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Group Assembly Process (GAP) - Stirring Paper

Infrastructures

by Jeremy Heighway

Public infrastructure in a degrowth society.
This field is vast and yet underrepresented in degrowth considerations. It is a field in which the 'public' nature of our infrastructure makes it hard for individuals to create new infrastructure for themselves; they just make use of the existing infrastructures which are in place. People also have very little control over where certain activities take place – schools, shops, workplaces, sports and entertainment opportunities all have to fit into the landscape and create unique mobility patterns. A lot of the issues here are also not really about growth or degrowth as such, they are about meeting a certain demand and have particular characteristics associated with them.

A question of scales
One size does not fit all here, and it is often difficult for individual solutions to scale up or down to suit different infrastructure environments. Unfortunately, conventional markets have focussed on mass production and mass implementation, which may provide a certain efficiency for the manufacturer, but does not necessarily provide efficiency for the 'consumer'. It is here that we need a sea-change in thinking about our products and infrastructures. They must become more multi-functional, or used more creatively by degrowth-minded citizens. I would like to stir up some thinking here around the topics of mobility, catering, buildings and energy.

Creative contradiction?
In one city where I used to live, the public transport company parked a long bendy bus in the city centre during the pre-Christmas 'consumer madness' and invited people to leave their first purchases there while they continued to shop for more. This assistance made it more likely that people would use public transport to go present-shopping instead of driving their own cars. Now, is this a good or a bad thing? Is it a valid aim of degrowth supporters to always try and enable society to do things less damagingly, or is there a threshold of unacceptability, where less bad is simply not good enough?

Multi- or extended functionality
Staying with the theme of alternative public transport use, how can we make use of public transport more outside the two rush-hour periods? Would there be benefits of having some busses being convertible to mobile snack bars, which could help provide food at lunchtime and in the evenings? There is even the example of the dabbawallahs who deliver food to Mumbai office workers. They bring in home-cooked food from the suburbs by train

and then use bikes to distribute it. It is possibly the most incredible delivery system in the world.

Space, choice and service viability

The Mumbai example leads on to the question of whether we actually need to allocate so much space to catering in our towns and cities, for space use quickly becomes a factor in whether we can walk to where we want to go or not. And how much choice should individuals have when selecting the services they wish or need to use? Also, although in the public realm, most services are provided by businesses, not by authorities. What do changing circumstances do to business opportunities, past, present and future?

In England there used to be a system of milk deliveries to home doorsteps using electric milk floats. It was an environmentally and socially friendly system. The used bottles were collected, cleaned and reused, the milk floats had no emissions from the vehicle, most people received fresh milk for breakfast in the morning and the elderly had the benefit of deliveries to their doorsteps (also of bread and various dairy products). So, what led to the demise of this 'infrastructure'? I shall leave that as an open question here.

Organisational infrastructure and inefficiency

I also realise that I am using the word infrastructure in a more organisational sense here, but often we may not need to change the physical infrastructure that much; we need to change our organisation. We need to find ways of using buildings in more than one way, for example. It is crazy that so many of our buildings are unused at different times of the day, but often require heating anyway. This applies to our homes, our offices, our shops, our schools etc. I find it ironic that the one building I do not wish to be in, namely a hospital, has possibly the fullest 24-hr use!

Our energy supply infrastructure also needs to become more decentralised and flexible, and this is truly a massive subject. When companies build a power plant they want it to be in use for as many hours a day as possible. It follows a simple economic business case calculation. However, private individuals (and often authorities) seem to show little regard for this. Cars spend most of the day parked rather than being in use. When they are driven, things are arguably even worse. Even at a low conversion efficiency, 40 million cars in Germany could in theory supply over 1,000 GW of electricity and a lot more heat, but when driven they consume energy in the vehicle something like five times as fast as an electric vehicle does. If we used modified car engines as CHP plants instead, we could generate heat and electricity for buildings and be able to provide the power for replacement electric vehicles on top.

"Bring your own" infrastructure

Additionally, the people moving around with electric vehicles could even support the supply infrastructure wherever they are by plugging in their vehicles. The amount of energy that people will have in their car batteries as reserve range energy will usually be enough to easily be a major source of the stationary power they need too. If a commuter uses 10 kWh of electricity to travel maybe 80 kilometres a day, then even today's electric vehicle battery packs will be able to provide several more kWh to the local grid if needed. Of course the vehicles will need to be charged on most days too, but this is actually a good thing, as fluctuations in renewable energy supplies from wind and solar are already creating a need for higher selective demand when there are renewable energy peaks.

Where are we heading anyway?

In the last paragraph I used the word 'commuter'. Where we live and where we work will

ultimately determine what our infrastructure needs could be in the future. Will urban farming and aquaponics lower the need for the amount of food we produce in the countryside? Will an increase in the amount of manpower required for farming reverse the flow of commuters back out into the countryside during the day? Will bad organisation or an unwillingness to share continue to mean that almost three seats out of four will continue not to be sat on even when a vehicle is in movement, let alone when it is stationary?! In the future, infrastructures should not be thought of as provided FOR us by third parties, they should be provided BY everybody much more too. In a circle back to the beginning of this text, we need infrastructures which make inclusional infrastructures more achievable. There is already a word for some of them; they are called apps.
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