

A Non Technocratic approach to Climate Change, the Municipal Green Opportunity.

Analytic philosopher: let's simplify this to the point it has no relation to the problem. Continental philosopher: let's complicate this to the point no one understands it. - Existential Comics

Undoing and replacing the national neo-liberal climate narrative, both project and philosophy at municipal level.

Introduction

This essay argues that current national, top-down technocratic policies guided partially by the economics of the 'market' will fail (partially or disastrously) to mitigate or build resilience toward a rapidly changing climate. It proposes and argues, in its stead, for local initiatives and solutions framed by a green holistic narrative.

Conventional analytic philosophy posits the primacy of ideal model ethical and thence political theories upon which to base policy and the conduct of government. In this essay, I follow Geuss^a who, in my opinion, makes a sharp and successful regress attack on a number of systems of ideal theory based ethics.

Following Geuss, I emphasise the contextual and the contingent, thus finding myself adrift from the purely analytic and steering, in my post-Neurathian boat (ship's master Captain Quine), towards the sociology of imaginaries¹ and of Utopia as method^b. I conclude with a partial sketch of a resilient municipality, somewhat following (later ideas of) Bookchin^c a model that, I believe, can be achieved at municipal level rather than from central government as in the two competing and (as I argue, failing) cases that I have called Standard Technocratic and Reactive.

There is a very extensive bibliography since I hope that this essay will be a stimulus to further and deeper reading and (perhaps) action by some of my local political actors.

Scope of the Discussion

This essay took as a starting point, my borough in London, that is therefore, paradoxically, given the above, also somewhat an *ideal* model, since it only deals with part of one city. One can immediately argue that this is imperfect since interactions at the boundaries, for example violent incursion, unhappily there is no valid response here, without writing a book instead of an essay.

¹ The imaginary (or social imaginary) is the set of values, institutions, laws, and symbols common to a particular social group and the corresponding society through which people imagine their social whole.

Three Failures and Three Approaches

I focus on, *water and food supply* and *public health*. For example, there will certainly be flooding at the lower levels and near waterways, but these problems are localised and bounded. In contrast, food supply and public health concern all ages, genders, and circumstances, though the poor, young, old and voiceless will, intuitively, have the worst of it.

For each, I discuss three political settings^{2 d}, the the Standard Technocratic, the Reactive and the Green Libertarian Municipal (abbreviated GLM), with an emphasis on the latter. I de-emphasise the Reactive, for reasons that become clearer later. For GLM, which I favour, I argue from, the probable partial failure of central government technocratic resilience and mitigation^e. In the first two, I have assumed that the municipal follows the national setting very closely, they are therefore top-down models, and in GLM that there are some elements of 'divorce' and active subsidiarity.

The technocratic setting is any centrist government from the late 20th and early 21st centuries. It implies a framework of neo-classical economics, using opportunity cost, equilibrium equations, intensive (and successful) lobbying by vested interests, identifying and satisfying 'consumers' and the other steps that we take when we try (not) to solve societal problems. I argue that this approach can tend to morph (or degenerate, to use more partisan language) into the Reactive.

The Reactive is minimally and reactively interventionist, laissez-faire and could be described (or criticised) as right libertarian, minimal state. There would be (both metaphorically and literally) some fire fighting, but response only to serious threat or disorder only, no notions of of resilience or mitigation, remedy or distributive justice, for example. Response to threat, may, for example, consist of threat to the food or water supply of *current authority* or refusal to *tithe* or *be taxed*. Elements of this may be present, even in the absence of any recognisable contemporary institutions, for example, Somalia under the tribes and warlords.

Finally, GLM treats all policy strands as part of an ecologically sensitive framework and project, thus subsuming the two chosen problems (and the rest, but that is a longer text) into a greater whole. I assume, also, that some of the current institutions still exist, something that is, by no means, certain. However, the societal part of the GLM approach is based on building, rebuilding or strengthening low level institutions, such as citizen's assemblies, spaces for activity and reflection, and local co-operatives and non-profits, these are somewhat detached from the national political and economic setting but connected amongst themselves via well-defined systems of federation.

There are (at least!) two overarching questions for this approach. First are the chosen problems (or many of the climate change problems) connected? For example, expensive and scarce food will clearly have an impact on public health. Following this line, if many of these problems are connected, does this favour GLM style approaches, since the proposed solutions are more integrated? I hope to be able to argue and answer in the affirmative, but so does technocratic government, in principle³.

2 I have called these *settings* because municipality sits within a broader political and societal landscape (unless we revert to autonomous city states and principalities). I have resisted *scenario*, pace Herman Kahn (see endnote d).

3 The net-zero challenge must be embedded and integrated across all departments, at all levels of Government and in all major decisions that impact on emissions. **It must also be integrated with businesses and society at large.** *Since many of the solutions cut across systems, fully integrated policy, regulatory design and implementation is crucial* from: Various. (2019). Net Zero – The UK's contribution to stopping global warming.

The second is about the relationship between the models. First, I am aware, that (pace David Lewis⁴) there are many models that I have *not* treated. I have chosen three as being as what Lewis would style 'near' (near our current experience, laws of physics apply, all men are mortal), rather than *unicorn and chocolate fountain* worlds or, more traditionally The Land of Cockaigne⁴. I assume, that bits of the future are embedded in the present and the near future is 'recognisable', to quote William Gibson 'the future is here already, it is just unevenly distributed'. Without disappearing down a giant rabbit hole of symbolic and formal modality, these three models are considered to be related as in this quote⁵:

Another interpretation of the 'accessibility relation' with a physical meaning, the claim "is possible in the world is interpreted as "it is possible to transform into a world in which is true"

Adding, with a minimal (but unspecified) number of transformations. So, I believe that the three models are 'near', that they will transform, in some cases from one to another. However, in my view there are asymmetries, in that the Standard Technocratic model *can* transform into the Reactive (easily) or GLM (more difficult), but I do not believe that the Reactive model transforms easily, into either of the other two. The GLM model *can* convert back into the Standard Technocratic but part of its 'design' (hopefully) makes it more unlikely to convert into the Reactive. I discuss some of the detailed changes that may effect transformation, when I discuss the models.

Argument

In our lives, we 'prepare', we get educated, save money and repair our homes. In all of these, we are making implicit, inductive assumptions about a somewhat unknowable future. We expect the same from our elected and paid officials, that there will be a national health service and a pension, if we fulfil certain conditions. All these assumptions are predicated on a central assumption *and hope* of a smooth and continuous path into the future.

However, let us suppose that we predict and prepare for significant discontinuities. There *will* be a sea battle tomorrow^h and it will decide whether our town is destroyed and we are sold into slavery, or not. This asymmetry is present in preparation for climate change too, the worst may not happen, in which case will our preparation be 'wasted'? I will argue that this is not so, as the joke⁵ goes, we will not have constructed a much better world for 'nothing'. Climate change and its remedies are not like the sea battle either, there may be partial effects, partial change, a much more varied set of future scenarios.

In pure analytic philosophy, climate change might require, for example, a 'duty to prepare' as a collective responsibility, difficult in practice and full of hidden controversyⁱ. My alternative to an ideal theory of ethics is to be more modest and start from the two tiers at the bottom of Maslow's Hierarchy⁶ (physiological and safety, see the footnote for a short explanation) on the basis that if we do not survive, there is, in fact, no discussion to be had. Survival *transcends*, if we happen to

4 A land of plenty in medieval myth, where physical comforts and pleasures are always immediately at hand and the harshness of medieval peasant life does not exist.

5 [James Governor. \(2010\). What If We Create a Better World For Nothing?. Available: http://greenmonk.net/2010/01/07/what-if-we-create-a-better-world-for-nothing/. Last accessed 29th October 2018.](http://greenmonk.net/2010/01/07/what-if-we-create-a-better-world-for-nothing/)

6 [Wikipedia contributors. \(N.D.\). Maslow's hierarchy of needs. Available: https://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs. Last accessed 29th October 2017.](https://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs) Maslow's hierarchy of needs is used to study how humans intrinsically partake in behavioural motivation. Maslow used the terms "physiological," "safety," "belonging and love," or "social needs" "esteem," and "self-actualization" to describe the pattern through which human motivations move.

believe that the human race is not a bad thing, another essay in itself. I believe this to be more in line with Raymond Geuss' criticism of the conduct of policy^j having no direct relation to abstract ethical and political theories that take centre stage in analytic philosophy. Part of my approach here therefore is a contextual, *it's a mess but we'll do our best*.

What will Happen?

To anchor the rest, we need to understand what will happen to water and food supplies and public health in a time of changing climate. Already, this is a future contingent, it has the status of a partially evidenced, inductive thought experiment. Within there are two aspects of note, *conventional uncertainty* and *chaotic effects*. I only argue within 2-3°C changes, supported, for example by current IPCC studies and arguments.

Chaotic effects are, for example, unexpected increase in greenhouse gases (for example, unexpected release of buried methane hydrate^k) or non-linear increase in warming from substantial ice melts and consequent loss of reflective surface (albedo effects). It is not clear what will happen to weather patterns here, but the results are unlikely to be *good*, for humans, anyway. Chaotic effects are usually towards the *worse* rather than the *better* in this case, with the possible exception of persistent volcanic eruption leading to a volcanic winter, see ^{l7}. But, even here, areas affected are unpredictable, crop loss is predicted, and increased ocean acidification is a side effect.

Finally, at 6°C^m, we're doomed anyway, so logically, this is not worth discussing, since the problem has *solved* itself, in a traditional way via a mass extinction.

Food Supply

I have used government statistics hereⁿ and here^o, to provide the facts and arguments in this section. First, over 50% of UK food is imported, therefore we can potentially add (internal and external) political and logistical effects to climate effects. Second, we may also want to make more fine-grained arguments about dietary mix in the course of arguing about food.

The UK is not nearly self-sufficient as regards food, this article^p discusses food security and Brexit, a good proxy for climate change stress and disruption. Food supply and diet are intimately linked to public health, in a number of ways, food shortages, calorific under nutrition, dietary deficiencies being the most obvious. Water, of course, sustains food production and we die quickly without it.

I therefore assume that we lose most of our imports, since our neighbours and suppliers will have the same scarcity and harvest problems and, logically and politically favour their local populations. If they do not and there is still some semblance of democracy, the population will be tempted to elect a government that does so. If there's no or little democracy (see the Reactive thread) the food will be hijacked (see Somalia) or traded away via corruption, so it will not arrive, either way.

Which native crops are most susceptible to climate change, since this is the second major factor in the 'reduced food mix'? Here are two sources^q ^r from the UK government and civil service. Maize and wheat, therefore bread and common types of meat (maize is used for cattle feed) will probably spike. We lose vegetables too, and putting water stress back into the equation, we see that the fruit and vegetable localism advocated later in the GLM approach makes sense in both contexts^s (loss of imports and climate based water stress). We will certainly eat less meat, whether we wish to or not.

⁷ A volcanic winter is a reduction in global temperatures caused by [volcanic ash](#) and droplets of [sulfuric acid](#) and water obscuring the [Sun](#) and increasing reflection of solar radiation after a large, [volcanic eruption](#).

Public Health

I have chosen to concentrate on physical health, although it is clear that there are consequences for mental health also. It is, however, much harder to speculate about mental health, except for a blanket, forward view that it may be generally 'worse', the evidence from the second world war, seems to suggest this^t. So, there are groups of problems, that are connected in many cases:

- Dietary problems from sub-optimal food supply
- Direct effects of heat, exhaustion, especially very young and very old
- Expensive drinking water
- Novel diseases and dangers enabled by a changing climate
- Unquantifiable mental stresses associated with the above factors

This leads to problems of access given (currently, as of 2018) already overburdened health resources. We have seen this already, excess death figures in France for recent summers^u, however there is some controversy about cause.

Solutions

I discuss the approaches here, in the order of Standard Technocratic coupled with Reactive and then move to GLM. I attempt to show, that Reactive and the Standard Technocratic solutions are likely to fail, since climate change is both a persistent and wicked^v problem rather than a set of separate, separately solvable, orthogonal problems that would yield to organisations and narratives that are structured in governmental or organisational silos.

Also, intuitively, if any of the separate problems (or a subset) produces a sufficient level of societal dissatisfaction, then, a flashpoint may make the Standard Technocratic spiral down towards a Reactive, where any policy or preparation is abandoned for reaction and coercion. This is why I couple these two approaches, without any delight, if I were to be right.

Standard Technocratic

We can describe this as *business as usual*, most stable European countries look rather like this. Calculations are made using the formulae of neo-classical economics, the 'future' is discounted as a single number and food and healthcare are rationed using complex forms and esoteric calculations. There may be preparatory elements (Net Zero^w, currently), but since they are compared to business as usual using opportunity cost, they are likely to be minimal. John Broome has provided a great deal of work^x, taking this approach. It is noteworthy and alarming, for example, that any levels of preparation and mitigation depend on the discount rate chosen, usually framed in purely monetary terms⁸.

The exercise is top down and full of esoteric terms and copious footnotes. For example, this paper on Ecosystem Based Adaptation^y (EBA). Even at the lower level of a single country, Germany, the focus and level of concrete thinking improves somewhat^z, but we are still in a technocratic quagmire^{aa}. It is notable here that, looking at Figure 6 in reference 19, there has been no thought about mitigation for uncertain food supply. Technocratic society, our current model has a

⁸ Present value, also called "discounted value," is the current worth of a future sum of money or stream of cash flow given a specified rate of return. Future cash flows are discounted at the discount rate; the higher the discount rate, the lower the present value of the future cash flows.

predominantly market narrative, therefore we can expect price spikes and price volatility, even in the absence of real scarcity (by which I mean, the sums *really* do not add up, we *actually* cannot feed everyone, as opposed to *some people do not have money*).

At the time of writing, there is a UK price spike for some medicines, one can expect some of the WHO essentials^{bb} to spike too. Of course, this suggests a descent into the Reactive, one common cause of rioting is scarce or expensive food, often bread, especially in conditions of visible inequality^{cc}. Fuel prices are also a common cause of civil disturbance, UK fuel distribution blockades^{dd} and from 2018 onwards, the French Gilets Jaunes. In 2017 in the UK, there were *telephone calls to the police* about a temporary shortage of fried chicken too, no words.

Worse, and I agree with John O'Neill here^{ee}, we have a view partially framed by Ecosystem Services, in my view a profoundly mistaken and arrogant view about our relationship with our little planet, since it uses a single dimension and monetary values for items which are a) incommensurable, no two trees are alike b) a tree has a complete micro-ecosystem with it and a relationship with other organisms, including nearby trees^{ff} c) If (climate) science is even partially correct, this is a form of Russian roulette, where removing the 'last tree'⁹ will tip us from partially addressable climate change into runaway climate tragedy.

In my view, to be broader and more philosophical, this kind of thinking is one of the larger negative intellectual externalities of the Enlightenment. Actually Marlowe warned us about this, well before the Enlightenment, making his Dr Faustus say '*Sweet Analytics 'tis thou has ravished me*'. Nietzsche, though ranting somewhat¹⁰, saw this as a clear and present danger. Or, from the right, Edmund Burke^{gg}: "*The lines of morality are not like ideal lines of mathematics. They admit of exceptions; they demand modifications. These exceptions and modifications are not made by the process of logic, but by the rules of prudence.*"

This approach leaves us with no clear, GLM or coherent governmental narrative, just a jumble of 'funding pots' and 'initiatives'. There are elements of Thatcherism's kitchen economics, *making numbers balance* as a philosophical good, numbers, outputs, and outcomes. As I know from bitter experience, outputs and outcomes are open to persistent fraud, anyway, remember the Russian (in the time of Союз Советских Социалистических Республик) joke, '*So long as the bosses pretend to pay us, we will pretend to work*'. A critic may (rightly) complain at this point that the Third Reich narrative was clear and, apparently, attractive. I try to partially answer this in section devoted to the GLM approach.

That narrative void is supplied by Debord's Spectacle^{hh}, a world saturated with artificial desires and life lived via proxies, especially via the narrative of competition (Bake Off, Strictly Come Dancing and assorted billionaires), happiness advertised as consumption and therefore debt. Also something that I choose to call 'transactionalism'¹¹, reification's evil cousin, as I write this someone is making a business out of hugging peopleⁱⁱ. Both the competition and the increasing orientation towards transaction, prepare and prefigure something more divisive and dystopian too. Both radical left wing accelerationists¹² and Nietzsche actually support this tendency, in the hope that the system will

9 When the last tree is cut, the last fish is caught, and the last river is polluted; when to breathe the air is sickening, you will realize, too late, that wealth is not in bank accounts and that you can't eat money - Alanis Obomsawin

10 So far there has been no philosopher in whose hands philosophy has not grown into an apology for knowledge; on this point, at least, every one is an optimist, that the greatest usefulness must be ascribed to knowledge. They are all tyrannized over by logic, and this is optimism in its essence.

11 This is a much smaller-grained concept than financialisation. It is nearer Lefebvre's concept of 'colonisation', the permanent intrusion of profit-motivated consumption into the *minutiae* of 'everyday life'.

12 In [political](#) and [social theory](#), accelerationism is the idea that the prevailing system of [capitalism](#) should be

finally fly apart, leaving room for the 'new'. However, things that fly apart usually leave wreckage, rather than shiny new things.

But, a critic may exclaim, the complex rules and regulations in (say) Universal Credit and Housing Benefit promote distributive 'fairness' and are therefore an ethical good, pace Rawls. Well, no, complexity is exclusionary, since those most in need are the least able to navigate the thicket of rules towards their legitimate benefits.

Last, although within this approach there is some space for mitigation, as we see from the cited EBA papers, the majority of initiatives are from the top downwards. Thus, they are often attenuated to the point of ineffectiveness by a version of the Cantillon Effect¹³, roughly money injected into an economy will a) spread unevenly b) be of maximum benefit at the point of injection, in this case project 'management' rather than any useful part of the project. Mitigation itself is mitigated to the point of ineffectiveness.

Finally, we also note in the UK papers a need for *cross cutting* approaches, a tacit meta-admission that the technocratic silos cannot capture and mitigate this kind of pervasive and (pace Kuhn) paradigm altering problem.

Reactive Intervention

We can summarise this approach by exclaiming 'shoot all the (food) rioters!'. There are no substantial attempts at mitigation, rather any crisis is allowed to resolve itself, except when the current set of *haves* (who may rotate, see below) are threatened. The shooting above and other incidents of violence, racketeering and intimidation occur as part of the process, in the worst case, as a permanent societal feature.

There is an existing contemporary narrative accompanying this approach pushed by right libertarian, (often) Christian fundamentalist lobbyists (they often self-style as think tanks^{jj}), roughly, the best state is the most minimal state, the rich are rich because they are virtuous, the poor are feckless or morally defective and deep inequality is, in fact and paradoxically, equitable, some ghosts of Nozick's well-paid baseball player, repudiated here^{kk}. Also, since they are financed in part by fossil fuel interests, climate change is not happening. Worse, following Naomi Klein's concept of 'disaster capitalism'^{ll}, there is a significant group who hope to profit from this disorder and oppose any form of mitigation. The collapse of the Soviet Union also made this type of opportunism surface, so it can be argued that this is a 'narrative of greed' rather than stemming from any particular political ideology.

expanded fast in order to generate radical social change.

13 The Cantillon Effect refers to the change in relative prices resulting from a change in money supply. The change in relative prices occurs because the change in money supply has a specific injection point and therefore a specific flow path through the economy. The first recipient is in the convenient position of being able to spend extra dollars *before* prices have increased.

There are some elements of this in current UK policy, for example, massive reduction of police and hospital spending, because, or as pretext, *the books must balance* (except for banks, however, who receive ample quantitative *easing*, to ease their pain, the magic money tree money whose delicious fruits are served often but only at the right tables), leading to a dysfunctional version of a Nozick style minimal state, to quote:

At one end of the spectrum are outlaw agencies or rogue individuals who either aim to perform actions that cross boundaries or pose substantial risks of crossing boundaries through their recklessness or negligence. The actions of such agencies or individuals may simply be suppressed to protect the rights that they threaten.

Under the stressors of popular food shortages (bread, for example, via cereal shortages), expensive fuel, water, and price spikes, broken public services, a discontented, and unequal population, it is reasonable to expect outlaw agencies and rogue individuals to appear and fill the gap left by legitimate (somewhat legitimate, there are no binary measures, pace Professor Wolff^{mm}) agencies and individuals. Indeed, ordinal legitimacy may pass to ad-hoc groups, a form of institutional renewal, this is partly the basis of pre-emptive strengthening for local social bonds, argued later in the GLM section. But better via considered preparation and mitigation, than via chaos. This is an inductive but plausible conclusion, looking at black markets during UK wartime, especially World War II, recently Somalia or Venezuela burdened by US sanctions.

A pessimistic view grants a clear path from business as usual, given enough stress to a Reactive State and thence to failed (Somalia, DRC). For example, scarcity of necessities, price spikes and volatility, inequality, perceived injustice, perceived political illegitimacy and environmental stress. We can add draconian laws, manipulation of media and civil authority excesses. It is a sinister truth that this path is continuousⁿⁿ, not discrete, there are no definitive distinctions between Reactive and failed^{oo}. If we were artificial intelligence addicted futurologists, these factors would be a feature vector¹⁴ rather than a single factor. Also, every recent world event of this type suggests build up and a final flashpoint¹⁵.

The current, unexpected Gilet Jaune protests in France have resulted in use of water cannon, ruined speed cameras, police excesses, deaths and blockaded roads. They have diminished somewhat because the French government has reversed a fuel tax rise. But food, water scarcity and price volatility caused by climate change *cannot be reversed in this way*, so one could expect a more persistent cycle of protest, panic and repression until the last few strands of state snap.

14 In pattern recognition and machine learning, a feature vector is an n-dimensional vector of numerical features that represent some object.

15 Tarek el-Tayeb Mohamed Bouazizi was a Tunisian street vendor who set himself on fire on 17 December 2010, which became a catalyst for the Tunisian Revolution

GLM Approach

I present three strands in this approach, material, technical and societal. I believe that currently technocratic governments can mutate towards this path, assuming politicians of intelligence and humility. A great deal of the work, both material, technical and societal is, in fact an *undoing*, letting go of the big centre and strengthening the smaller local, towards physical preparation, mitigation and societal resilience.

The Material

First physical mitigation, steps towards both food and health can be taken via *deep greening the city*. Trees provide shade, are carbon sinks and fruit or nut trees provide food. Bushes provide more fruit. Thousands of pieces of grass, mown and remown for no apparent reason can provide space for variegated planting. Given the extremes of rainfall and temperature and constraints of space, the best model for this is a heat adapted version of the Forest Garden^{pp}. This is high density, low maintenance arrangement of productive plants, bushes and trees. In Nepal '*Home gardens, with their intensive and multiple uses, provide a safety net for households when food is scarce.*' So this activity is not necessarily a primary or sole source of food, for example, it is a safety net and also provides a counterbalance against price spikes. See the commentary on security and crime, later, to see how this produce is (not) protected.

Apart from the obvious areas to be re-purposed, there are, of course many private paved or tarmac areas used for parking or simply to avoid gardening in a time-poor, artificially stressed^{qq}, urban society. There is already an American non-profit Depave.org^{rr} that reverses this.

Why is this a partial answer for health, also? Quite simply, tarmac is a black body that absorbs heat. Paving, concrete, and bricks (that we put in storage heaters, a clue) also act as heat storage. Vehicles, heating and air conditioning all output surplus heat. So, any city environment could benefit from tree-provided shade and re-greening at ground level, to mitigate high temperature and hence heat related health problems. Certain plants (ivy, for example) are also good pollution sinks, hedges help us and help wildlife too. There is some solid science in this paper^{ss}, part of the EPA collection, the EPA that the current US presidency is steadily dismantling.

Another part of the answer for health is cheap, available, and local fruit and vegetables, a problem for many modern urban diets, in spite of constant government propaganda. So we need to revive market gardening at the edge of the city. There are traces in Paris, at Maraichers^{tt} (translation 'market gardens') in the 20th Arrondissement where, and, I quote '*Until the 20th century the hills of Belleville and Montreuil were cultivated by many market-gardeners, whose most famous products were the "peaches of Montreuil"*'. Outside London, patchwork and free gardens are already appearing^{uu}, too. This is a carbon footprint, food miles and pollution issue, it is logical to produce *some* food *near* consumption and return somewhat to the pleasant aspects of cyclic time (pace Debord) delineated by seasonal produce.

To summarise this physical character of the mitigated city, it is a maximal *rus in urbe*, an augmented version of Cleveland's Forest City^{vv}. A cool green, blue, and brown place filled with teeming life, solar panels, rain water harvesters, anaerobic composters and nearly emptied of motor transport, that a contemporary commentator called 'treescape'.

The Technical

Within the technical there are two strands, open knowledge¹⁶ and alternative technology¹⁷. For the first, open knowledge (I include the world of open source software¹⁸ and hardware), let us conduct a little thought experiment. So, the Acme corporation a for-profit has developed technology that will reverse global warming in two years. However, it is only prepared to sell it rather than gift it. Only rich countries can afford it and the solution needs world-wide application. So, everyone suffers and dies, *killed by intellectual property law, profit motive, and shareholder value*. Actually, in this case, I believe governments would become coercive, so this is a weak scenario. But knowledge is not rivalrous, when I know something, you do not stop knowing it, for example. So, there are strong arguments, especially down at the two primary Maslow layers, for a culture of open, generous knowledge and (see the next section) open social epistemology to address our most pressing problems. Some of the more obvious avenues, research projects in higher education and charities, for example, have been damaged, fragmented, privatised or compromised by grants, grant 'competition' and strings-attached funding and 'sponsorship' from commercial organisations already in the Standard Technocratic Model.

Next, and feeding into this, alternative technology. We can choose here, low power, passive technologies using alternative techniques and materials. For example, dry stone walls (fun to build too) are alternatives to concrete barriers and we should look to the tropics for new passive dwelling construction^{ww}. All these initiatives reduce the power expended, until there is steady convergence with levels of power that renewables produce. We will still need steel and concrete, but we will need *less*. This passive trend will also carry into technology too, sensors rather than actuators¹⁹, to report on the 'world' but leave us human agency and physicality to act. Why do people garden? Here is a clue that non-alienated, species-essence, physical work in the air may be pleasurable. It is doubtful that the dream of full, luxury automation, even as full automated luxury communism^{xx} is desirable from many standpoints, from the physical health benefits to some positive notion of flourishing. Glory heere, Diggers all^{yy}!

The Social

Next, the social thread. As a concept that requires a complete essay (a book^{zz}, in fact) but needs a more compact discussion here, I advance the idea of *antisocial and social space*.

Antisocial, the architectural conveyor belt spaces for 'commercial browsing' without social connection. Fast food chains now have touch screens, customers order quickly without talking to the counter staff who can, of course, then be reduced in number. Obviously, cars isolate too, though as city folk we talk less than we *should*, even in shared public transport, for we are entranced by the contents of our electronic devices.

16 Open knowledge is knowledge that one is free to use, reuse, and redistribute without legal, social or technological restriction.

17 Alternative technology refers to technologies that are more environmentally friendly than the functionally equivalent technologies dominant in current practice.

18 The open-source model is a decentralized software development model that encourages open collaboration. A main principle of open-source software development is peer production, with products such as source code, blueprints, and documentation freely available to the public.

19 An actuator is a component of a machine that is responsible for moving and controlling a mechanism or system. In simple terms, it is a "mover" rather than a "listener".

Our neighbourhood cafés close, replaced by expensive (and therefore exclusive) coffee chains where digital nomads sit silently peering into screens. Much of the apparent public realm is also now private and enclosed^{aaa}, so no-one may sit, talk, sing or protest. Finally, we close or convert our libraries or community centres, after all, there is 'austerity' and these items do not self-finance and the *numbers do not add up*. We close social space containing social activity and replace it by anti-social space supporting colonised (see Lefebvre^{bbb}) and transaction based activity. Even our electronic communications, previously a neutral affair, remember the *telephone call*, are mediated by predatory vectorialists²⁰ and our meta-data (where are you, how many times have you contacted this person, from what phone model) is sucked out, commodified and sold, it may be *good to talk*, but the question lingers *for whom?* Neither the technocratic approach nor the reactive approach do any remedial work here, because anti-social space is a feature of a neo-liberal, technocratic narrative, money must change hands, even within the smallest human activity, comprehensively ignoring Sandel^{ccc}.

So, one important component of resilience in cities is the reclamation and re-creation of *social space*. These are neutral spaces that allow *people to meet* and activities to take place, things (avoiding any rigid ontology, here) to happen. Unlike the grant driven, agenda focused, time limited (since the *numbers will not add up*, after a while) *leisure activities* that our governments are so terribly keen on. You may well ask, dear reader, what this has to do with ecology, mitigation and resilience? And, quite brazenly, I answer, *nothing directly*.

However, *indirectly*, a different and more positive view emerges. That is, these are spaces for low level initiatives and problem solving, of which, resilience and mitigation activities are a subset. They serve allotment users, guerilla gardeners, citizen scientists to meet, exchange and be convivial toolmakers^{ddd}. At a meta level, there is value in physical meeting itself^{eee}, as opposed to electronically mediated meetings. Physical sociability gives mental health benefits as an important collateral benefit. Also, logically, if climate problems inflict damage on the electronic infrastructure (for example, loss of telephone masts), our physical exchanges then also become a central part of our social resilience.

Two final benefits of social spaces, prevention of othering and social epistemology. When we meet, talk and undertake projects together we inoculate ourselves, against the othering that has reappeared as the xenophobic thread in our national life and the darker side of identity politics. We also improve trust by creating informal, non-cryptographic webs of trust²¹, restoring that which has been destroyed by fake-name, anonymous and false-flag trolling in the attention economy of commercial cyberspace. If we are to be *all in it together*, we need to be *more together*.

20 Wark, McKenzie. *A Hacker Manifesto*. Harvard University Press, 2004, p. 57 Wark calls the information producers “hackers,” and refers to the owners/expropriators of information as “the vectorialist class” (since “information” travels along “vectors” as it is reproduced and transmitted).

21 [Nicholas Pornin. \(2018\). What is Web of Trust?. Available: https://security.stackexchange.com/questions/61360/what-is-the-web-of-trust](https://security.stackexchange.com/questions/61360/what-is-the-web-of-trust). Last accessed 15th January 2019.

Social space is a space for social epistemology too, problems get discussed and solved or set aside, for the moment, and marked as *Aporia*. Objectors may want this activity to take place exclusively online, but this disenfranchises the old, digitally challenged, second language speakers, the poor, and ethics-based cyber refuseniks. The scope of 'grass roots' social epistemology is expanding too, from the philosophical towards citizen science, open knowledge and open source technology, as described earlier. There is a meta-benefit here too, de-transactionalised relations of generosity, it is pleasant to *eat, share and discover together*. For example, here is an open source tool for estimating tree cover²², that my imagined municipality would find useful.

Last, social space permits the construction and reinforcement of an authentic pluralistic narrative and meta-narratives²³, as opposed to the ambient narrative of the Spectacle^{fff} (or of Fascism, for example, coherent but not pluralistic) that haunts and occupies the totality of anti-social space, advertising, status, transaction, ambient alienation and pervasive verbal and non-verbal micro aggression, I'm so sorry I bumped into you, I was playing Candy Crush Saga. People really need to watch where they are going, don't they? Especially those weird people wandering around without phones, those are the worst, they are traitors to the Spectacle, since they are *not continually consuming*.

How about security and crime²⁴? Again, this is another, complete essay. However, as with health and food supply, the effort is towards prevention, rather than sanction. This municipal microcosm has a non consumer, non competition narrative that values cooperation and generosity, rather than artificial scarcity and competition, partially a restatement of Kropotkin²⁵ '*Sociability is as much a law of nature as mutual struggle*'. Some lessons have been absorbed from the Bourgeois Bohème too, contempt for consumer fetish, the environment is not full of things to steal. Local mutual social credit (see, for example, Lietaer^{ggg}) is used for local transactions, making financial theft rather more difficult. Drugs are legal but alcohol is discouraged and, a great deal of the alienation that is motivation for heavy drug use is removed. It is difficult to 'steal' from the public spaces, since *this is not stealing now*, see the Todmorden project²⁶ and offshoots.

Social space and activity, described above, displace much small scale criminal activity, petty theft, and vandalism resulting from boredom and a lack of alternatives. Apparently life chances are possibly improved too²⁷. As in Vietnam, before Coca-Cola and other Western 'gifts', illiteracy is nearly unknown. There is not a direct causal connection between illiteracy and crime, but there is a high degree of correlation. Of course, I have not dealt with psychopathy (rather than sociopathy, which seems to stem from childhood abuse, something that can be addressed) and crimes of passion, here.

22 [Various. \(N.D.\). OpenTreeMap. Available: http://opentreemap.github.io/](http://opentreemap.github.io/). Last accessed 15th January 2019.

23 [Wikipedia contributors. \(2018, December 1\). Twelve leverage points. In Wikipedia, The Free Encyclopedia. Retrieved 11:01, February 22, 2019, from https://en.wikipedia.org/w/index.php?title=Twelve_leverage_points&oldid=871537650](https://en.wikipedia.org/w/index.php?title=Twelve_leverage_points&oldid=871537650)

24 [Dr. Liz Levy, Dr Dharshi Santhakumaran, Dr Richard Whitecross. \(2014\). What Works to Reduce Crime?: A Summary of the Evidence. Available: https://www2.gov.scot/Resource/0046/00460517.pdf](https://www2.gov.scot/Resource/0046/00460517.pdf). Last accessed 15th January 2019.

25 [Mutual Aid a Factor of Evolution/Chapter I. \(2012, April 17\). In Wikisource . Retrieved 10:15, February 1, 2019, from https://en.wikisource.org/w/index.php?title=Mutual_Aid_a_Factor_of_Evolution/Chapter_I&oldid=3802484](https://en.wikisource.org/w/index.php?title=Mutual_Aid_a_Factor_of_Evolution/Chapter_I&oldid=3802484)

26 [Wikipedia contributors. \(2019, January 22\). Incredible Edible. In Wikipedia, The Free Encyclopedia. Retrieved 11:59, February 5, 2019, from https://en.wikipedia.org/w/index.php?title=Incredible_Edible&oldid=879556925](https://en.wikipedia.org/w/index.php?title=Incredible_Edible&oldid=879556925)

27 Mahoney, Joseph L. "School Extracurricular Activity Participation as a Moderator in the Development of Antisocial Patterns." *Child Development*, vol. 71, no. 2, 2000, pp. 502–516. JSTOR, www.jstor.org/stable/1132005.

Concerning distributive justice towards harvest and prevention of misuse of the commons, a number of lessons have been taken from Ostrom's Eight Principles²⁸ for protecting and managing a common resource. For example, 5. *Develop a system, carried out by community members, for monitoring members' behaviour* is via the mutual social credit system which is transparent for transactions concerning food and water. However, it is not transparent for other transactions, otherwise it would quickly take on the characteristics of the current Chinese social credit system^{hh}.

Conclusions

I am very pessimistic about the first two approaches, the technocratic and reactive, because, apart from the arguments in the body of the essay, I believe that the many modern Western governments suffer from *infrastructural failure*, vested interests, politicians with second jobs, without life experience, with drug, alcohol or mental health problems, special advisors without life experience, weak donation and contribution rules, game playing instead of leadership, weak oversight and governance structures, first past post elections, non-rotation of elected officials, hidden lobbying (and in the USA, actual drafting of laws²⁹), non-transparent funding of 'think tanks', monolithic approaches to the 'economy', the forgotten or derided concept of a 'political economy'.

So I hope to have shown why adopting GLM provides a useful, coherent, pragmatic and attractive path and narrative at municipal level. Also, why the two alternatives, I have described contain one partial dead end, the Standard Technocratic and one related unattractive, violent path, the Reactive.

My positive arguments concentrate on the local, the municipal, where, we have some direct official and plenty of unofficial agency. They do not create agency or renewal at a national level, but may help to create a new narrative that *prefigures* national changes of policy, national governments are increasingly *followers* now that the public have social media groups that sometimes morph into effective praxisⁱⁱⁱ. My borough, the basis for this thought experiment, is experimenting with citizen's assemblies and participatory budgeting³⁰, following some of Bookchin's municipal ideas. The relationship between the municipal and the national may remain uneasy, with bolder municipality and atrophy/fragmentation of the Standard Technocratic centre. With any increase in local or municipal *actual* resource self sufficiency, the lever and threat of central government money, traditionally used from the centre downwards has a more limited effect. The creation and 'liberation' of public space is not 'expensive' either legally or financially and open knowledge is, well, usually free, always open.

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- 28 [Jay Walljasper. \(2011\). Elinor Ostrom's 8 Principles for Managing a Commons.](http://www.onthecommons.org/magazine/elinor-ostroms-8-principles-managing-commmons) Available: <http://www.onthecommons.org/magazine/elinor-ostroms-8-principles-managing-commmons>. Last accessed 15th January 2019.
- 29 [Alisa Chang. \(2013\). When Lobbyists Literally Write the Bill.](https://www.npr.org/sections/itsallpolitics/2013/11/11/243973620/when-lobbyists-literally-write-the-bill) Available: <https://www.npr.org/sections/itsallpolitics/2013/11/11/243973620/when-lobbyists-literally-write-the-bill>. Last accessed 15th January 2019.
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But municipal level action does not mitigate or solve some of the larger inputs to atmospheric pollution. The top hundred sources produce 71% of emissions³¹, and therefore, they *are* beyond the grasp of local mitigation. However, for the most part, we are still wage-slaves and our kindly owners provide pension funds that *do* currently invest in fossil extractive companies. The more enlightened organisations and universities have already started to divest. About 5% of global carbon dioxide release is associated with concrete manufacture³², so arguably, my imagined municipality should use some wooden structures as in times past. Even though we must 'forget' British colonialists 'So little done, so much to do' - Cecil Rhodes.

No single grand ethical or political theory or technology can address climate change either, so I remain steadfast within ethical and political contextual approaches. Two final quotes, about the non-normative, meta-journey:

“My focus on infrastructures will be an attempt to diversify and pluralise this discussion, partly by pointing to the multiplicity of underpinnings that need to be put in place for achieving sustainability on any scale—not simply science and technology, but also economics, ethics, law, and politics. I want to advocate for more experimental but also more participatory approaches to future-making, not propelled mainly by what is (or is thought to be) technologically feasible, but more fundamentally by diverse human imaginations of what might be good and attainable worlds.”
- Prof Sheila Jasanoff^{jjj} Harvard Kennedy School

“Much that is terrible we do not know. Much that is beautiful we shall still discover. Let's sail till we come to the edge.”
- Thomas M. Disch at the end of Camp Concentration^{kkk}

31 [Wikipedia contributors. \(2018, August 25\). Top contributors to carbon dioxide emissions. In Wikipedia, The Free Encyclopedia. Retrieved 07:13, January 21, 2019, from https://en.wikipedia.org/w/index.php?title=Top_contributors_to_carbon_dioxide_emissions&](https://en.wikipedia.org/w/index.php?title=Top_contributors_to_carbon_dioxide_emissions&)

32 [Wikipedia contributors. \(2019, January 13\). Environmental impact of concrete. In Wikipedia, The Free Encyclopedia. Retrieved 10:28, January 16, 2019, from https://en.wikipedia.org/w/index.php?title=Environmental_impact_of_concrete&oldid=878101233](https://en.wikipedia.org/w/index.php?title=Environmental_impact_of_concrete&oldid=878101233)

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