Creating Utopia & Correcting Dystopia: Innovative Transdisciplinary Contributions

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Plan

1. Introduction: Who’s Who

2. Our Habitat: Utopia - Arcadia - Broadacre City - The Case of Singapore

3. Our Habitat: Dystopia - Urban health risks - The case of Antwerp

4. Lessons Learned from Utopia and Dystopia

5. Transdisciplinary Contributions

WHO’S WHO

B. Arch (1st class honours)
University of Adelaide, Australia

MA.
University of Cambridge, UK

D.Sc. EPFL, Lausanne, Switzerland

UNECE, Environment & Planning
Palais des Nations, Geneva

Human Ecology & Environmental Sciences
University of Geneva, Switzerland
- Interdisciplinary & transdisciplinary inquiry
- Advanced Studies in Sustainable Development
- Global Environmental Policy Program (GEPP).

Swiss Academies of Arts & Sciences (2009 -)
Creating Utopia & Correcting Dystopia: Lessons from Urban History

“We are called to be architects of the future, not its victims.”
Buckminster Fuller
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Two Main Approaches for Urban Planning

Idealism & Utopianism
Brasilia, Canberra …
Case: Singapore.

Remedial Measures
19th c. Public Health Movement
Case: Antwerp, Belgium.

… and Tomorrow
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SINGAPORE LANDSCAPE  
Source: Photo by Rob Bonner
Plan of Singapore showing the existing and future provision of public green spaces as a Park Connectors Map for multiple purposes until 2030.

(Source: High Quality Living Environment for All Singaporeans: Land Use Plan to Support Singapore’s Future Population. Singapore: Ministry of National Development, p.29) © Urban Redevelopment Authority. All rights reserved).
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SINGAPORE BY NIGHT
Source: Photo by Rob Bonner
1. Geo-political level

2. Temporal dimension

3. Cultural & Institutional context

Relational Thinking for Urban Complexity

HABITAT

- Environment, Sécurity
- Transports, Infrastructure, Energy
- Economy Global & Local
- Health, Well-Being, Quality of life
- Aspirations, Values, Life-style
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RINGLAND PROJECT, Antwerp, Belgium.

(Source: Overview and visual representation of the ‘Ringland’ project. Reprinted from ‘Ringland’ under a CC BY license, with permission from Peter Vermeulen, original copyright 2015).
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RINGLAND Project
Antwerp, Belgium

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Contribution to CO2 → Adverse health impacts

Poor urban air quality → Adverse health impacts

Accidents → Increased car ownership & use

Demand for more roads & parking → Adverse health impacts

Growth in dispersed large retail centres → Adverse health impacts

Closure/loss of local shops → Low income families with no car unable to access fresh food - ‘food deserts’

Increased car ownership & use → Decline in walking

Congestion

Increase in impermeable surfaces → Increased polluted run-off

Vacant properties dereliction

Increased use of electrical cooling → Loss of shade

Impact on flora and fauna/biodiversity → Loss of green space

Flash flooding - adverse impact river water quality

Flash flooding - property damage

Loss of local amenity

‘THE WEB OF CONNECTIONS’

(Source: United Kingdom, Royal Commission on Environmental Pollution, 2006)
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Housing Quality, Energy, Resource Use & Health

- **HOUSING**
  - Investment in Housing Stock
  - Energy Efficiency
    - Reduce Resource Use
    - Local Air Quality
    - Sustainable Issues

- **Energy Efficiency**
  - Reduce consumption
  - Affordable warmth
  - Reduce illness

- **Affordable warmth**
  - Quality of Life
  - Local & Global Sustainability
  - Medical care
  - Demand on Health Services
FROM DISCIPLINE TO TRANSDISCIPLINARITY

(BY COURTESY OF THIERRY RAMADIER)

DISCIPLINE  MULTIDISCIPLINARITY  INTERDISCIPLINARITY  TRANSDISCIPLINARITY

DISCIPLINARY THINKING
Transdisciplinary Contributions

Healthy City Design
5 Key Domains: Innovative Responses

1. **Housing** that promotes well-being for diverse households

2. **Urban Agriculture** for local food production and consumption

3. **Inclusive Public Spaces** for healthier lifestyles

4. **Shifting from Transport Planning to Mobility** for more active living

5. **Rethinking Connections between Built & Natural environments** for planetary and human health.
Synthesis

Looking Back to the Future

We can't solve problems by using the same kind of thinking we used when we created them.

Albert Einstein
German Theoretical-Physicist
(1879-1955)

(Source: COST Action TD1408 “Interdisciplinarity in research programming and funding cycles” (INTREPID))
Reference

Swiss Academies of Arts & Sciences

Td-net  (http://www.transdisciplinarity.ch)

The network was launched in 2000 by the Swiss Academic Society for Environmental Research and Ecology (SAGUF) and taken over by the Swiss Academy of Sciences (SCNAT) in 2003. Since 2008 the td-net for transdisciplinary research has been a project of the Swiss Academies of Arts and Sciences.

Forthcoming book
