

## **From 2009**

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### ***Sense and Sensor Networks***

Sorry, I tried to work that into something like Sense and Sensibilia, especially as I'm an Austin (but not Austen, I like Clueless though) fan. Next time, maybe, and all decent suggestions welcome at the usual address. I'll credit you too, though not in coin of the realm. This is a open workbook, as well as a rantbook, so you can contribute, if you like.

#### **Introduction**

There's been a lot of counter-intuitive but sensible talk about how cities are pretty good units of greenicity. I just made that up, but it describes what I'm after, in general. Cities are dense so that there's opportunities for efficient power generation with low transmission losses, short and optimised transport loops and small physical footprint living. We may not want to live in Japanese or Hong Kong sized boxes but if the 'outside' is a pleasant park, that could compensate. All this, actually supports fairly large populations, but probably doesn't feed them, a major outstanding problem.

The transport and travel loops provide an excuse to take an interest in graph theory, the travelling salesman problem and logistics, in general. Hurrah for Hamiltonians, they will help set us free! As usual, I don't intend to provide complete explanations of some of the technical stuff. You can do some work yourself and then claim credit for any ideas (you'll be anxious to do this, if you're a member of a conventional political party anyway) as your own. I don't 'want' them and I've probably got more, they're not scarce, just a quiet day and a scrap of paper will get you started. You may have to read a book or two and talk to a few people first though.

Back to the subject. Although cities are potentially 'good' units in this way, they are 'bad' units in many other ways. They generate sewage, airborne and water-borne pollution, poisoned top soil and concrete and tarmac crusts (due to the inner monologues of the status quo) at an alarming rate. They also generate noise pollution, low level crime, light pollution (linked to the fear of crime) and mental and physical illness. The mental and physical illness is the result of the other factors, though also somewhat self-inflicted. They are currently energy-hogs and heat sinks too.

A footnote, a lot of the actual waste is corporate, PCs powered up, lights left on, illuminated advertising and shop fronts. In spite of this, the government plays at (with the deep bad faith of the existential Sartreian sense) energy savings by nannying the citizen. The government can't turn on the corporates on behalf of the citizens (an act of good faith, probably) because they are part of the (in the situationist sense) show.

## **Sense and Measure**

So the first thing to be done is to measure and show. By measure, I mean measure everything and I also mean 'overmeasure' (that is, not be satisfied with statistically significant samples, because they mask serendipity and extreme events) to do the job properly. Here are some of things that can be measured:

- airborne gas composition, especially the usual suspects
- airborne particulates
- sewage volumes and composition
- canal and river oxygenation and acidity
- aggregate energy usage (interesting since all supplies are in private hands)
- aggregate fossil fuel consumption

There's a lot of soft factors too, such as hospital admissions and low level crime. Traditionally these figures are worthless because they're massaged and used as political footballs. So perhaps we need vow-of-honesty measurement priests in charge of all this too. I'm sure that there's plenty missing and some things may turn out to be infeasible, this is an idea-in-progress. Although, I'm rabidly anti-neoclassical and don't like number fetishes (try silk, try leather there's a good situationist), there's some sense in making two or three fairly simple indexes out of these.

There's a large technology side-project here too. This needs within-reach evolution in sensing technology both in the breadth of what's being sensed, sensor features (all of them need to be networked) and price-point, since there are likely to be thousands of them. Some of this work is happening in universities, though, given the nauseating connection imposed between learning and 'industry' by 'modern' politicians since Thatcher, a great deal of it will be closed by patents, NDAs and unproductive money maggots.

So, I'm assuming that a network of these sensors exists and the inputs can be aggregated, stored and displayed. The raw results, aggregates and trends should be free and available to everyone. This is open data in the style of the US Geographic Survey (but not, of course, our expensive paid-for-twice Ordinance Survey). This provides extra benefits in that enthusiasts will work with the data for free and perhaps discover useful correlations and trends. We didn't try crowd sourcing on green issues, a useful and exciting 'yet'.

We then have a picture of the vitals signs and trends for our city on a rolling, transparent and unmediated basis. How different this is from 'retail sales', 'consumer confidence' (how about citizen ras-de-bol, look that up), 'GNP', 'unemployment figures' and other massaged stuff designed to frighten, manipulate and suck out our souls. No wonder that half our youth spend the weekends getting hammered. We have a cyber-gaia snapshot.

## **Social Policy via Rewards**

The next stage is to reward positive changes in the life-signs of the city by rewarding the inhabitants, Most of this is probably self-financing, since, for example, lower airborne pollution will result in lower hospital admissions and general levels of illness. Hey, people may be at work more and be more productive, the poor fools.

My emphasis in this, as in approaches to other problems in these essays is reward for merit, rather than punishment via taxation. This is an idea borrowed from Professor Apichai and, in general, the Buddhist economists. If people do 'good' things, something should come back to them. The altruists and idealists will do things 'anyway' (the right reason) but the less-enlightened will do things for actual benefit. People see taxes as the 'cost of doing business' usually not as behaviour modifiers.

So, I would plan to issue social policy bonds, Ronnie Horesh's idea, for improvements to some of these indicators and indexes. Social policy bonds have a maturity value greater than issue, if the specific goal is fulfilled. Otherwise, for example, they would expire as worthless. Thus, the price will fall over their lifetime until, we hope, that people buy the specific issue and begin to solve the particular problem. It's important to avoid perverse effects, for example, it may be a little harsh to kill people that are littering, however much they really deserve it. We should be satisfied just with maiming them and tattooing 'ignorant littering oik' on their foreheads, if there was room.

It would be better if certain issues were exclusively community purchased (rather than by organisations or corporates) and therefore become a fields for action within a specific area or community. This is a detail though.

For example, quantities of kitchen waste can be removed at local level and turned into compost. There is already a reward to the council concerned for this, in the form of £40, and rising, per tonne of landfill tax that would not be payable. Thus, local composting can be self financing. However, councils love (other people's) money, so only rarely, and at election time, will they pass on such a saving. I'm currently doing some informal measuring work on my peelings to work out some figures for anaerobic composting for my estate. Currently Maidenhead and Versailles are offering some kind of reward based system. In Maidenhead, the rewards are consumer goods, how stupid!

If there's a bond for car journey levels, people can start to car share or use existing car share infrastructure. Some of them might even want to try walking or cycling too. The bonds have a specific objective not a specific method (bear in mind, perverse effects though).

## **Invent and Communicate**

When approaching solutions, there'll be invention, trial and error, things that work well, things that people dislike and various combinations of all these elements. That's fun! It's exploration of the solution space or trying-things-out.

Since, we have the internet now, we can communicate some of these successes and failures to our cyber-neighbours who may be exploring solutions to the same kind of problems. They may have comments or improvements too. This is open knowledge in action, it doesn't require huge failed government projects or government intervention. Some of the approaches will fail but they will fail on a small scale leaving some good folk wisdom.

## **And That's It**

That's all folks. We're nearly there with some of the initiatives but this is a more general approach. My intuition is that this is a good approach for small scale local initiatives because they are more sensitive to local conditions. I'm somewhat involved in the parish-council devolved democracy movement and this seems like a good approach at 'parish' (2K – 10K people, for example) level.

There's plenty wrong, for example, airborne pollution doesn't respect borough boundaries, though politicians would like to believe that. As Thomas Disch said 'let's sail till we come to the edge'.

## ***A Green Micro-Economy***

This is a second attempt at something I wrote about four years ago. According to a couple of non-expert views, the first one was interesting and also somewhat incomprehensible, so I'm taking a second run at it. It combines quite a few ideas in the other essays too, merit, recycling, complementary currencies and compost (like many people who were around in the 50s, I love compost more than anything, though not more than life itself, compost needs humans). So first, a few explanatory words and notes.

### **Introduction**

First, a complementary currency is some kind of technology (paper notes, electronic exchange of numbers, large but very pretty stones with a hole in them) for storage and exchange of value. It is distinct from the national or regional (the euro, for example) currency, sometimes convertible but preferably not completely. By convertible, I'm talking about exchanging the complementary currency for a national or regional one. This is a complementary rather than alternative, the currency co-exists happily (we hope) with its larger (but more destructive) relation.

The currency, in this case, is a backed currency. A backed currency is exchangeable for some commodity or service. The simplest (and probably the most stupid but culturally very popular) are currencies that are backed by gold. There's not much you can do with gold, one can't eat it for example, you can make electronics and jewellery from it. Gold is 'valuable' because a) it's scarce b) it's pretty, pretty thin reasons. In this economy, a commodity basket (a known mixture of useful stuff) is used to back the currency.

Second, merit. This is borrowed directly from the Buddhist idea of merit, particularly the 'sila' or virtue part. The virtue part covers 'good conduct' which I have westernised somewhat, and aimed outside the precepts. Also, merit can be transferred (I'm actually not too comfortable about this) in special circumstances. In the west, we have degenerate, deformed and monetised versions of this, in the form, for example of 'loyalty cards' or 'rewards'. It would be an amusing (that's not really the word I want, is it?) essay to see whether we have constructed a complete set-mapped degenerate and monetised version of some of the other concepts too.

I have reversed the usual western government procedure, that is, tax undesirable conduct in order to try and change it and (not coincidentally) make a shed-load of money for the commissioning bureaucracy. Hurrah, the magic trough is always full! Also, as I've said elsewhere, these 'costs' are usually absorbed as the 'cost of doing business' or externalised (dumped by businesses onto individuals, mainly) whereas people are always happy with a 'bargain'. I'm thinking about positive feedback and virtuous circles rather than damping, for example. Finally, it's always worth turning anything on its head, to provide extra insight. I'm not, of course, going to say that many politicians and bureaucrats should be stood on their heads and left there (the name of that rhetorical construction is 'impatiens', for those that like that kind of thing).

## The Economy Itself

Ok, I hope the more esoteric items are a little clearer, let's go to work. My complementary currency has three items backing it:

- some national currency, that comes from selling stuff created in the economy itself (endogenously, according to Gordo the big-word-clown)
- energy that's generated from biomass, CHP and photovoltaic
- compost that's produced from composting products

The currency serves about 250K people maximum, a little more than a big London borough

Let's start with the borough wide composting, which produces the following effects:

- provides free compost for the food growing within the circumference of the economy
- provides compost for sale, for national currency, outside the circumference
- reduce landfill and thus provides payback in reduced landfill tax
- reduce size, weight and frequency of garbage pickup, more credits

So, our happy subjects, who, by regaining some control over their lives, are starting to become citizens again, start to compost. Hey, I do this in my maisonette garden now, it's much, much smaller than a handkerchief. You can either start to compost with communal compost heaps (which your council will hate) or anaerobic composters (which your council will love, capital expenditure, jobs for the lads, subcontracts, mmmmm!). However, you can compost quickly, higher volumes and greater range of stuff from large-scale anaerobic composters.

The solar cells, CHP and biomass (at the moment waste biomass from our horticultural 'contractor', good name, for a decent amount of money they kill and spray stuff, like their crime cousins) installations, provide a reasonable amount of electricity, generating credit values as the surplus goes back into the grid.

Finally, some community actions, such as delittering (meaning that the council is not paying expensive subcontractors and writing leaflets about it) are credited too.

Incidentally, as I've suggested in the s(n)ide remarks, unitary and borough councils are likely to hate this, it removes power, scarcity control (more power) and influence from the centre and moves it down a few notches. In fact, the correct within-the-system way to do this, may be via low-level parish, village or ward councils. These are possible now, even within the London boroughs.

Now, the commodity backing is being created, currency can be issued. Because the national currency is only part of the backing, it isn't at the same numerical value as (parity) with the national currency. This prevents, to some extent, the value leaking out of the currency catchment area. There's been a certain amount of national currency 'pump priming', buying and installing solar cells and composters, for example. There's also, inevitably, some expense in national currency, maintenance, spare parts and specialized labour, for example.

The currency can now be issued in transparent and known quantities (unlike our current for-profit issued currencies, created at about 90% via bank debt). It's interesting to find a way to do this equitably, perhaps via equal (and by that I mean the same quantity) to every citizen in the currency boundary as (mutual or cooperative style) dividends. It's a nice piece of optimism to think that the rich would simply give away their dividend to someone else or to a local cause that uses the

currency, perhaps they would. The currency then makes its way into the 'general' local economy, smaller shops and services, restoring some balance against the larger players. A small 'banking' and electronic transfer 'industry' springs up, if the currency is note/coin based.

Governance, issuance and withdrawal need some thought. In general, there's temptation to fraud when the stakes are high and the risk/reward levels are looking good (complete convertibility and notes in large denominations, for example), a good reason for human-scale, perhaps the 250K population is too big? It might be useful, but limiting to restrict the whole currency to 'greening' transactions (seeds, tools, garden labour, saplings, compost and top soil, for example) and then widen its applicability to the 'general' local economy after a while. The limiting case of this is a token voucher or stamp which is only useful for one type of thing.

People can redeem certain quantities of currency for the national currency, but it won't be a good bargain, so they'll be encouraged to do things in the locality. It would be good to find a way to prevent supermarkets from accepting it too, perhaps via governance measures limiting redemption from certain types of organisation.

I'm not pretending that any of this is a precise schematic, there's a great deal to be blocked in, nice sacks for the compost, currency governance committee, green transport for moving stuff around, documentation and explanation, systems for currency transfer and auditing money supply against commodity levels, want/offer boards and volunteers at all levels. It's a thought adventure that needs to be brought to life.

I see some of this as being biomimetic (a word that's gradually becoming more popular, watch out) as mimicking some of the human body. We have systems that carry blood, lymph and nerve impulses, we don't have one, general nutrient, removal of interstitial fluid and signalling system all-mixed-up. This is a conceptual weakness of 'big' general purpose currency and a clue that smaller-scale specialised technologies -may- work better (unless you're a hypercapitalist who believes that everything from the classical economics was delivered on a stone tablet; well, a lot of it is certainly in indecipherable language). All of our economic systems and signals are mixed up (polluted or trafficked, some might say) in one unreasonable tangled large thingy used for everything from luxury cars (bad, mainly) to food (essential for human life) to seeds (good, in most cases).

We could, of course, make good decisions and account well for all this. This is one of the intuitions of 'carbon trading' and pollution trading (neither of which I believe in, they are mainly unenforceable, create privilege, greenwash and miss the point which is not to do it) for example, instruments and units of values can be specialised in a positive way.

We can broaden this out to a complete and distinct set of expressions for value linked, for example, to food, non-renewables, renewables, energy and things-that-we-don't-really-want. This is great but there's always the problem of convertibility and leakages, food stamps to cigarettes, already tends to happen, for example. I'm hoping that the transition towns in the UK will take some of this approach when they think about local money rather than going for parity and convertibility with the national currency, running to stand still, really.

## ***Cover It All With Green***

When I'm in Bangkok, arguably more problematic in governance and transparency than Tower Hamlets, I spend some of my time taking pictures of street vegetation. Same thing in Singapore, I'm a carbon criminal, but I get around.

One day, I will show some of these pictures to someone in the council, if I can find someone actually working for the good of the borough. In fact, there are plenty, but they're never very senior, never will be, can't stop the top floor gravy train can we?

These pictures are of planters, lane dividers on the edges of pavements and pretty much everywhere. Singapore also has flowers hanging on shelves on the pedestrian bridges and Bangkok is beginning to follow suit (the mayor of Bangkok went to Singapore to take a look, a fine example of being able to learn, must be something missing in the water here). Lastly, on the Sky Train support pillars there are cheap lightweight trellises with climbing plants, so the climbers cover the pillars without eroding them.

So, this is a complete vertical and horizontal program that could be pushed much further for very little cash, trellis work everywhere, vegetation and micro-agriculture on roofs, concrete pillars and (ugly) walls, hiding them from view and making them inaccessible to graffiti. The school of management in Singapore has vegetation overflowing from its balconies too, looking out from Sukhumvit 8 over (affluent) Bangkok, this is beginning to happen there as well.

It's fairly low cost too, trellis from recycled plastic (though watch out for UV damage if uncovered), water from rainfall (though our 'gubbiment' prefers us to pay their mates for it) and some low-value (in a 'market' environment, shame it's more noble than banking, for example) labour.

I've called the food part of this the CIA, the Campaign for Interstitial Agriculture. It's an idea, a meme (if you will) but, starting with Cuba, there are great sprouts of it everywhere, gardenshare, fruit up front etc.

I live near an ugly, busy, urban, old fashioned four lane highway which would benefit from this approach. The cost is probably in the region of tens of thousand too, but, instead we 'choose' (well Coe-baby, a load of property developers and some gassy idea-free politicians choose for us) to waste about £20bn on the 'Olympics'. Yes, I know it's £10bn (up from £2bn) at the moment but it'll come out to about £20bn, you'll see, especially when we start importing US security 'consultants' to keep us 'safe'.

Now, the next thing is more radical. We need to start removing the vast swathes of tarmac, concrete and paving and replace them with wildflower drifts, lawn and smallish sheep tracks (for wet days). There are huge pieces near me (in a park and around the Limehouse basin) that are not justified by any significant traffic. Of course, now they are there, they are used for 'parking' and riding bicycles too fast. Walking and cycling needs to capture a reversal of the Good Roads Movement (which started with bicycles anyway).

Tarmac is a heat sink, an eyesore, an incitement to speed (in the future we won't need clocks, recycle a couple now, as a gesture), doesn't absorb CO<sub>2</sub> or compost, unpleasant to the eye and prevents natural run-off. What good is it, everywhere? Same remark for paving stones, although these, at least have a bit of built-in run-off. We need some tarmac but a grate deal less. I'm fine with some road transport, but we need to reduce the addiction and be more logistics-minded as a pervasive policy, to the devil with gassy (CO<sub>2</sub> being the gas) special interest groups like the RAC foundation.

As the title says, cover it with green, you have nothing to lose but your tarmac and concrete surfaces. We can measure the success or failure of this policy too, since it's got a surface area. Hey, we're almost back to the days of window tax! Except that this is better done with some kind of local incentive such as social policy bonds or local credits of some kind.



Of course, our council tends to move in the other direction, more and more tarmac. There is a simple reason for this, the horticulture is subcontracted, so the less that has to be done (mowed, trimmed, planted or weeded), the greater the profit for the subcontractor. Did I mention that most of the subcontracts are 'partnership agreement' subcontracts, murky things that deliver unquantified benefits for the council and very little for the tax or service charges payer? Thus, there's pockets to be filled and money to be made from tarmac, before, during and after.

We had a small area on Pennyfields that was fine for football, using, as a friend said, sweaters and tops for goalposts. That has been turned, at a cost of about £100K into a tarmac floored cage, which is now useful for 'sport'. Another example of granted-fueled uselessness. Actually I've just seen another in the east of the borough too, and, we have the same thing on our estate.

It represents about four unthinking steps in the wrong direction. First, there's nothing wrong with sport on grass, that's where it usually takes place. Second, these things do not need to be fenced in completely. Third, they do not need fixed goal posts (or even basketball goals, they can go up and come down), as my friend said, sweaters and tops will be enough. Fourth, after these three steps, high fencing will not be necessary, because there'll be nothing fixed to climb into.

There's a situationist thread that connects with this, the idea of psychogeography. Some of the reasoning that led to the pedestrianisation of Les Halles (the old fruit and vegetable wholesale market in the centre of Paris, now moved to the suburbs so that more petrol can be used, a triumph for the idea of 'real estate' and 'shopping malls') were based on this. Meanwhile, the greener the city looks, the greener it gets, barring Potemkin villages covered with institutional green paint.

## ***Points of Contact***

In London, I live next door to a small park. Our side, the north contains my estate (that's a project if you live in the US, an HLM if you live in France). Their side, the south, which is Narrow Street and beyond is private, luxury housing. In the park, there's a playground with swings and slides. To tell the truth, I like both, why can't there be, as a friend suggested, playgrounds for adults?

So, to this playground, come people from the estate and from private housing in all their various ethnicities and socio-economic categories. Since a great deal of my estate is leasehold, it's quite middle class, many of the right to buy flats have been sold on. In the playground, they watch their kids swing and sometimes gossip a bit. They acknowledge each other as human beings and look at each other.

Ok, let's take another, that I still find in Paris (though not in the snooty arrondissements like the 8<sup>th</sup> and the 16<sup>th</sup>, for example).