

# The need for a contribution of ekistics to planning education and research

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## Foreword

The object of the project is to provide an answer to the question, "How can we go about teaching Ekistics in our discipline?" The rationale is that the WSE needs to provide leadership through examples if Ekistic Education is to flourish.

## Ekistics Education Model Project

- **A case study:** An initial case study is from the Bachelor of Planning (BPlan) course "Settlement Planning" (or Planning 200) at the University of Auckland. The course is structured as follows:
  - First half (6 weeks) focuses on Ekistic theory and practice. This is based on two teaching manuals which are collections of Doxiadis' work and the Urban Detroit Area Study (practice case study).
  - Second half (6 weeks) teaches current theory and practice for a "compare & contrast" (e.g. Sustainability; Smart Cities). For further details, the reader may refer to the website: [www.planning.auckland.ac.nz/research](http://www.planning.auckland.ac.nz/research).
- **Generalizations of feedback from WSE members:** Since the EEM project began in 1999, comments have been received from WSE members. They include the following:
  - "Ekistics may have some uses but it needs to be brought up to the present"
  - "A good project – I use aspects in my architecture teaching but not all of Doxiadis' ideas"
  - "Hope it is not a slavish acceptance – there is some good

and bad stuff to think about."

● **Further work:** To date, the contribution in terms of examples, of course, has only come from one source, the University of Auckland. It follows, therefore, that we have a need for more course examples concerning:

- a range of disciplines
- lecture and studio/practical modes, and
- teaching about ekistics theory and practice that leads to research.

## Ekistics theory and practice research

The draft of a paper to be presented later at the Southern Crossings Conference (2002) formed the basis of the research section for this paper. It was intended that at Berlin it could provide a preliminary research agenda. As such it is based on some exploratory work being done by this author on themes connecting the writing of Arnold Toynbee and C.A. Doxiadis. This work has suggested a possible research agenda.

The balance of this paper is based on extracts from the draft of the Southern Crossings paper.

## Toynbee and Ekistics

The foundation of this paper is work by Arnold Toynbee dating between 1967 (*Cities of Destiny*) and 1970 (*Cities on the Move*).<sup>3</sup> The intention is to look back at the themes developed in those works and to examine how they may be applicable to the issues of cities for the 21st century. The nexus for this analysis of the ideas drawn from the past and projected into the future is Ekistics, the Science of Human Settlements. Ekistics has been chosen because it was a contemporary influence on Toynbee's thinking due to his association with Constantinos A. Doxiadis and the World Society for Ekistics. By drawing together the principal theory and practice developed within Ekistics as a transdisciplinary initiative, and Toynbee's interpretations in relation to the historical and contemporary city, the paper attempts to identify a strategic synergy that the whole is greater than the sum of its parts which can be applied to a scenario for the 21st century city in the context of globalization.

## Themes

From *Cities on the Move* one can identify some themes that address what Toynbee calls the "material" aspects of the city:

- Cities and food production
- The City and import-export flows

- Accessibility and security
- City walls and their equivalent in the contemporary city
- Density
- Movement

These issues are drawn from his chapter titled “The traditional city and the present urban explosion.” In his earlier *Cities of Destiny* Toynbee has assembled samples of historic cities categorized under the headings of “The City-State,” “Capital Cities,” and “Megalopolis.” These groups of cities later provided the structure for *Cities on the Move*. Thinking of the city in the future (or the city of the future) Toynbee turns to the world-city concept that has become a central feature of Ekistics. Within this concept he places two themes:

- Science spreads the world-city; and,
- Man at the mercy of his creations.

A full description of these themes can be found in the published *Proceedings* for the Southern Crossings Conference.<sup>2</sup>

Some comment is required of these themes developed by Toynbee:

- Firstly, it is naïve to think that a selected number of themes developed by Toynbee in the 1960s would be likely to capture themes relevant to a consideration of the city for the 21st century. This is especially so given that today we are thinking specifically of cities in the context of sustainability, and this was not an explicit feature of urban thinking in the 1960s.
- Secondly, the analysis has had to be generous in its interpretation of the meanings given to the themes when viewed in today’s terms, for example, “walls and equivalent.”

There is still a direction that helps us picture the coming century.

### Synthesis — Sustainable city

By taking each of Toynbee’s themes and considering them across each of the ekistic elements in turn, it is possible to develop a synthesis of each theme *in so far as they relate to the sustainable city* (fig. 1).

A further step in this synthesis process is to then consider each of the rows in figure 1 for an integrated statement that could be called a Vision for the 21st century sustainable city, along the lines of:

“A community-centred city where wise land use and environmental space concepts are applied with humanist science, urban design and movement systems to achieve the benefits of human scale at ekistic units 1-8, and efficient public movement systems beyond ekistic unit 8, while enabling people to retain a sense of personal independence, well-being, a collective quality of life, and maintaining quality ecosystems” (TOYNBEE, 1970).

### Concluding remarks

It has been suggested above that it would “be naïve to think that a selected number of themes developed by Toynbee in the 1960s would be likely to capture themes relevant to a consideration of the city for the 21st century.” This was justified by the comment, “This is especially so given that today we are thinking specifically of cities in the context of sustainability, and this was not an explicit feature of urban thinking in the 1960s.”

It is somewhat surprising, therefore, to look at figure 1 and see how relevant Toynbee’s themes seem to be. While the analysis has had to be generous in its interpretation of the meanings given to the themes when viewed in today’s terms, for example, “walls and equivalent,” there is still a direction that helps us picture the coming century.

What is useful is the way our minds can be focused on the

Themes Sustainable City	
<b>Cities and food production</b>	Community-focused basic food production with an ethic of “wise land use”
<b>Import-export flows</b>	Provide an economy that balances its import-export needs consistent with the concept of “environmental space” (CARLEY and SPAPENS, 1998) <sup>4</sup>
<b>Accessibility and security</b>	Attend to accessibility and security issues at the level of each ekistic unit
<b>Walls and equivalent</b>	Continue the traditional practice of applying walls and their 21st century equivalents to contain and secure sensitive social and ecological environments
<b>Density</b>	Provide for increasing densities while recognizing the contributions of the five ekistic elements and their interactions
<b>Movement</b>	Recognize the hierarchical and semi-lattice structures of movement systems and the need for these to be scaled to the appropriate ekistic unit level
<b>Science and city spread</b>	Match the needs of a sustainable city with the appropriate applications of science to control city spread
<b>Technological dependence</b>	Ensure the sustainable city benefits from technology while enabling its inhabitants to maintain their own sense of independence and well-being

Fig. 1: Synthesis by Toynbee’s themes.

aspects of the sustainable city that are introduced through Toynbee’s themes. This is not so much as a concluding position but one where a continuing agenda can be drawn from the synthesis to encourage research to expand our thinking. The structure of this agenda could be as illustrated by figure 2.

### Towards a strategic synergy of action

It is at this stage that questions can be asked that pick up Doxiadis’ matrix that relates issues of Desirability and Feasibility to the range of aspects used in Ekistics: economic (E), social (S), political (P), technological (T), and cultural (C) (fig. 2).

This matrix provides a basis for developing a strategic synergy of action. By this is meant, thinking strategically about how we can achieve an integration of the parts of the system outline in order to achieve the principle that “the whole is equal to the sum of its parts.”

Each of the Sustainable City Research Themes can now be examined systematically according to whether they are desirable and feasible for the 21st century city, considering economic, social, political, technological and cultural criteria. Pursuing this research model should produce a robust direction of enquiry informed by the past, and carry the ideas introduced by Toynbee and Doxiadis into urban analysis for the 21st century.

Further work is proposed to extend these ideas through ekistic research which is to be discussed at the 2001 General Assembly of WSE members in Berlin.

Sustainable city research themes	Desirability					Feasibility				
	E	S	P	T	C	E	S	P	T	C
Community-focused basic food production with an ethic of "wise land use"										
Provide an economy that balances its import-export needs consistent with the concept of "environmental space" (CARLEY and SPAPENS, 1998) <sup>4</sup>										
Attend to accessibility and security issues at the level of each ekistic unit										
Continue the traditional practice of applying walls and their 21st century equivalents to contain and secure sensitive social and ecological environments										
Provide for increasing densities while recognizing the contributions of the five ekistic elements and their interactions										
Recognize the hierarchical and semi-lattice structures of movement systems and the need for these to be scaled to the appropriate ekistic unit level										
Match the needs of a sustainable city with the appropriate applications of science to control city spread										
Ensure the sustainable city benefits from technology while enabling its inhabitants to maintain their own sense of independence and well-being										

Fig. 2: A Research Agenda for the Sustainable City focused on Desirability and Feasibility.

MASTER SHEET: THE EKISTICS FRAMEWORK																
SUB-THEME: NATURE: GOOD USE, PROTECTION AND IMPROVEMENT OF NATURAL ELEMENTS																
AUTHOR'S NAME: _____ CONTRIBUTION TITLE: _____																
	ANTHROPOS	ROOM	HOUSE	HOUSE GROUP	SMALL NEIGHBORHOOD NEIGHBORHOOD	SMALL POLIS	POLIS	SMALL METROPOLIS METROPOLIS	SMALL MEGALOPOLIS MEGALOPOLIS	SMALL EPEROPOLIS EPEROPOLIS	ECUMENOPOLIS	PAST	PRESENT	FUTURE	DESIRABILITY	FEASIBILITY
Criteria for Environmental Assessment																
Climate																
Habitability																
Utilisation of resources																
Flora and Fauna																
Landscape																
POPULATION	1	2	4	40	250	1.5T	9T	50T	300T	2M	14M	100M	700M	5TM	50TM	

Fig. 3: Recording sheet for the Planning students from the University of Auckland, New Zealand.

## Notes

1. T.W. Fookes, "World Society for Ekistics Project Proposal: Ekistic Education Models for contributing disciplines and professions," paper presented to the WSE meeting in Prague, 21-25 June, 2000.
2. See T.W. Fookes, "Ekistics and Arnold Toynbee's historical analysis of cities: Their applicability to the 21st century city," in E. Haarhoff et al. (eds.), *Proceedings for the Sixth Australasian*

*Urban History/Planning History Conference*, Feb. 13-16, 2002 University of Auckland, pp. 231-248.

3. Arnold Toynbee (1970), *Cities on the Move* (London, Oxford University Press); Arnold Toynbee (ed.) (1967), *Cities of Destiny* (London, Thames and Hudson).
4. Michael Carley and Philippe Spapens, *Sharing the World: Sustainable Living and Global Equity in the 21st Century* (London, Earthscan, 1998).