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## Introduction

This book places itself within the traditions and the ongoing activity of UCL's Bartlett Development Planning Unit, and within its research cluster, Environmental Justice, Urbanisation & Resilience.

It draws heavily upon my teaching for the Environment and Sustainable Development Masters. I owe an immense debt to all my fellow Development Planning Unit (DPU) staff, as well as past and present students, from whom I have learned much. In particular I am happy to acknowledge the contribution of Yves Cabannes: together we created a Masters module on Urban Agriculture, and explored the framework for a radical re-definition of the topic. My colleagues Zeremariam Fre and Michel Pimbert also played important roles in the module's subsequent development and influenced my thinking in several ways.

At the same time, I approach this topic as a food-growing practitioner and allotment-holder: the allotment movement and its working-class traditions of self-organisation continue to inspire me.

This is a book about how people can feed themselves into the future, and also about major aspects of climate adaptation/mitigation. I sought to approach these extremely serious topics in a spirit of responsibility. The United Nations Food and Agriculture Organisation (FAO) has proposed the need for a 'new paradigm' premised on 'sustainable intensification' and I felt it was essential to engage with this constructively rather than merely critiquing its 'discourse'.

A core concern of DPU is to address environmental crisis through the lens of the interests of working and oppressed peoples; on this basis, we always seek win-win solutions to ecological-social problems. While such solutions are concrete, and thus specific to each case, they also suggest more general conceptual insights, which can in turn serve to guide new projects.

As an example, we may explore the notion of 'risk'. This cuts across several topics and has a special relevance to food security, notably in the context of extreme climate events.

We could address 'risk society' in a Eurocentric and classist way which exaggerates the role of privileged consumers in driving a food regime more concerned with quality than quantity, but the result could be to increase social polarisation, which is exactly what we don't want. Undoubtedly, consumer pressure over chemical risks plays a positive role in some circumstances – China being a case in point – but we should never lose sight of the imperative to maintain sufficient quantity: the question is how, assuming we abandon chemicals, we can produce *enough* food for the world population.

This is why, rather than focusing too much on the question of whether organic food is healthier, my enquiry displaces 'risk' from the realm of consumption into that of production. The core argument concentrates around two points:

The first point is that the chemical, high-input, highly mechanised system destroys the land. This is an argument made by Karl Marx in the nineteenth century and similarly by the pioneers of the organic movement in the twentieth century. In fact one of the main normative aims of the book is to facilitate a confluence between these two currents: radical socialism and organic farming on the basis of their shared aims. If we take seriously the above argument, we will see that food production, on the current basis, is sure to collapse unless we can realise one of the most radical revolutions in human history. It would be ludicrous to think that a revolution of such magnitude could be radical merely in a technical sense, without being also socially radical.

The second point, which reinforces the first, relates to complexity. Here too, there is a potential confluence between Marxism and organics, for which the unifying principle is dialectics and general systems theory, but it also draws strongly on a dialogue between indigenous holistic thought, ecosystem theory and twenty-first-century explorations of evolution and soil systems. The issue is this: if systems are artificially simplified and homogenised – through a linear and reductionist approach where a few parameters control the rest and you expunge the messiness of emergent order – they become superficially stable and predictable, free of uncertainty or risk. But this is achieved only by incurring *both* unsustainable inputs/emissions (i.e. linear flows: fossil fuels coming in, and greenhouse gas coming out) *and* a loss of resilience/adaptive capacity. In a physical sense, the parameters are reduction to a few chemical inputs and strains of seed, which removes the diverse vocabulary of adaptation.

There is also, crucially, a *political* component of the argument: the very fact that simplified systems are easy to control confers power on the interests which set their ground rules. To overthrow the existing order – for example its corporate-dominated food chains – is therefore a political task, propelled by land/food-related social movements.

By following the implications of this reasoning, we will be not just addressing environmental justice in the *distribution* of risk (which is necessary in itself), but making sure that the interests of the vast majority are central in determining the mode of *production*.

Furthermore, in destroying the dominant circuits, just what are we opting *into*? This is where we can begin to define organics not merely in an unsatisfactory, purely negative sense (as an exclusion of chemicals), but in the very positive sense of a decision to opt into the self-organising properties of complex systems.

Physically, this means the land and plants, animals, fungi and bacteria, in all the web of below ground and above ground interactions which make up a constantly adaptive system capable of self-modifying and self-healing in response to shocks. By embracing the free energy of complex systems, we reduce the energy *input* supplied either by labour (under feudal-type oppressive agrarian societies) or, more recently, by fossil fuels. If we remove this input we automatically remove the entropic output (greenhouse gas, pollution) ... and thus the energy equation squares up.

Again, the above has strongly political overtones. Society too has its networks, its diverse vocabulary of institutional responses, its self-healing functions. In our specific case study of the city, we see how this process is actually happening in the present moment.

In fact, in reducing physical input, we do require something more intangible to replace it: human capacity, knowledge, wisdom. This re-connects to a central point introduced by the Utopian socialists of the early nineteenth century: the response to pessimistic Malthusian propaganda about an inevitably deficient food supply is to overthrow corrupt exploiters and unleash the associative and co-operative traditions of the working class.

Recent developments have only reinforced this: knowledge and debate *must* be open-source, a commons. That's why I was so keen, in contributing to this debate, for this book to be open access. I must, therefore, conclude by expressing my thanks to, and solidarity with, UCL Press in their decision to make open access a core principle, one with which I am proud to be associated.