

The City and the Super-Organism

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The City and the Super- Organism

A History of Naturalism
in Urban Planning

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By leaves we live.
Patrick Geddes

*Dedicated to my teacher,
Professor Makoto Yokohari*

Prologue

Sapiens as a Super-Organism

Since 2010, the leading science journal *Nature* has had a section on its website about cities. The site profiles and promotes the ‘special relationship’ between scientists and the city, aiming to understand how one can bring out the ‘best in the other’. The hope is that scientists can assist cities in tackling their biggest problems. It profiles the Nobel Chemistry Laureate Mario Molina who returned to his native Mexico City in 2005 to ‘tackle the messy world of public policy, urban planning and climate change.’¹

For students of planning history, the wholesale embrace of a scientific approach to urban problems ought to come as a surprise. In the 1920s the eminent biologist Ludwig von Bertalanffy proposed a ‘general systems theory’ to model relationships between systems that could apply to the natural and social sciences.² In the 1960s this theory was held up

¹ Nature Cities Page Accessed Monday 16 April 2018.

² Von Bertalanffy (1972).

as a universal one applicable to cities, allowing planners to better and more scientifically appreciate how changes in one part of a metropolis could impact another.³

But systems theory failed to be widely applied. City problems turned out to be too complex to be captured by a series of mechanistic relationships. The default state for a city was not one of quiet equilibrium which planning was intended to restore, but instead one of constant turmoil.⁴ Even the theory's chief proponent and author of the book *Urban and Regional Planning: A Systems Approach* (1969), Brian McLoughlin, eventually turned his back on systems theory, understanding that it was doomed to never be able to account for politics, sources of change and conflicts between actors.⁵

This book provides an historical context to the renewed enthusiasm towards a science of cities. The principle driver for a science of cities this time is an acceptance of the deep impact that cities are going to have on the future of life on Earth. To consider how much the emphasis has shifted, consider the final episode of David Attenborough's *Life on Earth* (1979) where the focus turns to our own species. The urban is briefly dealt with as the camera dwells on crowds of commuters in Japan, picking out a man carrying a child on his shoulders. Compared to the history of life (3.8 billion years) any consideration of cities (7000 years) is nothing but a nano-blip, justifying their momentary appearance in Attenborough's series.

However, in the future the impacts of cities will be easily measurable on a geological scale and their impacts will continue to be significant for life on Earth perhaps even after our own extinction. Now more than ever, cities represent the hope for alleviating, and the cause that is perpetuating, ecological collapse during the anthropocene. Without better understanding of our effects on the planet through, within and beyond urban living, the human race is probably not going to survive. Equally, as cities become a place of opportunity and refuge because of climate change, it is essential to know how to make life in them tolerable.

³ Nicholson and Gawne (2015), Batty (2007), and Taylor (1998, 63).

⁴ Batty (2007, 7).

⁵ Davies (1997).

Science is best equipped to provide answers to these vast and complex challenges. Planning history, scholarship, education and theory defined partially in opposition to science over many decades, needs instead to embrace it. But what kind of science do planners need and how can we reflect on an embrace of science from the past?

These questions motivated me to start thinking about a history of naturalism in planning, because I detected a need for a richer conversation between science and planning. Like ants, *Homo sapiens* are niche builders and have gained an evolutionary advantage through density and cooperation. While I attempted through teaching planning history and through previous drafts, to argue that our citadels had become our termite mounds, I knew that analogies and metaphors of the natural world were limited. For a start, unlike most ants' nests,⁶ people in cities don't have to be related or to even know each other to productively cooperate. Yet, I realised that many from the past who had been concerned about human survival in cities had looked to the natural world as a source of inspiration, seeking order through organicism instead of mechanics, evolution as an explanation of historical change, urban and cultural autopoiesis instead of decline. They had seen how urban decision-making could be supported by considering a theory that unified the natural and urban worlds.

This book is a history of these theorists and their naturalistic approaches. It is not aiming to be a complete planning history in the style of Stephen Ward work or Peter Hall.⁷ Instead the work in the following pages is a long essay, written in part as a provocation—a charcoal drawing on a large canvas rather than a richly detailed oil painting. The intent is to add to existing material for teaching planning history so as to contribute to a broader project of making planning history even more relevant to the present than it currently is. For this reason, as well as COVID-related lockdowns and without access to library resources for part of 2020, it is incomplete. But it is written in the hope that by

⁶ Although see Holzer et al. (2009); Attenborough recently filmed a series about the wood Ants of the Jura to illustrate that unrelated ants can cooperate.

⁷ Ward (2002), and Hall (2014).

drawing a sketch it will help others to configure their past and future work as part of a bigger picture.

The following work has been written with access to original material in French, German, Spanish, Japanese and Finnish. Where necessary for quoting I have used my own translations. However, I am especially indebted to Kaori Fujimoto for her help in reading the pre-WWII kanji of Kon Wajirō. All errors remain my own.

Some of the insights on Geddes and town planning exhibitions in this book were gained from work on a previous project led by Professor Robert Freestone of University of New South Wales (Australian Research Council Discovery Grant DP120101732). But this work was also supported by the Australian Research Council's Discovery Grant DP150103135 and the opportunity that this grant presented to work on mapping urban forest canopies and thinking about biologically relevant indicators of urban life. It was also supported by a sabbatical spent at RMIT Europe where I had the honour and pleasure to meet Salvador Rueda and discuss his work on ecological urbanism. I am also especially indebted to my colleagues at RMIT A/Professor Wendy Steele and Dr Brian Coffey who provided me with opportunities to discuss the content of the book and who gave me encouragement for the nascent direction that I was taking. This work is inspired by the work of two senior mentors during my career: Professor Makoto Yokohari (University of Tokyo), for his deep provocations about the nature of landscape and urban and natural systems and Professor Robert Freestone for his passion to uncover the stories behind the origins of urban planning. Finally, none of any of this would have been possible without the love and support of my family, especially my partner Katharine and our three children, Lucia, Raffaella and Frederica.

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