest, Steinmann injected the energy and memory of water at every stage of this building's construction, thus touching every surface and every pipe. By personally adding mineral water, sourced from three springs in eastern Switzerland, during the pouring of concrete, plastering and painting of walls, painting of the building's façade, and surfacing of floors; he enhanced the building's capacity to impact its inhabitants in a rather concrete manner. For Steinmann, such "moments of actions" encourage "the watching of and listening to nature and the understanding of nature,

as well as an impulse of persuasion, which seeks changes in the behaviour of all actors involved in the dialogue."¹⁵ Such actions no doubt encouraged construction workers to be more mindful of their duties, as I imagine routine jobs coming to a halt, as workers stepped aside to reverently observe Steinmann boost the building's well-being. Such interventions recall "micro-emotive" tendencies, discussed in the context of Hans de Vries in Section Four.

In early August 2016, EM initiated "Fieldstation III: Terra (Gaiagraphy)," for which they charged 323 quartz crystals for an hour in the source of La Zenne/Senne, located in Naast/Nässe, BE; 37km southwest of Parc Duden. Afterwards, six EM participants (the duo plus **Gustavo Miranda das Santos, Gwen Berrou, Gilly Karjevski, and Licia Soldavini**) held a meditation session, charging the crystals with their vision for Europe's capital. They then performed a Munay-Ki ceremony, an ancient Peruvian healing ritual, and enhanced the crystals with a Tachyon-energy field.¹⁶

The rites of the Munay-Ki transform and upgrade your luminous energy field. They are energetic transmissions that facilitate healing the wounds of the past – your karmic & genetic inheritance. They re-inform your DNA; enabling you to grow a new body – one that ages, heals, and dies differently. The Munay-Ki is your invitation to *dream an entire new world into being* (emphasis mine).¹⁷

Employing gaiagraphy (the practice of using maps to identify site-significant geometric patterns), they created *Locality Grid 1.3* based on the 10.767 km distance between the Royal Observatory in Uccle and the Planetarium near Heizel. They then drew an equilateral triangle, whose three legs are 10.767km, two of which intersect near the point where La Senne/Zenne reaches Bruxelles/Brussel, only to be channeled underground, as it has been since 1871. Over the course of a few weeks, EM



EM, *Locality Grid 1.3*, "Fieldstation III Terra (Gaiagraphy)," 2016. "Jardin Essentiel," Parc Duden, Bruxelles/Brussel, BE.

Using gaiagraphy, EM created a locality grid for Europe's capital. EM's grid reveals the equilateral triangle formed by the observatory in Uccle, the planetarium in Heizel, and the southwest point where La Senne/Zenne submerges under the city. While soaking, the public charged the warm water and quartz crystals suspended over their heads with their spectacular visions for Europe's capital.



participants buried the Tachyon-charged crystals every 100m along the equilateral triangle's 10.767 km legs in expectation of enhancing local inhabitants' well-being.

During the last Sunday in August, "Field-station III" passersby visited "Jardin Essentiel" in Parc Duden. Participants took turns soaking in a firewood-heated communal hot tub, infused with six bottles of water collected at the source of La Senne/Zenne. While soaking in the hot tub, actor-recipients were requested to *envision* Europe's capital, thus simultaneously charging the warm water, plus a dozen or so crystals suspended above their heads, with their intentions. Scores of people participated in this action meant "to dream an entire new world into being." Before sunset, "Field-station III" participants carried out an *Inearthing Ceremony*, whereby they buried the suspended crystals in the herb garden at the foot of the hill.

Demarcating Mindful Places

Since mindful and meditative are often used interchangeably, this section's focus could alternatively be either "contemplation rooms," as Touchstone collaborations (founded by **Miche Fabre Lewin** and **Flora Gathorne-Hardy** in 2010) characterise them, or "meditative hotspots." "Mindful places" works better for several reasons. For one, meditation typically concerns techniques and practices that aid the individual's ability to "self-regulate" his/her mind with the goal to reach a "heightened level of consciousness –including compassion, love, patience, and of course, mindfulness....Mindfulness is the act of focusing on being in the present, such as focusing completely on drinking a hot cup of tea, taking in its scent, warmth, taste and removing overpowering emotions from the mind."¹⁸

Since most artworks discussed in this section present particular experiences, the goal of mindfulness seems more appropriate. And if the distinction between meditative and mindful proposed by the *Medical Daily's* website rings

true, one's mindfulness *facilitates* heightened consciousness. Mindfulness begins as a distinct action, a focusing on some sensation in the present, whereas notions of compassion, love, or patience tend to remain abstract concepts during meditation or contemplation. By contrast, people demarcate a mindful place (both physically and psychologically) to help them reconnect with experiences from which they feel severed (true desires, friends, community, or nature), due to today's frantic and distracted lifestyles.

As noted in Section Five, Steinmann has created several buildings as art, what he calls "growing sculptures" to emphasise their indeterminate and unlimited potential as art (structures set *in motion* by an artist). After exhibiting *Void: Ruumi naasmine* (*Void: The Revival of Space*) (1992-1995), his renovation of the Tallinn Art Hall, Tallinn, EE; he proposed the *Centre for Sustainable Forestry* (1997-2006) in Komi, RU. During this period, he actually built *Saxeten: A Growing Sculpture* (2002-2006), a bridge that leads to a cabin (incidental tourist attraction) sited in the poorest mountain village of Schweizer Alpen/Alpes suisses/Alpi svizzere/Alps svizras, and then *Kunst ohne Werk aber mit Wirkung* (*Art without Object but with Impact*) (2010-2013). Housing only a guestbook inside, hundreds of people from all over the world have recorded their experiences inside his remote mountain shelter with a view onto an ecologically intact alpine landscape, which inspires people to meditate on Earth's future. He and architect **Jost Kutter** also designed *Mittendrin am Rande* (*In the Midst, on the Margins*) (2012), a not-yet built shelter slated for the Baltic isle of Vilm near the Internationale Naturschutzakademie. *Mittendrin am Rande* is also the title of Steinmann's ongoing series of photographs of northern hemisphere pristine forests, since 1987.

Somewhere between a nature hut and a refuge from society, this "dialogical structure" will one-day serve as a "port of call for thoughts and



George Steinmann, *Saxeten: A Growing Sculpture*, 2002-2006/present, Saxeten, CH. Photo Credit: George Steinmann. Photos registered with ProLitteris Switzerland.

Right: Touchstone collaborations (with MA design students Liz Dohna and Sonia Kneepkens from Central St. Martins), *Contemplation Room*, 2013, Guy's Hospital, London, UK. Participants created mind maps in the Contemplation Room.

Institutions increasingly invite artists to introduce actions that enhance mindfulness. George Steinmann established a "growing sculpture" in Confoederate Helvetica's poorest mountain village, while Touchstone collaborations guided participants in the exploration of questions regarding the body and disease.







Left: George Steinmann, *Metalog*, 1999–2000, Molecular Cell Biology and Genetics, Max Planck Institute, Dresden, DE.
Photo Credit: George Steinmann. Photos registered with ProLitteris Switzerland.

Above: Expanded image of *Metalog* mind map.

George Steinmann created these mind maps to reflect upon his immersion in the world of biotechnology, while Touchstone collaborations invited patients to reflect upon their relationship to hospitals, which they've entrusted with their care. Patient responses to dozens of questions put forth by Touchstone collaborations granted hospitals access to their patients' perspectives, enabling them to provide more satisfactory healing journeys.

for the embodiment of attitudes.”¹⁹ One design proposes using reclaimed wood from an old hunting lodge to construct right-hand and left-hand spirals indoors: the former leading towards the middle and symbolizing the path within; while the latter poses a view outdoors, symbolizing creation, creativity, and research. Hosting up to four artists, philosophers, and/or scientists for daytime activities; this modest forest shelter can accommodate two researchers overnight. Accompanying rules specify that this place is reserved for research, knowledge sharing, and creative engagement, and is NOT intended as a party room.

In July 2013, Futurecity commissioned Touchstone collaborations (working alongside design students **Liz Dohna** and **Sonia Kneepkens**) to create a design brief for a *Contemplation Room* in the new Cancer Centre at Guy's and St. Thomas' Hospitals in London, UK. They began in their studio by asking critical questions such as “What is a human being? What is cancer? What is contemplation?”²⁰ Nine months later, they hosted *Tea and Contemplation*, a “tea party” in the Burfoot Court Room at Guy's Hospital, guided by themes of the “body, healing, and contemplation.” “Nourish[ing] participants with a cup of tea, accompanied by an artisan loaf of bread and jam,” Touchstone collaborations inspired participants to come alive to their senses and in the safety of companionship, to explore several themes.

This space of trust opened up a respectful listening and sharing of responses to hear each other’s thoughts and feelings about the kind of space a contemplation room might offer on our journeys through life. These expressions and sentiments were woven into a growing collection of words, images, poetic responses, practical suggestions, sketches, and models that marked out the stage of the collaborative research journey.²¹



Working with Creative Partnerships and Chepping View Primary School, Touchstone collaborations created *Listening Place*, a ritual space within a newly-built thatched outdoor classroom sited in a meadow, offering pupils a place to "feel, think, and imagine." Students and staff gathered materials such as clay, stone, leaves, and snow, *in situ*, to make artworks. Having reconnected their imaginations to their senses, they unlocked creative potential across all age groups in the school. This followed up on Arts Council England's 2000 invitation to collaborate with four Liverpool schools to make their buildings and grounds more welcoming.²²

Preparing Shared Meals

Given the globally-recognised significance of shared holiday meals, it's hardly surprising that cooking and eating play important roles in most artists' practices discussed in this section. Although Teresa Murak is not known for sharing, let alone preparing meals, her signature material just happens to be the fast-growing, edible garden cress, whose seeds she has sown into "lady's smocks" (fabric sheaths worn by her) since 1972. Typically grown by Poles in their homes before Easter, cress is used to decorate dining tables and the Easter baskets carrying food to be blessed by priests the Saturday before Easter. It's thus impossible to sever cress from its ritual role during Easter meals, especially since Poles typically begin Easter with shared breakfasts, and continue eating with family and friends throughout the day.

During the 1970s, several performances of Murak wearing cress dresses seemingly sown onto her body were filmed, granting her goddess status. Like many feminist artists of that era, she was exploring "the parallels between the female body and earth, skin and soil, in different ways –especially with the seed sowings she makes on her own body."²³ Given that Murak also organised

numerous artistic exchanges for Polish, Swedish, and Norwegian artists; constructed large-scale Earthworks; and mounted theater-scale performances, her artistic contributions far outweigh her role as some ethereal Earth Mother endowed with Gaia's energy, spirit, and fertility.

During the 1980s, she produced several large-scale colour photographs (titled after towns like Abramowice Prywatne, where photos were shot) that further blur the line between body and land, but project a different persona, that of a woman in a state of ecstasy. Indeed, being named Teresa, one automatically connects her to Teresa of Ávila, the saint immortalised in the "Ecstasy of Saint Teresa" genre. For the saint, ecstasy was a level of devotion where the "consciousness of being in the body disappears. Body and spirit are in the throes of a sweet, happy pain, alternating between a fearful fiery glow, a complete impotence and unconsciousness, and a spell of strangulation, sometimes by such an ecstatic flight that the body is literally lifted into space."²⁴ With the artist, the face and body evoke the ecstatic state, yet her elongated, mesmerised body (sometimes forming a cross) adorned in cress remains bound to Earth. In refusing to float upwards, Murak casts Earth as her God, drawing her destiny downwards, not upwards. "The photographs from Abramowice [Prywatne] show how the artist enters the landscape and sinks in to become part of it. The boundary between vegetation and soil and the female lying on the ground is blurred, and its status appears to be disturbingly ambiguous."²⁵

One of Murak's rare "cress-free" outdoor actions was *Summer 1987 (15 July-15 August)*, for which she arrived on a hillside on the outskirts of Lillehammer, NO from Polska with sourdough on hand. She spent the next four weeks kneading the dough in a swamp, a spot that she discovered, while searching for the source of a stream. Sporting a flowing white gown, she let the leaven work its magic, until a pulsing, living earth mound

arose from the swamp. In some ways, her performance doubles as a creation myth, whereby leaven transforms watery earth into the bread of life. Infused with proteins, ordered life arose from the chthonic muck. She even says so herself: "I see the swamps as a form of primary matter, of primary existence...."²⁶ Describing her month-long, Lillehammer swamp action during the Summer of 1987, Murak wrote,

I'm going there, hoping to meet with swamp, after my experiences with river mud. I find the place where I would work with bread leaven. I reach inside and take out the swamp's soft matter, spreading out the leaven. Four weeks of work: watching, cultivating, keeping a bonfire burning, constantly adding flour. The leaven grows: at night, in the rain. A couple of times I invite people to the swampy island, soft, lightly rolling underfoot. The leaven continues to grow- after four weeks it is about 1.5m in diameter, its walls rising upwards. . . It was an incredible experience to touch the inside of the swamp, its original purity that I felt, reaching inside at arm's length.²⁷

Little discussed is the role played by meal preparation in Joseph Beuys' artistic practice. In Section Two, I noted that he dined with friends "upstairs," while living alongside a coyote during *Coyote: I Like America and America Likes Me* (1974). Philosopher **Harald Lemke** goes so far as to call Beuys a "gastrosopher" or "eat-artist."²⁸ In 1977, Beuys dug up potatoes, which he had planted six months earlier in front of a Berlin gallery, to coincide with the 100th day of documenta 6. Lemke considers Beuys' agricultural activities, which he regularly carried out in three gardens (Düsseldorf, DE; Weert, NL; and Bolognano, IT), as exemplary of Beuys' political ethos, for which cultivated potatoes served as fruits of his "creative resistance against industrial agribusiness and conventional farming methods."

The cultivation of one's own vegetable garden- an idea that existed already in the gastosophical writings of Rousseau and Nietzsche and to a greater extent Marx [not to mention Beuys-guru Rudolf Steiner] –meant to reclaim control over one's own life and to ensure a way of producing one's own food along wholesome lines that subvert mass production and the inferior quality of mass produced products.²⁹

In 1978, Beuys launched Fondazione per la Rinascita dell'Agricoltura (Foundation for the Rebirth of Agriculture) at the FIU (Free International University) in Italia, which eventually evolved into his soil campaign *Difesa della natura* (Protect Nature)(1984), briefly discussed in Section Two. Long before cooking shows and celebrity chefs were *de rigueur*, German television broadcast the segment from the 1979 documentary *Jeder Mensch ist ein Künstler* (Everyone is an Artist) that captures Beuys preparing a meal in his Düsseldorf studio.

He is filmed as he carefully cleans fresh vegetables, slowly peels potatoes and slices carrots one by one, in the preparation of a simple wholesome meal. Beuys' cooking activity, the food making process and the final presentation of the meal he prepared as an "art work" were the only portions of the documentary to be broadcast on television. The image presented by these sequences was doubtless stronger and more provocative in the early 1970s: here was the well-known avant-garde (and male!) Joseph Beuys, simply cooking and exhibiting this ordinary everyday activity to the general public through television as art.³⁰

For *Wirtschaftswerte* (Economic Values) (1980), Beuys exhibited East German products (packaged wheat, dried beans, and canned foods) on metal racks as healthier alternatives to those produced by wealthy economies, whose industrialised agriculture had noticeably harmed the food







Left to right: *Vert olanda*, 1977; *Aratura Biologica* (Organic Plowing), 1975, Pescara, IT; and *Contemporanea Roma*, 1973. Photo Credit: Buby Durini dell'Archivio storico De Domizio Durini

These intimate, though no less dramatic, action shots of Beuys either working in his vegetable garden or holding a broom were captured by his good friend Baron Buby Durini. They seem quieter than better known, though more intense, images of him with students handling industrial brooms, either to sweep paths through the Düsseldorf forest in 1971 or to sweep up Karl-Marx-Platz in Berlin after 1972's Labour Day demonstrations. His especially calm and focused demeanor convey well-being, indicative of ameliorative art practices, such as Mierle Laderman Ukeles' cleaning actions or Yoko Ono's ongoing efforts to mend the world.

supply. Lemke recalls a talk where Beuys applied his "gastrosophically extended notion of art to economic questions concerning farming practices and the work of the farmer, considered by Beuys to be essentially an artistic creativity. Because, as Beuys explained, 'a person like a farmer realises something truthful when he makes a product that is tremendously important for our life by cultivating the earth, [then] one has to recognise such a person as a creative being in this field of human activity...one must accept him as an artist'".³¹

As briefly discussed and noted in Section Six, Beuys' emphasising every person's creativity, the ultimate message behind his cooking during *Jeder Mensch ist ein Künstler*, is meant to empower people to acknowledge and tap their imaginative potential for problem solving. Eating happens to be the singular activity uniting all animals, though cooking skills and tastes vary considerably.

Lemke distinguishes Beuys' art-farms from that era's land art or Earthworks created by artists who either "situate art works in natural surroundings or integrate those surroundings in the making of the art work. Beuys, however, focused public attention on agriculture and the necessity of applying environmental thinking to agrarian food production by highlighting the crucial societal position held by farmers and the importance of their work."³² He was thus one of the first artists to recognise farming's capacity to promote well-being, both in terms of actual garden work (physical exercise, problem-solving, and sense of accomplishment), as well as the role of delicious meals in sustaining conversations among eaters. To emphasise the various ways Beuys practised "the art of farming as an art of living" in Italia, Lemke quotes Lucrezia De Domizio Durini:

Here, Joseph Beuys turned into a farmer, a true man of the country. He looked after his plants, prepared the manure heap, made compost with bio-degradable garbage, tidied the lumber and

pruned the plants...He burnt things that were of no use and then used the ashes to put in his organic compost heap. He picked vegetables and herbs from his vegetable garden in order to prepare his delicious dishes.³³

During Beuys' time, famines, malnutrition, and hunger were severe issues, even greater in magnitude than they are today, thanks to the United Nation's "Millennium Development Goals" for eradicating poverty, which has led the number of people suffering from hunger to be cut in half since 1990. More recently, the UN's World Food Programme implemented FITTEST (Fast Information Technology and Telecommunications Emergency and Support Team) (since 1998) to enable its rapid response to humanitarian emergencies. Section Seven artworks focused on food security primarily arose in the aughties alongside the environmental justice movement, which recognised urban citizens' limited access to affordable, fresh, nutritious food. I make these points to explain why I frame Beuys' farming and cooking forays as catering to individual well-being rather than improving food security.

In the mid-nineties, even before "social practice" became the Beuysian buzz word it is today, I recall hearing about Amsterdam artists being invited to exhibit talents other than art-making. And of course, most of the artists presented food, since artists are often foodies. In this section, artist-organised meals entail the activity of preparing something special, sharing particular dishes, and dining en masse so as to connect and recollect, one with the other. Such activities eschew dining as diversion, eating for entertainment, chowing-down as achievement, feasting for fun, or crunching on health food, in favor of munching to remember why participants ate what they ate, when, where, and with whom.

The actions of growing, preparing, and eating food play an especially important role for artists like Touchstone collaborations who view

food rituals as "threshold spaces for transformative exchange" and an "accessible way to bring an awareness of the relationship between our health and the health of the soil."³⁴ Contemporaneous with 2015 UN International Year of Soils and Bristol's being 2015 European Green Capital, the Centre for Contemporary Art and the Natural World (CCANW) organised two travelling, soil-related exhibitions in 2015. Under Clive Adams' direction, CCANW joined forces with Touchstone collaborations, whose mantra is "soil is our gold," on a series of eight Soil Saturdays held at CREATE Center in Bristol, UK during the months of July and August. As recollected by Touchstone collaborators:

Each of the Soil Saturdays offered a rich variety of opportunities to gather around food, thus bringing the matter of soil into our direct and daily experience, every day and every mouthful. Seasonal brunches, thanksgiving rituals, high teas, botanical cocktails, an allotment banquet, and harvest feasts were all freshly prepared by Soil Sisters [Miche Fabre Lewin, Flora Gathorne-Hardy, and Daphne Lambert] from the bounty of local, organic, and biodynamic harvests grown on the nearby city farms, allotments and community gardens. Every Soil Saturday began by inviting contributors to set intentions for the day by gathering around the Soil Shrine and lighting a candle. . . .The arc of Soil Saturdays provided the fertile ground for pioneering, citizen-led *action* [emphasis mine] around soil. Here, too, food and soil – the matter, the metaphor, and the meta-picture – invited philosophical reflections on the interconnected relationships between ourselves and the environment.³⁵

The notion of Soil Saturday participants setting "intentions for the day by gathering around the *Soil Shrine* and lighting a candle" parallels both EM Fieldstations that invite attendees to charge quartz crystals with their visions for a particular place and 431art installations that invite passersby

to select desired feelings from a range of capabilities taped across water samples.

Furthering Touchstone collaborations' commitment to the relationship between connected communities and healthy soil, they recently embarked upon a novel tact. Miche Fabre Lewin's current art research addresses the implications of millennial-era studies characterising neurons lining the stomach as the "second brain," given its role in making gut decisions, as well as framing emotions and moods that colour one's perspectives, and thus perceptions. Nicknamed the "second brain" in 1998 by neurogastroenterologist **Michael Gershon**, soil advocates hope to convince more scientists that the "first brain" plays "second fiddle" to the stomach, owing to its role in transmitting nutrients, and thus boosting the sustenance underlying the slogan "You are what you eat!" About 90% of the vagus nerve's fibers carry information one way (from the gut), thus informing the brain in the skull of its "state of mind."

According to a recent article in *Scientific American*, "The little brain in our innards, in connection with the big one in our skulls, partly determines our mental state and plays key roles in certain diseases throughout the body."³⁶ More recent research pits the stomach at the heart of well-being, giving soil pride of place, since soil funnels nutrients to whatever plants and animals human beings eat. Long before the circulatory system is stimulated or the nervous system is fired up, the digestive system processes and stores nutrients derived from soil.

Whether *Soil Saturdays* or *Sacred Mayonnaise*, discussed below, Touchstone collaborations aim to cultivate an understanding of soil and well-being as walking "hand-in-hand." When one considers the host of citizens suffering gastrointestinal infections, food grown in healthy soil is no doubt more capable of healing people's bellies, and thus improving their moods and global outlook.









Prior two pages: Teresa Murak, *Materia* (Matter), (2013-2014/2017), Earth, water. Centrum Sztuki Współczesnej Zamek Ujazdowski, Warszawa, PL. Photo Credit: Jean-François Paquay.

Almost forty years after Teresa Murak's mostly hand-dug *Sculpture for the Earth*, professional backhoe operators helped her shape this lozenge-shaped mound, sited alongside a museum.

Teresa Murak, *Sculpture for the Earth*, 1974, Earth, cress, Ubbeboda, SE.

Centre: Teresa Murak, March 2016. En route from Norge.



Healing Rituals

In 1974, Teresa Murak created *Sculpture for the Earth*, for which she spent 30 days digging a large hole (163cm deep (her height) and 4 metre diameter) in the ground in Ubbeboda, SE and sculpting the excavated dirt into a twin mound, whose convex curve mirrored the adjacent concave cavity. She next sowed edible cress atop their curved surfaces. From its onset, this work has been considered a classic of land art, but the fact that her title stresses "for the Earth" rather distinguishes it from works typical of this predominately purposeless genre. When asked during the filming of a 2008 documentary who the **Harrison Studio** consider their clients to be, they instantly replied "Earth." Since Murak's answer would no doubt be identical, her mirroring hemispheres are exemplary of rituals meant to heal Earth. In fact, all of

the scooping, smoothing, and sowing recall body work (massages, facials, pampering with oils and creams, and even mud therapy) more than "earth-work," which typically compels artists to hire "heavy equipment" to permanently reshape landscape.

Adding to Murak's work's notoriety is the fact that only three days after she completed it, "the local authorities ordered the ground leveled with bulldozers due to the negative perception of the sculpture by local residents."³⁷ *Sculpture for the Earth* thus offers a case in point for contemporary artistic practices that backfire, despite being designed to enhance well-being, precisely because unfamiliar artistic practices are neither capable of nor meant simply to "uplift." Fortunately for Murak, her sculpture's erasure was greeted by protests throughout the artistic community, who organised "Exhibition of Sympathy for Teresa



Teresa Murak, *Summer 1987 (15 July–15 August)*, 1987, Earth, sourdough starter, Lillehammer, NO.

In 1987, Teresa Murak spent four weeks in a swamp kneading soil and sourdough starter until a living, breathing landscape arose.

Nearly thirty years later, a steel box filled with soil from that swamp was transported to Warszawa for Murak's career retrospective at Zachęta Narodowa Galeria Sztuki.

Murak" to show solidarity with her loss. Four years later, the Swedish art magazine *Konstnären* called for its reconstruction.

Sculpture for the Earth is not Murak's only disconcerting earthen mound. In 2013, as workers dug a new Warszawa subway tunnel under the Wisła, she requested trucks filled with tunnelled soil to be dumped alongside the southern façade of Centrum Sztuki Współczesnej Zamek Ujazdowski, which she rather matter-of-factly titled *Materia* (Matter) (2013–2014/2017). She accompanied the drivers as they transported 350 tonnes of newly unearthed soil, which was "thrown down" by professional backhoe operators in such a way that its shape mimicked the hole left in the river bed. Running along an east-west axis, this elongated, lozenge-shaped embankment forms the positive space mirroring the tunnel's

negative cavity, much like her 1974 hand-dug hole and hillock. Sculpted by a professional "backhoe operator," *Materia* seems more "for the museum" than "for the Earth."

What's most remarkable is how totally provocative it is to come across a mud pile squatting alongside a museum. Four years later, people were still talking about this unusual sculpture, partly because some critics suspected that she had requested the museum to spray it with herbicides, keeping it more a dirt pile than a knoll, which would indeed be an odd demand coming from this historically, eco-oriented artist, were it true. Fortunately, it is false, though she did ask the museum to occasionally water it.³⁸ After a hard rain, the clayey soil stains the surrounding cobblestones, making it an even more unlikely candidate for a museum sculpture park. Like most living sculptures, it regularly



changed, never stopped fascinating, and its disappearance was as mysterious as its arrival.

Despite the controversies prompted by her public works, they effectively link landscape to her forty-year history of ritual wanderings. As **Joanna Kordjak**, curator of Murak's 2016 survey remarks:

Landscape is Teresa Murak's immediate material for her artistic actions and interventions – on different levels and at different scales: from treading paths in the landscape to sculptures for the earth whose parameters are marked by the human body. Wandering is the main activity that the artist often transforms into a ritual and a mystery play. The range of these wanderings differs: from the local (a walk through the streets of a city) to the almost global (traveling along the north-south axis), Murak marks her presence in many ways, often with spare modest gestures that nevertheless leave permanent traces like beads scattered on the beach, fingerprints, or footprints in the sand.³⁹

Given the significance of ritual, presence, and mark-making to Murak's oeuvre, I imagine that she hand-dug her first mound to heal the Earth and ordered the elongated pile's construction (some forty years later) to heal the museum, or perhaps the artworld itself. Clay has been used for medicinal purposes since prehistoric times, so it doesn't seem entirely crazy to believe that her lozenge-shaped dirt pile is rather a giant pastille, or perhaps a curative clay salve, capable of healing ills, just as Cleopatra famously applied clay to preserve her complexion. According to Wikipedia, the first recorded use of medicinal clay dates to around 2500BC, in Mesopotamia, and Egypt's pharaohs used clay as an anti-inflammatory and antiseptic.⁴⁰ Of course, no one was supposed to climb, let alone touch *Materia*. Even if Murak doesn't really expect it to heal anyone, its over-all sensibility is pretty heavy (we were compelled to return each day to look at it). And if healing the artworld really only requires

recruiting ever more curious art lovers, keen to experience and talk about unusual artworks, then this artwork achieved its goal over and over.

Affirming my hunch that Murak's healing rituals have intentional properties and that her earth actions parallel those ordinarily performed on human bodies, former director of the Lillehammer Kunstmuseum **Per Bj. Boym** describes her works with cress, earth, textile, etc. as a kind of experiment, "a system of actions (*gestes*) governed by a rule and submitted to conditions independent of these actions....There is something in the actual situation that will disclose the necessity for the artist of trying out just this method." He continues,

Teresa Murak's method focuses on the body as a whole, which is active in creating and presenting. And the whole body is working with – or being worked upon – mostly organic material or earth matter: earth: this part of a geological process being a mixture of organic material and minerals. Why is this method necessary?⁴¹

Following **Giorgio Agamben**, Boym observes that liturgical actions actually grant the performance its effectiveness:

The liturgy is, in truth, not very mysterious at all, to the point that one can say that, on the contrary it coincides with perhaps the most radical attempt to think a praxis that would be absolutely and wholly effective. The mystery of the liturgy is, in this sense, the mystery of effectiveness...It is more effective than any ordinary human action because it acts *ex opere operato*, independently of the qualities of the subject who officiates it.⁴²

What's more, some thirty years after Murak performed this mysterious leaven liturgy in a swamp in the woods at the source of a stream that flows into Norge's largest lake; Mjøsa is no longer terribly polluted, thanks to the establishment of

new restrictions, products, and treatment methods. Boym notes how Murak's action in the woods coincided with people's changed attitudes regarding their environment, which has had a positive effect. While one cannot prove that Murak's *leaven* performance forced this changed attitude, her action no doubt sparked a greater consciousness, which made change possible.

Seeking to make people more attentive to the link between a basic sandwich condiment and life, Miche Fabre Lewin conceived *Sacred Mayonnaise* on Southwark Bridge in London, UK as part of "Made in Britain, Feast" in 2010. This meditation in the art of making mayonnaise by hand was conducted on a specially-designed egg-shaped table in rhythm with the high- and low-tide of the Thames River flowing beneath the 150 participants. A coop housing organically-raised chickens was positioned five paces from the ovoid table, demonstrating the provenance of the eggs to the audience and food-citizens engaged in communal action.

What Touchstone collaborations consider exemplary of healing parallels "doing nothing" akin to Section Three artists or restoration, conservation, preservation, or reclamation in the hands of Section Six artists. In 2014, Touchstone collaborations were invited to design the gardens for Maggie's Oxford Centre, a charity housed in a building modeled after a tree-house that offers cancer patients and family members professional support. The centre sits along the eastern edge of the "Boundary Brook Wildlife Corridor" in Oxford, UK. This wildlife corridor was created by linking green space adjacent the Boundary Brook to Warneford Meadow on its west, Maggie's Oxford on its east and Boundary Brook Nature Park further east. Being totally in tune with its environment, it's no wonder that guests tend to describe Maggie's Oxford as a sanctuary, yet another "mindful place."

To arrive at their design for the grounds beneath the elevated structure, Touchstone



Oikos

Top: EM, Vegetarian Lunch, "Fieldstation I: Introduction, Recruitment, and Healing Department," 2016, LUCA- Narafi Campus, Bruxelles/Brussel, BE.

Bottom: Touchstone collaborations, *Sacred Mayonnaise*, 2010, "Made in Britain, Feast," Southwark Bridge, London, UK.

Ever since Beuys' 1979 "cooking show," shared meals have been considered an effective way to enhance societal well-being.

EM, *Amorgos map and Crystal Portraits*, "Fieldstation I- Carus," 2016, Amorgos, GR.

Right: EM, *Locality Grid 1.0*, "Fieldstation III: Terra (Gaiigraphy)," 2015, Warszawa, PL.

Inspired by Warszawa's site-significant power portals and energy zones, EM buried 150 quartz crystals along *Locality Grid 1.0*'s four 6.37km legs.



collaborations applied the human body's strategy for self-healing, whereby support and attention go a long way towards healing what ails the body. As they say, "Over time, plants, mosses and lichens will establish on the fringes of this undercroft landscape –an expression of nature's capacity for change and lively transformation."

[Their] approach has been to listen with the place to allow it to yield its own solutions. This process has engaged with local community groups who have safeguarded the threatened green spaces adjacent to the Boundary Brook ... The ecological planting has evolved through respecting and integrating the woodland and water-edge plants with the innovative tree house building by Wilkinson Eyre Architects. Tree and shrub planting and wildflower seeding will

all strengthen existing communities of plants and offer an evolving habitat for local wildlife.⁴³

In keeping with Touchstone collaboration's focus on the ongoing process of healing, as opposed to more immediate, restoration goals, they reiterate that their approach to landscape "respects the spirit, ecology, and culture of a place and celebrates the role of plants in our lives as habitats, food, medicines, and materials."⁴⁴ A stone's throw from Maggie's Oxford, Flora Gathorne-Hardy of Touchstone collaborations installed numerous boxes of medicinal herbs, including salvias, lavenders and various Echinacea, to create a roof garden atop Churchill Hospital's Oncology Wing. Resilient edible and medicinal herbs that thrive in various environments were planted to create healing gardens for the Hill Farm at Earth

Trust, with whom Touchstone collaborations have been involved for over eight years. At Doddington Hall, they enhanced a new farmyard kitchen garden by adding roses, sages, and artichokes, amidst traditional "apothecary herbs" such as hyssop and yarrow.⁴⁵

Since 2014, EM have orchestrated numerous ritual healings with the public, from shamanic walks to cocooning with energy-generating crystals, envisioning hot tub soaks, Himalyan bowl meditations, and intentional yoga. Like many artists discussed in this section, they emphasise doing actions charged with intentions and encourage self-reflection. During EM's public conferences, they regularly organise "sensory emancipation experiments" and engage audience members with questions like "What is to be healed?" and "What is absent?" in expectation that whatever responses are elicited tend to inspire respondents to take action. In 2015, Warszawa's A-I-R Laboratory (adjacent the Centrum Sztuki Współczesnej Zamek Ujazdowski) invited EM for a residency to develop "Fieldstations III (Terra)" and "VI (I-Carus)." After studying the city's power spots and strong energy fields, they devised a plan to relieve Warszawa of negative energy acquired during its occupation by Prussian, French, Russian, and Nazi forces, which had spurred routine "uprisings" over the centuries, beginning in 1794 AD. For "Fieldstation III," they drew a 9km diametre circle intersecting a square at the monument to EM alumni Nicolas Copernicus positioned in front of Polskiej Akademii Nauk. They next buried 150 tachyon-charged quartz crystals along each 6.37km leg of the square. With the city's traumatic memories still weighing heavily on its citizens, EM opted to "go into the Earth," thus initiating their ongoing practice of "inearthings," as compared to Murak's "unearthings" (digging up).

Till Krause, Director of Hamburg's **Galerie für Landschaftskunst**, initiated the project www.illegalevecht.org to encourage people to connect



EM, *Taking the Pulse of the Vecht River*, www.illegalevecht.org, 2015, Darfeld, DE.

Invited to take part in Galerie für Landschaftskunst's ongoing project "www.illegalevecht.org," Filip Van Dingenen and I've Van Bostraeten carried out several actions to heal the river's memory.

with the 167 km-long Vecht (die Vechte auf Deutsch), whose source is near Darfeld, DE and flows toward its mouth near Zwolle, NL where it joins the Zwarde Water at Genne (40km south of Weerribben-Wieden National Park in the province of Overijssel). Open to artists, citizens, families, individuals, municipalities, and companies, this Galerie has been prospecting doable projects that fit within their modest €39,260.08 budget for nearly a decade. Their ongoing Call for Proposal has spurred several actions, including a 2009 recommendation for a "float" from Darfeld to Zwolle, a 2010 suggestion that a dune be unleashed, a 2012 proposal to work with Emlichheim youth to make five sets of lounge furniture to be sited along the Vecht, a 2014 alchemical experiment, a 2015 enhancement of the river's well-being carried out by EM, and a 2016 scheme to widen the round-about at Welbergen.

To heal the Vecht's water memory, EM dropped tachyon-charged quartz crystals in points at the river's mouth and source. They used samples collected from the Vecht's source to create a Bach Elixir, which they plan to serve people inhabiting land surrounding the mouth of the Vecht. They collected six additional pairs of river samples , two of which they "vitalised with a vortex, two were vitalised with a tachyon field (2 hours), and two more were vitalised with intentions. Then we looked at all the pairs by looking through a microscope at the dry remains. "⁴⁶ Having set up a laboratory along the riverbank, they led a youth workshop that highlighted the pioneering research of EM alumni Viktor Schauberger. EM's charging water samples with either positive or negative intentions and then examining the dry residues under a microscope to glimpse the "architecture" of their intentions recalls Masaru Emoto's research discussed briefly above. EM collected so much data that they hope to one day work with a school to analyse the rest. Thus far, the most visible result of Galerie für Landschaftskunst's CFP remains the placement of

scores of www.illegalevecht.org stickers in spots adjacent the flowing river.

I imagine Krause titling his project "Illegale Vecht" to distinguish this project's ecological, dematerialised artistic tendencies from those of yesteryear artists who dropped "plop art" along the Kunstwegen (1971-2000), engendering a procession of high-dollar sculptures along the Vecht by artists like **Richard Deacon**, Olafur Eliasson, **Luciano Fabro**, **Hamish Fulton**, **Dan Graham**, **Jenny Holzer**, **Ilya & Emilia Kabakov**, **Tobias Rehberger**, **Nils Udo** and scores more. Around 60 such works occupy spots along a 132 km stretch of the Vecht from Nordhorn, DE to Zwolle, NL. The one "legal" work that also fits the "illegal" variant is "walking artist" Hamish Fulton's *Die Vechte entlang gehen* (Walking Besides the Vecht River) (1997), an artwork specifically created to link Nederland's **Kunstlijn** and Deutschland's **Skulpturenweg** Nordhorn to the otherwise borderless Kunstwegen.

Creating Cosmologies

Given that most artists claim to be areligious, irreligious, or nonreligious, if not Atheist; it may (or may not) seem odd that several artists have felt inspired to propose creation myths. I add "or may not" to include those who self-identify as "not religious" simply because they don't agree with or accept the kinds of stories world religions offer and defend. So *why not* invent your own? Two good reasons immediately spring to mind regarding why one *shouldn't be so bold* as to publicise one's personal cosmology. One reason to ignore this hot-button topic is that most people will automatically assume that it's a joke; concluding, "The artist must be teasing." And if this is the takeaway message, then the joke is on those artists who fail to inspire spectators to think differently about life's fragile origins, the planet all beings call home, and the unknown beings inhabiting galaxies far beyond the Milky Way. Even if one's proposed cosmology is not experienced as wry humour, spectators might deem the artist

either "mad" for proposing some far-flung alternative or "insulting" for overriding their accepted cosmology, endorsed for millennia by one of five religions, to which 83% of the world's population claim membership.

But then again, contemporary art exhibitions typically engender "safe-havens," venues where it has been shown that visitors expect to: encounter crazy ideas, explore controversial topics, and have one's imagination goaded beyond one's wildest dreams. So *why not* propose a novel cosmology? To date, several artists/teams have explored the idea of alternative creation myths and have exhibited related artworks. EM's *Fieldstation VIII* is actually dedicated to Cosmology, so they will eventually have to either propose a new cosmology or defend an existing one. To date, no artist-initiated cosmology poses a worry or threatens those currently endorsed by world religions, so they are more thought-experiments than belief-shattering. EM are currently researching the work of Religious Studies scholar **Kocku von Stuckrad**, whose 2005 book *Western Esotericism: A Brief History of Secret Knowledge* connects Arne Næss' deep ecology to scientists, whose research is often considered esoteric.⁴⁷ For von Stuckrad, "Deep ecology refers to recent ideas in biology, which regard the interdependence of ecosystems as the subject of investigation," a position that intersects environmental philosopher Paul W. Taylor's biocentric view, which considers "the entire order of the biosphere a complex but unified network of mutually linked organisms, objects, and events."⁴⁸

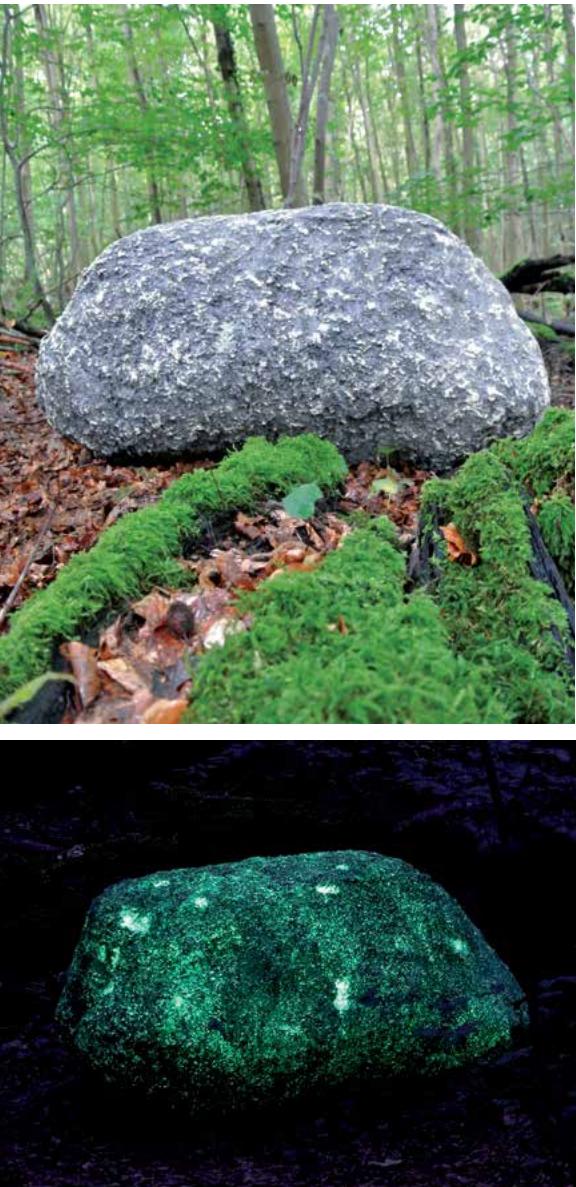
At this juncture, I imagine the reader starting to question the link between inventive cosmologies and ameliorative art practices. As it turns out, some psychologists have discovered that religious people tend to be "happier" than non-religious people, though they attribute this to the sense of community ("social connectedness") felt by religious practitioners, rather than core beliefs.⁴⁹ I would argue, however, that what psychologists



Kinga Kielczyńska and Melanie Bonajo, *Modern Life of the Soul*, 2007, Puszcza Białowieska, PL.

Eager to bring attention to primeval forests as sacred, special places, several artists' cosmologies attribute the origin of life to the forest.





431art, *Moss Visitors from Outer Space*, 2014, Internationales Waldkunst Zentrum, Darmstadt, DE.

431art's cosmology credits alien moss with having jumpstarted life on Earth, even though moss is actually a relative newcomer, as life on Earth goes. Forests are thus invaluable as moss habitat.

describe as happiness is actually well-being, and who better to elevate participants' sense of community than artists? One thus imagines artist-invented cosmologies increasing spectators' sense of connectedness, just as world religions do. Those who relate to an artist's cosmological position connect on that very point, whereas those who dismiss it connect on that point. But I suspect there are way more benefits and positive outcomes than mere connectedness.

While creation myths are hardly "activist" in intent, they typically reflect their originators' values, prompting spectators to question, discover, and evaluate their own values whenever they encounter artists' far-flung fictional accounts. Can it be coincidental that the creation myths discussed in this section all suggest that human beings evolved from plants, rather than four-legged animals, such as apes, which **Thomas Huxley** first asserted over 150 years ago in *Evidence as to Man's Place in Nature* (1863). For *Modern Life of the Soul* (2007), Kinga Kiełczyńska and **Melanie Bonajo** lived in Puszcza Białowieska, moving each day from forest home to forest home, dressed like forest nymphs, attempting to become one with the forest. Their experience of spending several weeks in the forest prompted the 2008 manifesto *Modern Life of the Soul*, which includes these points:

Human beings derive directly from plants, not animals, and people are a plague. We believe in the electro-magnetic mind and psychological forces of plants, and thus we believe that plants can read your mind. We oppose the over-production of consumed goods, and of ideas, because it draws the consciousness to the fields of the unnecessary. Preoccupation with sensory experience has focused attention on effects instead of causes. This has led scientific investigations down a blind alley where everything grows infinitely.

For *Moss Visitors from Outer Space* (2014), 431art constructed three concrete cube seats from which to observe a gorgeous glow-in-the-dark meteorite, awaiting discovery in the Bessunger Wald adjacent the Volkssternwarte Darmstadt. With this work, 431art assert that "all life arises from moss brought to life by a meteorite." Just as Hindus believe that cows are sacred, because they might one day be reincarnated as human beings, 431art suggests that moss is sacred, since "all life," not only that of human beings, arose from moss. This view underscores their focus on "plants' rights," as discussed in Section Two. **Christopher Wilhelm Aigner** adds, "As the natural habitat of moss, the forest is therefore the provenance of everything alive and, with that, can be considered the original social environment. This evolutionary hypothesis is so daring that it could even be called over-daring, thus immediately bringing the viewer to his or her senses." Aigner considers their use of "seriousness, humour, and irony," which induces emotional reflection to be one of art's particular attributes. Keen to correct 431art's far-flung cosmology, Aigner adds that moss itself evolved on Earth only 450 million years ago from archaea and algae, which strived for 3.5 billion years "for a more oxygenated existence."⁵⁰

Sustaining the Everyday

In April 2016, I visited the exhibition "Green Revolution" at the Museum of Art and History (MoAH) in Lancaster (California), US. Although some of the artworks metaphorically addressed sustainable living and renewable resources, such as wind, solar, and water, none were ecoventions. On the walls, visitors encountered foreboding facts such as: "It takes 1,321 gallons of water to produce 500 sheets of paper," "Seven million trees are cut down every year just to make disposable napkins," "One pound of chocolate requires 3,170 gallons of water to produce," and "One apple requires 18 gallons of water to grow." Of course, water is a hot topic

in drought-ridden California, so it's important to be reminded that even eating healthily can have repercussions, though of course they nowhere mention that water isn't entirely wasted, as apple trees transpire. What really caught me off guard was the "exhibition within the exhibition" regarding the "Land Art Generator Initiative (LAGI)," a biannual platform for artists, architects, and landscape architects begun in 2010. In 2010, LAGI focused on Dubai/Abu Dhabi, in 2012 NYC's Freshkills Park, in 2014 København, and in 2016 Santa Monica (exhibited at MoAH).

According to the wall panel, "The main goal of LAGI is to design and construct public art installations that have the added benefit of utility-scale renewable energy generation. Each sculpture will continuously distribute clean energy with the electrical grid, with the result that thousands of homes will be powered by art." At first, I felt ecstatic, since it seemed like my dream for ecoventions being considered a societal norm, rather than counter-intuitive strategies that require a lot of people power to gain funding, public trust, and stakeholders, had finally come true.

After studying several of the dozen or so design proposals, I realised that designs promoted by LAGI for Santa Monica were hugely resource intensive, mostly overdesigned with large amounts of shiny metals that would require mining, transport, installation, and routine maintenance. Have we not learned anything from wind power whose metal-intensive turbines require replacement every twenty years? Some say the routine turnover of turbines, their higher replacement costs, and fewer tax incentives risk to price wind energy out of the playing field.

Strangely, none of LAGI's designs employ materials sustainably, as do designs by N55 (see Section Five), who sparingly use nonrenewable metals to make habitable structures that optimise material strength such as their SPACEPLATE GREENHOUSE (2011) (see Section Seven). Given



the growing popularity of green infrastructure (nature-based design), it's truly surprising that none of the LAGI designs integrate nature or renewables like trees and plants into their designs, especially since California is awash in biomass (from agricultural to animal waste). Several designs claim either to harness waves or to clean water, but one wonders from looking at these designs whether a prototype could be built to perform an alpha test on these otherwise "pie-in-the-sky" pipedreams.

When compared to "utility-scale renewable energy generators," whether submarine-scale buoys plated with photo-voltaic cells or tidal turbines that harness the sun to distill fresh water from the ocean, I can't help but wonder whether **AnneMarie Maes'** *DIY Honey Batteries* (2014) that use honey and lemon to produce a direct current aren't a better use of home-ready resources. Maybe our planet's energy problem is actually caused by centralised, giant systems that bankers and investors "push," rather than micro-solutions like biomass and micro-hydro that power lights, machines, and electronics more locally. No doubt, there will never be enough bees and honey to power the energy needs of 9 billion people worldwide, but a partial push to employ honey batteries at the breakfast table or in coffee shops would at least reiterate the honey bee's importance for mankind's survival. Maes' harnessing local energy recalls EM's quartz-crystal piezo electric battery (2016), Olafur Eliasson and **Frederick Ottesen's** *Little Sun* (2012), Joseph Beuys' *Capri Battery* (1985) made with a lemon, and **Victor Grippo's** potato-batteries (1972). With so many vegetables eliciting energy to power batteries, there must be a way to rethink industrial designers' shiny metal obsessions.

Despite the recent push for locally-sourced goods, the fashion industry remains one of the most egregious abusers of foreign manufacturing and shipping of goods, given the worldwide expansion of luxury brands, as well as the

building of ever more stores, etc. Every aspect of the fashion world is capital intensive and resource exploitative. One Belgian designer, **Katrien Van Hecke**, not only hand-dyes all of her silk swaths of fabric using natural dyes made from numerous substances, such as the spice turmeric, but she is the only Belgian designer who still fabricates her line "locally." Van Hecke remarks, "Every garment can be seen as an individual object. This results in imperfections and variations, which I consider to be distinctive characteristics." Fabric colours "came from herbs and spices fixed with chemicals into the fiber of the fabric, and overlaid with prints that are based on airbrush and salt reactions. The selection for AW13 [was] Saint-John's wort, clove, eucalyptus, alma, curry. [She also made a] mono-chrome jacquard coat, made of yarn recycled from old woolen garments."⁵¹ Her creating artisanal fabrics from household materials parallels that of ceramists like Jean-François Paquay (Section Four), who transform their garden scraps (using peonies, ivy, wood, and straw) into ash glazes. In addition to developing sustainable fashion, each of her collections draws heavily from art history. Consider SS16, which found inspiration in Victorian Era Pre-Raphaelite painting, inspiring her to sculpt flowing garments from up to 6 metres of fabrics.

Since showing her first collection during Paris Fashion Week SS11 (October 2010), Van Hecke's work has been selected for several editions of Estethica (AW13, SS14, AW14), the British Fashion Council's annual "ethical fashion showcase," which launched in 2006 and was folded into the regular "London Fashion Week" calendar by 2014. With this move, all relevant designers/brands showing at the LFW Designer Showroom at Somerset House could sport the "Estethica" tag to denote their sustainable provenance. In 2015, BFC spun off Estethica, which had already supported over 100 designers expressly committed to either: fair trade and ethical practice in the production process, the inclusion of organic

fibres, or the use of up-cycled and recycled fabrics and materials. As already indicated, Van Hecke's artisanal garments typically reflect her commitment to *all three aspects*.

The new Estethica tag aims to recognise that fashion and sustainable fashion can be one and the same thing. We are proud to acknowledge that so many

talented designers are committed to transparency, sustainability, and social responsibility.⁵²

Even the online fashion brand **yoox.com** has turned ecofriendly with its eco-friendly initiative **yooxygen.com** (since 2009), whose mantra is "Dress Responsibly." 

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Two Essays

- Peninsula Europe / Harrison Studio
- Reading to Reflect on Art...and Beyond Art /
Lucrezia De Domizio Durini



Peninsula Europe

Are the conditions in place yet
that require a bold experiment
at unprecedented scale and cost
and with unpredictable outcomes?

For instance, of 2.3 million square kilometres of
farmland
and food production
20% probably, possibly much more
will yield to drought

Of 650,000 square kilometres of
mostly mono-cultural forest
80-90% will yield to fire, disease, flood and drought
in the High Ground
with the predicted 5.5 degree C. temperature rise

Of 340,000 square kilometres of grassland
it too mostly monoculture
about 30% will yield to drought

Does the Russian plain
become the future bread basket
of the European Peninsula?

As 450 million people become 500 million
and waters rise
forcing the upward movement of people
and as food production drops
and markets are harshly stressed
if business continues as usual
the best likely case is food rationing,
the worst case in many places
is the collapse of civil society

It is better, much better
that resources be diverted in the trillions of euros
to assist the soils of the subcontinent
into becoming a vast sponge mosaic
encompassing the high grounds
where the rivers begin
and continue their paths from high grounds



to low grounds to ocean's edge

Understanding that 2.3 million square kilometres originally of forest and grassland/savannah ecosystems were terraformed into 2.3 million square kilometres of farmland

Understanding the value of this vast human labor does not account for the loss of topsoil the loss of seed stock
The loss of forest and ecosystems and species
Above all
The loss of earth that holds waters

From the perspective of the laws of the conservation of energy all of the losses so noted and those yet to be noted represent energies now not available in the peninsula life support system

We see human indifference operating in the exploitation of our life support systems, ignoring the second law of thermodynamics which says that energies transformed from one form to another incur a net loss
From the perspective of the laws of the conservation of energy the whole landmass of the European Peninsula has experienced a dramatic rise in systems entropy throughout human industry and given that warming will take place even if dramatic carbon reduction is achieved entropy will likely continue to increase and the system's ability to support life will very likely decrease

The only available response that we see

is to collaborate with life support systems enabling the peninsula-wide reduction of entropy
It is the only "whole system" response that we can imagine as a counter to the Force Majeure

How could one begin?

By making subtle changes on the terrain that would re-terraform the majority of arable land on the peninsula of Europe back to the water retention landscape it once was so that all waters remain on the same lands that they fell upon
Simultaneously recharging aquifers lowering the topsoils' entropy

What would live, grow and might even thrive in the dramatically changed landscapes that a warming planet will require in particular on a warming peninsula with some places wetter and some places drier and temperatures rising following the predictions?

The question then arises
That given the loss of seed stock and the systems shock of rapid heat rise and the presently degenerated properties of topsoil how can species in great varieties reform ecological niches and habitat for themselves and others in this new landscape mosaic in parallel to and in similar scale to the re-energizing of 2.3 million square kilometres of topsoil across the peninsula?

We suggest a second bold experiment be undertaken with the intention to assist the migration of species presently under stress from rapid temperature changes



changes in soil and earth and reduction in seed stock

We propose paleobotanical research be conducted to create a peninsula wide research library particularly focused on the Eemian approximately 120 years ago where climate was very similar to that which is predicted in the next 100 years or less

We propose a second species research library be established that looks at species and ecosystems that presently inhabit the planet and that are close to the climate predicted over the next 100 years or less

We propose that a vast research effort be put in place charged with doing the investigation and experimentation that would be the basis for assisting the migration of species groupings that would form the basis for establishing adaptive ecosystems that if successful would self complicate in this new climate that seems to be our future

We see two learning curves that need to take place The first one is developing the methodology for collaborating with natural systems well-being The second is reinventing food production systems in which the harvest preserves the system and the system preserves the topsoil

Such would be a new beginning for an adaptation to a very different world than the one that we now inhabit

The greatest difficulty in this new beginning seems not so much the research required or the science or the experimental design

where concept and design can be tested in small patches

Rather it is overcoming the inertial properties embedded in three major cultural forces that now define most human behavior toward our life-support systems They are Democracy Capitalism Technocracy And some religions

For this experimentation to succeed All three must yield agency enforceable by law to the lives that are not yet themselves

Newton and Helen Harrison
Santa Cruz, US
May 2017



Reading to Reflect on Art...and Beyond Art

We are living in a period of history when the virus of power has brought into being an army of men bent on committing a genocide of myths, fantasies, and dreams, though their primary aim is to transform freedom into a sort of democratic authority, where the obligation of corruption arises from the vanity of thought, only to extend in rapid fashion to good taste, good manners, and every last aspect of our day-to-day lives, despotically invading Art and the system of Art as well.

Institutions and governments throughout the world bear responsibility for having contributed, with their obsolete modes of behaviour based on compromise, to the loss of Ethics, Culture, the dignity of Man and a respect for Mother Nature. Pressure groups have gained the upper hand, with their material interests winning over their aspirations and yearnings. Transparency, history, creativity and values have been replaced by the machinations of party politics and efforts to ape the images of the mass media, leaving the day-to-day life of mankind in thrall to political strategies and capitalist power.

Today we find ourselves in a state of profound crisis worldwide. It is a crisis with multiple dimensions whose countless manifestations touch every aspect of our lives: our physical, mental and spiritual health, as well as our very means of sustenance. While it is food that nourishes the body, it is communication that fuels social thought, the quality of the environment and of human relations, not to mention economics, politics, technology and culture. *This crisis has laid siege to the intellect, morals and the spirit.* It poses an authentic threat to the realm of dialectical exchange and good taste. As such, the current crisis is not merely a time of troubles for individuals, governments and institutions, but a period of transition on a planetary dimension. As individuals, as a society, as a civilization, we are reaching a *turning point*.

There is no way to prevent cultural transformations of this extent and depth. Indeed, far



from opposing them; we should welcome such upheavals as the sole possibility for avoiding a state of anguish, collapse and mummification.

In order to be ready for the massive transition to which we're about to be subjected, we need a thoroughgoing review of the fundamental assumptions and principles of our culture. We must cast aside any conceptual values that have outlived their usefulness and acknowledge anew certain values that were abandoned in earlier epochs of our cultural history.

We must never forget that *there is only one Earth that nourishes all of the planet's living beings, and this is the shared home that we inhabit, the place where we live and die.*

We must arrive at a clear, uncompromising vision of both ourselves and the values of man.

We must learn once again to analyse the conduct of others as the sole truth of ourselves. We must draw up a *life design* for our future, a project.

During this phase of cultural reconsideration and rebirth, it will be important to limit the distress, the discord and the conflict that typically accompany periods of massive social change to an absolute minimum, so as to ensure that the transition be as painless as possible. A key consideration for achieving this is to avoid limiting efforts to launch attacks on social groups, institutions or leading figures who are compromised by various strategies, so as to demonstrate how their attitudes and conduct reflect a system of values that underlies our entire culture and that, at present, is obsolete.

Steps must be taken to acknowledge and to do as much as possible to render public the fact that our current social changes are signs of a much more extensive inevitable cultural transformation. Only then will we be capable of arriving at a similar cultural watershed in a peaceful fashion.

The Artist today plays a key role in the social transformation currently underway.

It is a responsibility that confirms the essential need for the artist. A power that changes, above all else our way of living, thinking and seeing; is a transformation that lends drive and vigour to a process of radical learning without end.

The artist's intellectual zone makes a major contribution to the passing and evolution of *Time*, enlightening confused and befuddled minds by revealing the secret of Art and pointing to the road that wayward wanderers should take. There are men who do not believe in the therapeutic value of Art.

The Artist of today must place himself at the service of society, so as to improve the life of man.

I believe that every man has a natural tendency towards full development. Referred to as the "tendency of on-going renewal," it is the foundation of all living organisms and represents the cornerstone of an approach focused on the individual. This is where efforts should be concentrated, in order to gain an understanding of what truly motivates man's actions.

In short, we are living through a period of great confusion regarding all facets and permutations of human values. This debilitating confusion and miasma of materialistic sentiments all point in the direction of a single path that leads to a sole concept: the way of Profit and Power. That is to say, a dead end.

Modern man is mutilated, incomplete, an enemy unto himself. Marx calls him "alienated". Freud considers him "repressed." The man of today has lost the harmony of bygone days that linked his soul to *the love that moves the Sun and the other stars...* (Dante). We might very well ask ourselves what is the root cause of this ethical turbulence that affects even the most mundane aspects of our day-to-day lives?

I believe, indeed, I am absolutely convinced, that modern man has banished from his life all *Respect for Time*. St. Francis of Sales, during a sermon to the faithful, spoke of the haste to which man unconsciously falls victim, pointing out that, *The more we run, the more we muddy ourselves*. And there is nothing more precious than "Time." For it is time that leads us to discover our identity, revealing to us the truth of who we really are, because *Time is man's truth*. Nothing else that belongs to us as unequivocally as *Time*. *Time is our only true wealth*.

And yet, in our society of rapid consumption, modern man feels he is wasting his time whenever he is not doing things in a hurry, only then, with the time he has gained... he finds nothing better to do than to kill it... Most people run themselves ragged, they chase, they search... they stumble wildly in the dark... they shred every sentiment, every last value... and... they believe the essence of time is its passing. This may be how they view time, but they have the wrong idea, because if time is considered only in terms of its passing, then an understanding of how it resides within each of us, in the essential element that Hegel refers to as the *Spirit of Time*, can never be reached.

It is this *Spirit* that sets the common theme for religion (*re-ligo*, or "tying together"), for political association, for social ethics, for the legal system, for traditions, but also for science, for technological capabilities and... to an even greater extent, for Art, as the path that leads man towards the exalted strengths that aid the man-artist in reinforcing his creative energies, resisting the pressures of the outside world and placing his inner life on the spiritual plane.

Art is an alternative, free form of human existence, the site of essential considerations and absolute tensions, where the artist, rather than merely reproducing the visible, renders it

visible through the various idioms of his or her own soul.

In his logic, Aristotle initiated an analysis of the forms of language, as well as the formal structure of conclusions and deductions, irrespective of their content. In this way he reached a level of abstraction and precision unknown up to that time in Greek philosophy, making an immense contribution to clarifying and establishing a sense of order in our modes of thinking. For all intents and purposes, he created the underpinnings of scientific language. Human beings have a general capacity for language that presides over their various modes of expression and can be referred to as: the ability to establish a tie between an idea and a sign, whether it be a sound, a gesture, a figure or a design.

Language is not for informing, but for evoking (J. Lacan). It follows that in manifesting his creative expressions, the artist chooses a personal idiom capable of giving meaning to the essential concept of his or her artistic exploration. *Thought is the fundamental language* of human beings, this being all the more true for artists, who in recognising the power of thought have the privilege to use both archetypal materials and new languages to create their works. It is in the course of this process that his/her exploration appears as a magical message that, while passing through the infinite zones of man's moral heritage, traces the peaks of the majestic landscape of the cultural universe. In this way, the true artist together with his/her works creates a language all his/her own, seeing that he/she always considers the "word" to be his/her tool of thought.

Word and deed outline the logical image of events.

But what is the meaning of *spirituality* in today's society? What design can the artist of the 21st century draw in a world dominated by business and the ephemeral side of things? Where the gluttony



of images, in tearing memory to shreds, demolishes intelligence?

Many modern artists endowed with unquestioned talent currently live in a sort of existential fog, having fallen into the death-dealing trap of their own egotistical greed, until they are no longer able to establish the ultimate goals of life, reason and knowledge.

I am fond of citing an instructive metaphor of Kafka's: *The old man said: "I don't understand how a young person can take off on a horseback for the next village, without worrying that the time in a normal life, which passes by so quickly, will not be enough to make the trip".*

The Art of the 21st century inevitably brings the artist face to face with two compelling needs: First and foremost, a sense of vibrant renewal of the spirit: *I shall give you a new heart, I shall instill a new spirit in you and, having removed the heart of stone from your body, I shall give you one of flesh* (St. Augustine). To paraphrase these words, we can state that this is the sole mission to be pursued by the artist in the course of this millennium.

We are sick and tired of seeing artists rehash what has already been seen on television, or what takes place out on the street, in advertising or in fashion magazines, or who shove aside historic figure and events, certifying their diseased art with approval of critics who, having sold out to the political system or the capitalist powers that be, reign supreme. We are truly disgusted with the false innovations, and I can only agree with Benjamin when he says, "*The great creators have always included unbending souls whose first step was to clear away all that had come before them ...*"

In the last few decades, a number of artists have deliberately chosen *Silence*, seeing that silence is simply another *logos*. By interweaving silence and words, they work towards creating a healthy, beneficial language, both ongoing and irrefutable, having been drawn from the depths

of time and space, where it lives and coexists with their great secret: *the acoustics of the soul*.

The second critical need regards the *give and take between artists of different nations, different generations and paths of exploration, bonded together by a strong sense of respect for the fundamental principles of Man and Mother Nature. They live the unrestrained creative energy of an incisive, superlative effort. They possess healthy, silent thoughts that serve as vehicles for a message of social, cultural and economic rebirth.*

Starting from this analysis, we can reflect on the *Present Time* and the cultural heritage left us by Joseph Beuys, one of the most emblematic and significant figures in the history of world art from the postwar years onward. *A Man and an Artist, he invented no method. He simply dedicated his entire life with every means at his disposal to improve the existing methods of society.*

His two key principles centred around the *Free Creative Energy* that all men on earth possess and the supportive, independent collaboration established among diverse social, political and cultural elements: his famous *Living Sculpture*. Joseph Beuys was the forerunner of a mode of thinking that perceived social needs in advance, framed in terms of the demands and circumstances of the Present Time. He was the active precursor ready to address all the economic, environmental, humanitarian, political, ecological and cultural problems that, today that more than ever plague every man who inhabits planet earth.

Thanks to Beuys, we shall oneday understand that our present is dramatic because Man attempts to deal with Nature through the same misguided approach he takes to cities, islands, the countryside, the entire planet... to his brother as well

The artist must set himself apart from the accused trap of consumerism, so as to be able to reflect on *Time*, on its perception, on the varying

spiritual depths of Man and Nature, utilising on the one hand the force of the mind's spatial reach, meaning the aptitude that embodies the intuitive potential of man, together with the course of truth, in the sense of the truth that transcends systems, so as to live and love reality.

Man's Behaviour is the Sole Communication of the Truth (LDD)

Lucrezia De Domizio Durini

Paris, FR and Bolognano, IT 2016



Top Right: Lucrezia De Domizio Durini and Joseph Beuys planting an Italian Oak, 1984, Bolognano, IT.
Below: Buby Durini and Joseph Beuys, Crossing the Mare Adriatico, December 1977

Both photos: Buby Durini dell'Archivio storico De Domizio Durini.



Chronology of Ecological Projects in Europe

29BC

Virgil publishes *The Georgics*, a 4-volume poem concerning agriculture (georgika is Greek for agricultural things).

1224

St. Francis of Assisi writes *Il Cantico delle Creature di San Francesco* ("Canticle of Creatures"). Canonised in 1228, he has since been associated with the care of animals and environmental patronage, prompting the current pope to adopt the name Pope Francis.

Chronology of Eco-Art Related European Exhibitions

Chronologies

1957

'58

1957

"Natuur en Kunst," Stedelijk Museum, Amsterdam, NL.

Chronologies



1959

1959

„Dalla natura all'arte,” Centro Internazionale delle Arti e del Costume, Palazzo Grassi, Venezia, IT.
Travels as “Van Natuur tot Kunst” to Stedelijk Museum, Amsterdam, NL in 1960. (group show includes Roberto Crippa, Jean Dubuffet, Lucio Fontana, Pinot Gallizio, Henry Heerup, Etienne Martin, Germaine Richier, and Sofu Teshigahara)



'60

1960

Marinus Boezem exhibits part of a polder as a ready-made artwork.

'61

'62

1962

Beuys performs Elbe Aktion.

1962

ICA exhibition includes Allison Knowles' *Make a Salad*.



1963

'64



'65**'66****1966**

Barbara Steveni initiates Artist Placement Group to place artists in industry and public institutions, London, UK.



**1967**

Hans Haacke and Piotr Kowalski grow grass as art in New York City, US, and Paris, FR, respectively.  Jan Dibbets starts stacking squares of grass sod as art.  Richard Long creates *A Line Made by Walking*.

1967**1967**

Hans Haacke, solo show includes *Grass* growing on the floor, Hayden Gallery, MIT, Cambridge, US.

late 60s

Louis Le Roy, *Wild Garden*, Oranjewoud, NL.

1968

Nicolás García Uriburu colours Canal Grande green to protest its poor health. Venezia, IT.  Ugo La Pietra hangs banner stating *Abitare e Essere ovunque a casa propria* (Living is being at home everywhere) across a street in Giulianova, IT.  Sjoerd Buisman grows grass in a trough angled on the wall.  Marinus Boezem exhibits a weather report as art.

'68**1968**

Walter De Maria, "Munich Earth Room," Galerie Heiner Friedrich, Munchen, DE.  Lygia Clark, "The House is a Body," Pavilhão Brasileiro, La Biennale di Venezia, IT.



1969–1976

Keen to bring the city to life, Ugo La Pietra launches *Recupero e reinvenzione* (Recovery and Reinvention), for which he tracks the prevalence of spontaneous paths, unauthorised green spaces, urban spaces and gardens.

1969

Lothar Baumgarten grows kale from his hometown and moths in a table-top Conservatory. \$ Gruppo 9999 broadcasts the lunar landing live on closed-circuit monitors at their Firenze disco Space Electronics. \$ Gina Pane performs *Table de Lecture (Terre-Ciel)*, for which she caresses and massages rocky dirt, Torino, IT. \$ Michael Heizer digs his first Earthwork, the 4.9 metre-deep, 30-m wide, circular *Munich Depression*, München, DE. \$ Dennis Oppenheim creates *Directed Seeding-Canceled Crop*, his first and only European Earthwork, on farmer Albert Waalkens' land, Finsterwolde, NL. \$ Marinus Boezem hangs bed sheets out of the Stedelijk Museum windows to capture wind patterns \$ Louis Le Roy, "Wild Garden," Heerenveen, NL. \$ Ugo La Pietra begins registering urban farms and city environs as his art, Milano, IT. \$ Ger van Elk shaves a cactus. \$ Axel van der Kraen builds driftwood tables on the beach that leave with the tide. \$ Lex Wethgeelaar organises ecological walks.

1970

Nicolás García Uriburu colours La Seine green to protest its poor health, Paris, FR. \$ Nicolás García Uriburu plants one hectare trees in Uruguay. \$ Gina Pane inscribes *Terre Protégée III* with stones on farmland, Fenestrelle, IT. \$ Joseph Beuys presents *Rannoch Moor*, a 31-minute film of a wetland, UK. \$ Hans de Vries replaces impervious city sidewalks with peat tiles.

'69**1969**

Jannis Kounellis, "Dodici Cavalli Vivi," Galleria L'Attico, Roma, IT. \$ Michael Heizer, solo show, Galerie Heiner Friedrich, München, DE. \$ "Op Losse Schroeven," Stedelijk Museum, Amsterdam, NL. (includes Marinus Boezem's sheet flying in the wind and Dennis Oppenheim's *Directed Seeding-Canceled Crop* in Finsterwolde, NL) \$ "Micro-Emotive Art," Curated by Ger van Elk, Galerie Riekje Swart, Amsterdam, NL. \$ Hans de Vries, "Manifest ik-jij relatie," 't Klooster, Kreatief Centrum, Hengelo, NL. \$ "Nederlandse beeldhouwkunst: 1964–1969," Centraal Museum, Utrecht, NL. (group show includes Hans de Vries) \$ "Prospect 69," Städtische Kunsthalle, Düsseldorf, DE. (group show includes Robert Smithson's *Dead Tree*) \$ Gerry Schum, "Land Art" films, Fernsehgalerie, Sender Freies channel, Berlin, DE. (8 programmes for Marinus Boezem, Walter De Maria, Jan Dibbets, Barry Flanagan, Michael Heizer, Richard Long, Dennis Oppenheim, and Robert Smithson)

'70**1970**

Sonsbeek '70, Sonsbeek Park, Arnhem, NL. (exhibition focused on site-specific sculpture). \$ "Binnen en Buiten het Kader: Environments en situaties van jonge Nederlanders," Stedelijk Museum, Amsterdam, NL. (group show includes Hans de Vries) \$ Hans de Vries, "Kunstenaar zonder kunst," 't Klooster, Kreatief Centrum, Hengelo, NL. \$ "L'art Vivant aux États-Unis," Fondation Maeght, St. Paul de Vence, FR. (group show includes Hans Haacke's *Ten Turtles Set Free*) \$ "Free-Village," Eerbeek, NL. (group show includes Hans de Vries) \$ "Situations in De Waag," De Waag, Almelo, NL. (group show includes Hans de Vries) \$ Klaus Rinke ships 12 60-litre bottles of water collected from 12 points of der Rhein for "Information" at MoMA, New York, US.



1971

On the occasion of "S-Space Mondial Festival no. 1," Gruppo 9999 flood the lower level to simulate an artificial lake and exhibit vegetables growing adjacent the dance floor, Firenze, IT. \$ Gruppo 9999's "The Vegetable Garden House" wins MoMA's "Competition for Young Designers." \$ Marinus Boezem's proposal to insert a machine used to scare birds away from an orchard is cancelled due to environmentalists' objections. \$ Joseph Beuys performs *Eine Aktion im Moor* near Eindhoven, NL. \$ Nicolás García Uriburu colours Lac de Vincennes green to protest its poor health, Paris, FR. \$ Joseph Beuys and 50 students sweep paths through an urban forest, enacting *Overcome Party Dictatorship Now, December 1971*, to expose the extent of the proposed destruction, Düsseldorf, DE. \$ Robert Morris constructs the Earthwork *Observatorium* in the dunes near Velsen, NL.

1971**1971**

"Eleven Los Angeles Artists," The Hayward Gallery, London, UK. (group show includes Harrison Studio's *Portable Fish Farm* (catfish) and Helen Harrison's *Fish Feast* for 500 people) \$ "Sonsbeek buiten de Perken," NL. (open air show of 84 artists situated all around Nederland, featuring land art by: Richard Artschwager, Utrecht; Dan Flavin, Rotterdam; Michael Heizer, Limburg; Richard Long, Groningen; Robert Morris (*Observatorium*) Velsen (reinstalled in Flevoland in 1977); Robert Smithson (*Spiral Hill/Broken Circle*) in an Emmen sand quarry, and Hans de Vries (cow diaries and species inventories from 1km² plot) in Rotterdam, NL.

**1972**

Nicolás García Uriburu colours 14 fountains green during documenta 5, Kassel, DE. \$ Louis Le Roy begins "Wild Garden," Groningen, NL. \$ Jarosław Koźłowski and Andrzej Kostolowski mail *Sięć (Net)* to over 300 artists and art critics around the world, calling for cooperation and unrestricted exchange of artistic facts (concepts, propositions, projects and other forms of articulation). Modeled on plant growth, *Sięć (Net)* anticipated being "unpredictable and random, eluding any outside control." In actual fact, the state security apparatus shut down the apartment viewing of mailed responses, since only family members are permitted private gatherings. \$ Ugo La Pietra begins ongoing series of collages that explore relationships between administrators, city planning, architects and the public, Milano, IT.

'72**1972**

"Eleven Los Angeles Artists," Palais de Beaux Arts, Bruxelles/Brussel, BE. (group show includes Harrison Studio's *Portable Fish Farm* (carp, rudd, tench and bream)). \$ Hans Hacke, solo exhibition, Museum Haus Lange, Krefeld, DE. (includes *water Purification Plant* and *Gerichtetes Wachstum* (Directed Growth), an indoor system for growing green beans) \$ "Italy: The New Domesticated Landscape," Museum of Modern Art, New York City, US. (group show includes works by Gruppo 9999, Ugo La Pietra) \$ Hans de Vries, "Binnen en Buiten," Galerie Mickey, Loenersloot, NL. \$ Ugo La Pietra, Galleria Il Salotto, Como, IT. \$ Teresa Murak, exhibits *Sowing*, Dziekanka Gallery, Warszawa, PL. \$ Hundertwasser issues "Your Window Rights and Your Tree Duty" manifesto. \$ Beuys and students sweep up Karl-Marx Plaza after Labour Day protests, Berlin, DE.

'73

Gianfranco Baruchello initiates *Agricola Cornelia*, a bit of “anti-land art” 6km north of Roma where he cultivates horticulture, bees, sheep, and cows, thus saving wasteland from unauthorised destruction. \$ Louis Le Roy publishes *Natuur Uitschakelen Natuur Inschakelen* (Switch Nature Off or On) \$ Hans Haacke suggests *Vorschlag “Niemandsland”* (Proposal “No Man’s Land”) for Ministries of Education, Science and Justice in Bonn, DE. \$ Joseph Beuys presents “12 Hour Lecture,” Melville College, Edinburgh, UK.

'74

Ugo La Pietra, Guido Arra and Franco Vaccari go by train to Düsseldorf, making *Viaggio Sul Reno* en route. Düsseldorf, DE to Basel, CH. \$ Ugo La Pietra publishes *Istruzione per l’uso della città* (Instructions for Using the City), Milano, IT. \$ Nicolás García Uriburu colours Port de Nice green to protest its poor health. Nice, FR. \$ Nicolás García Uriburu colours Haven van Antwerp green to protest its poor health. Antwerpen, BE. \$ Teresa Murak performs *Procesja* (Procession), a two-hour walk through Warszawa streets, sporting a cress cape. \$ Teresa Murak builds *Sculpture for the Earth* by hand. Ubbeboda, SE. \$ Beuys presents chalkboard lectures in UK, IT, and US.

'73**'73**

Hans de Vries exhibits seven artist’s books at Kunsthistorisch Instituut, Groningen, NL. \$ Hans de Vries, Goethe Institute, Amsterdam, NL. \$ Paris Biennial, Paris, FR. (group show includes Hans de Vries).

'74

Joseph Beuys performs *I Like America and America Likes Me*, for which he inhabits Rene Bloch Gallery with a coyote for three days in New York City, US. \$ Harrison Studio (with architect Marc Biass), “Propositions pour Les Halles,” L’Eglise St. Leu, Paris, FR. \$ Harrison Studio, Projekt ’74, Kunsthalle Köln, Köln, DE. \$ Nicolás García Uriburu plants South American Ombú tree, Museo de Arte Latinoamericano, Maldonado, UR. \$ “Eleven Dutch Artists,” Fruitmarket Gallery, Edinburgh, UK and Aberdeen Art Gallery and Museum, Aberdeen, UK. (group show includes Hans de Vries’ notes about his day to day activities) \$ “Sympathy for Teresa Murak,” Ubbeboda, SE.



1969–1976

Keen to bring the city to life, Ugo La Pietra launches *Recupero e reinvenzione* (Recovery and Reinvention), for which he tracks the prevalence of spontaneous paths, unauthorised green spaces, urban spaces and gardens.

1975

Gianfranco Baruchello makes a movie about weather's impact on wheat harvests, Roma, IT.  Having undertaken an artist's placement with the Scottish Development Office, John Latham argues for preserving *Niddrie Woman*, a ready-made monument comprised of 19 red shale "binges" deposited by miners, and thus replete with environmental and social value. West Lothian and Midlothian, Scotland, UK.

1975**1975**

Harrison Studio (with architect Marc Biass), "Propositions pour Les Halles," Grand Palais, Paris, FR. (They proposed to make a lake in the excavation of Les Halles).  Ugo La Pietra, Galerija Suvremen Umjetnosti, Zagreb, HR.  Glen Onwin, "Saltmarsh," Scottish Arts Council Gallery, Edinburgh, UK.  The Potato Museum opens, Maransart, BE.

1976

John Latham creates *Derelict Land Art: Five Sisters*, documenting the five Scottish spoil piles that he fought to preserve in Livingston, UK, which have since attracted flora and fauna.  Louis Le Roy completes *Wild Gardens* with Lucien Kroll, Woluwé-St. Lambert, Bruxelles/Brussel, BE.

'76**1976**

Environment, Participation, Cultural Structures, La Biennale di Venezia, Venezia, IT. Thematic exhibition addresses "art and the anthropogeographic environment." The Harrison Studio exhibit *In Which the Appetite is Discovered to Be Endless*.

1977

Lois Weinberger stages *Baumfest* (Tree Celebration) for people in Stams, AT. \$ herman de vries starts exhibiting leaf collections. \$ Ugo La Pietra produces *La riappropriazione della città* (Repossessing the City), a film that captures city environs as art, Milano, IT. \$ Walter De Maria, *The Lightning Field*, Quemado, US. \$ Grizedale Forest Park opens, Ambleside, UK. \$ Robert Morris rebuilds *Observatorium* on a grassy field near Lelystad, NL.

'77**1977**

Documenta 6, Kassel, DE. Joseph Beuys exhibits *Honeyump in the Workplace*. \$ Ugo La Pietra, Galleria Palazzo Galvani, Bologna, IT.

1978

Lois Weinberger inventories objects in his hometown whose usages have been altered, Stams, AT. \$ Nicolás García Uriburu plants several green trees along Avenida 8 July, hoping to make a green carpet from trees, Buenos Aires, AR. \$ Swedish art magazine Konstrånen calls for reconstruction of Murak's *Sculpture for the Earth*. \$ Joseph Beuys presents lecture during launch of Fondazione per la Rinascita dell'Agricoltura (Foundation for the Rebirth of Agriculture), FIU, Pescara, IT.

'78**1978**

From Nature to Art/From Art to Nature-Nature and Anti-Nature, La Biennale di Venezia, Venezia, IT. (group show includes Vito Acconci, Giovanni Anselmo, Alice Aycock, Joseph Beuys, Lothar Baumgarten, Daniel Buren, Alberto Burri, Alighiero e Boetti, Pier Paolo Calzolari, Christo and Jean-Claude, John de Andrea, Agnes Denes, Jan Dibbets, Jean Dubuffet, Ger van Elk, Luciano Fabro, Gilbert and George, Hans Haacke, Jannis Kounellis, Richard Long, Mario Merz, Pino Pascali, Giuseppe Penone, Michelangelo Pistoletto, Sadamasa Motonaga, Klaus Rinke, Kazuo Shiraga, Giuseppe Uncini, Bernar Venet, Gilberto Zorio) \$ "Nature<=>Art," Nederlands Paviljoen, La Biennale di Venezia, Venezia, IT. (Exhibition includes Douwe Jan Bakker, Sjoerd Buisman, Krijn Giezen, and Hans de Vries) \$ "Social Art," La Biennale di Venezia, Venezia, IT (includes Ugo La Pietra). \$ herman de vries, "earth museum" opens, Eschenau, DE.



1979

Ugo La Pietra films *Interventi pubblici per la città di Milano (Paletti e catene)*, which captures urban interventions tied to Milano's preponderance of restrictive "poles and chains," Milano, IT. Piet Slegers installs *Landschaps-zonneproject*, Kröller-Müller Museum, Otterloo, NL.

1979**1979**

Ugo La Pietra, Centro Internazionale do Brera, Milano, IT. § "To Do With Nature," Pulchri Studio, The Hague; Liljevalchs Konsthall, Stockholm, SE; § Museum of Contemporary Art (SMAK), Ghent, BE. § Ugo La Pietra exhibits "poles and chains" as indoor furniture, La Triennale di Milano, Milano, IT. §

'80**1980**

La Biennale di Venezia, Venezia, IT. (group show includes Agnes Denes) § "To Do With Nature," Kunsthalle Köln, Köln, DE; Travels to Louisiana Museum, Humlebæk, DK and Gulbenkian Museum, Lisboa, PT.



1981

Gianfranco Baruchello ends his agricultural experiment *Agricola Cornelia*, Roma, IT. \$ Nicolás García Uriburu and Joseph Beuys jointly dye der Rhein green (and bottle it) to protest its health. Düsseldorf, DE.

1982

Gianfranco Baruchello publishes *Mostra Antologica* (Retrospective Exhibition). \$ Louis Le Roy grows a *Wild Garden* in Paris, FR. \$ Piet Slegers creates the recreational five-hectare *Aardzee* (Earth Sea) (1975), Zeewolde, NL.

'81**1981**

"Duisberg Öffnet Sich" (group show includes Ocean Earth, Beuys and others), Ruhrgebeit, DE.

'82**1982**

"Space Force in Action," Kunsthalle Düsseldorf, DE. Space Force performs acid-rain analysis. \$ documenta 7, Kassel, DE. (group show features Joseph Beuys' *7000 Eichen*). \$ "Landscape and the Love of Nature + Other Photography + Artists Travelling," Dutch Art Foundation. \$ "Mit Natur zu tun," Kunstverein Ingolstadt, DE and Städtischce Galerie, Erlangen, DE.



1983

Louis Le Roy (1924-2012) begins his *Eekathedraal*, Mildam, NL. \$ Joseph Beuys proposes *Gesamtkunstwerk Freie und Hansestadt Hamburg* for the "Stadt-Natur-Skulptur" competition, Hamburg, DE. \$ Joseph Beuys photographs people holding *Difesa della Natura* (Protect Nature) banner against Abruzzo hills, IT. He issues posters, postcards and boxed editions to commemorate this event. \$ Forty artists transform disused quarries into Tout Quarry Sculpture Project, Isle of Portland, UK. \$ Meret Oppenheim installs *Tower Fountain*, a concrete column covered in moss and wild grasses, Bern, CH.

1984

Joseph Beuys issues cards to advertise 13 Maggio 1984 *Difesa della Natura* lecture oooin Bolognano, IT. \$ Ugo La Pietra proposes *Orto Botanico di Brera* to transform Botanical Gardens into an open-air museum for the essence of Lombardy, Milano, IT. \$ Ugo La Pietra starts the series *Il Giardino delle Delizia* (The Garden of Earthly Delights) to inject cities with strong "green" presence, Milano, IT. \$ Before building the new town, urban planners recommend the *Kunstbaan Zeewolde*, Zeewolde, NL.

1983**1983**

"Art and Time," Rotterdam Art Foundation, NL. \$ Potato Museum moves to Washington, DC, US.

'84**1984**

Ocean Earth, "Television Government," Kunsthalle Berlin, Berlin, DE. \$ "Sculptures Along the Linge," Acquoy, FR.



1985

Teresa Murak photographs herself in Polish fields, as if she is "one with Earth."

'85**1985**

"Process and Konstruktion," München, DE.

1986

herman de vries acquires a 4000 square-metre meadow in Eschenau, DE. § Nicolás García Uriburu enacts "Clean Air for Ever 1968-1986," Venezia, IT. § Fritz Hundertwasser completes massive greenroof atop *Hundertwasser House*, Wien, AT.

'86**1986**

Art and Science exhibition, La Biennale, di Venezia, Venezia, IT.



1987

Manus Bozem grows 178 Lombardy Poplars shaped like La cathédrale Notre-Dame de Reims to create *De Groene Kathedraal*, Almere, NL. \$ Jan Eric Visser starts transforming his inorganic household trash into autonomous sculptures. Teresa Murak kneads leaven and swampy soil for a month near Lake Mjøsa, NO.

1987**1987**

documenta 8, Kassel, DE. (group show includes works by Ocean-Earth collaborator Ingo Günther, Harrison Studio, and Joseph Beuys' *2000 Eichen*) \$ "The International Show to End World Hunger," organized by Minnesota Museum of Art, tours 28 cities in 13 countries on 4 continents. (group show includes grain harvested from Agnes Denes' *Wheatfield: A Confrontation*, 1982) \$ "Nature-Art," Lillehammer, NO. (summer symposium and exhibition of both Polish and Norwegian artists).

1988

Lois Weinberger maps the positions of numerous abandoned gravel pits in Hohenau, AT. \$ Lois Weinberger creates *Gebiet Wien* atop 600-square metres of "bad soil," using wild plants collected from elsewhere that he later replants in roadsides and abandoned quarries.

'88**1988**

"Le printemps de la Villette: La nature de l'art," Parc de la Villette, Cité des Sciences et de l'Industrie, and l'Institut Goethe, Paris, FR. (group show with Jean-Loup Cornilleau, Georg Dietzler, Lili Fischer, Piero Gilardi, Jurgen Klaus, Tonia Kudrass, Jacques Leclercq, Guy Lozac'h, Minot et Gormezano, Daniel Pestel, and Nils-Udo) \$ "Gedenken und Denkmal" (group show includes Harrison Studio), Martin Gropius Bau, Berlin, DE. \$ Harrison Studio, "Book of the Seven Lagoons," D.A.A.D. Gallery, Berlin, DE. \$ "Sculptures in the Forest," Kröller-Müller Museum, Otterloo, NL.

1989

Ugo La Pietra installs *Soggiorni urbani* (Urban Living Room) on via Sant'Andrea, Milano, IT. \$ Hans Haacke proposes *Calligraphie*, a planting of rapeseed and/or beans at the Assemblée Nationale, Paris, FR. \$ Zeewolde development plan incorporates De Verbeelding art landscape nature, Zeewolde, NL.

'89**1989**

Harrison Studio, "The Sava River," Neuen Berliner Kunstverein, Berlin, DE. \$ Ressource Kunst: Die Elemente Neue Geschen," Akademie der Künste, Berlin, DE. \$ Lois Weinberger, Galerie Krinzinger, Innsbruck, AT. (Weinberger exhibits wall of 23 balanced rocks.) \$ "Eko-art," Centrum Sztuki Współczesnej Zamek Ujazdowski, Warszawa, PL. \$ George Steinmann, "The Fossil Age," Pori Art Museum, Pori, FI. \$ Pier Pennings en Wiel Kusters, "De Berg," Gouvernement te Maastricht, Maastricht, NL.

'90**1990**

Harrison Studio, "The Sava River," Modern Galerija Ljubljana, SL. Travels to Muzeju Revolucije Naroda Hrvatske, Zagreb, HR.



1991**1991**

Ocean Earth, "Europa," Kunstraum Daxer, München, DE. (groups show featuring Ocean Earth's satellite monitoring of Europe's 13 ocean basins.) § Ocean Earth, "Heimaten," Wiener Festwochen, Subway stations, Wien, AT. (features Ocean Earth's satellite monitoring of 4 Black Sea sites.)

**'92****1992****1992**

Lois Weinberger replants 14 plants from his collection for "Beelden Buiten," Tielt, BE. § herman de vries exhibits *the oak*, an 825cm-long fallen oak tree, which has been in the process of decay ever since, Collection Lenz Schönberg, Söll, AT.

documenta 9, Kassel, DE. (group show includes Ocean Earth text) § "Beelden Buiten," Tielt, BE. (outdoor show includes Lois Weinberger and Maria Thereza Alves) § "La Vitra tra cose e nature, sezione naturale virtuale" (Life in terms of things and nature- Design and the Environmental Challenge), La Triennale di Milano, Milano, IT. § Allocations: Art for a Natural and Artificial Environment, Floriade: Zoetermeer, NL (features commissions by Marinus Boezem, Mel Chin, herman de vries, Fortuyn/O'Brien, Piero Gilardi and Ocean Earth)

1993

Lois Weinberger plants poppies atop slag heaps in Hohenau, AT. \$ herman de vries installs *sanctuarium* in Stuttgart, DE. \$ Herman Prigann constructs *Ring der Erinnerung* (Ring of Remembrance) on the prior east- west border, DE. \$ Alan Sonfist installs his *Labyrinth of 1001 Endangered Oak Trees within a Stone Ship*, Tranekær International Centre for Art and Nature, Langeland, DK.

1994

Lois Weinberger presents portable gardens, plastic bags containing "poor soil." \$ Lois Weinberger replants wild plants from *Gebiet Wien* in Berlin. \$ Lois Weinberger starts photographing ruderal plants in black and white. \$ Herman Prigann conserves industrial site as *Die gelde Rampe* (The Yellow Ramp), Cottbus, DE. \$ Platform founds Renue, London, UK.

'93**1993**

"Ocean Earth: for a World Which Works" (retrospective, Neue Galerie am Landesmuseum Joanneum, Graz, AT. \$ Ocean Earth, "Oil-Free Corridor," La Biennale di Venezia Aperto, Venezia, IT. \$ Ocean Earth, "Strategie Globale for France," FRAC Poitou-Charentes, Angoulême, FR. (Ocean Earth exhibits *Giant Algae System/Clean Air Rig*) Travels throughout FR 1993-1996. \$ "Kunst-Kultur-Ökologie," Bea Voigt Galerie, München, DE. (group show includes Mel Chin, Mark Dion, Harrison Studio, Mierle Ukeles Laderman) \$ "Différentes Nature-Visions de l'art Contemporain," Galerie Art de la Défense EPAD, Paris, FR. (group show includes Agnes Denes) \$ Österreichischer Pavillon, La Biennale di Venezia, Venezia, IT. (includes Christian Philip Müller's *Green Border*) \$ Salzburg Summer Festival, Szene Salzburg, AT. Lois Weinberger presents *Burning and Walking*. \$ Avital Geva, "The Greenhouse," Israeli Pavilion, La Biennale di Venezia, Venezia, IT.

'94**1994**

Harrison Studio, "The Green Heart Reenvisioned," Jeruzalemkapel, Gouda, NL. \$ Harrison Studio, "Fragmentation and Unity: Der Einzugsgebietmeister," The Bauhaus, Dessau, DE. \$ Peter Fend, "Eurasian Scenario," Marc Joancou Gallery, London, UK. \$ Peter Fend, "Startbahn Österreich," Galerie Metropol, Wien, AT. (Fend proposes a bird path) \$ George Steinmann, "The Beginner's Mind," Lokaal 01, Breda, NL. \$ "Third Biennial of Land Art," Cottbus, DE. (includes Herman Prigann's *Die gelde rampe*)



**1995**

Kielder Water and Forest Park opens in one of Britain's largest nature reserves, Kielder, UK. ☈ Mikael Hansen transforms 1200 tree-trunk sections into a 60-metre long *Organic Highway*, Tranekær International Centre for Art and Nature, Langeland, DK.

1995**1995**

Harrison Studio, "The Green Heart Reenvisioned," Centrum Beeldende Kunst, Leiden, NL. Travels to Kunstmuseum, Bonn, DE. ☈ Peter Fend, *On Board*, Aperto, La Biennale di Venezia, Venezia, IT. ☈ Ocean Earth, "alternatives to dams," Landkraft, Künstlerhaus Thurn & Taxis, Bregenz, AT.

'96

herman de vries begins *bomenmuseum* (tree museum) (400 different species) in Wateringse Veld, a new suburb of Den Haag, NL. ☈ James Turrell installs *Celestial Vault* (Hemels Gewelf) at Kijlduin, Den Haag, NL. ☈ Agnes Denes, *Tree Mountain*, Pinskiö, FI.

'96**1996**

Georg Dietzler, San Francisco Art Institute, San Francisco, CA. (Dietzler creates a mushroom column *in situ*). ☈ Harrison Studio, "A Brown Coal Park for Sudraum Leipzig," Landeshaus Sachsen, Bonn, DE. ☈ Harrison Studio, "Future Garden-Part 1 The Endangered Meadows of Europe" atop Kunst-und Ausstellungshalle der Bundesrepublik Deutschland, Bonn, DE. ☈ "TRILOGY-Art-Nature-Science," Kunsthallen Brandts Klædefabrik, Odense, DK. (group show includes Harrison Studio, Lois Weinberger). ☈ "Nowhere," Louisiana Museum, Humlebæk, DK. (group show includes Henrik Höökansson's frogs) ☈ Carsten Höller, "SKOP," Wiener Secession, Wien, AT. (Höller exhibits a strawberry patch). ☈ Vito Acconci, *Park Up a Building*, Centro Gallego de Arte Contemporáneo, Santiago de Compostela, ES. ☈ "Art and Technology," Royal Shell Research Laboratories, Amsterdam, NL.

1997

Lois Weinberger replants plants from *Gebiet Wien* in Kassel. § herman de vries installs round, brick *sanctuarium* in Münster, DE. § Studio Orta enacts *All in One Basket-Buffet Act I* to deter wasted produce, Paris, FR. § Hamish Fulton makes *Die Vechte entlang gehen*, linking the Skulpturenweg Nordhorn to the Dutch Kunstlijn to create Kunstwegen DE-NE along die Vechte. § Vito Acconci, *Park in the Water*, Den Haag, NL. § George Steinmann proposes Centre for Sustainable Forestry as a public artwork, Komi, RU.

'97**1997**

Harrison Studio, "Green Heart Vision," Kunstmuseum Bonn, Bonn, DE. § Pavillon français, La Biennale di Venezia, Venezia, IT. (includes Peter Fend/Ocean Earth). § Henrik Hökansson, "Out of the Black into the Blue," Nordic Pavilion, La Biennale di Venezia, Venezia, IT. § "Laboratory for Plant Growing," Le Jardin des Biotechnologies, La Cité des Sciences et de l'Industrie, Paris, FR. (group show where Georg Dietzler installs *Oyster Mushroom Growing Experiment*) § documenta X, Kulturbahnhof, Kassel, DE. Lois Weinberger presents *Burning and Walking* out front, a hand-drawn map providing tour of ruderel plantings, and *Das über Pflanzen ist eins mit ihnen* (What is Beyond Plants is at One with Them), for which he grows "immigrant plants," collected in the Balkans, Ukraine, España, Syria and Greece, on the rail tracks. Carsten Höller and Rosemarie Trockel exhibit *Ein Haus für Schweine und Menschen* (A House for Pigs and People). § herman de vries, "von der erde (from earth)," Städtische Galerie am Markt, Schwäbisch Hall, DE. § "Art-Science-Art," Shell Research and Technology Centre, Amsterdam, NL.

1998

Lois Weinberger is one of fifteen artists invited to submit a proposal to transform 65 hectare Hiriya Dump (80 m high), outside Tel Aviv, IS, into a recreational area. (In 2004, German landscape architecture firm Latz + Partners is awarded the project). § Musée Gassendi begins to house herman de vries' earth museum, Digne-les-Bains, FR. § Nancy Holt constructs *Up and Under*, Pinsiö, FI. § Ugo La Pietra installs *Soggiorni urbani* (Urban Living Room), Cursi, IT. § "Modern Nature. Künstler als Gärtner," O.K. Centrum für Gegenwartskunst, Linz, AT. herman de vries begins design for *watergoed*, linking 600 hectares of restored agricultural to Weerribben Nature Reserve, which protects wetlands and marshes of north-west province, Overijssel, NL.

'98**1998**

Harrison Studio, "Future Garden, Part II: A Mother Meadow for the Parks of Bonn," Bonn, DE. (This exhibition features the first completed meadow with stories from Bonn's Rheinauenpark). § Harrison Studio, "Future Garden, Part II," City Hall, Bonn, DE. § Harrison Studio, "Casting a Green Net: Can it be We Are Seeing a Dragon?" The Bluecoat Gallery, Liverpool, UK. § "Natura Artis Magistra," Wijerberg Foundation, Ypey Park, Leeuwarden, NL. § Skulptur Projekte, Münster, DE. herman de vries installs *sanctuarium* to protect ruderal plants. § Greenhouse Effect, Serpentine Gallery, London, UK. (group show with projects by Mark Dion, Nina Katchadourian, Roxy Paine, or Yutaka Sone that mostly simulate nature or present specimens, but also includes Henrik Hökansson's "living After Forever (ever all)"). § Ocean Earth is the only non-Yugoslavian attendee at Ocean-focused conference in Zagreb, HR. § Manifesto 2, Casino, Luxembourg. (group show features Tobias Rehberger's *Within View of Seeing (Perspectives and the Prouvé)*). § Lois Weinberger, "Garten," Seniorenhain (permanent), Linz, AT. § "...es grünt so grun..." Bonner Kunstverein (group show includes Lois Weinberger).



1999

Lois Weinberger cuts a room line in the courtyard of Universität Innsbruck, adding a verdant strip. Innsbruck, AT. \$ herman de vries installs *sanctuarium* in Zeewolde, NL. \$ Studio Orta performs *Ha-Recycling, Enterprise Act II*, Wiener Secession, Wien, AT. \$ Lois Weinberger installs *Wild Cube* situated adjacent Sozial-und Wirtschafts-wissenschaftliche Fakultät der Universität Innsbruck, Innsbruck, AT.

1999**1999**

Lois Weinberger, "Empty Garden," Watari-Um Museum of Contemporary Art, Tokyo, JP. Weinberger exhibits plants from *Gebiet Wien* and plants a roof garden atop the museum. \$ "Post-war Architecture," La Biennale di Venezia, Venezia, IT. (group show includes Ocean Earth). \$ Henrik Håkansson, Tomorrow and Tonight, Kunsthalle Basel, Basel, CH. (roof garden habitat) \$ "Natural Reality: Artistic Positions Between Nature and Culture," Ludwig Forum für Internationale Kunst, Aachen, DE. (Joseph Beuys, Mel Chin, Georg Dietzler, Mark Dion, herman de vries, Eve Andrée Laramée, Ana Mendieta, Herman Prigann, Robert Smithson, Alan Sonfist, Ursula Schultz-Dornburg, Nils Udo, Lois Weinberger) \$ Hiranya Dump, Tel Aviv Museum, Tel Aviv, IL. (group show included Lois Weinberger's proposals for transform Hiranya Dump into recreational space). \$ "Robert Smithson Retrospective: Works 1955-1973," Museet for Samtidskunst, Oslo, NO. Travels to Moderne Museet, Stockholm, SE and Arken Museum for Moderne Kunst, Ishøj, DK. \$ "Fauna," New Art, Moscow, RU. Travels to Zażeta Nardowa Galeria Sztuki, Warszawa, PL. \$ Tobias Rehberger, *Sunny-side Up*, "Matrix 180," Berkeley Art Museum, Berkeley, US..

2000

Lois Weinberger collaborates with homeless people to identify ruderal plants to be listed on a mural. He also replants plants from an over-run royal garden at Potimore House to nearby barren lands. \$ N55 reconceives public space with PUBLIC THINGS, Toulouse, FR. \$ N55 begins their campaign to distribute geodesic LAND cairns to identify free space across three continents. Harrison Studio recommend that the government stop pumping water from, the Krimpenerwaard in order to halt peat evaporation, NL.

2000**2000**

Henrik Håkansson, *Sweat Leaf*, Galerie für Zeitgenössische Kunst, Leipzig, DE. \$ Tobias Rehberger, *The Sun from Above* (Die Sonne von Oben), Museum of Contemporary Art, Chicago, US. \$ "Postindustrial Sorrows," Nassauischer Kunstverein, Wiesbaden, DE. \$ "More Works about Buildings and Food," Lisboa, PT. (features N55 and the land's kitchen). \$ Lois Weinberger, solo show, Camden Art Centre, London, UK. \$ Lois Weinberger, "The Edge of the City," SpaceX Gallery, Exeter, UK. \$ Nils Norman debuts *The Gerrard Winstanley Radical Gardening Space Reclamation Mobile Field Centre and Weather Station*, Galerie für Landschaftskunst, Hamburg, DE.

'01

2001

Henrik Häkansson sets up his *Zeewolde Field Laboratory*, Zeewolde, NL. \$ Christian Philip Müller installs three glass cubes filled with different soils, Alois Lageder Vineyard, IT. \$ Harrison Studio is awarded Groenveld Prize for doing most that year for the Dutch Landscape. \$ Giuliano Mauri, *Tree Cathedral*, Arte Sella, Borgo Valsugana, IT.

'02

2002

During two summer months, environmental activist Dr. Georg Soier inhabits Lois Weinberger's *Wild Cube*, Innsbruck, AT. \$ Marie Markman plants "A Thousand Flowers," Hamburg Biennial, Hamburg, DE. \$ Lois Weinberger creates a roof garden using densely-packed plastic buckets of soil from open land.

2001

Czekalska + Golec, "The Fifth Activity: Devices Saving Physical (rescued) and Spiritual Lives (rescuers)," Muzeum Sztuki Łódź, Łódź, PL. \$ "Peninsula Europe: Bringing Forth a New Space of Mind," Der Alter Rathaus, Potsdam, DE. \$ Ocean Earth, "Sea Change growth of algae/fermentation/gas flame," SpaceX Gallery, Exeter, UK. \$ La Biennale di Venezia, Venezia, IT. (group show includes Agnes Denes) \$ Lois Weinberger, "Home," SpaceX Gallery, Essex, UK. \$ Sonsbeek 9, Arnhem, NL. (outdoor exhibition includes Lois Weinberger) \$ Nils Norman, "Geocruiser," The Institute for Visual Culture, Cambridge, UK. \$ Making Nature, Edsvik konst och kultur, Sollentuna, SE. (group show includes Lois Weinberger) Travels to Haus am Waldsee, Berlin, DE; Nikolaj Kunsthall, Copenhagen, DK, and Atelier Augarten Belvedere, Wien, AT. \$ "East of Eden/art-nature-society," SpaceX Gallery, Exeter, UK (group show includes Lois Weinberger) \$ "Trouble Shooting," Arnolfini, Bristol, UK (group show includes Nils Norman) \$ "The Waste Land," Atelier Augarten Belvedere, Wien, AT. (group show includes Lois Weinberger) \$ Herman de Vries, "the very things," CAIRN centre d'art, Digne-les-Bains, FR. \$ Olafur Eliasson, "The Mediated Motion," Kunsthaus Bregenz, Bregenz, AT.

2002

Harrison Studio, Halbinsel Europa, Ludwig Forum for International Art, Aachen, Deutschland, DE. \$ Harrison Studio, Péninsule Europe, Les Abattoirs, The Regional Museum of Modern and Contemporary Art, Toulouse, FR. \$ Hell Gruen, Europa 2002, Düsseldorf, DE. \$ "Animal Actions," CSW Łaznia, Gdańsk, PL. \$ Harrison Studio, Schiereiland Europa, Kasteel Groeneveld, Baarn, NL. \$ Lois Weinberger, Bonner Kunstverein, Bonn, DE. \$ Garten-Kunst, Bilder und Texte von Garten und Parks, Museum of History, Wien, AT. \$ Ecovention: Current Art to Transform Ecologies, curated by Amy Lipton and Sue Spaid, Contemporary Arts Center, Cincinnati, US. (international participants are Joseph Beuys, Agnes Denes, Georg Dietzler, Reiko Goto, Hans Haacke, Henrik Häkansson, Superflex, George Steinmann, and Shai Zaka) \$ Climate: The Experiment with the Planet Earth, Deutsches Museum, Berlin, DE. \$ Søren Dahlgaard, "The Mobile Island," Institute of Contemporary Art, Overgaden, DK. \$ documenta 11, Kassel, DE. AMD & ART's *Vintondale* project was presented. \$ Lois Weinberger, Garden St. Polten, 1994/2002, Landesmuseum Niederösterreich, St. Polten, AT.



**2003**

Lois Weinberger exhibits mobile landscapes (indoors) filled with plants from particular places. \$ herman de vries introduces *bois sacré et sanctuaire de roche-rousse*, Digne-les-Bains, FR. \$ Renue and SEA merge to form SEA/Renue, which implements sustainable energy in London and beyond, UK.

2003**2003**

"Utopia Station," La Biennale di Venezia, Venezia, IT (group show includes Liam Gillick, Atelier van Lieshout, Peter Fend/Ocean Earth, Jonas Meckus, Nils Norman, Yoko Ono, Christoph Schlingensief, Nancy Spero, Superflex, Agnes Varda) \$ Now What? Dreaming a Better World in Six Parts, BAK Utrecht, Utrecht, NL. (group show includes Lois Weinberger) \$ Global Village Garden I, Kulturland Brandenberg, Brandenberg, and landkunstleben, Buchholz, DE.

2004

Lois Weinberger replants plants left at the site of the 1984 National Garden Festival in plastic suitcases, creating a *Portable Garden* for the National Wildlife Centre during the Liverpool Biennial, UK. \$ Lois Weinberger makes a rooftop garden with beds for surprise seeds, Wiener Rathaus, Wien, AT. \$ Lois Weinberger exhibits *Gardens of Diversity* in Bristol's abandoned lots. \$ Debra Solomon begins publishing her independent research regarding urban agriculture at www.culiblog.org. \$ Lois Weinberger founds the Ruderal Society in an old mirror factory in Gars am Kamp, AT. \$ Fernando García-Dory launches *Shepherd School*, Urrielles Mountains, ES. \$ Lara Almarcegui secures her first wasteland, a one hectare parcel freed from use until 2016, Genk, BE. \$ Paul Chaney and Kenna Hernly begin living off the land via *Field Club*, Cornish Peninsula, UK. \$ Mikael Hansen transforms 1200 tree-trunk sections into a 60-metre long *Organic Highway*, Tranekær International Centre for Art and Nature, Langeland, DK.

'04**2004**

"Hortus, Botany and Empire," Liverpool Biennial & Spacex Gallery, Exeter, UK. (group show featured Lois and Franziska Weinberger, Marjetica Potrč and Peter Fend/Global Feed) \$ Peter Fend/Global Feed "Reverse Global Warming," Spacex Gallery, Exeter, UK. \$ Lara Almarcequi, "Free Space," Z33, Hasselt, BE.

2005

Nils Norman, *The Homerton Playscape Multiple Struggle Niche*, City Projects, London, UK. § Studio Orta launches *Orta-Water*, a water purification system to reclaim water pumped from Canal Grande, Fondazione Bevilacqua La Masa, Venezia, IT.

'05**2005**

Harrison Studio, "Peninsula Europe: Bringing Forth a New Space of Mind," Die Bundesgartenschau (BUGA) 2005, München, DE. § "Låd os mødes" (Let's Meet), Ydre Norrebro, DK. (Marie Markman, Nis Rømer and Jesper Dyrehauge collaborate on a kitchen garden) § La Biennale di Venezia, Venezia, IT. (group show includes Peter Fend *Waterways* and Agnes Denes). § Down the Garden Path, New York, US. (group show includes Thierry de Cordier, Ian Hamilton Finlay, Nils Norman, and Christian Philip Müller). § "Dumb Economy, Funny Democracy, Impossible Projects," Rooseum, Malmö, SE. § GU-Graz Umgebung-Konstruktion einer urbanen Landschaft, Kunstverien Graz, Steirischer Hebst, AT. (group show includes Lois Weinberger) § The Wisdom of Nature: Eight Visions from Austria, EXPO Japan, Nagoya City Arts Museum, Nagoya, JP. (group show includes Lois Weinberger). § Studio Orta, "70 x 7 The Meal Act XXIII," Barbican Gallery, London, UK. § Studio Orta, "OrtaWater," Fondazione Bevilacqua La Masa, Venezia, IT. Travels to Boijmans Van Beuningen, Rotterdam, NL (2006); Vienna Art Fair, Wien, AT (2009), 9th Shanghai Biennale, Shanghai, CN (2012); and Lakenhal Museum, Leiden, NL (2015).

2006

Nils Norman builds *Trekroner Bridge and Islands*, a bridge plus two water-cleansing islands, Roskilde, DK. § Georg Dietzler uses oyster mushrooms to transform crop and organic waste into highly fertile soil, regional cropping systems for food production as additional income stream for farmers. § Dominique Gonzalez-Foerster installs *Trèfle*, Parco Arte Vivente, Torino, IT.

'06**2006**

"Les Yeux Ouverts," Centre Pompidou, Paris, FR. § "Hot Summer of Urban Farming," curated by Publik, Norrebro, DK. (group show includes Camilla Berner, Gillion Grantaan, Nance Klehm, Marie Markman, Jonas Maria Schul, Åsa Sonjasdotter, Hartmut Stockter, and YNKB). § "A Step Aside," Magasin d'en Face, Grenoble, FR. § "On Mobility," De Appel, Amsterdam, NL. (group show includes Åsa Sonjasdotter) § Lara Almarchegui exhibits *Guide to the Waste Grounds of São Paulo*, São Paulo Bienal, BR. § Lois Weinberger, solo room, 21st Century Museum of Contemporary Art, Kanazawa, JP. Weinberger exhibits photos, a giant rendering of his 1997 map plus *Gartenarchiv* (624 slides). § Lois Weinberger, Future Garden, Toyota Municipal Museum of Art, Toyota, JP. § Lois and Franziska Weinberger, "Home Voodoo" Arnolfini, Bristol, UK. § Cape Farewell organise "Art & Climate Change," Natural History Museum, London, UK. Travels to Liverpool Biennial, Liverpool, UK (2006), Kampnagel Cultural Centre, Hamburg, DE (2007), Fundación Canal, Madrid, ES (2008), Miraikan, Tokyo, JP (2009), and Cranbrook Art Museum, Bloomfield Hills, US (2010) (group show includes Heather Ackroyd & Dan Harvey, Kathy Barber, David Buckland, Peter Clegg, Siobhan Davies, Gautier Deblonde, Max Eastley, Nick Edwards, Antony Gormley, Alex Hartley, David Hinton, Gary Hume, Ian McEwan, Michèle Noach, and Rachel Whiteread)



2007

Ines Doujak critiques corporate biopiracy with *Siegesgärten* (Victory Garden), a table featuring 70 explanatory texts cum seed packets, whose trail ends at a modest outdoor garden, during documenta 12. \$ To rehabilitate the Icelandic economy, Olafur Eliasson purchases a herd of Icelandic Grey Sheep. \$ Myvillages launches International Village Shop, "a shop with many shops" that trade in goods from rural communities. \$ During Skulptur Projekte, Tue Greenfort inoculates water pumped from Lake Aa with iron chloride before spraying it back in, Münster, DE. \$ Studio Orta travels to Antarctica and envisions a "safe haven" for refugees fleeing conflict, based on the principles of the 1959 Antarctica Treaty, which bans military activity and promotes scientific cooperation for the betterment of humanity. \$ Lara Almarcegui presents *Guide to Al Khan: An Empty City in the Village of Sharjah*, as part of her ongoing *Demolitions, Wastelands and Empty Lots* series, Sharjah, AE. \$ Roni Horn's *Library of Water* includes about 100 interviews regarding weather, conducted with Icelanders between 2005 and 2006, Stykkishólmur, IS.

2007**2007**

La Biennale di Venezia, Venezia, IT. (group show includes Agnes Denes). \$ "Port City," Arnolfini, Bristol, UK (group show includes Maria Theresa Alves). \$ "Offload: Systems for Survival," Watershed Media Centre, Bristol, UK. \$ "Eco Media: Ecological Strategies in Today's Art," Edith Russ Site for Media Art, Oldenberg, DE Travels in 2008 to Plug-in, Basel, CH and in 2009 to Sala Parpalló, Valencia, ES. \$ "NaturKunstForum," curated by Anke Mellin and Dorit Croissier, Landschafts Ausstellung, Alheim-Licherode, DE. (group exhibition features outdoor projects by Annechien Meier, Jean-François Paquay, among others). \$ Debra Solomon co-curates "Edible City" for Nederlands Architectuurinstituut (NAi M), Maastricht, DE. \$ Still Life: Art, Ecology, and Politics of Change, Sharjah Biennial 8, Sharjah, AE. (group show features works by Lara Almarcegui, Peter Fend, Tue Greenfort, Henrik Hakansson, Tea Mäkipää, Marijeka Potrč, Tomás Saraceno, Rirkrit Tiravanija, among others) \$ Garten Eden- der Garten in der Kunst seit 1990, Kunsthalle in Emden, DE. (group show includes Lois Weinberger) \$ Debra Solomon is "food domain expert" for the design biennial DOTTo, Newcastle, UK. \$ "100 Good Ideas to Change the World," Hayward Gallery, London, UK. \$ Lois Weinberger, Gartenlust- der Garten in der Kunst, Grotesque Hall, Belvedere, Wien, AT. \$ documenta 12, Kassel, DE. (group show includes Ines Doujak, Sakarin Krue-On, Sanja Iveković) \$ "Global Cities," Tate Modern, London, UK (group show includes Nils Norman). \$ "Everything Flows, A Panorama of the Elbe," Altona Museum, Hamburg, DE. (31-month long exhibition of Beuys' "gesamtkunstwerk") \$ Mel Chin, "Disputed Territories," Museum Het Domein, Sittard, NL. \$ "Living Material," Parco Arte Vivente, Torino, IT.

2008

Lara Almarcegui creates *Guide to the Wastelands of the Bilbao River Estuary*, Bilbao, ES. \$ Commissioned by Wysing Arts Centre, Cambridgeshire, UK to collaborate with nomadic peoples, Nis develop WALKING HOUSE. \$ Lara Almarcegui instigates legal protection of 700 m² of Ebro River floodplain, Zaragoza, ES. \$ Lara Almarcegui documents *Ruines in Nederland XIX to XXI*, NL. \$ Herman de Vries' *bomenmuseum* (400 species) and ecological connection zone opens in Den Haag suburb Wateringse Veld, NL. \$ 431art launch "botanoadopt". www.botanoadopt.org. DE. \$ Nis Römer works with architect Carsten Hoff to build a rooftop garden above a former grocery store. \$ Kultivator discover 40 groups interested to earn the *Right to Farm the Land*, Gamlegården, SE. \$ Finnish Society of Bio Art launches their programme, Kilpisjärvi Biological Station, Lapland, FI.

'08**2008**

Harrison Studio, "Greenhouse Britain: Losing Ground Gaining Wisdom," City Hall, London, UK. Travels to Darwin Festival, Shrewsbury Museums and Art Gallery; Holden Gallery, Manchester Metropolitan University; Knowle West Media Centre, Bristol; and Storey Gallery, Lancaster (all UK). \$ "Kultur/Natur," Tonne Building, Hamburg, DE. \$ "Awakening," Teutonic Castle, Świecie, PL. (interventions in urban public spaces includes Elżbieta Jabłońska) \$ Green Island, AMAZE Culture Lab, Milano, IT. (group show includes Lois Weinberger) Travels to Garibaldi Train Station and Palazzo Triennale Milano, IT. \$ Debra Solomon is invited to participate in the biennial "Cité du Design," Saint-Etienne, FR. \$ "Global Warming," The Ice Box, Philadelphia, US (group show includes Shai Zaka and Ralf Sander). \$ Ferne Nähe< Natur > in der Kunst der Gegenwart, Kunstmuseum Bonn, Bonn, DE. \$ Sydney Biennial, Sydney, AU. (group exhibition includes Pierre Huyghe's *A Forest of Lines*) \$ "Greenwashing," Fondazione Sandretto Re Rebaudengo Centre for Contemporary Art, Torino, IT. (group show includes Lara Almarcegui) \$ "UT-21-Be Veg. Go Green. Be SmART," Lillehammer, NO. (7 Polish and 7 Norwegian artists) \$ Harrison Studio and KWMC, "Greenhouse Britain," Arnolfini, Bristol, UK. \$ Animalis Painting Triennial, Miejskie Galerii Sztuki, Chorzowi, PL. \$ Ugo La Pietra, "Abitare è essere ovunque a casa propria," Fondazione Mudima, Milano, IT.



2009

For "Portscapes", Lara Almarcegui documents 17 *Wasteland of the Port of Rotterdam*, NL. Åsa Sonjasdotter's "Potato Perspective" collaborates with the Andes Asociación on a travelling exhibition and book regarding indigenous knowledge of potato horticulture, Cusco, PE. Camilla Berner organises the seed bank (124 species), *Precious Things and Stuff We Don't Like*, from a wasteland in Copenhagen, DK. Cecylia Malik climbs a tree 365 days in a row and gains a public by posting images daily to Facebook, Kraków, PL. Agnes Denes grows a wheatfield in London, UK as part of "Radical Nature." Field Work co-ordinate a march centred on "Environmental Justice" during COP15, Copenhagen, DK.

'09

2009

"Radical Nature: Art and Architecture for a Changing Planet: 1969-2009," Barbican Gallery, London, UK (group show includes Ant Farm, Lara Almarcegui, Lothar Baumgarten, Joseph Beuys, Center for Land Use Interpretation, Agnes Denes, Mark Dion, Anya Gallaccio, Tue Greenfort, Hans Haacke, Henrik Håkansson, Harrison Studio, Robert Smithson, Simon Starling, Mierle Laderman Ukeles, etc.) S "Green Platform: Art, Ecology + Sustainability" Centro di Cultura Contemporanea Strozzi, Firenze, IT. S "Foodprint," Stroom, Den Haag, NL. (three-year public art project involves Nils Norman, Debra Solomon/Urbaniahoeve and Marjetica Potrč and Ooze working with local residents), S Field Work organise a march to protest environmental justice during COP15, Copenhagen, DK. S C Words: Carbon, Climate, Capital, Culture, organised by Platform for Arnolfini, Bristol, UK. S "Awakening-Reactivation," Świecie, PL. (includes interventions in urban public spaces by Artur Źmijewski and Julia Wójcik) S "Science: INSIDE [art + science]," Lisboa Biennial of Art, Cordoaria Nacional, Lisboa, PT. S "Re-think: Contemporary Art and Climate Change," Copis, Copenhagen, DK. (group show curated by Anne Sophie Witzke includes Eric Andersen, Lise Autogena, Olafur Eliasson, Kerstin Ergenizer, Thilo Frank, Jette Gejl, Tue Greenfort, Henrik Håkansson, Elin Hansdóttir, Haubitz + Zoché, The Icelandic Love Corporation, Tea Mäkipää, Cornelia Parker, Parfyme, The People Speak, Joshua Portway, Ruri, Tove Storck, Superflex, Fiona Tan) S "Earth: Art of a Changing World," Royal Academy of Art, London, UK. (group show includes Sophie Calle, Tracey Emin, Antony Gormley, Mona Hatoum, Gary Hume/Cape Farewell, Cornelia Parker, Pipilotti Rist, Keith Tyson among others) S Lois Weinberger exhibits *Laubreise*, a "living heap" of composting plant matter, collected from the Giardini and housed in a pavilion adjacent der Österreichischer Pavillon, La Biennale di Venezia, Venezia, IT. S herman de vries, "ambulo ergo sum," Galerie du CAIRN, Digne-les-Bains, FR. S "Deep Green," Den Frie Udstillingsbygning, Copenhagen, DE. (group show includes Tue Greenfort, Learning Site, and Åsa Sonjasdotter) S "All Creatures Great and Small," Zachęta Narodowa Galeria Sztuki, Warszawa, PL. S "Becoming Animal, Becoming Human," Neue Gesellschaft für Bildende Kunst, Berlin, DE. S Village Green, Parco Arte Vivente, Torino, IT. (group show includes Lara Almarcegui's excavation)

2010

Pierre Huyghe installs *La Saison des Fêtes (The Season of Holidays)*, a circular flower bed divided into 12 wedges to reflect monthly plants, in the Palacio de Cristal, Parque de El Buen Retiro, Madrid, ES. S "Raumsichten" rejects Lara Almarcegui's proposal to protect a parcel of wasteland, Nordhorn, DE. S Nils Norman works with Stroom and stakeholders to create *Eetbaar Park*, 2 permaculture farms, Den Haag, NL. S Debra Solomon founds Urbaniahoeve to show how to grow free food for all, Amsterdam Noord, NL. S opensourcefood begins foraging workshops for asylum seekers inhabiting Red Cross Centre Kongelunden, Dragør, DK. S 431art invite people for *Schmeck die Heimat* (Taste the Homeland), an opportunity to sample various public waters each treated with local supersonic urban sounds. Schöppingen, DE. S Susanne Lorenz installs *Beautiful Line*, a bio-filtration system in cooperation with biologist Dr. Stephan Pflugmacher, Die Seseke, DE. S Fernando García-Dory initiates *Inland*, a three-year project focused on rural life. S Myvillages host an "Images of Farming Conference," Städtische Galerie Nordhorn, DE. S Annechen Meier initiates *Panderplein Project*, unearthing a 1250 m² allotment garden on a public square, Den Haag, NL. S Annechen Meier installs a bus shelter covered in Hedera to clean diesel particulates from air. Pécs, HU. S Cecylia Malik builds a boat and rows it across six local rivers, documenting their health along the way, Kraków, PL. S Gilles Clément installs *Jardin Mandala* atop Parco Arte Vivente, Torino, IT.

'10

2010

Harrison Studio, *Landscape as an Idea: Projects and Projections, 1960-80*, KM Kulturunea Erakustaretoa, San Sebastián, ES. S "In Between-Displaced Harmonies, Dissonant States," Pécs, HU. (Group show included Annechen Meier) S Natura e destino, Galleria Riccardo Crespi, Milano, IT. S "The Art of Urban Ecology," Berlin University of Technology, Berlin, DE. S "Gentle Actions –art, ecology and action," Kunsternes Hus, Oslo, NO. S "Künstlergärten in WeinGarten," Stuttgart, DE. S "Awakening 20.10," Świecie, PL. (interventions in urban public spaces) S "Garten," Anke Mellin curator, Nerotal Park, Kulturmuseum der Landeshauptstadt Wiesbaden, DE. (group show includes living sculptures by Veronika Fass, Annechen Meier, and Kerry Morrison) S "Über Wassen gehen," Kamen, DE. (featured artists' initiatives to clean water sources) S "Emscherkunst 2010," Essen, DE. (art in the public sphere triennale includes Ns's *Walking House* and Marjetica Potrč/Ooze's community garden) S "Danmark 2010–Instructions to the Nation of the 'Happiest People in the World,'" Overgaden, Copenhagen, DK. (Group show includes Åsa Sonjasdotter's A Biological Relationship) S Lois Weinberger, (re)designing nature: current concepts for shaping nature in art and landscape architecture, Künstlerhaus Wien, Wien, AT. (Travels to Städtische Galerie Bremen, DE) S "Animal Politique," Frac Poitou-Charentes, Angoulême, FR. S Brandon Ballengée, Praeter Naturam, Parco Arte Vivente, Torino, IT.

2011

Lois Weinberger situates a "wild cube" adjacent zier Haus: Museum Moderner Kunst, Wien, AT. § Nils Norman is named lead artist for Trumpington Green Corridor 2011-2018, Cambridge, UK. § N55's *Walking House* and *Public Rover* take walks during "One City Campaign," København, DK. § N55 introduce *Spaceplates* Greenhouse prototype during "One City Campaign," København, DK. § N55 initiate a *Communal Bakery* in Rotterdam, NL. § Marjetica Potrč and Ooze implement *Théâtre Evolutif*, Saint-Michel neighbourhood, Bordeaux, FR. § Herman de vries' *bomenmuseum* (400 species) is finally completed in Wateringse Veld, NL. § Nis Rømer initiates *Plant Nursery*, København, DK. § Cold Coast Archive begin *Longing-Fast Forward* a long-term registration of change in Greenland. § Jodie Baltazar founds Pixxe to transform public or neglected spaces into socially useful ones, PL. § For "Vorratskammer/Pantry," Myvillages grow hundreds of hydroponic lettuce heads in the pool in front of Haus der Kulturen der Welt in order to produce food and drink for 8000 festival goers, Berlin, DE. § Ugo La Pietra returns to collages that explore city planners' impacts on the public, Milano, IT. § Studio Orta presents an experiential meal to tie cancer prevention to agricultural solutions, Fondazione Umberto Veronesi, Milano, IT. § Cecilia Malik and Justyna Koeke organise *Alcon Blue Collective* to protest a development planned to be built along the migration route of European Blue Butterfly, Zakrzowek, PL. § Bigert & Bergström invent *The Tornado Stopper*, based on Russian scientist Vladimir Pudov's theory. Working with Canadian meteorologist and storm chaser Mark Robinson, they track tornados in the mid-west, and attempt to divert them with electric magnetic fields, resulting in an hour-long documentary.

2011**2011**

"Nutzliche Natur," "Die Landwirtschaft im Blick der Kunst (Useful Nature: Agriculture Viewed Through Art)," Kunstmuseum Hohenkarpen, Hofgut Hohenkarpen, DE. § "Ethics/Aesthetics," AAO, Athens, GR. § "Animal Kingdom-There Was an Old Lady Who Lived in the . . ." Schinkel Pavillon, Berlin, DE. § Åsa Sonjasdotter, "Mobil Gardening," Prinzessinnengarten, Berlin, DE. § Lois Weinberger, "Belvedere Wien," zier Haus: Museum Moderner Kunst, Wien, AT. Weinberger installs a *Wild Cube* out front. § "Imagine: Towards an Eco-aesthetics," Århus Kunstrygning, DK. § "Eco-Art," Pori Art Museum, Pori, FI (group show includes Jan-Erik Andersson, Christo & Jeanne-Claude, Agnes Denes, Chris Drury, Andy Goldsworthy, and Nils Udo). § Søren Dahlgaard, "Growing Vegetables on a Coral Island," Århus Kunstrygning, DK. § "Über Lebendkunst," a festival of culture and sustainability, Haus der Kulturen der Welt, Berlin, DE. § "Contemporary Art in Public Space," curated by Publik, København, DK. § Søren Dahlgaard, "Hibahidhoo," Galleri Image, Århus, DK. § Ecoaesthetics annual focus, Århus Kunstrygning, DK. § Emanuela Ascarì, "Habitat," Museum of Industrial Heritage, Bologna, IT (Ascarì collects rubble and decaying construction materials from the dump and exhibits them as historical matter). § "Farming the City," Amsterdam Centre for Architecture, Amsterdam, NL. (group show includes Urbaniahoeve's *The Shipwreck Contains the Ship*) § "Spoor," Borgloon, BE (outdoor exhibition includes Vera Thaens' *Survival Unit*). § Sanni Seppo and Ritva Kovalainen, "Koltainen Metsä" (Golden Forest), Taidemuseo Tennispalatsi, Helsinki, FI. § Eduardo Kacs, "Living Works," Parco Arte Vivente, Torino, IT.

2012

MyVillages start working with *Eco-nomadic School* (formerly Rhizom), enabling knowledge sharing amongst European rural communities (RO, UK, DE and FR). § Marie Markman creates *Et Spiseligt Landskab* (Edible Landscape), Aarhus, DK. § Finnish Society of Bioart organises "Prime Materia," a collaboration between four artists and three research groups at the University of Helsinki, FI. § Lois Weinberger exhibits a garden featuring hundreds of buckets of locally-gathered soil. § Nicolás García Uriburu colours die Weser green to protest its poor health, Weserburg, DE. § Maria Thereza Alves and Gitta Gschwendter officially launch *Seeds of Change: A Ballast Seed Garden for Bristol*, Bristol, UK. § George Steinmann designs *Mittendrin am Rande*, a walk-in sculpture, Isle of Vilm off Rügen, DE. § Nance Klehm and Jodie Baltazar lead workshops to train community gardeners for Soil Garden, Warszawa, PL. § Michael Singer leads *The Edge*, a series of public conversations including four workshops leading over 500 participants to discuss how to make Refshaleøen Peninsula productive, København, DK. § Marjetica Potrč and Ooze build a constructed wetland to clean water pooling on a former Shell Oil industrial site, Bruxelles, BE. § Marjetica Potrč and Ooze initiate *The Public Space Society*, Zürich West, CH. § Cecilia Malik launches Critical Water Mass, an annual river festival, Kraków, PL. § N55 install their large-scale *SPACEPLATES GREENHOUSE*, Bristol, UK. § N55 present *XYZ SPACEFRAME VEHICLES* in Dundee, UK. § Camilla Berner introduces *Species Plantarum: Tingbjerg*, Tingbjerg, DK. § Vera Thaens installs *7.1* a sustainable enterprise, on Sint Martinplein, Sint Truiden, BE. § Studio Orta exhibits *Ortawater-Purification Factory Huang Pu River*, 9th Shanghai Biennale, Shanghai, CN. § Studio Orta hoists 44 *Antarctica Flags* over the Southbank Centre as part of the Festival of the World, London and the Queen's Diamond Jubilee, UK.

'12**2012**

The Ends of the Earth: Land Art to 1974, Museum of Contemporary Art, Los Angeles, US. (group show includes Lothar Baumgarten's *Conservatories (Guyana)* 1969-1972, Agnes Denes, Hans Haacke) § dOCUMENTA(13), Ottoneum Naturkundemuseum, Kassel, DE. (features AndAnd tea garden, Claire Pentecost's soil ingots, Mark Dion's wood samples, Amar Kanwar's Indian rice collection, Christian Philipp Müller's swiss chard seed collection). § "Food Forward," curated by Karen Verschooren, Stroom, Den Haag, NL. § "Take Part: ArtReach- Art and the Institution in the Age of Participation," Nikolaj Kunsthall, København, DK. § "Colosseum of the Consumed," Grizedale Arts Frieze Project, Frieze Art Fair, London, UK. (includes MyVillages' beverages) § Cold Coast Archive, "Future Artifacts from the Svalbard Global Seed Vault," Center for PostNatural History, Pittsburgh, US. Travels to Rom 8, Bergen, NO. § "The Politics and Pleasures of Food," Galerie ACC Galerie, Weimar, DE (group show includes Åsa Sonjasdotter and Fernando García-Dory). § "Awakening-Before the End of the World," Elbjørg, PL. (interventions in urban public spaces) § "Tenderness of Being," Toruński Wozowni, Wozowni, PL. § Piero Gilardi: Collaborative Effects, Castello di Rivoli, Torino, IT. Travels to Van Abbemuseum, Eindhoven, NL and Nottingham Contemporary, Nottingham, UK. § dOCUMENTA(13), Fridericianum Kassel, DE. (features Kristina Buch's butterfly garden, Tue Greenfort's *The Worldy House*, Jimmie Durham's *Arkansas Black Apple Tree* and *Korbinian apple tree*, Fernando García-Dory's *A Shepherd Assembly*, Christian Philipp Müller's swiss chard seed bridge, Song Dong's *Doing Nothing Garden*, Korbinian Aigner's apple drawings, Lara Favaretto's upcycled heap, and Pierre Huyghe's *Untitled*) § "Reflections on Mother Earth, Agriculture and Nutrition," Musée Ariana, Geneva, CH. Travels in 2013 to Spazio Oberdan, Milano, IT; in 2014 to SESC São Paulo, BR; and in 2014 to Museum of Civilisations from Europe and the Mediterranean, Marseilles, FR. § "Hungry City: Agriculture and Food in Contemporary Art," Kunstraum Kreuzberg, Berlin, DE. (group show includes works by Jekaterina Anzupova, KP Brehmer, Agnes Denes, Fernando García-Dory, Tue Greenfort, Kultivator, Kristina Leko, MyVillages.org, Heinrich Riebesehl, Antje Schijfiers & Thomas Sprenger, Lukasz Skapski, Åsa Sonjasdotter, Daniel Spoerri/Tony Morgan, and Insa Winkler) § Lois Weinberger, *Garden*, 1994/2012, Gare de Rennes, Les Prairies Biennial d'Art Contemporain, Rennes, FR. § "Contract Killer," Atlas Sztuki, Łódź, PL. § Søren Dahlgaard, "Seeing is Believing," Viborg Kunsthall, Viborg, DK. § Søren Dahlgaard, "The Farm," Maldives National Art Gallery, MV. § "Green Jazdow: CCA On the Grass" (Zielony Jazdów), Centrum Sztuki Współczesnej Zamek Ujazdowski, Warszawa, PL. (Outdoor works include Rirkrit Tiravanija's festival pavilion and Juliette Delventhal and Paweł Kruk's *We're Like Gardens*, a permaculture garden sited in front of AIR Laboratory)

2013

Lara Almarcegui proposes *Abandoned River Park* to protect massive tract of wasteland. León, ES. \$ N55 launch XYZ OPEN CITY, an open-source, modular system for facilitating shared functions in public space. Groningen, NL. \$ Fritz Haeg plants an edible estate with 20 school kids in Aarhus, DK. \$ N55 test four-part human-powered mobile gardens for PARKCYCLE SWARM, Copenhagen, DK. \$ N55 present their research on SPACEPLATES at International Conference Structures and Architecture, University of Minho, Guimarães, PT. \$ Marjetica Potrč and Ooze launch *The Commons Project*, Den Haag, NL. \$ Teresa Murak begins constructing *Materia* (Matter) adjacent Centrum Sztuki Współczesnej Zamek Ujazdowski, Warszawa, PL. \$ Emanuela Ascani places 33 letters for *Ciò Che è Vivo Ha Bisogno Di Ciò Che è Vivo* (What is Alive Needs What is Alive) along the route from FR to IT. \$ Cecilia Malik hangs blue braids from a tower in the main square, inspiring the government to save Białka River from overdevelopment, Kraków, PL. \$ Studio Orta presents their largest, 70 x 70 m *the Meal Act XXXVI*, Mural Arts Program, Philadelphia, US.

'13**2013**

"Environments and Counter-Environments," curated by Peter Lang, Luca Molinari, and Mark Wasuta, Graham Foundation, Chicago, IL. \$ Behind the Green Door: Architecture and the Desire for Sustainability, Oslo Design Triennial, curated by Belgian design collective ROTOR, Oslo Design Triennial. (analysed 600 objects' claims of being "sustainable") \$ Søren Dahlgaard, Maldives Exodus Caravan Show (MECS), La Biennale di Venezia, Venezia, IT. Travels to Te Tuhi Arts Centre, Auckland, NZ, 2014; Silent Barn Art Center, Brooklyn, US, 2014; CCA Andratx, Mallorca, ES, 2014-2015; Federation Square, Melbourne, AU, 2015; Centrum Sztuki Współczesnej Łaznia, Gdańsk, PL, 2015; and Museum De Domijnen, Sittard, NL, 2017-2018. \$ "Space Odyssey 2.0," Z33, Hasselt, BE (group hack features Vera Thaens' water-purification plant) \$ "GMOs Kill Honey," curated by Łukasz Skąpski, Zachęta Narodowa Galeria Sztuki, Warszawa, PL. \$ "Ecology, Body, and Dance," curated by Maciej Łękowski, Centrum Sztuki Współczesnej Zamek Ujazdowski, Warszawa, PL. (Outdoor exhibition includes Elżbieta Jabłońska, Franciszek Starzewski, Franciszek Orłowski, Teresa Murak, and others) \$ Lara Almarcegui, Pabellón Español, La Biennale di Venezia, Venezia, IT. \$ "Animal Planet," Galeria Arsenat, Bialystok, PL. \$ Cecilia Malik, "Rezerwat Miasto" (The City Reserve), Bunker Sztuki Gallery, Kraków, PL. \$ "Sustainable Art- sztuka wobec potrzeby zrównoważonego rozwoju," Studio BWA, Wrocław, PL. \$ "Leap Across the Elbe," International Building Exhibition, Hamburg, DE. \$ documentation from Joseph Beuys' "Gesamtkunstwerk" 30 years after he first proposed it. \$ "Yes, Naturally: How Art Saves the World," Gemeentemuseum, Den Haag, NL. \$ "Emscherkunst 2013," Essen, DE. (art in the public sphere triennale includes Tue Greenfort, Galerie für Landschaftskunst and Tomás Saraceno) \$ "Awakening," Elbląg, PL. (Interventions in urban public spaces includes Parque nō) \$ Patricia Johanson, "The World as a Work of Art," Museum Het Domein, Sittard, NL. \$ "Participate: Baku Public Art Festival," Baku, AZ (group show includes N55 Parkcycle Swarm) \$ MyVillages, "Trade Show," Eastside Projects, Birmingham, UK. \$ Fernando García-Dory, "A Farm on the Countryside in the City," Tenta Konsthall, Stockholm, SE. Michel François, "8ème Biennale d' art contemporain," Louvain-la-Neuve, BE

2014

Olafur Eliasson uses Icelandic sheep wool to make *Mat for Multidimensional Prayer*, Ed. 24. \$ Marjetica Potrč and Ooze install *The Wind Lift* affording a harbour view from 25 m, Folkestone, UK. \$ George Steinmann launches his growing sculpture *The Prix Thun für Kunst und Ethik*, an annual CHF 25,000 art prize, Thun, CH. \$ Artists begin gardening in abandoned plot adjacent historic Finnish Houses to prevent city from tearing them down, Warszawa, PL. \$ Urban gardening evangelist Elżbieta Jabłońska leads Nieużytki Sztuki (Wasteland Art), urban farming opportunities sited alongside nine Polish cultural institutions, from Gdańsk to Wrocław, PL. \$ Katie Paterson plants *Future Library*, 1000 trees that will provide the paper for texts from famed authors to be published 100 years after being penned, Nordmarka Forest, Oslo, NO.

'14**2014**

Welcome to the Anthropocene: The Earth in Our Hands, Deutsches Museum, Berlin, DE. \$ Museum of Arte Útil, organised by Tania Bruguera, Van Abbemuseum, Eindhoven, NL. (archive of 500 practical projects. Forty such as Dahlgaard's Maldives farming experiment, explore environmental issues) Travels to Muzeum Sztuki Nowoczesnej w Warszawie, Warszawa, PL. \$ "Still," curated by Czakalska + Golec, Galeria Monopol (group show featuring Performance). \$ "Dirt Dialogues: An Integrated Art Program," 20th World Congress of Soil Science, Jeju, KO. (Alexandra Toland presents 36 artists' posters). Travels in 2015 to CREATE Centre, Bristol, UK. \$ "Green Market," Centrum Sztuki Współczesnej Zamek Ujazdowski, Warszawa, PL. (outdoor exhibition curated by Jota Castro). \$ "Biotopes" (includes les fujak and 43 artist), Internationales Waldkunst Zentrum, Darmstadt, DE. \$ herman de vries, ISRIC World Soil Museum, Wageningen, NL. \$ Maria Thereza Alves, "The Long Road to Xico, 1991-2014," Centro Andaluz de Arte Contemporáneo, Sevilla, ES. \$ Brandon Ballangé, "Seasons in Hell," Museum Het Domein, Sittard, NL. \$ Ecce Animalia, Muzeum Rzeźby Współczesnej and Centrum Rzeźby Polskiej w Orlisku, Orlisku, PL. \$ "Call and Response: George Steinmann im Dialog," Kunstmuseum Thun, Thun, CH. \$ The Yes Men, "Out-Smarting Capitalism," Museum Het Domein, Sittard, NL. \$ "Vivre(s)," Château de Chamardane, Domaine de Chamardane, FR (group show includes María Thereza Alves, Fernando García-Dory, Futurefarmers, Harrison Studio, Asa Sonjasdotter...) \$ Ugo La Pietra, Progetto disequilibrante, Triennale di Milano, Milano, IT. \$ Vegetation as a Political Agent, Parco Arte Vivente, Torino, IT. (group show includes Marjetica Potrč, Critical Art Ensemble, Fernando García-Dory, and Claire Pentecost.)



2015

herman de vries installs *natura mater*, a sanctuary in Lazaretto Vecchio, Venezia, IT. \$ Guerrilla gardeners Richard Reynolds and Vanessa Harden seed-bomb *Empty Lots* soon after Abraham Cruzvillegas installs it at Tate Modern, London, UK. \$ Platform London invites people to seed-bomb Cruzvillegas' *Empty Lots* as part of the Deadline Festival held at Tate Modern, London, UK during COP21 in Paris, FR. \$ Marjetica Potrč and Ooze create a naturally-filtered pool, *Of Soil and Water: King's Cross Pond Club*, London, UK. \$ Strategy to save Finnish Houses in Jazdów neighbourhood works, so 25 artists join together to rent more land for *Hoe and Sun Community Garden*, Warszawa, PL. \$ Agnes Denes grows *Wheatfield* on a public park, destined to be a Library of Trees, Porta Nuova, Milano, IT. \$ Pope Francis issues encyclical *Laudato si*, "Praise be to you-On Care For Our Common Home"

2015**2015**

Asa Sonjasdotter, "Tote Wespen Fliegen Langer (Dead Flies Fly Further)," Berlin Museum für Naturkunde, Berlin, DE. \$ "Ziemia (Earth), Muzeum Współczesnej Wroclaw, Wrocław, PL. \$ Pierre Huyghe, Roof Garden Commission, Metropolitan Museum of Art, New York City, US. \$ herman de vries, "to be all ways to be," Nederlands Paviljoen, La Biennale di Venezia, Venezia, IT. \$ Koen Vanmechelen, "This is Not a Chicken," Museum De Domijnen, Sittard, NL. \$ "Deep Roots," Falmouth Gallery, Exeter, UK. (group exhibition curated by Clive Adams, features Paolo Barrile, Andy Goldsworthy, Chris Drury, Richard Long, Sandra Masterson, Ana Mendieta, Daro Montag, David Nash, Claire Pentecost, herman de vries, Peter Ward, and Adam White) Travelled around UK. \$ "Young Shoots," curated by CCANW, CREATE Centre, Bristol, UK. Travelled around UK. \$ Abraham Cruzvillegas, *Empty Lots*, Tate Modern, London, UK. \$ Koen Vanmechelen, "Awakener/Lifebank," Palazzo Franchetti, Venezia, Restaurant B, and Fondazione Berengo, Murano, IT. \$ Søren Dahlgaard, "Growing Vegetables on a Coral Island Hibernalidhoo," CCA Andratx, Mallorca, ES. \$ Art+Climate=Change Festival, Melbourne, AU. \$ Basia Irland, "A Retrospective Exhibition," Museum De Domijnen, Sittard, NL. \$ Platform London hosts 3-day "Deadline Festival" regarding "art, climate, empire and oil" so as to interrogate BP museum sponsorship, Tate Modern, London, UK. \$ "The Touch," UP Gallery, Berlin, DE. (Group show included Czekalska + Golec and Murak) \$ "Urban Organisms," Newbridge Project, Newcastle, UK. (group show includes Nss) \$ "City Camping" situation on the banks of the Seine, Paris, FR. (Nss exhibit three habitable projects). \$ "Be-diversity: Art and Science at MUSE," Science Museum of Trento, Trento, IT. (group show includes Åsa Sonjasdotter, Wim Delvoye, Oliver Ressler, and many more) \$ ARTCOP21, 150 exhibitions across the globe to lend attention to COP21, Paris, FR. \$ "Solutions2," Group exhibition presents Studio Orta's *World Antarctica Passport Bureau*, George Steinmann's *Symbioses of Responsibility*, Barthélémy Togou and Olafur Eliasson's *Little Suns*, Grand Palais, Paris, FR. \$ "Jazdów Archipelago," Centrum Sztuki Współczesnej Zamek Warszawa, PL. \$ Debra Solomon and Jaromil, "Entropical," Het Glazen Huis, Zone2Source, Amstelpark, Amsterdam, NL. \$ "Grow it Yourself," Parco Arte Vivente, Torino, IT. (group show includes Futurefarmers, Piero Gilardi, MyVillages, Fernando García-Dory, and Emanuela Ascarí)

2016

Olafur Eliasson tries to convince Versailles Greenhouse gardeners to uses glacial moraine dust from Greenland as a soil fertiliser. \$ Art book publisher Phaidon issues *Studio Olafur Eliasson: The Kitchen*, communal dining recipes. \$ Hoe and Sun Community Garden opens the School of Urban Gardeners and is awarded second place in the category of "food justice" by International Network for Urban Gardening, Warszawa, PL. \$ Katie Paterson (in collaboration with Zeller & Moye Architects) uses 10,000 tree species to construct *Hollow*, Royal Fort Gardens, University of Bristol, Bristol, UK. \$ Cecilia Malik helps protestors paint colourful discs that champion the Puszca Białowieska, Kraków, PL. \$ Steel box containing Norwegian swamp soil is transported to Polska for Teresa Murak's survey. 

'16**2016**

"Up in the Air," Stuk, Leuven, BE. (group show includes Amy Balkin, Bigert & Bergström, Laurent Grasso, James Turrell, and others) \$ "Honeyscribe: Bees and the Art of Pollination," Spacex Gallery, Exeter, UK. (12 UK artists) \$ AndAndAnd, Kunstmuseum Leipzig, DE. \$ "a due: Arte Contemporanea in Italia e Belgio: 1990-2016," Istituto Italiano di Cultura; Bruxelles, BE. (two-person show features Margherita Moscardini and Futurefarmers) \$ "Emscherkunst 2016," Essen, DE. (art in the public sphere triennale includes Henrik Hökansson, *Insect Societies* and SUPERFLEX, *Waste Water Fountain* in the middle of the river) \$ "The Urban Garden Jazdów," Centrum Sztuki Współczesnej Zamek Ujazdowski, Warszawa, PL. (outdoor exhibition) \$ "What is Waste?" (group show includes works by Dianna Cohen, Maarten Van den Eynde, Ryoei Kawanishi, Jan Eric Visser, herman de vries, and Izaak Zwartjes). \$ "Sublime: The Tremors of the World," Pompidou-Metz, Metz, FR. (group show features works by 85 artists including Amy Balkin, Lewis Baltz, Joseph Beuys (and Gianfranco Gorgoni), Edward Burtynsky, Christo and Jean-Claude, Agnes Denes, Laurent Grasso, Peter Hutchinson, John Latham, Gordon Matta-Clark, Ana Mendieta, Richard Misrach, Isamu Noguchi, Gina Pane, Giuseppe Penone, Hiroshi Sugimoto, and Robert Smithson and 68 others) \$ "Live Uncertainty," São Paulo Bienal, São Paulo, BR. (group show features works by Maria Thereza Alves, Victor Grippo, Pia Lindman, among others) \$ "Into Nature art expedition," Nature Art Biennial, provincie Drenthe, NL (group show features works by Taturo Atzu, Sjoerd Buisman, Mark Dion, Paul de Kort, Wolfgang Laib, Dennis Oppenheim, Robert Smithson, and herman de vries) \$ "Jardin Essentiel," Park Duden, Bruxelles, BE (group show features works by EM) \$ Teresa Kazimiera Murak-Rembielińska, "Załączna Narodowa Galeria Sztuki, Warszawa, PL. \$ "Earthrise: Visioni pre-ecologiche nell'arte italiana (1967-1973)," Parco Arte Vivente, Torino, IT (group show includes Gianfranco Baruchello, Piero Gilardi, Gruppo 9999, and Ugo La Pietra) \$ "ecologEAST: Arte e Natura al di là del Muro," Parco Arte Vivente, Torino, IT; (group show includes Teresa Murak) \$ "Un Art Pauvre," Centre Pompidou, Paris, FR. (group show includes Ugo La Pietra, "I Gradi di Liberta: 1966-2016," MA+GA Museum, Gallarate, IT).

'17

2017

Joseph Beuys, "La Tenda Verde" (Das Grün Zeit) Parco Arte Vivente, Torino, IT. § documenta 14 Kassel, DE and Athens, GR. (group show features works by Rasheed Araeen and Lois Weinberger among others). § La Biennale di Venezia, Venezia, IT. § "Antarctic Pavilion," La Biennale di Venezia, Venezia, IT. § Sharjah Biennial 13, exhibition centres around water, crops, earth, and culinary, Ramallah, PS; Dakar, SN; Beirut, LB; Istanbul, TR; and Sharjah, AE. § Poëzie Museum, conceived by International Silence, opens, Museumplein, Amsterdam, NL. § "Hybris," Museo de Arte Contemporáneo de Castilla y León, León, ES (group show includes Harrison Studio, Fernando García-Dory, Basia Irland, Patricia Johanson, Teresa Murak, Katie Paterson, Herman Prigann, and scores more). ☀

'18





Glossary

abiotic / part of the environment including temperature, humidity, light, altitude, and chemical make up. These factors limit the types or organisms living there.

algal bloom / fast-growing microscopic, single-cell algae, as opposed to beneficial blue-green algae that block out light and kill water life, and alter marine habitat.

aerobic decomposition / recycled plant waste, bio-solids, fish and other organic matter.

anaerobic digestion / bacteria's converting organic matter into combustible biogas.

annuals / plants that need to be replanted every year.

anthropogeomorphology / the study of man-made land forms.

aquaponic / cultivation of plants in water using fish waste to nourish plants.

aquatic / pertaining to water, commonly fresh water or dwelling in fresh water.

autotrophs / organisms that produce organic material from inorganic material by outside energy, such as plants with chlorophyll and some types of bacteria.

available sunlight / each plant's requirement, as well as a particular spot's daily access.

biodiversity / the variability of living organisms from all sources, including intra- and inter-species diversity.

biodynamic farming / farming practices based on the teachings of Rudolf Steiner.

biodynamic preparations / nine distinct preparations ranging from burying a cow horn filled with manure (#501) to burying a deer bladder stuffed with yarrow blossoms (#502) to burying a domesticated-animal skull filled with oak bark mulch (#505).

bio-intensive farming / farming practices based on the teachings of Masanobu Fukuoka.

biomass / total amount of living organic material in an ecosystem. Biomass spurs nutrients and suppresses weeds. When cover crops are turned into the soil, rather than mowed, microbial life is encouraged, providing food sources for organisms and small animals.

biomass heating systems / energy harvested from plants.

biosolids / solid by-products of waste water treatment processes.

biosphere / where living species are found, within a few meters of the earth's surface, in soil, water, or the atmosphere.

biotic / living part of the environment, including plants, animals, and microbes.



bog / a thick mat of sphagnum moss encircling or covering a small lake or pond containing cranberry, Labrador tea, and bog laurel.

brown compost / compost made from papers, leaves, sawdust, straw and bark.

brownfields / post-industrial sites; abandoned or degraded sites, left over from industry.

carbon cycle / process by which carbon circulates through the environment. Carbon is part of carbohydrates, proteins and fats. Plants absorb carbon from the atmosphere, which is changed into carbohydrates via photosynthesis, and eaten by animals. Animals release carbon through respiration or decomposition, when plants or animals die.

carbon footprint / how much carbon-releasing energy is required for a particular entity.

carnivores / animals that eat other animals. If they feed on herbivores, they are called first-order carnivores. Second-order carnivores feed on other carnivores.

carrying capacity / the maximum population of an individual plant or animal species that the community can support.

cellulose / a complex carbohydrate making up a major part of plant cell walls.

channelisation / lining rivers with concrete. Originally done to protect watersheds from toxins, channelisation hastens flooding as there is no longer soil or plants to absorb excess water.

chinampa system / originally an Aztec farming system based on “floating gardens,” but now a system of directing seasonal water and storing it in trenches to create a farmable wetland.

chlorophyll / the green pigment of plants that converts light energy into chemical energy. See photosynthesis.

chloroplast / the tiny spheres in plant cells that contain chlorophyll.

clean-air experts / specialists that improve ventilation, thermal comfort.

community art / art produced with a particular community in mind.

companion planting / plants grown together to promote one another's healthy development.

compost / organic material that has been broken down by microorganisms into a dark, carbon-rich material that nourishes and properly structures the soil.

composting / rejuvenating the dead refuse of once living matter into growing.

coniferous / cone-bearing trees or bushes such as evergreen, needle-leaved or softwood trees, and many tropical trees. Leaves remain on the tree for two or more years.

consumers / any organism that feeds on other plants or animals. Also called heterotrophs, which means other feeders.

conversational drift / an open dialogue that inspires imaginative ideas, brainstorming.

cover crops / using edible crops with deep taproots increases amount of air pore space, improves water penetration and improves soil structure. Non-edible cover crops include winter rye, winter wheat, buckwheat and vetch.

crop rotation / not planting the same crop in the same location year after year.

CSOs / combined-sewer overflow; the effect of the sewers, whose pipes follow the river's contour, overflowing into a waterway and vice-versa. Caused by silting and excess water entering both systems at accelerated rates during rainstorms.

culvert / a sewer or drain running under a road or embankment.

daylighting / returning streams from underground pipes to the open air, where sunlight activates microbial communities, providing sustainable water quality benefits.

decomposers / organisms, usually bacteria and fungi, that get energy from breaking down dead organic matter into simple but useful substances.

deciduous / broad leaf or hardwood trees, leaves stay on tree for one growing season, change color in the fall and are shed for winter.

decomposers / organisms, usually bacteria and fungi that get energy from breaking down dead organic matter into simple but useful substances.

decoy crops / attract pests so that they can be destroyed before they attack.

detritus / decaying organic debris that forms silt like layers on the floor of the wetland, and creates a food base in streams.

do-nothing farming / Masanobu Fukuoka's initial approach, which anticipated the permaculture movement.

E and R ratings / ratings that describe the eco-efficiency of building materials.

ecology / the study of how plants and animals interact in light of their environment.

ecological niche / lifestyle unique to a species of plant or animal. Includes food chain, relationship to habitat, adaptations to ecosystem, and daily and seasonal activities.

ecosystem / living (biotic), and non-living (abiotic) parts of the environment. Includes plant and animals, as well as chemicals, and climate.

ecosystem functioning / the view that species diversity indicates ecosystem stability.

edible landscape / using edible plants to connect people to the land via foraging activities.

emergent / plants with root systems submerged in water.

environment / external factors that an organism is exposed to, including living and non-living factors.

Eutrophication / process by which a wetland becomes overloaded with mineral and organic nutrients (disturbed soil or animal waste run-off), thus reducing the oxygen.

evapotranspiration / plants cool the air by releasing water vapors through their leaves.

farm rows / the way plants are organised in the ground.

flow forms / objects placed in rivers to stimulate river's flow and aerate via movement.

fodder / grains, cereals and dried hays fed to farm animals.



food chain / transfer of energy cycle from one organism to the next. This chain starts with the Sun's energy, then to the plants, then to animals.

food desert / neighbourhoods lacking access to fresh food.

food pyramid / estimate of energy available at each feeding level shown in pyramid diagram. The energy amount is measured by weighing plants and animals at each level.

food security / the continued availability of food.

food self-reliance / one's capacity to access and/or provide food for oneself.

food web / diagram showing all feeding relationships in a given community.

free-range / animals that move about a field foraging for their own food.

global warming / the heating of the planet due to excess energy use and hot gases.

grass fed / animals whose diet is restricted to grass rather than grains like corn.

green compost / compost made from vegetables, coffee, fruits and manure.

greenhouse effect / the heating of the atmosphere due to solar radiation's being trapped in ozone, water vapors and carbon dioxide in the earth's atmosphere.

greenhouse gases / carbon dioxide (CO_2), methane (CH_4), Nitrous Oxide (N_2O), and Chlorofluorocarbons.

green-minded "carpenters" / carpenters who use clean construction processes and non-toxic materials that are often recyclable. One alternative to standard dry wall is a formaldehyde-free biocomposite made from soybeans and recycled newspaper.

green roofs / self-sustaining shallow (3-30 inches of soil) gardens (usually an alpine ecosystem which endures harsh weather conditions) placed on a building's roof to reduce urban heat in summer and insulate in winter. Roofs typically reach 80 degrees Celsius in summer, adding 27 degrees Celsius to the city's temperature and cooking the pollution. Green roofs not only extend a typical roof's life from 15 years to 40-100 years, but they reduce runoff by absorbing 58-71% of the storm water and decrease a building's energy use enough to cover the initial $\text{€}115\text{-}175/\text{m}^2$ investment in two-three years. A feasible roof must be rated for at least $74\text{kg}/\text{cm}^2$.

green manure / a crop grown (usually cover crops) and then incorporated into the soil to increase fertility and organic matter content.

green space / public space that is scaped with plants, not concrete.

greenwashing- non-green industries support green projects to alter their public image.

ground water- water which flows underground and keeps wetlands wet and streams flowing during droughts.

guilds / any group of species that work well together, as they exploit the same resources.

habitat / place where an organism lives.

harmful gas emissions / those like carbon dioxide, sulfur dioxide, nitrous oxide (NO_x).

herbivores / animals that feeds on plants. Herbivores are at the second level in the food chain. They have specialized digestive tracts to convert plant fiber into energy.

heterotropic / organism that cannot produce its own food. All animals obtain their food, directly or indirectly, from plants.

horizon / a layer of soil that runs parallel to the surface. Different levels have different degrees of organic matter, the richest being the top layer, or topsoil.

humus / decaying organic matter, usually dark in color and rich with nitrogen.

hyperaccumulators / plants that selectively absorb and contain large amounts of metal or minerals in their vascular structure.

hardening off / transitioning plants between the warm greenhouse to unsheltered garden spots.

hay / grasses that have been mowed and dried for animal feed.

hoop greenhouse / also called a hoophouse, a low-impact, temporary greenhouse that can be easily assembled.

horticulture / the science of cultivating fruits, vegetables, flowers and plants.

humus / a dark-colored stable form of organic matter that remains after most of the plant and animal residues in it have decomposed.

hydroponic / the cultivation of plants in water containing dissolved inorganic nutrients.

invasive species / foreign plants that alter the balance of local plants and animals.

interplanting / planting smaller plants between larger ones or short-season crops next to long-season crops. Try beans with corn, chard and tomatoes or lettuce adjacent to broccoli.

lead poisoning / potential urban-farming problem discovered by soil testing.

leaf mould / decomposed leaves used either as mulch or to make compost.

LEED (Leadership in Energy and Environmental Design) certification / rating method created by US Green Building Council. Calculates environmental correctness and offers standards of achievement from certified to bronze, silver, gold and platinum (the top).

leases / recommended to protect investment of time and energy into a place.

lichen / a symbiotic relationship between two plants, a fungus which provides structure and a green or blue-green algae, which photosynthesizes and produces nutrients.

life process / factors that separate living from non-living things. Common life processes include eating and digestion of food, ability to sense change, respiration, growth, and reproduction.

loam / rich soil with moderate amounts of sand, silt, and clay.

low-till (no till) farming / farming techniques that minimise the disruption of topsoil.



Malthusian Theory / population grows geometrically, while food grows arithmetically.

methanogens / garbage-eating microbes.

mulching / using leaves, straw, bark chips or sawdust to retain moisture and prevent soil erosion.

native plants / local plants that sustain the balance of local animals and plants.

nitrogen cycle / nitrogen must be converted to nitrates for plant use. Nitrates are made either by bacteria in soil or in some select cases, by the plants themselves. Plants use nitrates to build plant tissue, which is then eaten by animals. When animals die and decompose, bacteria and fungi return the nitrogen back to the soil and the cycle starts again.

no-dig gardening / pioneered by Fukuoka in 1938 and two UK gardeners in the 1940s.

non-BGH milk / BGH stands for "bovine growth hormone." It kills bacteria, thus allowing cows to produce more milk.

non-point source pollution / less visible discharges, such as stormwater, rain, lawn and parking lot runoff that contribute to pollution.

no-work gardening / pioneered by American Ruth Stout as a way to plant without plows.

off-gasing / a by-product of every day solid materials that emit toxic substances.

omnivore / animals that eat both plants and other animals.

organic farming / chemical-free farming.

organism / a living creature such as a plant, animal or single celled organisms like bacteria.

ownership / best solution for permanent green space.

parasite / an organism that grows, feeds, and is sheltered on or in a different organism, while contributing nothing to host's survival.

parent material / rock that has been broken down by either physical weathering, chemical weathering, or biological weathering.

permaculture practices / "permanent agriculture," or farming after nature. Formalised in 1978 by Australian Bill Mollison, who worked with David Holmgren.

permaculture principles / 1) take care of the Earth, 2) Take care of the people and 3) Share the surplus.

perennial food-bearing plants / recurring plants whose deep roots absorb more moisture.

pH / stands for potential of Hydrogen, a measure of a solution's acidity (<7) or alkalinity (>7).

phosphorus cycle / phosphorus from rocks is broken down and dissolved in water. This phosphorus rich water is used by plants to build plant material which is in turn eaten by animals.

photosynthesis / the process by which green plants use chlorophyll to convert light energy, carbon dioxide and water into carbohydrates. Oxygen is the by-product created in this process.

point-source pollution / observable dumping practices (air, land or water discharges) that are currently regulated.

population / number of the same species that are living in the same area at a given time.

post-industrial sites / brownfields or sites degraded by industry, awaiting a new vision.

predator / a carnivore that feeds on live animals.

producers / plants, which are the only organism that can produce their own food.

Also called autotrophs or self-feeders.

public art / art that is visible and relevant to all.

3 Rs / reuse, reduce, recycle.

rainwater catchment / any number of strategies for harvesting and storing rainwater locally, before it enters stormwater systems or waterways.

raised beds / Developed by British horticulturalist Alan Chadwick in the '70s, raised beds help plants shoot deep roots into the soil to obtain moisture and nutrients resulting in higher yields, reduced water consumption, and fewer weeds.

reclamation / altering a site, so as to highlight particular attributes that are overlooked.

regenerative farming movement / practical methods for soil enrichment.

regenerative lifestyle / applying the notion of soil enrichment to every aspect of life.

renegade gardens / gardens that look like heck but provide plenty of habitat and nutrients for hundreds of species.

respiration / energy for growth and reproduction comes from burning a fuel, namely glucose (a

simple sugar). The by-product of cell respiration in plants is oxygen, and in animals it is carbon dioxide.

riparian zone / area of vegetation adjacent to a body of water that influences and is influenced by the water.

riprap / a loose assemblage of broken stones erected to form a foundation in water or on soft ground.

salmonid / a species of the family salmonidae, which includes salmons, trout, chars, and white fishes.

scavengers / animals that feed on dead plants or animals.

sick-building doctors / specialists in improving air delivery systems by detecting and eliminating off-gassing materials or toxin-emitting walls, counters, and floors.

single rows / normal way to plant tomatoes, eggplant, sweet corn and melons.

site access / one's plan for granting access to all of the gardeners, farmers and visitors.

site ownership / reduces the risk of one's efforts being erased overnight.

slag / a hard, gray, porous by-product of the steel industry (a.k.a. fly ash).

slope of the land / a factor that affects water flow and available sunlight.

soil / fine-rock particles (sand, silt and clay), organic matter, water, air, microorganisms and other animals. Although every farmer has his/her own "secret recipe" for soil, this "living organism" is



roughly 25% water, 25% air and 50% solid material, of which 5% is organic matter and 45% mineral.

soil condition / entails multiple factors such as pH, nitrogen, potassium and phosphorous levels.

soil erosion / soil depleted from land during due to digging or rain. Distributed via the watershed, dislocated soil risks to clog local waterways. Each year, a self-contained forest loses only 5 lb/square mile of soil, while a farm loses 50 lb/square mile, but a house undergoing construction loses 5000 lb/square mile.

SOM / sufficient amounts of organic matter to increase water and nutrient retention.

species / a group of similar organisms that have a shared origin and the ability to breed freely with one another.

slag heap (terril) / the waste remaining after land is crushed to extract metals.

succession / the gradual replacement of one plant community with another due to environmental changes.

sustainable materials / healthy, long-lasting and kind to those who use them, make them and live with them.

spacing / each plant has its own spacing requirements, which must be followed.

straw / dried grain used primarily for bedding, but sometimes fodder.

succession planting / planting summer or fall vegetables as cold-weather crops are harvested.

sustainable agriculture / optimizing resources (energy, soil, water, nutrients) to generate food. Aquaponics is current favorite, since it uses 80% to 90% less water than traditional gardening to produce abundant quantities of vegetables.

sustainable development / an oxymoron. The preferred term is "low-impact development," which attempts to minimise the exploitation of time, energy and available resources.

thinning / the removal of young plants to allow more space once seedlings get established.

three-sister garden / planting corn to provide structure for beans, beans to add nutrients to the earth and squash to provide ground cover and shade.

topsoil / rich layer of nutrient soil. It took thousands of years to build the prairies of the Great Plains, the rich layer of topsoil that produces the abundant crops of America's agricultural production. Composting enables this process to occur in a fraction of the time.

transpiration / the process by which excess water released by plants was water vapor from leaf pores.

transplanting / planting a seedling or sapling grown in a container into the earth.

trophic level / a species position in the food chain as determined by their place in the energy transfer in the ecosystem. Plants are first, as they derive their energy from the sun. Animals that feed on plants are second and animals that feed on other animals are the third.

turbidity / the level of suspended particulates in a waterway.

vacant lots / land that appears to be abandoned and unwanted until people start farming it.

value-based gardening / combining head, heart and hands.

verbal agreements / clear discussions of responsibilities is a must to clarify duties/goals.

vernal pools / aquatic spot where amphibians lay eggs.

VOCs / volatile organic compounds; primary contributors to off-gassing.

waste stream / total flow of residential and commercial solid waste (not including hazardous or industrial waste) that must be recycled or put in landfills.

water access / a plan for getting water to the garden and keeping it available.

water cycle / the process by which water circulates through the ecosystem. Water enters the ecosystem by water vapors produced by plants and animals, as it rises, cools and condenses, it forms clouds that then produce rain, bringing the water back to the earth surface for consumption by plants and animals.

watershed / an area bounded by mountains or hills from which all rainwater flows to a single body of water. The system of visible and underground creeks, tributaries, streams and brooks feeding into a river.

wetland / a natural habitat of wildlife found in lowland areas, such as a bog, marsh, or swamp that is saturated with moisture. Wetlands planted near buildings can clean either the building's storm water

runoff or gray water produced by its users. wetland types:

1. forested- a forest floor of saturated, mucky soil. Trees found here include Sitka Spruce, Oregon Ash, and cottonwoods.
2. shrub/scrub wetland- water-saturated soil covered by dense shrubbery such as dogwood, crabapple, salmonberry, and hardhack.
3. wet meadow- areas that often look like soggy pastures of grasses, rushes, and sedges.
4. marshes- small lakes and ponds full of cat tails, pond lilies, and yellow iris. Marshes that occur along the coastline are salt marshes.
5. pool- a deep, scoured portion of stream where water flows slowly, offering salmon a feeding and resting place,
6. riffles- shallow rapids where water flows swiftly over gravel and is home to aquatic insects.

wide rows/beds / planting vegetable seeds in bands of 10 to 30 inches rather than single rows. This produces two to three times more food, letting the plants themselves provide mulch, canopy and weed cover. Best for radishes, carrots, beets, onions, leaf lettuce, peas, and beans.

xeriscaping / landscaping with drought-resistant plants that don't require watering.



A Future Library of European Eco-Art Books...

1960

Willem Sandberg, *Van Natuur tot Kunst*.
Amsterdam: Stedelijk Museum. 1960.

1976

Ugo La Pietra. *recupero e reinvenzione*. Mariano Comense: Edizioni Grafica Mariano s.n.c.
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Akin to a species count, a vast index indicates ecosystem functioning.

— Sue Spaid

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On the design of *Ecovention Europe*

Two of the common “3R’s” — reuse and reduce — were important to the design of this book.

Reuse: Sue Spaid and I worked on *Green Acres: Artists Farming Fields, Greenhouses and Abandoned Lots* together in 2012. The grid for *Green Acres* had a lot of time and conceptual reasoning invested into it. Since *Ecovention Europe* is a sort of sibling to *Green Acres*, we decided to reuse the *Green Acres* page layout templates. The type choices, grid setup, etc. for this book are lifted from *Green Acres* and tweaked for the minor new and different needs required for *Ecovention Europe*. Although sustainable designers routinely find novel ways to reuse materials, I’ve found little discussion for the possibility of reusing ideas and solutions, either as an exemplary form of reuse nor as a useful design tool.

Reduce: One goal for the manufacturing of this book is to expend fewer materials, most noticeably ink, than in the previous tomes I’ve designed. Using less ink required me to select colours more carefully and to use them more sparingly. No colour adds up to more than 100% ink coverage. (The book uses CMYK; and colour palette selections all start at 100% pure C, M, Y, or K, and then are mixed in equal percentages to keep 100% or less total coverage: 50% + 50%; 33% + 33% + 33%, etc.). Another way I tried to reduce ink was by using bitmapped city maps as the decorative section markers. The feeling of a filled area is kept, but since many pixels end up being blank, much less ink is used. Attempts to keep things from bleeding and to fill each page’s grid completely were also made (reduce paper, reduce ink). In *Green Acres*, I used some superficial decorative elements that looked nice but served no functional purpose — they merely took up room. I also ended columns only where a full paragraph ended to make a few things easier from a design perspective (less has

to change if something is added or removed while things are being finalised; you don’t have to deal with as many annoying line or paragraph breaks across columns, etc.). So, while this gave a ragged, formally-nice flow to text columns, it was an inefficient use of space in the book. With the layout of *Ecovention Europe*, I spent a lot of effort reducing the amount of unused space, thus minimising paper waste (however, more time was used, still a resource not to be wasted).

As a conceptual exercise, this was good. But, did it actually make much of a difference? I don’t know yet. In a book like this, there are a lot of images, yet the artworks don’t adhere to the same ink coverage rules that I set for section colours and body text. One might also ask if I could achieve the look I want using only black, which would save a lot in terms of ink and clean-up over CMYK. Perhaps.

How could this be done differently and better next time? Would a different typeface save ink and space? Are there other ways to handle image inclusion? Is there an alternative to making this? (Should this exist at all? I didn’t ask myself that question before we began.) While I was not prepared to tackle these questions for this book, I will continue exploring and attempting to resolve them with subsequent projects. ☺

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An epic research adventure in ecological and transformative art.
— Nils Norman, artist

Sue Spaid opens her book with a discussion of the well-known idea of expanding the field of sculpture and shows the limited reach of this move. In fact, what she does in *Ecovention Europe* and has done in previous books is to effectively expand the field of art history in such a way as to include multifaceted ecological works. This book offers a comprehensive overview of this genre's occurrence in Europe over the past 60 years, which means that it is already older than many hitherto established and recognized artistic genres. Sue Spaid shows not only the important role played by ecological art in ecological discourse, but also the way ecological art itself has expanded the field of art by introducing new theoretical issues and extra-artistic practices that blur the border between art and everyday life, often more successfully than other artistic agendas.

— Mateusz Salwa, philosopher



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