

The Cartographer's Dilemma

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Abstract

The city is quickening. We hover between built space and media places. Place making that takes no heed of the knowledge environment is no longer sustainable. In the era of pervasive computing we need better maps to manage the built environment. The Cartographer's Dilemma proposes a new place making action plan for a withering public sphere. We need to develop new epistemic assemblages - street probes - for navigating a landscape of space and information. The city as site and form of knowledge begins with Patrick Geddes, the evolutionist/planner who celebrated the Greek *polis*, who was a pivotal link in an intellectual lineage that extends from Darwin to contemporary media theorists. With projects like the Outlook Tower and the Cities Exhibition, Geddes left behind a tool kit on synthesis, gear to map sites and record knowledge, and assemble places where mapping persists. He saw the city as an evolving search engine, a tableau you drifted through, synthesizing as you move. For Geddes, you became a citizen when you glimpse the future and humanize it. Mindful of Geddes - and wedged between a data space and a hard place - this paper will explore how place makers can begin to rethink the neighbourhood enclave and reprogram them as precincts for knowledge creation and creative action. This paper uses Geddes' work on the city to rethink the implications of the digital environment for the space we call Civic. It recalls projects in the UK context, that address this space as an archive of knowledge and identity. The Cartographers Dilemma is relevant for the re-cabled megalopolis that will need strategies for capitalising on this status. It will argue for a new definition of the sustainable city, by projecting the urban planning theories of Patrick Geddes onto the evolving 21st century media environment.

Keywords: *digital media, urbanism, civics, map, game, Patrick Geddes, sustainable community.*



1. Shrink Wrap City: small medium and large

Paul Guzzardo

If you listen closely you can hear a sucking sound. I'll start this with a call for an epistemological beachhead and rant against the shrink-wrapped city.

Lorens Holm

Let's grab something from our Abstract and dub it a map.

The city is quickening. We hover between built spaces and media places. Placemaking is no longer sustainable because it takes no heed of the knowledge environment. In the era of pervasive computing we need better maps to manage the built environment. The Cartographer's Dilemma proposes a new spatial practice, a muscular cartographic practice for a withered public sphere. We need to develop new epistemic assemblages - street probes - for navigating a landscape of space and information. The city as site and form of knowledge begins with Patrick Geddes, the evolutionist/planner who celebrated the Greek *polis*, who was a pivotal link in an intellectual lineage that extends from Darwin to contemporary media theorists. With projects like the Outlook Tower and the Cities Exhibition, Geddes left behind a tool kit on synthesis, gear to map sites and record knowledge, and assemble places where mapping persists. He saw the city as an evolving search engine, a tableau you drifted through, synthesizing as you move. For Geddes, you became a citizen when you could glimpse the future and humanize it. Mindful of Geddes - and wedged between a data space and a hard place - this conversation will explore how place makers can begin to rethink the neighbourhood enclave and reprogram them as precincts for knowledge creation and creative action.

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I want the spotlight off of Larry Page and Sergey Brin _ those Google titans _ and flash it on Geddes and the City. So here's a Geddes quote.

*The general principle is the synoptic one, of seeking as far as may be to recognise and utilise all points of view and so to be preparing for the Encyclopaedia Civica of the future.*¹

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And another.

*Town plans are thus no mere diagrams, they are a system of hieroglyphics in which man has written the history of civilisation, and the more tangled their apparent confusion, the more we may be rewarded in deciphering it.*²

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The dilemma in the tera-perabyte world is getting deciphering gear on the street. Without that *techne* the city is less and less a stage for knowledge creation and synthesis. We need new place making action plans. We need new interfaces on the ground linking the city space and data-landscapes. Place making that takes no heed of the evolving knowledge environment is no longer sustainable. If the end game is a sustainable city, the city has to be a knowledge generator. And without a street/data/scape interface - new crossover nodes - it's neither. Time is short. This brief should have been started twenty years ago. That's when the info-age began slamming us. But it never got written. Now the digital buckshot is coming at hyper-speed. And we've got a gaping hole in the city. We're wedged between a data space and a hard place, and left with a shrink-wrapped something or other.

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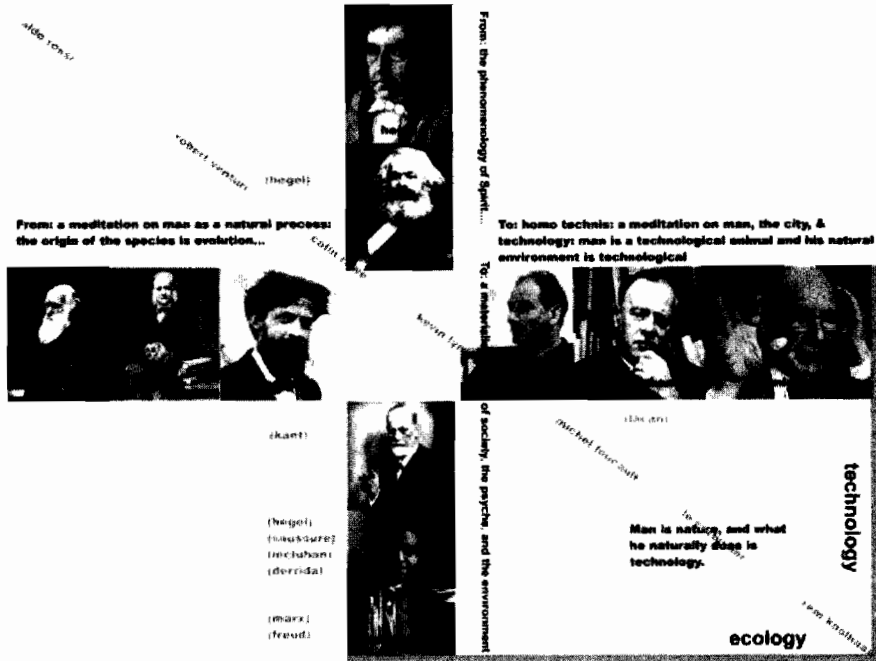
The city already functions as an archive and learning environment. If this were not the case, it would not be possible to follow a guidebook. We see it in street names and in blue plaques on buildings; in the way that bus shelters mark the city as a flow of people, or manhole covers mark the city as a flow of sewage (think of the great Victorian sewage works, those monuments to hygiene and civic pride). For Geddes the evolutionist (student of Huxley), the city was an artifact in the continual evolution of intellect. For this reason he was conservative in his approach to the renovation of the city. He advocated 'surgical' interventions to destroy as little fabric as possible. *Tabula rasa* planning was intellectual suicide, tantamount to the loss to civilisation of the library of Alexandria. We need to invent the spatial notation to mark the city as a flow of data and discourse.

¹ Patrick Geddes, *Cities in Evolution: An Introduction To The Town Planning Movement And To The Study Of Civics* (London: William & Norgate, 1915) p320

² Patrick Geddes, *Cities in Evolution* (London: William & Norgate, 1949) new and revised edition, p170. This quote is not in earlier editions.

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But a new tool set, a new systems approach is essential, or as Geddes would say “the principle is the synoptic one”.



2. Geddes Game Board no.1

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We need to develop a spatial system of form-types and grammar, and a strategy for location. In another register, it is not miles away from the question of the coherence of the city addressed by Aldo Rossi in his theory of types, or of Palladio in his pages of villa plan forms. What are the abstract principles, and what elements repeat endlessly in different circumstances. What are fixed and what contingent?³ How do we represent the city to ourselves as a flow of ideas, knowledge, love, money, political affiliations. We are looking for nothing less than a new vision of coherence and cohesion on a par with Nolli’s vision of Rome. Nolli showed us that the city was an infrastructure of surfaces, continuous, plastic, inside-outside. The cartography that allows us to map the knowledge of the city back onto the city will not be a new map that replaces Nolli’s (what Venturi sought to do), but a process, a recursive mapping process: continuous and without end – a Recursive Urbanism. Imagine an urbanism where a continually updating cartography replaces the static map. It is a

³ We have this formula – fixed and contingent - from my colleague Graeme Hutton. It was the framework for the Urban Design Studio, Dundee School of Architecture.

technical process, what Mumford called *technics* (he posed man's *technic* outside against his Freudian inside).⁴

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The question is: where are we going to get the crew to move towards this coherent vision? To get that *Nolli update*, place-makers have to rethink cultural precincts and creative practices. The remix digerati have to be on the street. We don't want a generation of creatives secreted in clandestine places, shackled to screens and virtual sites. Or shunted to mutating gaming consoles, where buttons and a directional joystick rein the drift. They have to be on the ground navigating through the digital fog. That's the place to double, layer and go off in several directions. But they need gear to cut a path in the data maelstrom. They need way stations; places to map, to plot a course, and platforms from which to peer into the city. But they don't have it. As technologies quicken and the public realm shrivels it is time to act. Place making and makers have yet to respond to the sucking sound.

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This is not a question of re-equipping the digerati or new cultural precincts, but of imagining new forms of public space, and new notations for marking it. We are losing the space of public discourse that was represented, if not wholly instantiated, by Aristotle's *polis*. The role of space as the platform for the collective expression of public opinion is slipping away. Civil disobedience is scarcely conceivable today. Most public space is now simply amusement space. And that doesn't leave much room for the city as a repository of knowledge. We need mapping stations for collating the knowledges and identities embedded in AND OUT OF the city, for writing new narratives and counter narratives; we need "doctors' surgeries" for surgery upon the city.⁵ It poses problems for strategies of location. Geddes proposed the Cities Exhibition as the place to collate local knowledge and put it into circulation. Each city was to have an Exhibition as a permanent civic institution along with the courthouse, museum, etc. He argued that it was a necessary condition for participatory democracy, because you could not make informed decisions if you did not know about the place you lived, and its relation to the city, the region, the country, the world...

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... and *its relation to* the virtual place, the blended space. The surgical insertion is the way to go. Slide the scope in. Its how I positioned my digital street praxis. Think of them as mapping nodes that slip into what's already there. When it works you end up with ocular devices that peer through the digital fog, and that's

⁴ Lewis Mumford, *Art and Technics* (London: Oxford University Press, 1952). This gem of a book.

⁵ The idea of the doctor's surgery or 'Environmental Health Clinic', where residents of a place could go to consult about the repair of their place, is floated in Benjamin H. Bratton & Natalie Jeremijenko, *Suspicious Images, Latent Interfaces* (The Architectural League of New York, 2008), pp. 22ff. *Situated Technologies Pamphlets 3*.

not far from Geddes. Geddes's place making emerges out of the liminal world of Greek philosophers who played with comings and goings, ins and outs from caves. Geddes understood the city as a blended site. He was more than a student of Darwin/Huxley. He was an apprentice of those classical Greeks. The Geddesian playbook opens on the Greek *polis*. The *polis* is where the first citizens - creatives - drifted and mixed things up. Good things happened there, like knowledge and synthesis. It was a platform for problem solving. It was a change agent. Today, our media environments have taken us _ and our blended selves _ back to these liminal places. We still mix and drift, but we don't do much on the street. It's in a soft space, the virtual realm, where we tell our stories and learn. But if we could get back on the street, maybe some good things would happen in this here and now.

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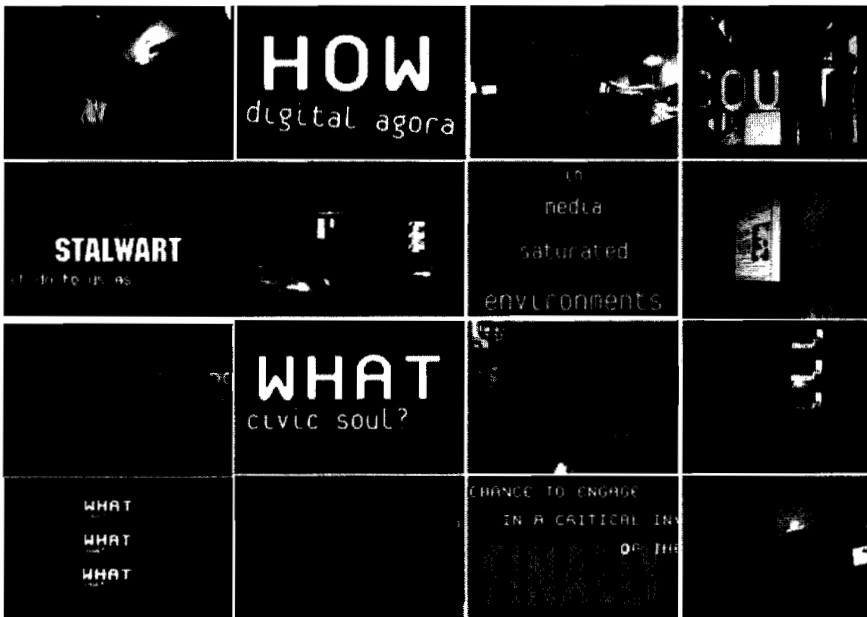
I'm all for delaminating people from their bedrooms and getting them back on the street, but this is not about creatives, because to segregate a special form of cartography for a special form of people is just another version of the cultural Acropolis and what we are looking for is a cultural infrastructure for scoping the city. I call it *infrastructure* because – unlike Geddes Cities Exhibition - we need a cultural institution as ubiquitous and dispersed as phone booths, post boxes, public toilets, manholes, which creates a network of stations for reflecting upon the city and mapping that new knowledge back onto the city. If we take Geddes seriously, the knowledge is already there, and it is about creating the moments for accessing it, reflecting upon it, and transmitting it to others. Instead of the media environment shadowing the city like an Other scene that mimics it in complexity draws off its energy, its civics, its intellectual life, can we not engage it to create a hybrid.⁶ Imagine local gallery + *QuestionTime* + webscape *congestion* (thanks Koolhaas) with link to local authority website (except that it might replace the local authority at least at the community level). It will be a hybrid media platform and public space showcase.⁷

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⁶ For Freud, the Other scene was the dream, that landscape of unconscious desire, that was marked by an other spatial and temporal logic than the logic of the city. If we succeed in drawing the media environment into dialogue with the built environment, it will doubtless not domesticate its Otherness.

⁷ There is also interesting work on the city and media environments coming out of interaction design. See for instance: SJ O'Neill 'The Interactive Spectacle and the Digital Situationist', in *Exploration of Space, Technology and Spatiality: Interdisciplinary Perspectives*, ed. by P Turner, S Turner, E Davenport (Hershey, PA: Information Science Reference, 2008) And: SJ O'Neill 'Presence, Place and the Virtual Spectacle', in *Psychology Journal* special edition on *Space, Place and Technology: Human presence in mediated experiences*, ed. by L Gamberini, G Riva, A Spagnolli, Vol 3(2) (2005), p149 & 161, [http://www.psychology.org/pnj3\(2\)_space_place_and_technology.htm](http://www.psychology.org/pnj3(2)_space_place_and_technology.htm)

I played in that soft space, first in Cabool, my media nightclub,⁸ and then in the MediaARTS lab. The lab was blended place, a straddled one. It was on the street, a sort of polis update: *Release 99*.... The lab wrapped a windowed corner in downtown St. Louis. Artists used digital collage, remix to create new urban narratives, to map and re-mythologize the streetscape. Their work, the evening's digital amalgam/remix was projected on screens and monitor walls facing the street. Subject matter included meditations on film/digital editing; art/science practice; the effect of information technology on social practice; 9/11; the millennium, comic books; and Orwellian media culture. It ran off and on for a couple years. It was street theatre, a tool to advance synthesis and awareness, with the hope that it might lead to collective action. When I was hanging out on that Midwestern street corner you were doing things here. Then we collaborated on *laser\net* in Dundee.



3. St. Louis MediaARTS LAB: Polis Game Board no.2

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MediaArt St. Louis and *laser\net* join a good trajectory of projects, which create opportunities for Geddesian reflection upon the city. They are part-projects. None are complete yet, perhaps they will always only ever be gestures to the

⁸ For Club Cabool (1992), see *Interior Design* (December 1997), *DisenoInterior* (1998), and *Lofts: vivir, trabajar, comprar* (Barcelona: Koneman, 2001)

future, achieving their aims by falling short of them.⁹ Fergus Purdie's *Curating the City* (2009) maps the intellectual history of Perth onto Perth. It began with a Geddesian survey of the learned societies, clubs, and guilds embedded in Perth's history. It issued in an exhibition of maps and screen prints which located them in the city fabric and history of Perth. It was not exactly an urban design project, but the prolegomena to one.¹⁰ For *Glasgow: City of Dreams* (1996), Will Alsop's strategic proposal for Glasgow, Alsop divided the river Clyde into an enfilade of 12 navigable 'rooms' running through Glasgow, a division which recognized their different characters, and asked different practices to develop ways of drawing out their history and character. For our room, we proposed a mechanism that allowed pedestrians to access an archive of digitised images of Glasgow's Clydeside shipbuilding history and project them across a monumental visual space straddling the Clyde.¹¹ We are still planning the *Re:mix the city* project, a network of media stations for Dundee. There is a pedigree of such projects that includes Cedric Price's *Potteries Thinkbelt*, his hybrid open university-cum-transport system that traversed the Midlands 19th C pottery belt.

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laser\|net was an experiment in mediating spaces and communities with media platforms. *laser\|net* was a gallery installation in which a central screen had projected upon it the spaces that it divided. The crowds could communicate across it and could trigger images and sound files that occluded it, from position points in the space. Perhaps the best bit was the blog.¹² But an online off-street installation can only do so much. The blogosphere starts to feel a little shrunk. Not always the best arena for the mapping tools that *expose the archetypal drama of life*. The phase is Mumford's, his sum-up of Geddes.¹³

⁹ 'Part-project' is borrowed without permission from Lacan's 'part-object'. The part-object functions by always being less than what it promises to be, like the bits of the body that we eroticise.

¹⁰ Vulcan Works (5 Melville Street, Perth) is a live project in response to *Curating the City*, an exemplar of direct action in the real world, based on the relation between artist + city. VW demonstrates the Geddesian principal of conservative surgery and resulting regeneration. It is an outlook tower. For more on Fergus Purdie Architects see <http://www.fwp-architect.com/>

¹¹ Published in *The MAC Journal* 1996. This project was done by Noble Associates Architects, London, with Lorens Holm as project architect.

¹² *laser\|net* (2006) was a collaboration between Guzzardo, Holm, John Bell, and Adam Covell, funded by the AHRC. It was installed in Centrespace in the University of Dundee's Visual Research Centre. Cf. Guzzardo and Holm, 'Is there a digital future landscape terrain' in Michael Spens, ed, *Landscape Architecture: Site-Non-Site*, special issue of *AD: Architectural Design*, 77:2 (2007). Cf. also (<http://www.dundee.ac.uk/pressreleases/prfeb06/laser.html>) and (<http://www.dundee.ac.uk/geddesinstitute/lasernet.htm>).

¹³ Lewis Mumford, "The Geddesian Gambit," in *Lewis Mumford and Patrick Geddes: The Correspondence*, ed. Frank G Novak (London: Routledge, 1995) p360

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The stage has to be the street. We have to reclaim it as an agent against the programmed amnesia inherent in most city planning, which turns the city into a spectacle for tourism, for business, for raising tax revenues, above all for amusement and investment. Its hyper-real flythrough tropes turn the city into a display whose effect, intentional or otherwise, is to sedate us; to turn us away from the difficult issues confronting us, issues about our relation to our environment, built and natural, which, if we could reflect upon them, we would have a hope of solving. Need some new spaces to confront bad times.



there is a **Digital Future Landscape Terrain...**
Future Landscape Terrain: fingerly, numeric, parcelled.
Digital Landscape Terrain: imagined imminent immensity.
Digital Future Terrain: a narrative scaped by the land.
Digital Future Landscape : a tussocked surface, rough going.

4. *laser\|net*: Cahokia Indian mound on the outside, digital platform on the inside

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It's time for new projects-praxis. How do we build an ur-map? How do we build a wiki on the street?¹⁴ Its not going to happen without a radical rethink of place making, creative practices and media re: sources. I know that system thinking and Walter Benjamin are rarely coupled but this is going to take a tiger's leap off street and then back. And there is something happening 'off street' that draws me. It has money and smarts. It is computer gaming. And yes most computer games fall in that vast hyped hyper-bounce *blastscape*. This is a niche. It is called Serious Games and has a Geddesian hum to it. Here's the canned definition:

*The ecology of computer games with a purpose beyond play... games that have the potential of immersing the individual into an environment that is engaging, challenging and fun, and most importantly, educational*¹⁵

¹⁴ wikipedia, an 'Encyclopaedia Civica of the future', went on line in 2001, eighty six years after the publication of *Cities in Evolution*. A wiki is a software that allows multiple users (players) to introduce content to a collaborative or community website. It involves the visitor in an ongoing process of creation and collaboration that constantly changes the Web site landscape. The most well known use is the online encyclopedia, *wikipedia*, from which this note was paraphrased. Cf. <http://en.wikipedia.org/wiki/Wiki>

¹⁵ Serious Games website at <http://www.seriousgames.org/about2.html>

Serious gaming emerges out of “deep game engine” architecture. Players move “in and out” of a trajectory, a sequence of domains. Serious game theorists examine game design in terms of the potential for rich learning and literacy. The sage behind the field is James Paul Gee.¹⁶ When I read Gee it seems as if Geddes’s *œuvre*, devised for the city as a creative cauldron of progress and humanization, has been hijacked to a gaming space. *Polis*-sequel has drifted to soft *semiotic domains*, a term within game engine architecture. The platform has switched, from city to game. The new *lingua franca* of serious gaming - issues of domain and social practice, effective participation, domains for multi-literacy, experiencing the world in new ways - all share a jolting similarity to the Geddesian playbook. And like the one on the ground, it involves trajectories through a sequence of tableaux, places for lingering meditation, for thinking *flaneurs*. Intended or not, these game theorists have appropriated Geddes’ read of the city as the platform for shared understanding and knowledge.

LH

Traffic is a serious game. We play it all the time. We glimpse game-space in the traffic congestion of our cities. Not because it is accessible to all, but because it is interactive for all players; more so in Europe than in the US (where drivers slumber in their lanes). It has a grammar, a precise domain, rules. It continually evolves in response to the city, and the city continually evolves in response to it. Lets celebrate the much maligned traffic engineer for his Geddesian drift of the city.

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The game is about drift. So is the city. But the team is now playing in a virtual realm, and there is no indication that it is coming off that field. And that’s a problem. It involves more than discourse. It’s also about money. The sustainable city and the serious game are both in search of new system platforms, platforms that are more than spectacle delivery shunts, new maps for a recursive urbanism. The barrier that separates city and game praxis needs to blend. We need collaborations, a profound rethinking of civics, planning, and creative practices.¹⁷

¹⁶ James Paul Gee, *What Video Games Have To Teach Us – About Learning And Literacy* (New York: Palgrave MacMillan, 2003)

¹⁷ “Games for Change” is a serious game not for profit. Here’s the mission. ‘Games for Change seeks to harness the extraordinary power of video games to address the most pressing issues of our day, including poverty, human rights, global conflict and climate change. We are a voice for the transformative power of games, bringing together organizations and individuals from the nonprofit sector, government, journalism, academia, industry and the arts, to grow the sector and provide a platform for the exchange of ideas and resources. Through this work, Games for Change promotes new kinds of games that engage contemporary social issues in meaningful ways to foster a more just, equitable and tolerant society.’ Visit (<http://www.gamesforchange.org/ourwork>)

LH

Geddes understood the itch to game. The agonistic frontline for this biologist was the street. It was the font for creative struggle, wakefulness and synthesis. Here are a couple lines.

*....competition is the essential factor of the progress of life. For, if competition be, as we are told, the life of trade, competition must also be the trade of life. What could the simple naturalists, like Darwin and his followers, do but believe this and thence project it upon Nature and upon human life with a new authority!*¹⁸

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Seems apt that 'the Dundee street' where Geddes spent twenty years teaching is home to Realtime Worlds, the company that brought us *Grand Theft Auto* and now *All Points Bulletin*. Street maps and street fights, mixed and remixed by Scotland's digerati. Here is a cut and paste from their website:

*All Points Bulletin is a massively multiplayer online free-form combat and driving-based game, designed by the creator of the original GTA franchise. Developed by Real Time Worlds Ltd, APB brings players into a living, breathing city where cash is king and territory equals respect...*¹⁹

According to Dave Jones, *APB* is a server-based *real time* interactive city environment, that is modified by user CONTENT. You enter the game through a street space.²⁰

LH

¹⁸ Geddes, *Cities in Evolution* (1915) p77

¹⁹ *Grand Theft Auto* is a video game series created by David Jones, founder and creative director of Realtime Worlds. The Grand Theft Auto franchise has had a significant impact on the medium of the videogame. It is now one of the most recognized video game brands on the market. *APB (All Points Bulletin)* is an upcoming massively multiplayer online video game based in urban sprawls and featuring two sides, Enforcement and the Criminals. Players may join either side, and form sub-groups in these. The quote was accessed on 13 01 2010 from the *APB* website at <http://www.apbgame.com/>. For images of *APB*,... there are twelve screen shots of *APB* at <http://www.apb.com/screenshots/>. Our strip of 3 favorites (accessed on 13 12 2010) are numbers 12, 10, and 6. They imagine locations in the city of San Paro (<http://www.apb.com/features/>).

²⁰ Dave Jones introduced his upcoming MMO *All Points Bulletin* at Develop 2009 where he was a keynote speaker. According to Jones, one of the key features distinguishing *APB* from its competitors is that it runs on a server and therefore allows the street to exist in real time. Visit Youtube for his presentation (accessed 13 12 2010):

Part 1: <http://www.youtube.com/watch?v=l8wxgfeF10w>

Part 2: <http://www.youtube.com/watch?v=uqPow9J8D8M>

Lets speculate: it is only a matter of time before someone in the gaming industry develops gameware that would allow you to navigate a model of a real city. You could then join a community of players organized by the on-line game infrastructure - *and* by the city. This presents the possibility of a community – not yet realized - for whom the idea of location raises interesting questions: location would become on-line and place-based at the same time. A splitting of location. It would begin the process of recognizing a form of media and built environment hybrid. The planning department at UCL already has a model of London.²¹ Make it interactive, make it the environment for a *GTA* or an *APB* type game. You would be able to meet your mates downtown, shoot up your own high street and then drive to your friend's and shoot up hers. The challenge for planners will be to take this interaction off the virtual stage and transfer it to the built environment. And to make the city plan respond to it. But it is ironic that the most advanced examples of deep gaming always go toward spectacle. These street spaces are hyper real and drained of content at the same time. Of course, the driver for the gaming industry is no different than the driver for development of the city: it is the market. Although both the city and the game model social relations, they are first and foremost investment opportunities. And the image of the city that they both produce is – literally and metaphorically – plunder.

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Market or not, the media environment is too big to look the other way. Better than Brahm's or the big box. The question is how can we grab the gaming phenomena and use it to transform civics? How do we graft it onto the street? The contest is inevitable. Spectacle may win.

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We need to call time. Our editors want to know what all this has to do with urbanism and sustainability.

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Traffic cops and game designers aren't the first to be gripped by drifting and splitting, layering, and flowing in several places simultaneously. Our modernist fathers – Giedion, Léger, Sert – imagined it.

Modern materials and new techniques are at hand, light metal structures.... panels of different textures, colors and sizes; light elements like ceilings which can be suspended from big trusses involving practically unlimited spans...Mobile elements, changing positions and casting different shadows when acted upon by wind or machinery, can be the source of new architectural effects. During night

²¹ Professor Mike Batty at the Centre for Advanced Spatial Analysis, University College London, presented clips of it at *Managing metropolitan regions: Geddes and the Digital Age* (2007) a conference hosted by the Geddes Institute for Urban Research at the University of Dundee.

*hours, color and forms can be projected on vast surfaces.... Man-made landscapes would be correlated with nature's landscapes and all elements combined in terms of the new and vast façade, sometimes extending for many miles, which has been revealed to us by the air view. This could be contemplated not only during a rapid flight but also from a helicopter stopping in mid-air.*²²

LH

Their radiant city never happened. They didn't have the technology to inject, penetrate and overlay knowledge. Nor was it to hand when *the situationist city* succeeded *the radiant one*. Now we have the chance to structure change. We can start "that irrigation of territories", and this time, zone in on knowledge. Build a network of storefront mapping stations where we can read the ecology we're plumbed into. For Koolhaas, the city is a flow of space, money, psyche, and information.

*'If there is to be a "new urbanism" it will not be based on the twin fantasies of order and omnipotence; it will be the staging of uncertainty; it will no longer be concerned with the arrangement of more or less permanent objects but with the irrigation of territories with potential; it will no longer aim for stable configurations but for the creation of enabling fields that accommodate processes that refuse to be crystallized into definitive form; it will no longer be about meticulous definition, the imposition of limits, but about expanding notions, denying boundaries, not about separating and identifying entities, but about discovering unnameable hybrids; it will no longer be obsessed with the city but with the manipulation of infrastructure for endless intensifications and diversifications, shortcuts and redistributions – the reinvention of psychological space. Since the urban is now pervasive, urbanism will never again be about the new, only about the "more" and the "modified." It will not be about the civilized, but about underdevelopment.*²³

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Geddes' greatest contribution was to realise that how we understand the world will change over time; and that the street is a tool to crank out maps to refresh that understanding. In this time of rapid change, this is the BRIEF – the BRIEF for the design of a sustainable city.

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²² Siegfried Giedion, Fernand Léger, and José Luis Sert, "Nine Points on Monumentality" (1943), reprinted in Paul Bantel and Lynn Hopffgarten, eds., *Harvard Architectural Review IV: Monumentality and the City* (Cambridge, MA: MIT Press, 1984)

²³ Rem Koolhaas, "What Ever Happened to Urbanism?" (1994), in *S,M,L,XL,OMA* (with Bruce Mau) (Monicelli Press, New York, 1995) pp. 959/971.

Geddes' contribution was to imagine the city as an expanding archive of knowledge. Our knowledge is inscribed on the surface of the earth. To know yourself and to understand your relation to the world, you have to be able to reflect upon this surface, and find the technology to instrumentalise it, visualize it, manipulate it, and put it into circulation. To imagine this possibility, we draw on the experiments of gaming, serious or otherwise. The problem of sustainability is thus a problem of creating spatial and digital places for collective reflection and thought about ourselves and our world. Without these forums, there is no possibility for sensible decisions about the environment. This was Guattari's point in *The Three Ecologies* (an essential read), where he argued that the ecologies of the physical, social, and psychical worlds are interrelated; and that the problem of ecological sustainability is not a lack of knowledge or technology but a problem of homeostasis. We will never achieve a homeostatic relation with the physical world - built or unbuilt - until we are in homeostatic relations with Others and with ourselves. We will not be able to make sensible ecological decisions until we put our social and psychical houses in order. Controversies asides, Rachael Carson published *Silent Spring* in 1962; and Greenpeace was founded in 1971. We have been living with climate change under one name or another for two generations, yet we pretend we have just discovered it. The UK Research Councils are now talking about Connected Communities, and their supporting technologies, a belated recognition that if we are not able to build mechanisms that bring us together to make sensible decisions, all the zero carbon technology in the world will not help us.²⁴

If there is to be a new urbanism, it will have to be a sustainable one. Giedion and Koolhaas are both problematic references: although they imagine the city as an armature for continual change, integrated consciousness, community, and new creative possibilities; if there is to be a new urbanism, it will not be based on monuments or the fantasy of laissez-faire urbanism. The point I want to leave with: a sustainable urbanism is a matter of creating forums where people can make sane decisions about the city they live in. These forums will be spatial and digital because these are the primary media of community and communication. These forums have to be in the city, fully engaged with it, because the city is our primary repository of knowledge about ourselves, our society, our material world.

PG

We need platforms on the street to plumb the complexity/dynamic of Guattari's 3 E's, to allow an ongoing 3 E's assessment, that relationship between humans and their environment. That is what Geddes attempted with his surgical interventions, his outlook tower, his cities exhibitions – what is now being done off street with John Paul Gee and serious gaming. We simply want to bring it back to street; we have to find room out there on the street to build.

²⁴ Felix Guattari, *The Three Ecologies* (London: Athlone Press, 2000). Transl. by Ian Pindar and Paul Sutton from the original French, *Trois Ecologies*, 1989.

LG

Patrick Geddes was a message Huxley and Darwin sent to the future. He died in 1932; the same year Aldous Huxley published *Brave New World* - another dispatch. Geddes left us a tool chest packed with maps. They're maps to build platforms that glimpse, peer ahead, assess what is coming, and maybe humanize this new place.

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