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SCARCITY + CREATIVITY IN THE BUILT ENVIRONMENT

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**SCARCITY AND CREATIVITY**

Jon Goodbun

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A Working Paper for SCIBE  
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### Introduction

In this paper I will draw together some of the insights that have been gained out of my participation in a major EU HERA funded research project that has run for the last two years between a small network of European architecture schools, led by the University of Westminster (and which will be completed in summer 2013) – entitled 'Scarcity and Creativity in the Built Environment'. I was a co-author of the original funding bid, and have been an active member of the team since then. This paper will condense some of my/our theoretical insights into what scarcity is as a concept and reality, and will also report on the findings of the design research project teams more broadly.

### Scarcity and Post-Scarcity

We find ourselves today in a paradoxical situation in a highly unevenly developed world. Since the middle of the twentieth century, if not earlier, it would have been perfectly possible to reorganise human society such that there was an abundance of good food and water, and a rewarding advanced industrial-ecological urban environment and global landscape for the global human population.

Tragically, today, the very possibility of a post-scarcity society seems to be slipping over the horizon, and is barely imaginable ... but it is not gone yet. Still, rather than technological progress leading to the liberation of really-free-time (the ultimate scarcity), many of us today find ourselves working constantly under conditions of affluenza, to become ever poorer.

Yet in other parts of the world, but also just a few streets away from us, fellow human beings are living under conditions of abject poverty.

At the same time, a newly constructed threat of scarcity shadows our near future. It is estimated that there will be 10 billion extra humans added to global population in the next decade. While we deal with the implications of that (which we could easily do on the basis of different global economic models)<sup>1</sup>, climate change events multiplied by the apparent endgame of this phase of capitalism suggest a very real potential for chronic scarcities across both developed and developing countries. Many of the new scarcities produced by climate and environmental change will manifest themselves through space, and there will be new forms of environmental and spatial scarcity produced.

### Capitalism and Scarcity

Material scarcity, as the great anarchist philosopher Murray Bookchin once noted – drawing heavily, it must be said, upon the insights of Karl Marx – has been a feature of human societies up to the present day:

'until very recently, human society has developed around the brute issues posed by unavoidable material scarcity and their subjective counterpart in denial, renunciation and guilt.'<sup>2</sup>

The various forms of domination and inequality which have structured social relations within almost all human societies necessarily emerged out of the everyday reality of material scarcities. It was struggle over scarce resources which created the possibility, perhaps the necessity, for the

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<sup>1</sup> As Lyla Mehta notes in the conclusion to her edited collection of essays on scarcity, 'as the contributors to the volume repeatedly demonstrate, there is plenty of food, water and energy on this planet to meet the requirements of a population that demographers project will peak at just below 9 billion.' in Lyla Mehta, *Limits to Scarcity – contesting the politics of allocation* (London: Earthscan, 2010), p.4.

<sup>2</sup> Murray Bookchin, *Post-Scarcity Anarchism 2nd Ed* (Montreal: Black Rose Books, 1986), p.11.

production of structures of power in societies, in human selves, and against the wider living world. Bookchin again states that:

'material society provided the historic rationale for the development of the patriarchal family, private property, class domination and the state; it nourished the great divisions that pitted town against country, mind against sensuousness, work against play, individual against society, and, finally, the individual against himself.'<sup>3</sup>

Bookchin shows how material scarcity must be understood as the connection between the two distinct modes of understanding alienation in modernity as i. our individual alienation within and from oneself, and from a lived and sensuous engagement with matter, and ii. our collective estrangement from social production and the non-human natures which provide the context of all human practice in general. He concludes with a particularly useful definition, stating that:

'scarcity is more than a condition of scarce resources: the word, if it is to mean anything in human terms, must encompass the social relations and cultural apparatus that foster insecurity in the psyche.'<sup>4</sup>

Michel Foucault similarly pays close attention to the historical development of human subjectivity under changing modes of scarcity. He describes how in the mercantilist period of capitalism – which dominated in Europe from the start of 17<sup>th</sup> to the start of 18<sup>th</sup> century – a particular set of practices and apparatus were developed to deal with the threat of scarcity. These practices were replaced in the 18<sup>th</sup> century by the ideas of the physiocratic economists and the emergence of *laissez-faire* thinking: a

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3           Ibid.

4           Ibid. p.13.

different mode of dealing with the threat of material scarcity, and a different collective subjectivity.

Foucault describes how mercantile capitalism organised grain production around an anti-scarcity system – notably characterised by price controls, prohibition of hoarding, limits on export (and also limits to amount of land to be cultivated to prevent excessive abundance) – primarily to prevent scarcity provoking revolt and political unrest in the cities and towns. He describes two general frameworks for thinking about 'philosophical-political horizon' of scarcity as 'the juridical-moral concept of evil human nature, of fallen nature, and the cosmological-political concept of fortune.'<sup>5</sup> However, the mercantilist anti-scarcity system frequently failed, and the emerging physiocratic free marketeers 'tried to arrive at an apparatus for ... working within the reality of fluctuations between abundance/scarcity, dearness/cheapness ... which is, I think, precisely an apparatus of security and no longer a juridical-disciplinary system.'<sup>6</sup>

Writing in 1793 one of the physiocrats, Louis-Paul Abeille stated that so long as there is free circulation in markets then 'scarcity is a chimera', and Abbot Ferdinando Galiani furthermore stated that 'scarcity is, for three quarters of the cases, a malady of the imagination'.<sup>7</sup> As something that afflicted an entire population at once (what Foucault calls the 'scarcity-scourge') scarcity had indeed largely become a chimera, although this is replaced by a structural necessity for an anonymous some-of-the-population to endure scarcity, sometimes (which remains the basis for much of the capitalist apparatus today). While mercantile law re scarcity was based upon a set of prohibitions, price controls and a set of legal

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5 Michel Foucault, *Security, Territory, Population: Lectures at the College de France 1977-78* (NY: Pallgrave Macmillan, 2007), p.30.

6 Ibid., p.37.

7 Louis-Paul Abeille and Abbot Ferdinando Galiani both cited in Foucault, *ibid.*, p.52.

prohibitions or moral imperatives, under *laissez-faire* scarcity-capitalism Foucault find the origins of a contemporary apparatus of security:

'the apparatus of security ... "lets things happen." Not that everything is left alone, but *laissez-faire* is indispensable at a certain level: allowing prices to rise, allowing scarcity to develop, and letting people go hungry so as to prevent something else happening, namely the introduction of the general scourge of scarcity.'

For Foucault the modern *laissez-faire* anti-scarcity system of dispersing scarcity through freer market mechanisms was more than just a more advanced form of capitalist organisation, it was a 'security apparatus' which constituted a new form of collective subjectivity – the atomised mass of 'population':

'a political subject, as a new collective subject absolutely foreign to the juridical and political thought of earlier centuries is appearing here in its complexity, with its caesuras'<sup>8</sup>

Modern capitalism developed then, as a specific historical form of an apparatus of scarcity based upon an ideology of *laissez-faire*. David Harvey states that 'scarcity is socially organised in order to permit the market to function,'<sup>9</sup> whilst Andy Merrifield has similarly observes that:

'The fundamental basis of a capitalist economy, of a society based on the profit motive, on exchange value and money

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<sup>8</sup> Ibid., p.42.

<sup>9</sup> David Harvey, *Social Justice and the City* (Baltimore: Johns Hopkins University Press, 1973), p.114.

relations, is scarcity – *the active creation and perpetuation of scarcity*.<sup>10</sup>

For Bookchin however, the position of scarcity under capitalism does not stop at this point. The *laissez-faire* approach to structuring a capitalist economy coincided with massive developments and transformations in science, technology and manufacturing. Modernity, for the first time in human history, created the material possibility of what Bookchin describes as a 'post-scarcity society', a condition where all of the essential necessities of a life are delivered with a minimum amount of human labour. If the need to labour under the threat of scarcity had historically lay at the heart of all forms of oppression, inequality and alienation, both in societies and within selves, then for Bookchin post-scarcity describes 'fundamentally more than a mere abundance of the means of life: it decidedly includes the kind of life these means support.'<sup>11</sup> Writing in the early nineteen-seventies, he argues that:

'the industrial capitalism of Marx's time organised its commodity relations around a prevailing system of material scarcity; the state capitalism of our time organises its commodity relations around a prevailing system of material abundance. A century ago scarcity had to be endured, today it has to be enforced.'<sup>12</sup>

The condition today is arguably even more full of complexity and contradiction. Conceptions of post-scarcity society continues to animate much of the political imaginary of both of the great liberation philosophies of modernity – anarchism and communism. Terry Eagleton has recently restated how Marx's greatest contribution to the then already existing idea

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10 Andy Merrifield, *Magical Marxism: Subversive Politics and the Imagination* (London: Pluto, 2011), p.96.

11 Ibid., p.13.

12 Bookchin, *ibid.*, p.102.

of communism was to realise that it *must* have a material basis, and Bookchin agrees that:

'to have seen these material preconditions for human freedom, to have emphasised that freedom presupposes free time and the material abundance for abolishing free time as a social privilege, is the great contribution of Karl Marx to modern revolutionary theory.'<sup>13</sup>

But we also find an interesting post-scarcity discussion happening in more mainstream arenas. Philip Sadler is one example of a contemporary business theorist who is optimistically arguing that capitalism will necessarily pass through a wholesale and largely 'unforeseen' transformation in the coming decades, referring to many tendencies that would not be out of place in a more Marxian or autonomist setting, such as: falling costs of production, open-source intellectual property and collaborative working etc. Sadler argues that

'although the need for system change is widely accepted, there is little recognition of the need to adjust to post-scarcity conditions and to base policies and decisions on the principles of the economics of abundance rather than on the economics of scarcity'<sup>14</sup>

There are of course however significant differences between anarcho-communist visions of post-scarcity, and more capitalist ideas of commodity abundance. Indeed, it is difficult to see how the contradictions of capitalism will not necessarily derail any possibility of a capitalist condition of post-scarcity. In fact, the prospect of post-scarcity is a spectre *haunting* capitalism. The overwhelming tendencies are for the marginal costs of

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<sup>13</sup> Ibid., p.102.

<sup>14</sup> See Philip Sadler, *Sustainable Growth in a Post-Scarcity World* (Farnham: Gower, 2010), p.236.

production to fall, and for the rate of profit to fall. Capitalist organisations have to constantly struggle to find ways to make a profit out of production. This involves designing-in redundancy and failure into products that could in many cases last generations rather than months or years. It involves developing highly proprietary parts and systems such that commodities cannot be repaired, and of course the projection of a vast spectacular infrastructure of advertising and branding that alienates us further and makes this insane situation seem desirable. All of these processes and many more serve to create imaginary scarcities, and furthermore real scarcities through the wastage of materials and the pollution and destruction of the ecosystems that we rely upon for resources. And there are of course important relations between scarcity and environmental degradation: polluted and damaged environments produce less. We are then not in any simple way simply using up finite resources, but are also reducing the productive capacity of the living world. Indeed, Eagleton has argued that standing within sight of an era of post-scarcity, capitalism is gravitating towards ecological catastrophe as the best means of perpetuating itself through an extended new era of scarcity. If Marx realised that the overcoming of scarcity was a precondition of most paths to communism, Eagleton speculates whether the emerging ecological crisis is a mechanism for historically precluding those possible futures.

However, the same deep contradictions of the capitalist process are structuring scarcity today in what are arguably even more profound ways. As already stated, the primary tendencies in production are for both costs and profits to fall. Yet as David Harvey has recently shown, the quantity of capital circulating in the global economy looking for profitable investment opportunities is greater than ever before. Since production is increasingly unable to provide capitalists, pension funds and the like with profitable investment opportunities, new avenues of speculative investment have been found through investing in assets. Property, land and housing are typical investment routes, but so are mineral and agricultural assets, and because

this kind of widespread investment necessarily has a ponzi character (if everyone invests in assets then values increase), it can seem to work. Such investment strategies have of course been behind a series of asset and share price crashes and 'market failures' since the seventies. The kinds of assets that are being targeted by investment funds have in recent years have further widened. Beyond new technologies providing one new route of speculation (remember the dot com bubble), food is increasingly an investment opportunity, and this is becoming a significant source of food scarcity and food price inflation (although there are many other fundamentals that will be pushing up global food prices in the near and medium term, notably climate change)<sup>15</sup>.

### Scarcity: Reality and Ideology

Scarcity then, is both a reality, and an ideology (in the classic Marxian sense of 'false consciousness'). Real 'scarcities' play real roles in the complex system that is global capitalism. There are real material and energy flows, which ultimately have a combination of geophysical and social foundations. At any one time there are limits to these flows – ie there are real scarcities.

In addition, the concept of scarcity plays an ideological role. That is to say, it *naturalises* (it makes obscure) the *social* component of the limits of these flows. Those in the system who own and manage these geophysical resource flows have a vested interest in maintaining scarcities. *Scarcities, the control of resources, are real social power*. In energy supply for example, big power companies are most obstructive to local energy generation, and most supportive of inherently centralising technologies such as nuclear and fossil fuels. Yet equally, as Murray Bookchin noted, a wind farm owned by a multi-national power corporation is not an alternative or ecological

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<sup>15</sup> John Beddington and Deborah Duanne in discussion on coming food price rises and scarcity on BBC Radio 4 Today programme 2.1.13

technology either, as democratic social control is an essential component of ecological technology.

Scarcity works dialectically with abundance. The same system which produces scarcity in the ways described above, also constructs 'abundance' as both a reality and an ideology. Most notably here, the ideology of abundance promotes the false consciousness that we can extract as much as we want from the planet... so, we literally get hit conceptually in both directions... and this keeps people confused! In both cases then, the key ideological role is to obscure the real workings of the system – and to make it seem natural, incomprehensible etc etc.

### Scarcity, Design and Creativity

Scarcity then, is a profoundly complex and indeed problematic term, and is far from neutral or uncontested. We can use it cautiously, as a heuristic device, and as a means of grasping and collecting together a range of responses to the complex contradictions of our socio-ecological condition today. But using the concept of scarcity as a means of rethinking architectural and urban design is by no means straight-forward. Clearly, our intention is to confront what urban geographer and political theorist David Harvey has described as 'the environmental question', defined as a problematic with simultaneously ecological, social, cultural and political dimensions. In this regard Harvey has off-handedly but brilliantly noted that 'if you think that you can solve the environmental question, of global warming and all that kind of stuff, without actually confronting the whole question of who determines the value structure ... then you have got to be kidding yourself.'

Scarcity indeed is a term that bridges economic and ecological domains, and perhaps enables us to grasp something of this 'value structure'. It is often noted, ecology and economy share a common etymological root in the Greek *oikos*, meaning dwelling. Both economy and ecology are spatialised and temporalised in dwelling. Scarcity, universalised and naturalised in the

field of economics, defines the contemporary *oikos*. A collective re-imagining of scarcity must necessarily entail a transformative re-imagining of economics and ecology.

So does anything interesting happen when we ask about scarcity in the built environment? Of course, we can note all kinds of fascinating examples of situations where scarce resources have provoked creative responses – both at the hands of professional designers, but also of course in all kinds of everyday and informal scenarios. Time permitted I will return to extemporise at the end this paper using illustrations of some examples of such creativity, and under what conditions this might occur – but in anticipation of that it is useful to note now that our research suggest that for a creative solution to emerge in response to one scarce variable, it is typically necessary for other variables to have some 'slack' in the system. Indeed, as Gregory Bateson noted in his essay 'Restructuring the Ecology of a Great City', we should not be fooled into believing that efficiency and reduction are in any simple way sustainable solutions, as a highly efficient system has no scope for adaptation.<sup>16</sup>

Beyond that however, designed objects and built environments also play important roles in maintaining more ideological conceptions of scarcity: designed objects and environments often obscure their conditions of production, and also obscure the flows that they are a part of. There is then a second remit for design research into scarcity and creativity, which is in fact what architectural historian Manfredo Tafuri referred to as 'ideological critique' – in this case of the hidden conceptualisations of scarcity in existing design practices. An ideological critique might look at different approaches and ask, in what ways are these design practices increasing false consciousness around the system of production? In what ways could they be

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<sup>16</sup> See on this Jon Goodbun, 'Flexibility and Ecological Planning: Gregory Bateson on Urbanism' in Jon Goodbun with Jeremy Till and Deljana Iossifova, *AD Scarcity: Architecture in an Age of Depleting Resources* (London: Wiley 2012), pp.52-55.

revealing the networks and flows, or facilitating democratic 'local' control (and indeed ultimately 'global' control) of aspects of these systems, etc?

Architectural, urban, planning and design research has had multiple moments of engagement with these issues: developing new forms of analysis of global flows and scarcities, developing all kinds of new so-called green technologies and systems (as well as revisiting many old technologies), and developing new forms of design practices that are more socially activist in orientation. Equally of course, mainstream architecture, urbanism and design practices are complicit in, and indeed primary vectors for, the very forces that are causing these conditions. In recent years the dominant discourse for exploring problems and solutions has worked around the concept of 'sustainability'. But, as has been increasingly widely observed, this concept is deeply problematic: sustaining what? A modified form of existing consumer capitalism and the uneven and profoundly unjust power relations that it is built upon too often appears to be the real (if often unintended ) agenda.

Scarcity, whether conceived as an actual limit on resources, or as a socially constructed condition of uneven social or global distribution of resources, has been largely absent as a critical concept in recent mainstream western architectural and design discourse. This is perhaps not surprising: the architectural profession is set up to serve the needs of the global rich. Yet, this situation is rich in possibilities for the design professions and design research. In 2003 the graphic designer Bruce Mau founded the Institute without Boundaries, based upon R Buckminster Fuller famous call for a new kind of designer, a 'synthesis of artist, inventor, mechanic, objective economist, and evolutionary strategist'. Designers might solve problems using less resources, articulate critically the existing uneven allocation of resources, promote reduced consumption of resources in using products and so on. Thinking through scarcity and design allows a reconsideration of how are things made, how are they distributed, how are

they used, and what happens at the end of their use. We are compelled to design processes as much as objects, systems as much as brands.

## Conclusion

Leading analysts of all the major resource domains – water, food, material resources and energy – tell us that our global industrial growth models, driven by largely unplanned and irrational financial market speculation, are taking human societies to the brink of a series of chronic shortages and insecurities. Some of these are determined by real natural limits in terms of diminishing quantities of available mineral resources, ranging from metals (rare or otherwise) to oil: a condition often referred to as 'peak everything'. Other scarcities are based upon our problematic or socially uneven management of naturally produced resources such as water, timber and food (both livestock and agriculture). Many others still are simply based upon the socially and geographically uneven development and allocation of these resources (and power), with a transfer of real metabolic value from the poor to the rich areas of the globe. In parallel to these metabolic inputs, industrial economies are also externalising – in a generally catastrophic manner – all kinds of waste sinks. Again this is characterised by an uneven development, typified by flows of waste from rich to poor regions. In all of these cases, existing systemic stresses are expected to transform and intensify in unpredictable ways as a result of climate change and ecosystem shifts.

But we must not forget that constantly through these processes, capitalist scarcity also alienates us from a proper understanding of our relation to nature, and to the rest of the world. It turns the world into what Heidegger called a 'standing reserve'. There is a sense in which the very idea that *resources are running out* is itself a huge misunderstanding, a form of alienated thinking. Capital in this sense alienates us from a creative, sensuous and social grasp of our relationship to resources (or whatever word we should use): to matter and life.

We must not allow the current normative conception of scarcity to continue to dominate... it is thoroughly ideological, and hides the reality that *there is still the socio-political possibility of choosing post-scarcity*. A critique of the capitalist conception of scarcity involves a re-examination of both the concept of the commons, and the production-apparatus of contemporary subjectivity. Much work has been done in this area in different-though-interrelated ways, by for example Harvey, Hardt and Negri, and various associated *autonomia* fellow-travellers, to name but a few. Our task is to make a specifically spatial contribution to thinking and acting around these questions, as architecture, cities and urbanisms are always some kind of mediation of modes of subjectivity constructed through relations of scarcity.

We find ourselves then, at the beginning of the twenty first century, in a paradoxical world. Our capacity to produce and meet all of our needs has never been greater, yet inequality and poverty abounds, and the methods by which we do produce all too often seems to diminish our long term wealth, and damage the web of life within which we exist. It is not at all clear that scarcity is ultimately any better a concept for trying to grasp the sheer extent of the problems and opportunities contained within 'environmental question' broadly conceived, than sustainability or any other recent term. Indeed, *our problem is precisely that we do not have a conceptual and critical language up to the job*.

## WWW.SCIBE.EU

Author: Jon Goodbun, University of Westminster

Contact: [jcgoodbun@mac.com](mailto:jcgoodbun@mac.com)

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