

DIAC 2002 paper

*Keywords:* public spaces, mixed reality, colloquial sociality, responsive media, gardens, adaptive systems

## *Sustainable Arenas for Weedy Sociality: Distributed Wilderness*

### *Abstract*

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*Introduction: "The Desert of the Real"*

The globalization of markets is accelerating a rapid decrease of diversity in the social, biological and cultural habitats, due to the economic imperative of proprietary interests such as communication technology industries and transnational 'life industries'. Physical public spaces as arenas for a wide range of interaction and social change are losing even their symbolic importance as the global marketplace has shifted from commonly accessible public markets to dispersed and abstract omnipresent networks. Those physical spaces that remain have largely become ornamental simulacra of common living space - voids in our urban space only nominally accessible to the public. In the late twentieth century, city after city built financial or government districts that seem to have a certain vitality during the business day, but transform into vast deserted canyons lined with dead facades after hours. In fact to call the city's voids deserts would do injustice to the harsh vitality of the ancient desert habitats. Wastelands might be a more appropriate name for these voids.

Moreover, there is another kind of wasteland, the wasteland of monoculture. Here we are migrating a term in reverse from biotechnology to the condition of modern urban spaces. Even more fundamentally, the very activities that are acceptable in public have become more and more regulated with the reduction of public, or better, collective urban space to spaces of consumption.

M. Sorkin and others have documented the shopping mall as the principal common space of the turn of the millennium. Shopping spaces are now architected and engineered to maximally elicit and reinforce a radically restricted set of behavior, reducing human inhabitants to as perfect consumers as those simulated in the financial models. However, as William H. Whyte, R. Koolhaas and others have observed, as soon as such shopping spaces are erected, clients, neighborhood inhabitants tend to reverse colonize such spaces and perform non-shopping activities as well in local, socially entropic activity, viz. youth 'mallings,' the permanently pesty object of mall surveillance and security. In Atlanta, one can read out an inverse relation between the degrees of social vitality and control in mall spaces such as the \_\_\_\_\_ Mall which is dominated by African-American youth and stays active contrasted with Phipps Plaza, touted as the most exclusive mall in the Southeast, which is a void during much of the day. Such unplanned, interstitial activity points to the possibility of creative, social improvisation within harshly planned environments.

But to be clear, we do not venture a political economic analysis in this paper. It is not economic Reality but the imaginary that we propose to grow in the heart of our cities. How might we do this? By seeding the city's empty spaces with 'weeds,' by cracking the crystal lattice grids of the urban space and filling the cracks with accidents of speech, of unruly, untamed image and animate fabric.

### *Context: Public Spaces and Multiple Imaginaries*

In the era of mass homogenization of branded public spaces around the world, we propose a research into the historied examples of sustainable urban spaces that focusses on dynamics and diversity in social, biological and cultural domains. Examples of such public spaces include community gardens and pocket parks, non-institutionalized plaza and street life, travelling fairs and periodic festivals. By considering such social event spaces, we may discover ways of conducting an alternative economy based on emergent trans-local actions, rather than accepting the generic, mono-cultural approach of the globalized market.

William Whyte, in his *Social Life of Small Urban Spaces* (1980) did a landmark study of plazas and street life using time-lapse film, ethnological diagrams and empathic observation. He and his peers tried to understand what made some public plazas vital places and others dead. Whyte and his team discovered that the most basic features that made a public plaza viable were: access to all classes of people, contiguity with the street, food vendors, and adequate seating. One of the most interesting phenomena was that, given the merest opportunity, in a vital public plaza, hotdog stands and other small vendors were able to colonize a place and provide modest clusters of life .

*[Images of people accelerating slightly as they step up into Paley Park in New York. (1980, 57)]*

In contrast to the spaces such as Seagrams Plaza and Paley Park that Whyte discovered so vital in New York City more than 20 years ago, a survey of public arenas in Europe and North America today reveals a shortage of environments and events that encourage a shared and autonomous experience of culture. The wide adoption of interactive media may satisfy the need for gaming but the need for shared physical experiences and responsive, public spaces often remains unanswered. Digital technology and telecommunications technology have been accused of increasing the isolation of individuals and rupturing local communities. The urbanism that Guy Debord criticized 30 years ago, "isolated individuals ... recaptured and isolated together," has intensified to fill a city with people so massively atomized by mobile communication and ubiquitous computing that it is Tourette's syndrome, not schizophrenia that one could pose as the emblematic dysfunctionality of the era. Alternatively however, these digital telecommunications technologies could be integrated into existing physical public spaces to sustain the emergence of new forms of creative and shared experiences. We believe that some forms of technological development should focus on the interactive shaping of people's perception of culture, rather than promoting the passive consumption of cultural artifacts. This is relevant for allowing communities to become active participants in artistic processes, becoming increasingly conscious of their role and opportunities in shaping their culture.



### *Four Weedy Situations*

Let's look at four very different spaces or habitats in which alternative publics may be constructed: a homeless shelter in Atlanta, a community garden in New York, the GroWorld hybrid media / physical garden project, and the Hubbub speech-painting public space project.

### *Peachtree Pine: Cooking with Matter, Cooking with Media*

The Peachtree Pine Center for the Homeless, which occupies a whole city block in the heart of downtown Atlanta, Georgia, is the only place in the city which places no thick filter of conditions which must be satisfied by a person in order to be admitted to shelter. Though dedicated as a place of last resort for the indigent, it is being built as a porous space, a place in which certain social boundaries are meant to leak. For example, one large ground floor area will be a dining hall where people can cook, or eat in a common area. It also will serve as a place for people to come and buy a meal as at any midtown restaurant, paying if they have the means.

The rooftop of the Peachtree Pine Center will have space reserved for a community garden, but for several other activities, too, including public projection art and performance.

The ground floor has a TI line that lays the foundation for residents to emit and receive media using public webcast technologies. People can come to together to prepare and share media as they cook and share food. By design this may become a site where people come to learn how to articulate themselves in other media as well: they will have a chance to learn how to make their own media and their own material artifacts.

### *Radical Ecology, Urban Living*

The Turtle Squat and Green Dome Garden are but two of several dozen community gardens grown in the interstices between urban developments in New York City. These gardens became sites for gatherings, alternative tours through the unknown greens of the city, informally coordinated puppetry performances, ecological demonstrations and activist workshops. The gardens serve not only as detoxifying elements in an otherwise extremely polluted urban environment, but also as alternative public spaces -- havens for imagination and drifting unfettered by economic or racial discrimination.

These rich socialities hover on the edge of existence in the interstitial spaces of their urban environment and economy. They've grown organically from



from: <http://www.gaia-inst.org/presentations/weeds.htm>



from: "Build a garden on the site of the destroyed WTC"  
[http://www.nyc.indymedia.org/front.php3?article\\_id=15735](http://www.nyc.indymedia.org/front.php3?article_id=15735)

the needs of their constituent communities. Let's look at two examples of experimental media-augmented public spaces that may open up yet other modes of alternative sociality. Then we will extract some commonalities that could be useful for the design of enlivening public spaces. We propose two projects – Hubbub and GroWorld – as case studies for a socio-cultural pattern sustaining diversity spanning across discontinuous social, organic and cultural domains.

The pattern described in this paper is based on the assumption that social interaction and exchange can take advantage of the information technologies to augment site-specific urban contexts with a layer of digital media that can be shared between several localities and communities. By developing (elements of) spaces that can be seen as autonomous 'live' entities, the public arenas acquire additional layers of interaction (human-human, human-built space, human-media space...), that potentially can generate fresh and more richly nuanced forms of social capital.



### *Hubbub*

Hubbub, a project developed in the Topological Media Lab at Georgia Institute of Technology, is an investigation of how accidental and non-accidental conversations can be catalyzed in urban spaces by means of speech projected onto public surfaces. Hubbub installations may be built into a bench, in a bus stop, a bar, a cafe, a school courtyard, a plaza, a park. As you walk by a Hubbub installation, some of the words you speak will dance in projection across the surfaces according to the energy and prosody of your voice. We capitalize on

recognition errors to give a playful character to the space. A Hubbub' installation succeeds to the degree in which strangers who revisit such an augmented space begin to interact with one another socially in ways they otherwise would not. Hubbub is a part of a larger research project which explores how cities conduct conversations via the architecture of physical and computational matter.

In the dystopic future of Luc Besson's film "The Fifth Element," police conducted raids on tenements dressed like spacesuited shock troops. Armed to the teeth, they burst into rooms and cabs, broadcasting / bull-horning as they extract citizens from their cells or vehicles the refrain: "Thank you for your cooperation." In public space, language is typically used in a lattice -- grammatical and disciplining (viz. an airport's audio instructions: "Stay on the right side of the slideway, please let others pass on your left...") In Besson's film, the police's refrain – "Thank you for your cooperation." – emblematically marks how public media have become ever more explicitly instruments of behavioral control.



Plaza Hubbub, Teleopolis Festival, San Francisco Exploratorium



We maintain that sociality is an intrinsic part of human life, of what makes urban life exceed its death, but we also maintain that it must grow from ordinary, unscripted gesture and talk. It cannot be laid down as a matrix of behavior from loudspeakers, whether delivered in the honey tones of the Charles de Gaulle Airport's announcer or in the sum of sines of a TI voice chip. To be viable it can only spring from the detritus of everyday conversation, perhaps worked by art, but perhaps also merely as sprouts between the cracks of a language laid under the concrete matrix of slogans and jingles and macros of speech made as a sequence of forced moves, used by people when they find nothing to say to one another.

*[example: Glenn Gould's radio jam session using speech sampled from a diner. CBC recording]*

In Hubbub, we are studying how speech recognition technology could be used to augment a common public space, to render it more vital, to make its surfaces and volumes register speech in common so that over days, weeks and months, this detritus of speech and conversation, jive, wordplay, catcalls, epithets, songs, will layer and convect and sustain a garden of fresh common language games.

### *Weed talk, wilderness voices*

We treat live speech not as a medium for explicit communication but as a living medium for architectural construction. By projecting some animated glyphs homologous to the spoken speech, we give speech some of the fixity of text and text some of the prosody of speech. But we do not presume to make a deterministic word game out of Hubbub, preferring instead to turn the accidents of the speech recognizer to advantage in a phonic game for the passing speakers.



*Examples of materials developed by Evelina Kusaitė, based on movement organs of shrimp and jelly fish*

In San Francisco, we have built two tests: an outdoor installation where we projected animated glyphs on steel cloth by the waterfront, and an indoor installation where we projected recognized speech as glyphs animated by the timbre, pitch, stereo-location and other features of the speaker's voice. In each case we carefully designed the sculptural installation for the physical setting, the social ambience and the potential for ludic activity.

### *GroWorld: Distributed Wilderness*

"... recycling allows the same materials to be transformed from one object to another, such that the materials "move"... through culture. Culture becomes nothing more than the organization of such flows..."

"Images are literally consumed as a form of nutrition... As the body expands, the environment is literally brought inside. Space gets reconstituted. Architecture is what you swallow." (Wigley, M in A. Marras, 1999)

GroWorld is an initiative that started within FoAM in Brussels. It encourages multidisciplinary discussions, bringing different research topics into a common focus: 'growth processes' in (physical and virtual) life. GroWorld is currently developed in three parallel trajectories: socio-cultural (sym), ecological (bio), technological (sys). The trajectories are mutually independent, but complimentary, with their results being integrated into several experiments and projects.

#### *sym [Dylan Thomas -- the Force That Through the Green Fuse...]*

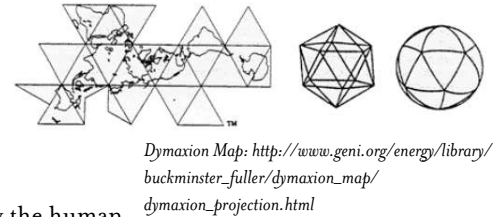
GroWorld's cultural trajectory comprises artists and designers interested in 'biomimetics', learning from nature to design responsive spaces and objects. Nature is not taken as something pure and innocent, but as the substance and action that grows through the cracks of the extreme, and potentially hostile environments - such as urban spaces, polluted areas (Chernobil Eco System), bathyscopic bottoms of oceans, volcanic fluxes. More specifically, this "sym" strand examines growth and adaptation processes in audiovisual media, material, object and environment design and realizes such processes as experiments in mixed reality installations, a-life environments and smart textiles.

While being informed by the current understandings of morphogenesis of living organisms, such as plants or swarm populations, this research does not attempt to replicate biological patterns, structures or behaviors. Instead, it looks for emergent properties of growing synthetic life forms: visual worlds, sonic structures and responsive materials. Currently, the research explores materials such as artificial muscle technologies and electrostatic polymer gels for the creation of more 'flexible' architectures of public spaces and processes such as cell signaling and bioluminescence that could be used in the design of responsive media and materials.

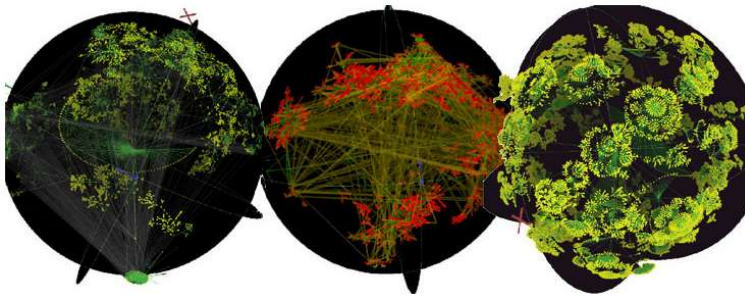
#### *bio*

Biopiracy is one of the most menacing by-products of the western 'civilisation'. [TOO BROAD] Several transnational biotech concerns [NAME SOME CORPORATIONS, DUPONT? AND CITE REFS] have elaborate intellectual property mechanisms that endanger the evolution of flora and fauna worldwide. This process has its roots in the colonial era,

when the indigenous plants and animals were treated as scarce exploitable resources, species were exterminated before the local popular constituencies could act. Furthermore, small farmers, and especially horticulturalists, unable to compete with the large industries have been forced to breed monocultures that diminished the genetic diversity of the local ecology. Today, the transgenic crops are not only slowly wiping out the existing eco-systems, they cause quick and drastic mutations in some plants and animals, rupturing the habitat's balance. The local farmers are discouraged from cross-breeding and developing new species, as they might be infringing a patent and consequently could be prosecuted. This all may sound like a science fiction recipe of eco-disaster, according to which the Earth strikes back by growing an army of macrophages that threaten to destroy the human race. Fortunately, there are several local and global movements that are monitoring these affairs, and are acting upon them on different levels. GroWorld proposes a small addition to these valuable efforts.



Dymaxion Map: [http://www.geni.org/energy/library/buckminster\\_fuller/dymaxion\\_map/dymaxion\\_projection.html](http://www.geni.org/energy/library/buckminster_fuller/dymaxion_map/dymaxion_projection.html)



Visualisation and navigation diagrams from:  
<http://www.caida.org/tools/visualization/walrus/>

The ecological strand of GroWorld involves building a trans-local network of public gardens concerned with sustaining local bio-diversity. Around the globe, there are several private and communal gardens grown by local scientists, landscape architects and neighborhood communities. They are sites evolving on their own accord - becoming patches of autonomous organic wilderness in the midst of an urban

jungle, grown and molded by their care-takers and temporary dwellers. However, they are too often isolated, overlooked or taken for granted.

GroWorld will attempt to map these weedy actions, that have managed to grow beneath the radars of the transnational biopirates, bring these gardens in contact with each other, so that instead of being private and isolated utopias, they form parts of a diverse, worldwide distributed habitat, connected via the contact and exchange of the people involved. The symbiotic relationship between the physical gardens and communication technologies develops in a spontaneous and autonomous manner. \*

An evolving map, based on principles from Buckminster Fuller's Dymaxion Map that "reveals a One-World Island in a One-World Ocean" ([www.bfi.org](http://www.bfi.org)) - rendering this distributed wilderness as interconnected, rather than divided by arbitrary historical or economic boundaries.

\* Autonomous does not equal uncontrolled, or totally unconstrained. We can see the effects of such development in the sprawls of Los Angeles and Atlanta and residential districts built after WWII in Italy.



Some of the gardens will sprout from the locales of GroWorld participants. They are devised both as growing environments in which the visitors can comfortably linger, surrounded by specific local flora, and instruments allowing their players to collaboratively shape and steer the environment's processes of growth, decay and transformation.

This strand is currently in the process of feasibility research and informal contacts with communities in several localities, such as Belgium, the Netherlands, Austria, Croatia, UK, USA and Australia.

### sys

The strand that will potentially be most useful across a variety of public spaces is the "sys" technological strand of GroWorld. Its results should be accessible to different communities and should be adaptable for several social, ecological and cultural contexts - adaptable to both indoor and outdoor spaces, different climates and cultures. The overall objective of this work is to enhance existing public wildernesses with interactive media and technologies. Social interaction and communication determine function and form of these spaces, and should therefore become a crucial part of technological development.



Registration of a GroWorld installation in a semi public garden in Brussels, December 2000

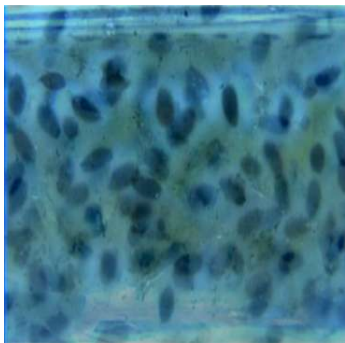
*[The purpose of this work is to identify, analyze and incorporate studies of different types of informal or conversational public activities, that are less based on rules and more on improvisatory and social interaction.]*



The specificity of public spaces demands a high degree of adaptive capabilities from the technologies to be integrated within them, such as sensitivity to context, climate and culture. Christopher Alexander, in his book, *The Timeless Way of Building*, considered every space as becoming alive through events that were induced by the geometry of that space. Schematizing Alexander's description, the geometry of a public space helps give a shape to the imagination of its visitors, the imagination inspires the behavior, and the behaviors build the events. Mixed reality technology introduces one new element in this experiential spiral: the synthetic responsive media logic infusing the space, the imagination, the anticipation and the event. Adding computational functionality to already existing elements of a public space augments ordinary objects which become able to interact with their surroundings and evolve based on that interaction.

Integration of digital media with physical spaces acknowledges and uses the advantages of both physical and computational domains: the full sensorial immersion of the physical plus the malleability and responsivity of the digital.

One of the artistic productions that puts some of this research into practice is txOom, a responsive environment founded on "recycling" media, materials and behaviors from one form to another:



*Video texture developed by Maja Kuzmanovic based on cell signaling of bioluminescent bacteria (dinoflagelates)*

Influenced and enticed by the human behavior, the design of audiovisual media and real-time media synthesis mechanisms of txOom should result in an adaptive, responsive environment. The system driving the environment is engaged in autonomous evolution, that is guided (fertilized or infected) by the actions of its users. This system is designed in a way that will allow artists and engineers to engage the local communities in the design of the media and materials for the site-specific installations. These groups will aid the adaptation of the designed, responsive environments to the local situations, allowing them to blend with natural, industrial or historic spaces, whose context is very well known to the local people. The aim of the project is to make these spaces 'grow' with

media and become more 'flexible' and adaptable to the social interactions of their visitors. In 2002 the txOom environments will be temporarily integrated into public spaces, such as abandoned an military installation in Torino, Italy, an old Circus Building in Great Yarmouth, UK and possibly the Botanical Gardens in Vienna, Austria.

### *Conclusion: Weeding Techniques*

"Most of the associations between the living things we know about are essentially cooperative ones, symbiotic in one degree or another..." (Lewis Thomas, 1974)

Reviewing the cases that we have introduced in this paper : Hubbub, GroWorld, txOom, we see a few common themes that could be useful for designers of new technologies. In such projects, the media and technologies that we propose should:

1. Make the static public spaces malleable, adaptable to the events that take place in them.
2. Give physical characteristics to the digital media, allowing a continuous, natural interaction between the physical and the virtual. More specifically, media transformations should appear animate and the interaction with them should be familiar and understandable to the users/participants.

3. Design the pattern tracking so that there is no syntactic filter, moving beyond the valorization of glitch or error (which as an aesthetic stance goes back, in the modern era, to Cage and to Dada). Every gesture, every stroke, every movement should be accepted by the system, with nuanced response.

Both Hubbub and Groworld are phenomenological experiments that are built upon symbiotic collaboration between different cultures and disciplines. The projects should lead towards manifold applications of developed media and technologies, with a high level of invariance. Metaphorically, these practices can be compared to the horticultural, communal patterns of farming, that can function as an alternative to generic or monocultural approach to global economy.

Integration of cultural, ecological and technological studies will move these projects towards a long term experiment in sustainable creative, technological and sociological development, connecting organizations and individuals from various disciplines and cultures in one common goal: growing an adaptive, sustainable habitat for nature, technology and culture.

So to conclude, what are the strategies or heuristics that we might draw from these examples?

*Strategy 1: Turn lattices to water.*

Application: street/plaza geometry : the perspective should shift in a gentle rhythm as one moves through the space. This depends on the characteristic speed of course. One precondition may be simply to exclude cars from certain neighborhoods, and provide alternative flow.

*Strategy 2: Turn crystal to mud.*

Application: Unlike crystal structures – lattices of atoms inhospitable to life, mud houses a riot of bio-processes, micros-organisms, worms and other interstitial life-forms. What we learn upon closer inspection, is that far from being confined to insignificant gaps between crystalline structures, such bio-processes, the wet chemistry, the wet biology, form the bulk of matter. And it is such generic mud that affords the possibility of forming new life sweeping away the simple cuts between life and non-life.

Just so, we can carry such intuitions into technologies of language. We can use speech not for communication of information but as compost, or peat for burning, building, potting communication.

*Strategy 3: Minimize borders and maximize edges.*

The sustainability of public spaces is dependent on an abundant diversity of social, biological and cultural habitats. Their interrelationships will inevitably grow at the edges of dissimilar



environments, such as urban-natural, cultural-scientific, physical-digital. The public spaces of the future should merge the context and the meaning of the local, physical sites with the globally accessible digital media and build trans-local events encouraging interaction between communities on both sides of the digital divide. Maximizing the edges enormously increases the interface between worlds; maximizing the interstitial surfaces increases the chance of exchange, mutual transformation and combustion, a fire that creates life from the conflagration of culture plus science, matter plus symbol.

In his essay, "One More Turn After the the Social Turn," Bruno Latour added a second dimension above the usual axis between nature and society, proposing that we explicitly think about the degree of stabilization of what he and Michel Serres call "quasi-objects." Latour spoke of the construction of scientific knowledge. What we have done and propose to continue is a living art and an art of living out the potential of putting in play the balance between what is natural and what is synthetic.

In fact, GroWorld and Hubbub point to new symmetries that become possible between the natural and the urban in the presence of embedded computation. What's natural is no longer natural, but in light of our experiments, this could be a healthy prospect. A square meter of grass in the middle of the concrete jungle has quite a different set of symbolic and biological values than a square meter in the middle of the forest (or the desert). If we infuse that plot of dirt with sound, and structured light and other media, what we might do is to puncture the skin, that border, between life and non-life. There's the danger of course, that we kill everything within that soil, but there's also the opportunity to animate the inanimate, to enroll deaf and dumb bits into a living system, and breathe irony, laughter, music into the lumpy matter.

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