

SOCIETY AND ENVIRONMENT: A HISTORICAL REVIEW

Jaqueline Tyrwhitt (1905–83) was a British town planner, editor, and educator. These four key Tyrwhitt texts illustrate how she forged and promoted a synthesis of Patrick Geddes' bioregionalism and the utopian ideals of European modernist urbanism, which influenced post-war academic discourse and professional practice in urban planning and design internationally, and United Nations community development policy specifically.

Tyrwhitt's contributions to *The Town and Country Planning Textbook* – the preface and “Society and Environment: A Historical Review” – spelt out a Geddesian (as opposed to Corbusian) line of modern planning thought, providing a scientific humanist theoretical framework for the field: an evolutionary perspective on “the inter-relation of history and environment with man's daily life.” She paid particular attention to the urban core and noted the limitations of the Garden City ideal – and thus Britain's New Town strategy – and called for a more creative approach to civic design, inspired by a love for *existing* places, considered as a whole, in their regional setting.

In her subsequent papers “The Valley Section: Patrick Geddes's World Image” (1951), “The Core and the City” (1953), and “The Village Centre” (1957) Tyrwhitt expanded on these themes to establish a cogent and coherent alternative to Corbusian CIAM norms.

STUDIES IN INTERNATIONAL PLANNING
HISTORY

Series Editor: Professor Helen Meller

Series Advisor: Peter Inch

The *Studies in International Planning History* series brings back to print influential texts from around the world about the study and practice of city and regional planning. The aim is to make material that is now difficult or impossible to obtain more widely available for scholars of urban planning history. Each book is a facsimile of the original work, with an introductory essay written by an expert in the field putting the text into its contemporary and current context.

Titles in the Series

THE TRANSACTIONS OF THE ROYAL INSTITUTE OF
BRITISH ARCHITECTS TOWN PLANNING CONFERENCE,
LONDON, 10–15 OCTOBER 1910

Introduction by William Whyte

GHENT PLANNING CONGRESS 1913
Proceedings of the Premier Congrès International et Exposition
Comparée des Villes

Introduction by William Whyte

NOTHING GAINED BY OVERCROWDING

Raymond Unwin

Introduction by Mervyn Miller

THE ANATOMY OF THE VILLAGE

Thomas Sharp

Introduction by John Pendlebury

WHEN WE BUILD AGAIN

The Bournville Village Trust

Introduction by Peter J. Larkham

THE PLAN FOR MILTON KEYNES, VOLUME ONE
Milton Keynes Development Corporation
Introduction by Mark Clapson

PEOPLE AND PLANNING
Report of the Committee on Public Participation in Planning
(The Skeffington Committee Report)
Introduction by Peter Shapely

VILLAGE HOUSING IN THE TROPICS
With Special Reference to West Africa
*Jane Drew and Maxwell Fry in collaboration
with Harry L. Ford
Introduction by Iain Jackson*

LUSAKA: THE NEW CAPITAL OF NORTHERN RHODESIA
Introduction by Robert Home

URBAN TRANSFORMATIONS AND THE ARCHITECTURE
OF ADDITIONS
*Rodrigo Perez de Arce
Introduction by Julian Marsh*

NEW IDEALS IN THE PLANNING OF CITIES,
TOWNS AND VILLAGES
*John Nolen
Introduction by Bruce Stephenson*

EUROPE REHOUSED
*Elizabeth Denby
Introduction by Elizabeth Darling*

THE CONDITION, IMPROVEMENT AND TOWN PLANNING
OF THE CITY OF CALCUTTA AND CONTIGUOUS AREAS:
THE RICHARDS REPORT
*E. P. Richards
Introduction by Richard Harris and Robert Lewis*

PRINCIPLES OF PLANOLOGY: GRONDSLAGEN
DER PLANOLOGIE
*J. M. de Casseres
Introduction by J. E. Bosma*

MOSCOW IN THE MAKING

Sir E. D. Simon, Lady Simon, W. A. Robson and J. Jewkes
Introduction by Stephen Ward

TOWN PLANNING FOR AUSTRALIA

George Taylor
Introduction by Robert Freestone

1951 EXHIBITION OF ARCHITECTURE

Guide to the Exhibition of Architecture, Town Planning
and Building Research
Harding McGregor Dunnett
Introduction by Alan Powers

THE PLANNING OF A NEW TOWN

London County Council
Introduction by John R. Gold

TRAFFIC IN TOWNS

A Study of the Long Term Problems of Traffic in Urban Areas
Colin Buchanan
Introduction by Simon Gunn

THE BOSTON CONTEST OF 1944

Prize Winning Programs
Introduction by Jeffrey M. Diefendorf

THE GARDEN CITY MOVEMENT UP-TO-DATE

Ewart Gladstone Culpin
Introduction by Stephen V. Ward

SOCIETY AND ENVIRONMENT

A Historical Review
Jaqueline Tyrwhitt
Introduction by Ellen Shoshkes

SOCIETY AND
ENVIRONMENT: A
HISTORICAL REVIEW

Jaqueline Tyrwhitt
Introduction by Ellen Shoshkes

First published 2015
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge
711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

© 2015 Routledge

The right of Ellen Shoshkes to be identified as author of the introduction to this work has been asserted by her in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

Every effort has been made to contact and acknowledge copyright owners. If any material has been included without permission, the publishers offer their apologies. The publishers would be pleased to have any errors or omissions brought to their attention so that corrections may be published at a later printing.

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

Trademark notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data

Tyrwhitt, Jaqueline.

Society and environment : a historical review / Jaqueline Tyrwhitt ; introduction by Ellen Shoshkes.

pages cm. -- (Studies in international planning history)

Includes bibliographical references and index.

1. Urban ecology (Sociology) 2. City planning--Environmental aspects. I. Shoshkes, Ellen. II. Title.

HT241.T97 2015

307.76--dc23

2014047841

ISBN: 978-0-415-70659-9 (hbk)

ISBN: 978-1-315-69289-0 (ebk)

Typeset in Bembo
by Taylor & Francis Books

CONTENTS

1	Society and Environment: A Historical Review	4
2	The Valley Section: Patrick Geddes's World Image	54
3	The Core and the City	60
4	The Village Centre	70

INTRODUCTION

Jaqueline Tyrwhitt (1905–83) was a British town planner, editor, and educator who was at the center of a group of people who shaped the post-war Modern Movement. In the course of planning for the physical reconstruction of postwar Britain, Tyrwhitt forged an influential synthesis of planning ideas grounded in the bioregionalism of the pioneering Scottish planner Patrick Geddes and informed by the tenets of European modernism, as adapted by the Modern Architectural Research Group (MARS), the British branch of *Congrès International d'Architecture Moderne* (CIAM). Tyrwhitt's contribution to the development of these ideas – in diverse geographical, cultural, and institutional settings and through personal relationships – was connected to her role in the revival of transnational networks of scholars and practitioners concerned with a humanistic, ecological approach to urban planning and design, notably those connecting East and West. She was a key agent in the diffusion and cross-fertilization of this set of planning ideas and in the evolution of a collaborative planning and community design praxis that incorporated features of an emergent “postmodern globalist” civic culture.

Tyrwhitt willingly worked behind the scenes, translating, synthesizing, and mediating ideas that transcended national and disciplinary boundaries, making it a challenge for scholars to see the connections she helped to establish. Tyrwhitt exerted her influence, often anonymously, through collective leadership, or as an intermediary or catalyst. The texts selected for this volume illuminate how Tyrwhitt's synthesis influenced academic discourse and professional practice in urban planning and design generally, and United Nations (UN) community development policy specifically, in the mid-twentieth century.

1 Jaqueline Tyrwhitt

Born into a family descended from the original English gentry, Tyrwhitt trained for a career as a garden designer, which included a year at the Architectural Association (AA) (1924–5), and practiced for several years. Tyrwhitt enjoyed designing gardens, but wanted to do more meaningful work, so after taking an economics course at night she became an organizer for the League

of Industry, where she became conversant with the issues and people calling for a reorganization of industry along the lines of “planned capitalism.” In 1935, in order to learn more about the integration of industry with agriculture, Tyrwhitt took a job at Dartington Hall, the experimental estate established by Leonard and Dorothy Elmhirst, which fostered new methods of farming and forestry, the creation of related industries and included a progressive school and arts and crafts workshops. Tyrwhitt probably came across Patrick Geddes’s *Cities in Evolution* (1915) there, which inspired her interest in town planning. (That book was out of print but there was probably a copy in the Dartington Library. Geddes and his son Arthur had a special connection to Leonard Elmhirst and Dartington through their work in India with Rabindranath Tagore.)

In 1936 Tyrwhitt decided to study Geddes’ approach to regional and town planning at the School of Planning and Research for National Development (SPRND) that E.A.A. Rowse had recently established. Geddes’s ideas provided the conceptual basis for SPRND’s curriculum, including that a plan must be preceded by both regional and civic surveys. SPRND offered a more comprehensive postgraduate course than the existing departments of Civic Design at Liverpool and London Universities, and would admit as students graduates of any subject directly related to planning, such as sociology, public administration, geography, and economics; the other schools only admitted architects, engineers, and surveyors. But before returning to London Tyrwhitt spent the first nine months of 1937 studying town planning and land settlement in Berlin, and then in October enrolled in the two-year diploma course at SPRND. Tyrwhitt supplemented her studies with research for the Garden Cities & Town Planning Association and for the Industries Group of Political and Economic Planning (PEP). SPRND closed in September 1939 when Britain declared war on Germany. Tyrwhitt was among the first and last graduates of Rowse’s school.

Tyrwhitt joined the Women’s Land Army and served for over a year in the New Forest, where she enjoyed managing two sawmills. Rowse convinced Tyrwhitt to return to London to direct the Association for Planning and Regional Reconstruction (APRR), a new organization created to carry on SPRND’s research work.

1.1 The war years

Tyrwhitt assumed her position as APRR director in February 1941, in the midst of the blitz, at a pivotal moment in British planning history. The war had convinced the public of a need for physical as well as social and economic planning to build a better post-war world, and Tyrwhitt led APRR into the center of that conversation. Tyrwhitt modeled APRR on PEP, in which she was among the few active women members. APRR’s research agenda included regional planning, industry, agriculture and nutrition, population, housing and recreation, health and education, and uses of waste. It aimed to develop multi-disciplinary survey methods and mapping techniques to apply Geddes’s ideas

to postwar reconstruction. Like PEP, APRR published the results of its research in standardized broadsheet format. The idea of standardization to facilitate communication across specializations was a key aspect of APRR's effort to create a "composite mind" – Rowse's metaphor for the type of cooperative intelligence ideally generated by a multi-disciplinary team that was a requisite for comprehensive planning along Geddesian lines.

In December 1941, Tyrwhitt began to organize a correspondence course in town planning for those serving with the armed forces. She redesigned Rowse's pre-war school as the new School of Planning and Research for Regional Development (SPRRD), operated as an arm of APRR. The War Office agreed to offer the three-part course, which followed Geddes in emphasizing the need for a synoptic perspective of the region as the planning unit, and for an interdisciplinary team approach in order to integrate physical, economic, and social factors (Figure 1). A new chapter in Tyrwhitt's career – planning educator – began when the first students arrived by mail in December 1943. By April 1944 there were about 200 enrolled students, and the school was APRR's biggest job – which Tyrwhitt ran practically single-handedly. She then turned her attention to preparing a post-war Completion Course for those who wanted to qualify for Town Planning Institute (TPI) membership – professional certification.

1.2 Post war planning for reconstruction: information and exchange

In spring, 1945, Tyrwhitt undertook a lecture tour of Canada on behalf of the British Ministry of Information, to report on town planning for post-war Britain. Jacob Crane, then Director of the U.S. National Housing Agency's International Office, knew Tyrwhitt through the International Federation of Housing and Town Planning (IFHTP) and arranged to extend her tour to include U.S. cities. This North American journey proved to be a life-changing experience for Tyrwhitt, opening new horizons and significantly extending her personal and professional networks. Tyrwhitt's membership in the MARS group ensured a warm reception by CIAM emigres in the U.S.; she was particularly impressed by Lázló Moholy-Nagy and his friend Sigfried Giedion, who opened her eyes to a greater appreciation for aesthetics.

Upon her return to London Tyrwhitt completed editing *Patrick Geddes in India* (1947), a collection of excerpts drawn from the town planning reports Geddes made for Indian cities between 1915 and 1919. Her intent was to demonstrate the practical application of Geddes's principles to the current *worldwide* task of urban reconstruction. Those principles included: "diagnosis before treatment," i.e., survey before plan; "conservative surgery," i.e., rehabilitation rather than removal; and "bioregionalism," i.e., that people and place are inseparable. Moreover, through Geddes's words, Tyrwhitt (1947, 26) urged Westerners to learn, as Geddes did, from Indian civic beauty – "at all levels, from humble homes ... to palaces" – to look at life holistically.

INTRODUCTION TO COURSE

This third-part of the Course in Town Planning is intended to show the methods by which the student can employ the tools described in Part 2 according to the principles outlined in Part 1. The lessons in this part have increased in length as there are few current textbooks to which reference can be made. They will repay careful study in addition to that required to answer the actual questions set.

It will be noticed that Lesson I serves as an Introduction and has no questions. It is, however, necessary to read this lesson carefully before proceeding with the Course. It must again be studied at the end of the Course before answering the questions set to Lesson XI. Lesson XII is in the nature of an Appendix.

"A" students who successfully complete this course are eligible to attend Special Three Months' Completion Courses, which will be held in London and elsewhere as soon as the war is over. These will concentrate upon survey work, studio work and illustrated lectures on history and design—all subjects that cannot well be taught by correspondence. At the end of this Special Three Months' Course students will sit for examinations that will exempt them from the Final Examination of the Town Planning Institute.

CONTENTS

PART I.

		Exercise Numbers	Page Number
LESSON	I. Introduction : Regional Integration, Part I	None	3
LESSON	II. Regional Planning—Land Use	(1) (2)	11
LESSON	III. Regional Planning—Community Services	(3) (4)	17
LESSON	IV. Rural Planning	(5) (6) (7)	23
LESSON	V. Power in Relation to Regional Planning	(8) (9) (10)	39
LESSON	VI. Decentralisation	(11) (12) (13)	53
LESSON	VII. The Instruments of Transport and their Synthesis	(14) (15) (16)	61

LESSON I.

REGIONAL INTEGRATION

Reading Creative Demobilisation : E. A. Gutkind : Kegan Paul : 1943.
Culture of Cities : L. Mumford : Secker & Warling : 1940.
Evolution of Cities : P. Geddes : 1913.
*T.V.A.

American Publications—

American Regionalism : H. W. Odum and H. E. Moore.
National Resources Planning Board.
Regional Factors in National Planning 1935.
Pacific Northwest 1936.
Upper Rio Grande 1938.
Problems of a Changing Population 1938.

SYNOPSIS.

The Problem. Part I.

What is Regionalism—Regionalism and Provincialism—Why is integration necessary—What is to be integrated—Interdependence of social and economic integration—Regionalism as a readaption—Main factors in regionality.

The Approach. Part II.

Approach from the top and approach from the bottom—Growth from within—Delimitation and marginal areas—Functional and personal factors—Unity, diversity and uniformity—Interaction of town and country—Inter-regional balance and regional homogeneity—Systematic planning, not laissez-faire—Co-operation of the people—Education for regional consciousness.

Figure 1 The correspondence course in town planning that Tyrwhitt ran on behalf of the War Office for those serving with the armed forces, followed Geddes in emphasizing the region as the planning unit, and the need for an interdisciplinary team approach in order to integrate physical, economic, and social factors.

Source: Courtesy EKISTICS: *The Problems and Science of Human Settlements*.

INTRODUCTION

Tyrwhitt also organized a conference on “Human Needs in Planning: The Contribution of Social Studies to Architecture and Planning,” convened in November 1945 by APRR in cooperation with the Royal Institute of British Architects (RIBA) Architectural Science Board and the Institute of Sociology. A follow up to a meeting Tyrwhitt had organized with RIBA in 1942 on regional survey techniques, this conference aimed to enable those engaged in social surveys relating to physical planning to discuss their methods and findings. The conference attracted significant media attention, as it addressed a key assumption underlying the planning legislation being enacted by the new Labor government: the nature and availability of useful social data on which to base decisions.

It was to meet this urgent need for social data that Tyrwhitt launched an expanded version of APRR’s Information Service, featuring a bimonthly abstract of APRR’s work and “matters of interest in the planning world.” APRR offered data visualization and compilation services, including submission of evidence. Tyrwhitt was particularly proud of APRR’s library. She oversaw the adaptation of the Universal Decimal Classification (UDC) system to suit APRR’s work: organizing the main topics of physical planning and related subjects from a planner’s broad perspective. In conjunction with its growing library, APRR launched a monthly Reference Sheet listing recent acquisitions and featuring an annotated bibliography. In this way, Tyrwhitt directed APRR to provide the data to implement the “broader conception of planning” called for in the Town and County Planning Act of 1947, which required reliable and comprehensive social data.

One practical reason for the development of APRR’s library was to support SPRRD’s three-month Completion Course, which began in January 1946. There was such demand for this course that it ran for seven consecutive sessions, ending in December 1947. Tyrwhitt then stepped down as director of studies in favor of Rowse, who had returned from military service. As Britain’s post-war planning system became institutionalized, though, TPI decided to recognize only training programs affiliated with a college or university. SPRRD’s wartime correspondence course and postwar completion course had provided an important arena for developing the relevant subject matter in an interdisciplinary way before planning became an academic specialization. Tyrwhitt was especially proud that SPRRD had trained a small but influential cohort, whose members made significant contributions to postwar reconstruction worldwide, assuming positions throughout the British Commonwealth and Dominions and the UN.

However, in 1948 Tyrwhitt, age 42 and unmarried, was both free and forced to join the tide of European intellectuals looking for new opportunities abroad. England faced serious economic problems at war’s end, enduring austerity and rationing through the early 1950s. With scant funds for research, and shrinking demand for private consultants, APRR suffered from a lack of work. Openings for women in the workplace created by the war closed in favor of returning veterans. The international connections Tyrwhitt made propelled her into a

new phase of her career as a transnational actor. The years 1948 through 1954 were a fruitful but unsettled time, as she assumed a series of academic posts in North America, became Giedion's close collaborator, joined the CIAM inner circle, and worked with idealistic planners and designers who renewed their international ties in the context of the new UN organizations then being established. It is during this period of extensive travel and intensive interactions across cultural and disciplinary boundaries that Tyrwhitt produced the texts reprinted here – each of which represents an act of translation.

2 The Texts

2.1 Town and Country Planning Textbook (1950): “Preface,” and Chapter 6, “Society and Environment”

Production of the *Town and County Planning Textbook* (1950) was Tyrwhitt's last project for APRR, which closed in 1950. Tyrwhitt considered the *Textbook* “as APRR's swan-song ... it does contain the *raison-d'être* of our existence, and the proof that it was worth it.”¹ She states in her Preface that it was the “remarkable success” of the Correspondence Course that convinced APRR that there was growing demand for the publication of such a program of study. Preparation of this textbook – the first of its kind in Britain – involved revising and supplementing the original lectures with new material from several social science disciplines to reflect the requirements created by the 1947 Town and Country Planning Act.

APRR's decision to publish the *Textbook* was probably also triggered by the formation of the Schuster Committee on the Qualifications for Planners in May 1948, which initiated over two years of deliberation on the scope of planning and the role of planners to guide universities that were building training programs. APRR's *Textbook* attempted to define the curriculum, and organize the related parts of this new field of expertise, at a critical juncture in the history of the profession, when planning practice was becoming codified and planning education standardized.

Tyrwhitt (1950, xv) explained why APRR was credited as editor: “Just as Planning is not the work of one brain but rather the result of a joint effort of many individuals trained previously in different specialist fields, so the evolution of this book should be recognized as the product of such a team.” Tyrwhitt deserves credit as the guiding spirit of this team effort that produced a collection that represents the “sum of town planning theory and practice” at that time (White 1974: 45).

Tyrwhitt (1950, 1) was explicit about the synthesis of Geddesian and modernist social-aesthetic ideals this collection represented: “Patrick Geddes's triad ‘place, folk, work’ and the four points of the CIAM Charte d'Athenes ‘living, working, developing mind and body, circulating’ are fully treated and though the

purpose of the book is to impart technical information, there is a constant warm under current of enthusiasm for the well-being of a lively and diversified humanity.” Her contributions to the collection include “Chapter 6, Society and Environment: A Historical Review,” “Chapter 7, Surveys for Planning,” and the “Bibliography,” based on APRR’s Classification System. These contributions – as editor, author, compiler, and indexer – exemplify the various means by which she translated the ideas that evolved in the context of the collaborative group work she fostered at APRR and SPRRD. Collectively these topics represent three facets of her scientific humanist conception of planning as:

- grounded in an evolutionary macro-historical theoretical perspective;
- based on empirical research, using the survey method both as an analytic tool and as a means of civic engagement in the planning process; and
- a holistic, integrative process that requires as a corollary the coordination and classification of different branches of knowledge.

Tyrwhitt wrote Chapter 6 in the context of the trans-Atlantic activities she was immersed in during 1948–9 – including steering CIAM’s study of planning issues, and the education of planners in North America and the UK – which reinforced her confidence in the potential of an ecological approach to community design, integrating economic, social and physical analyses. The chapter provides an historical background and framework for planning as a search for ways of life suited to fundamental human needs. Her construction of this past – paying particular attention to treatment of the urban center – was connected to a vision of the future: designating the contextual, Geddesian line of modernist planning as the true way forward, and distinguishing it from the place-less application of a pre-conceived principle or panacea – the Garden City.

The *Schuster Report* was published at the same time as APRR’s *Textbook*, and recommended an approach similar to SPRRD’s course. But planning education in Britain did not develop along those lines in the 1950s; a narrower version of physical planning emerged as a separate discipline, described in Lewis Keeble’s *Principles and Practice of Town and Country Planning* (1952). Meanwhile, an ecological, research-based concept of planning did take root in prominent U.S. universities – notably at Harvard, where Tyrwhitt joined the faculty in 1956. The pendulum began to swing back in British planning education in the 1960s, though, with a revival of regional planning and comprehensive approaches stimulated by the second wave of systems thinking and the influence of UN technical assistance programs.

2.2 “The Valley Section: Patrick Geddes’ World Image” (1951)

Most people who became familiar with Geddes’s ideas in the 1940s knew them secondhand, as his work was largely unpublished and his published texts

INTRODUCTION

were inaccessible and often incomprehensible. Tyrwhitt played an important role in stimulating the postwar revival of interest in Geddes's thinking through her edited versions of his writings: *Geddes in India* (1947); and an abridged edition of *Cities in Evolution* (1949), first published in 1915 and out of print for more than a generation.

Tyrwhitt's edition of *Cities in Evolution* omitted five chapters, but added an appendix including, et alia, Geddes' Notation of Life "thinking machine" diagram (Figure 2), an essay on that diagram as "an early general systems model" co-authored by John Turner, one of her former soldier-students, and excerpts from a lecture Geddes gave at the New School for Social Research in New York in 1923 that explained his concept of the Valley Section (Figure 3). Tyrwhitt worked on *Cities in Evolution* while teaching at the New School in 1948; she reprised Geddes's Valley Section lecture – based on rough shorthand notes she had found – for her own last lecture there.

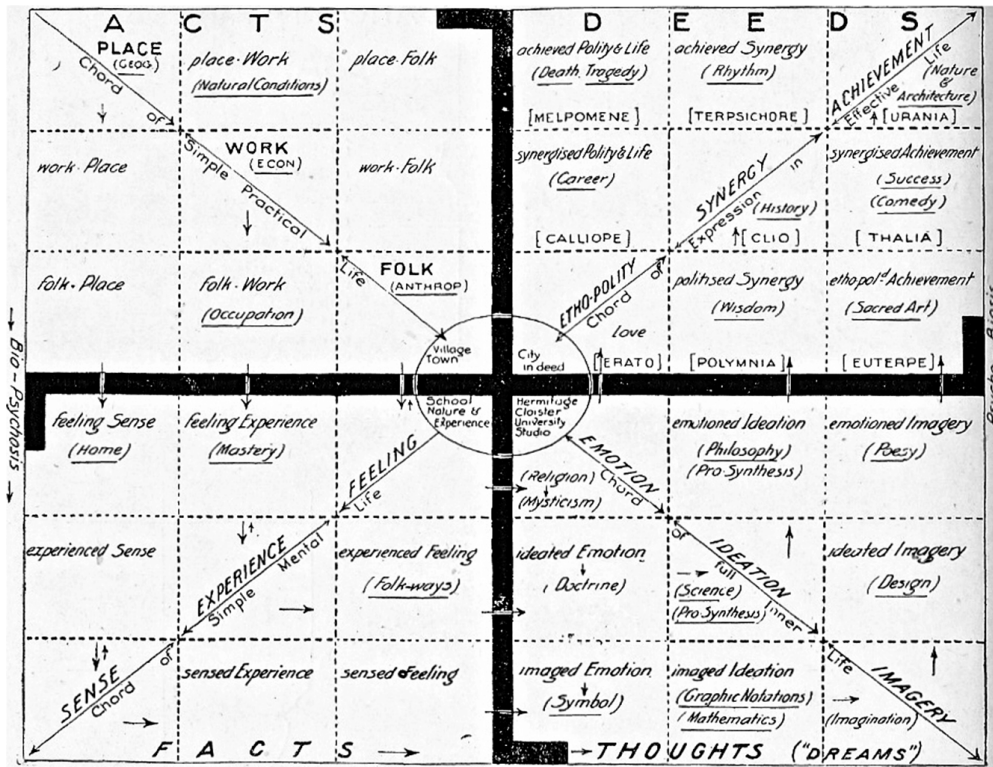


Figure 2 As General Editor of the second, revised edition of Geddes' *Cities in Evolution* (1915, 1949 ed.) Tyrwhitt included an appendix on Geddes' Notation of Life diagram featuring an essay by John Turner and W.P. Keating Clay interpreting the diagrams as a medium of expression of a new synthetic form of thought. Tyrwhitt provides her own reading of this diagram in "The Valley Section: Patrick Geddes' World Image" (1951).

Source: The Outlook Tower Association and APRR, eds. (1949) *Cities in Evolution*, by P. Geddes (1915) new and revised edition. Appendix I. 194.

INTRODUCTION

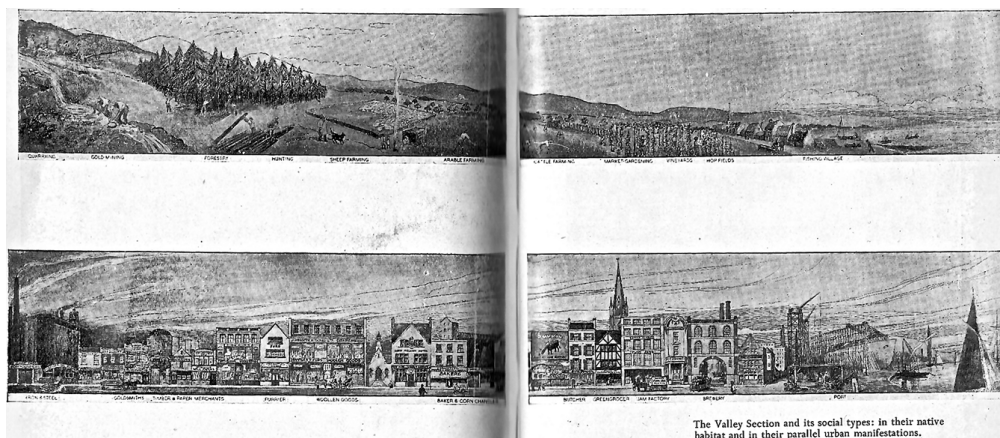


Figure 3 Tyrwhitt selected this illustration of The Valley Section from Geddes' second Cities and Town Planning Exhibition to include, along with texts drawn from Geddes' Catalogue to the first exhibition, in the second, revised edition of Geddes' *Cities in Evolution* (1915, 1949 ed.).

Source: The Outlook Tower Association and APRR, eds. (1949) *Cities in Evolution*, by P. Geddes (1915) new and revised edition. Cities and Town Planning Exhibition. 166–7.

Whereas Tyrwhitt had exercised her editorial voice silently in *Geddes in India*, rewriting passages to eliminate verbal obscurities; and quietly in *Cities in Evolution*, adding and subtracting text, in “The Valley Section” she constructed a narrative using Geddes’ texts in order to articulate *her* interpretation. Tyrwhitt’s (1951: 6) stated aim was to remind planners – for whom Geddes’ phrases “survey before plan” and “place-folk-work” had become commonplace – that Geddes’ “real contribution to planning thought and practice was to link these two concepts indissolubly both with each other and with Comte’s theory of ‘Peoples and Chiefs: Intellectuals and Emotionals’” – the typical personalities who are “carriers” of a culture. To make this case she extracted text from Geddes’ lectures that clarify the connections between the Notation of Life and Valley Section diagrams – the theoretical concepts examined more closely in her appendix to *Cities in Evolution*. In presenting Geddes’s texts in this particular way, against a backdrop of new appreciation for his thought, which resonated with contemporary trends in social thought, she not only played an important role in translating Geddes’s ideas – making them accessible – she essentially produced a work unique in its own right, creating a new way of seeing urban development processes as expressed in the subtitle: “Patrick Geddes’ World Image.”

Among the many ideas on display in this article, Tyrwhitt shows that the Notation of Life and Valley Section diagrams together operate as a cross-disciplinary, multi-level model of guided social evolution: social learning operating in space and time. From this systemic perspective, city and region, part and whole, subjective and objective, past, present, and future are inextricably related. This model provides a theoretical framework for comparative, historical study of human settlements and an analytic approach to the problems of cities

as complex interactions of functionally interdependent parts and developmental processes. The key to planning for the future is to understand – and raise public awareness about – trends and their consequences; the hope for the future lies in the unique ability of our species to set goals and follow a course of action, *imagine* a future, grounded in the realities of a particular place, and choose a path, among alternatives, to realize it. Therein lies the connection between the regional survey, an *imaginative* plan, and civic design.

Tyrwhitt’s work on “The Valley Section” provided the larger intellectual context for her engagement in a range of activities: teaching a course on utopian traditions in town planning at Yale; writing the introduction to an issue of the UN’s new *Housing and Town Planning Bulletin* on the integration of community facilities with housing; producing one CIAM book – *A Decade of New Architecture* (1951) – for Giedion and developing another on town planning with CIAM president José Luis Sert; and planning for CIAM 8, which the MARS group proposed to focus on the theme of civic centers and host in England in 1951. The MARS proposal countered one by Swiss architect Le Corbusier to use a grid he and others devised to articulate CIAM town planning principles. These engagements placed Tyrwhitt in the middle of the conflicts that flared between architects and planners around the growth of planning as a profession and the growth of architects’ interest in planning aspects of redevelopment and civic design.

Tyrwhitt strategically timed publication of “The Valley Section” in January 1951 to introduce Geddes’s Notation of Life diagram as an alternative to Corbusier’s Town Planning Grid, which she felt inappropriately emphasized architectural design and building construction rather than town planning. Tyrwhitt thought that most British professionals viewed planning as a continuous – Geddesian – process, focusing on action based on analysis of recurring survey work rather than the production of a static master plan. Corbusier’s grid was more suitable for smaller-scale civic design projects which the British considered the domain of the architect.²

In June 1950 Sert asked Tyrwhitt to reconcile the two themes proposed for CIAM 8. She proposed modifying Corbusier’s Grid to examine civic centers – now called the Core – at five “scale levels” of community: housing group, neighborhood, town or city sector, city, and metropolis – in other words, the regional hierarchy of social units represented in *The Valley Section*. This new format was labelled the MARS Grid. In October, when Tyrwhitt began writing “The Valley Section,” she clearly intended “Geddes’ World Image” to lend weight to and complement the MARS Grid. Furthermore, her understanding of Geddes’ ideas informed her understanding of the Core which, at CIAM 8, Tyrwhitt defined as “the gathering place of the people ... whether planned or not ... a physical setting for the expression of collective emotion” (Figure 4). Tyrwhitt thus ascribed to the Core a key role in the social learning process represented in the Notation of Life diagram, as – in Geddes’ words – the place where “the whole awakened ... the voice of the people at its best – morally and emotionally” is heard, expressing the civic consciousness that gives rise to “the flowering of cities.”

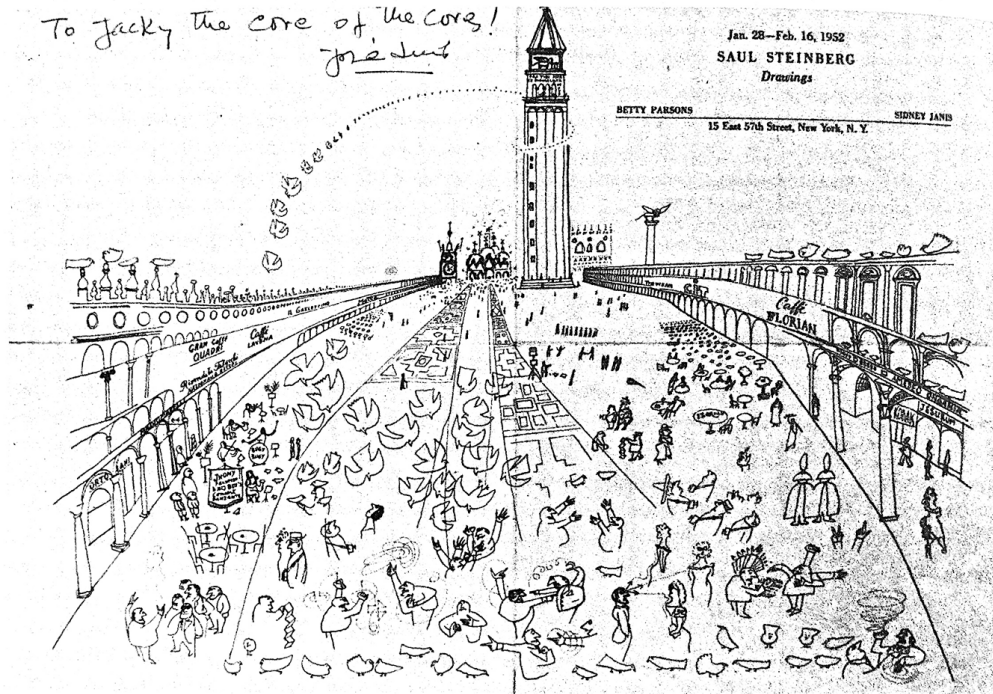


Figure 4 The sketch for the frontispiece of the companion book to CIAM 8 illustrates Tyrwhitt's concept of the Core as above all a place for spontaneous interaction. Source: Courtesy *EKISTICS: The Problems and Science of Human Settlements*.

Some young architects and planners – notably the group known as Team X – took up this line of thought when they adopted Geddes's Valley Section as a humanistic alternative to the Corbusian line of CIAM town planning ideas; their understanding of the Valley Section was based on reading Tyrwhitt's translations of Geddes' texts and conversations with Tyrwhitt, who advised them. Tyrwhitt used Geddes' ideas to enrich and further CIAM discourse, not subvert it. She succeeded in moving modernism beyond functionalism to a new humanism, at least in the Geddesian arm of the planning branch of the postwar modern movement. In her summary of the resolutions of CIAM 8, which also announced the end of this era of CIAM, Tyrwhitt concluded that the Core as a means for the “animation of spontaneous nature ... seems a heritage that our group, after twenty years' work, can now hand on to the next generation. Our task has been to resolve the first cycle of the work of CIAM by finding a means to *transform the passive individual in society into an active participant of social life*” (“Short Outline of the Core” 1952, 168).

2.3 “The Core and the City” (1953)

In “The Core and the City” Tyrwhitt elaborated on the argument she made at CIAM 8: The “cure for our ... amorphous modern cities” was not by

decentralization but “by the creation of new Cores – new concentrations of activity – by a visual emphasis upon centers of integration rather than upon bands of separation,” such as greenbelts (1953, 103–4). Tyrwhitt probably wrote this article in London in the summer of 1952, after completing her first year as a visiting professor at the University of Toronto, where she was setting up a new graduate planning program within the School of Architecture. She had repeated her course on utopian traditions in town planning there, and now felt she had the basis for a book re-analyzing town planning ideals. The significance of “The Core and the City” lies in her effort to translate CIAM’s theoretical discourse on modernist urbanism into terms that the typical British practitioner could understand and use to make physical planning more responsive to social and economic trends.

Tyrwhitt drew on her understanding of Geddes’ Notation of Life diagram to frame how the idea of “good practice” is mediated by a consciously or unconsciously held image of the ideal way of life, one that crystallized over time from a concept proposed as a radical remedy to a particular societal problem to a panacea. Thus, she proposed, the Garden City concept evolved from a revolt against the nineteenth-century slum to a sacred cow in British planning theory and policy: “the prevalent ideology of escape from city.” Passage of the Town Development Act of 1952 exemplified the persistence of this doctrine in Britain despite continued growth of large urban areas.

Tyrwhitt argued that people were now drawn to cities not primarily for jobs, but for access to opportunities for social interaction and cultural resources – “the bright lights of the city and all that they imply” – that were mainly found in a small area: the core. She couched her argument in terms of “eternal human needs” for diversity and inter-exchange; asserting “a fundamental human right ... of citizens to move about freely in the core of their city.” The most important consideration in the animation of a core as a focus for urban activities – aside from providing buildings for various uses – is to provide a range of open spaces, notably, places for *casual discussions among strangers*, i.e., civic discourse.

To illustrate how the core of the city formed part of the hierarchy of inter-related centers at various scales within “the urban constellation,” Tyrwhitt presented examples from CIAM 8. They weren’t meant to suggest solutions for the problems of a particular community, but rather represented the creative ferment that was generated by the debates at CIAM. Those debates epitomized international concern with the social and economic forces driving metropolitan growth in all Western industrial nations in the 1950s, producing suburban sprawl and decline of central cities. The old urban patterns were breaking down, and there was a need to rethink basic assumptions, but what were the new models?

In this text Tyrwhitt proposed the ideal of the core as a guiding concept to positively influence the future form of growing middle-sized cities – which were otherwise encouraged by British policy to export their “surplus” population to a small town. Rather than “kill” these cities by imposing this cure-all,

Tyrwhitt called for *building on* existing trends to create the “new urban constellation.” Her proposals, drawing on the repertoire of CIAM ideas, included limiting the central, pedestrian-oriented core to a walkable area (adopting a research-based spatial metric); and revitalizing the blighted inner urban ring by introducing fingers of natural areas (i.e., green urbanism) to define mixed income communities large enough to support new or revived neighborhood cores with schools and shops.

Tyrwhitt’s image of the core and the urban constellation wasn’t taken up in British planning circles, where the doctrine of decentralization and containment that molded the post-war planning system remained relatively unchallenged into the 1960s. However, Tyrwhitt continued to develop this line of thought at Harvard while launching the new urban design program, and in the Ekistics movement, formulating models for cities that could absorb growth without destroying existing communities. As a result, several generations later, Tyrwhitt’s ideas for transit-based, urban and regional planning to guide metropolitan growth into a multi-nodal pattern of compact centers, with greenways defining and integrating nature into neighborhoods, is now widely acknowledged as a “best practice” for sustainable development – albeit one that is hard to implement in the absence of regional governance.

2.4 “*The Village Centre*” (1957)

During 1953–4, Tyrwhitt served as the first woman to lead a UN Technical Assistance mission, as advisor to the Government of India’s International Exhibition of Low Cost Housing, held in New Delhi, and director of a concurrent UN Seminar on Housing and Community Improvement in Asia and the Far East, another first. In “*The Village Centre*” she describes the working model she designed as the UN’s contribution to – and centerpiece for – the housing exhibition, which emphasized the use of local materials and skills; she presented this paper at IFHTP’s first South East Asia regional conference, which was held following the UN seminar and involved many of the same people. The significance of this text is in both its testimony to the pioneering role Tyrwhitt played in the UN technical assistance program, as well as in Tyrwhitt’s description of her adaptation of a CIAM-inspired core as an integrated approach linking rural housing policy to the political and economic development of village life. Tyrwhitt successfully employed this working model of a Village Center as one means of introducing her Geddesian line of modern planning thought into UN discussions at this critical initial stage in the evolution of the technical assistance program.

Tyrwhitt’s concept emphasized the community facilities that composed the village center – their siting, design, and function – rather than the construction methods employed in the experimental houses surrounding it. Those facilities included a multi-purpose school, a health clinic involved with environmental sanitation, crafts workshop, a communal seed store, and a plant for collecting

INTRODUCTION

methane gas from cow dung to be used as fuel. This ensemble embodied “the integration of mind, body, hands and the good earth” as a “living actual reality” in the villagers’ immediate living environment, and fostered social learning. Tyrwhitt describes how these facilities would be used in different ways at different times by different people; how the construction, operation, and use of these buildings would employ self-help techniques, cooperative methods, and appropriate technology using local materials and skills available in the average village; and how those activities and services aligned with various public policies, local traditions of self-government, and the teachings of Gandhi, whose spirit infused the project, and whose presence was enshrined there in a replica of his hut.

Tyrwhitt developed her concept for the Village Center through an extensive process of international fact-finding and collaboration. After a month at UN headquarters planning the seminar, she met with experts in London, consulted with several related UN agencies in Geneva that played significant parts both during the seminar and as sponsors of the UN’s contribution to the housing exhibition, and met with IFHTP staff in The Hague to coordinate the two meetings. After securing official approval of her proposal for the model village, Tyrwhitt traveled from India to southern France to attend CIAM 9, first making a stop in Israel to meet with UN technical assistance experts working there. In Israel she was impressed by a building system devised by an Australian architect and decided to include it in the UN’s model village. She also collected ideas and designs for model houses at CIAM 9, and engaged diverse CIAM voices to contribute to the seminar, including members based in Japan, Ceylon (Sri Lanka), and Vietnam, a country not officially recognized by the UN.

Tyrwhitt then designed the Village Center in cooperation with the Delhi offices of the specialized UN agencies, and the corresponding Departments of the Government of India. “The Village Centre” is representative of Tyrwhitt’s role in building such far-reaching connections between people and institutions in the East and West, and in facilitating and translating the results of such multi-faceted cross-cultural and cross-disciplinary communication (Figure 5).

The Housing Exhibition and UN Seminar provided a rare opportunity for an international gathering of experts to study collectively in the field innovative projects in the developing world that integrated regional planning, urban design, community development, and resource management. Tyrwhitt helped UN staff translate recommendations that emerged from the seminar into recommendations to governments in the region. One proposal was to create the first planning school in Southeast Asia, which Tyrwhitt later helped establish in Indonesia through a partnership between the UN and Harvard. Recommendations for *comprehensive* housing and community improvement programs, and encouragement of mutual self-help and participatory practices within a regional planning framework that reconciled economic and social requirements, were incorporated in the long-range community development program approved by the UN’s Economic and Social Council in 1957 and the

INTRODUCTION

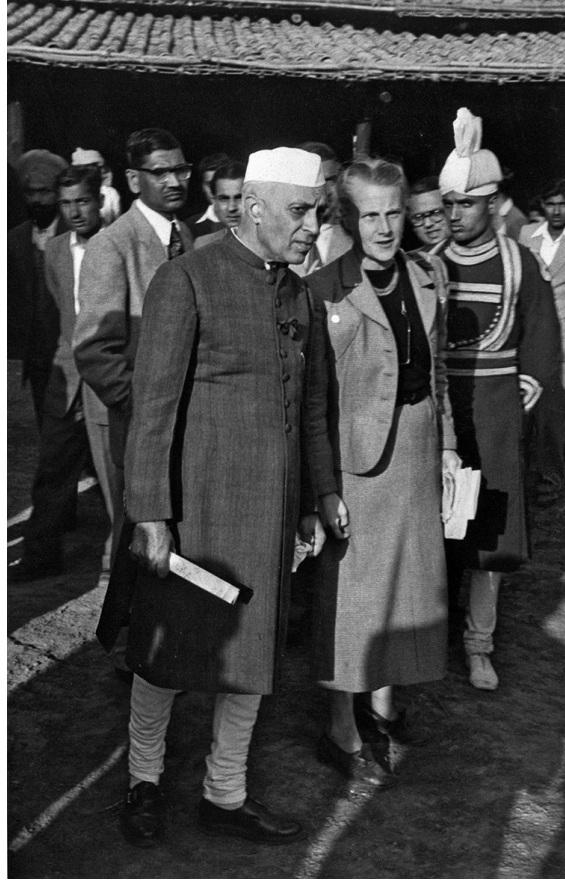


Figure 5 Tyrwhitt escorted Indian Prime Minister Nehru around the working model of a Village Center, the UN's contribution to – and focal point of – the Government of India's International Exhibition of Low Cost Housing.

Source: Courtesy of United Nations.

Long-Range International Program of Concerted Action in the Field of Housing and Related Facilities, adopted in 1959.

3 Conclusion

Jaqueline Tyrwhitt made significant contributions to planning theory, practice, and pedagogy during the 1940s and 1950s by conveying as well as translating planning and design ideas across national, cultural, and disciplinary borders. The texts re-issued here illuminate how she used translation to shape her engagement as a pioneering woman at the frontier of the planning field: synthesizing the collaborative work of APRR in defining a curriculum for comprehensive, Geddesian planning; interpreting Geddes's diagrams as a guiding concept linking research and practice; explaining the relevance of CIAM theoretical discourse on urbanism to British planning practitioners; and

INTRODUCTION

cross-fertilizing Eastern and Western ideals in the formulation of UN community development policy. The syntheses developed in these texts – and throughout her career – are early examples of the lines of thought that led to the concept of sustainable development in the 1970s, the international Healthy City Movement in the 1980s, and the revival of ecological urbanism today in its several forms.

Notes

- 1 Letter from J. Tyrwhitt to B. Wells, January 23, 1950. This letter is part of a collection of Tyrwhitt papers added in 2013 to the Tyrwhitt Collection in the RIBA Archive, and not yet catalogued at the time of this writing.
- 2 Tyrwhitt continued to compare and contrast the CIAM grid and Geddes's Notation of Life diagram in the context of work with Constantinos Doxiadis, developing an Ekistic grid as a framework for a computerized information system to support the scientific study of human settlements. In a talk at AA in June 1965, Tyrwhitt (1965, 10) compared these three visual schemata as attempts to design "grids of inter-relations, each one building to some extent on the last." She featured this discussion in her introduction to an anthology of articles from the journal *Ekistics*, in 1972, demonstrating that ekistics was grounded in Geddes's evolutionary perspective and analogous to the CIAM approach to urbanism.

Bibliography

- Association for Planning and Regional Reconstruction. 1945. *Maps for the National Plan. A Background to The Barlow Report, The Scott Report, The Beveridge Report*. London: Lund Humphries.
- Bell, G. and J. Tyrwhitt. 1972. Introduction, in *Human Identity in the Urban Environment*, edited by G. Bell and J. Tyrwhitt. London: Penguin, 15–37.
- Carver, H. 1975. *Compassionate Landscape*. Toronto: University of Toronto Press.
- Foley, D. 1963. *Controlling London's Growth 1940–1960*. Berkeley: University of California Press.
- Geddes, P. 1915. *Cities in Evolution*. London: Lund Humphries.
- _____, 1947. *Patrick Geddes in India*, edited by J. Tyrwhitt. London: Lund Humphries.
- _____, 1968. The Valley Section, edited by J. Tyrwhitt. *Architects Year Book*, 12, 65–71.
- Giedion, S. 1941. *Space, Time and Architecture: The Growth of a New Tradition*. Cambridge, MA: Harvard University Press.
- _____, 1951. *A Decade of New Architecture*. Zurich: Girsberger.
- _____, 1958. *Architecture, You and Me: The Diary of a Development*. Translated by J. Tyrwhitt. Cambridge, MA: Harvard University Press.
- _____, 1967. *Space, Time and Architecture: The Growth of a New Tradition*. Fifth edition. Cambridge, MA: Harvard University Press.
- Hebbert, M. 1983. The Daring Experiment: social scientists and land use planning in 1940s Britain. *Environment and Planning B: Planning & Design*, 10(1), 3–17.
- Human Needs in Planning Conference at RIBA, 1946. *Journal of the Royal Institute of British Architects*, 53(February), 126–8.
- Keeble, L. 1952. *Principles and Practice of Town and Country Planning*. London: Estates Gazette.
- Kyrstis, A. 2006. *Constantinos A. Doxiadis Texts Design Drawings Settlements*. Athens: Karos.

INTRODUCTION

- Liscombe, R.W. 2006. Perceptions in the Conception of the Modernist Urban Environment: Canadian Perspectives on the Spatial Theory of Jaqueline Tyrwhitt, in *Man Made Future: Planning, Education and Design in Mid-twentieth Century Britain*, edited by I.B. Whyte. London: Routledge, 78–98.
- Mary Jaqueline Tyrwhitt: In Memoriam. 1985. *Ekistics*, 52(314/315).
- Meller, H. 1990. *Patrick Geddes: Social Evolutionist and City Planner*. New York: Routledge.
- Meyerson, M. with J. Tyrwhitt, B. Falk, and O. Sekler. 1963. *Face of the Metropolis*. New York: Random House.
- Ministry of Town and Country Planning. 1950. Report of the [Schuster] Committee on Qualifications of Planners, (Cmd.8059). London: HMSO.
- Mumford, E. 2000. *The CIAM Discourse on Urbanism, 1928–1960*. New Haven: Yale University Press.
- Mumford, L. 1947. Introduction, in *Patrick Geddes in India*, edited by J. Tyrwhitt. London: Lund Humphries, 7–13.
- _____, 1950. Mumford on Geddes. *Architectural Review*, 108(644), 81–7.
- _____, 1951. The Skyline, Artful Blight. *New Yorker* (May 5), 84–90.
- The Outlook Tower Association and The Association for Planning and Regional Reconstruction eds. 1949. *Cities in Evolution* by P. Geddes (1915). Second edition, revised. London: Williams and Northgate.
- Rodwin, L. 1953. The Achilles Heel of British Town Planning. *The Town Planning Review*, 24(1), 22–34.
- Scott, J. and R. Bromley. 2013. *Envisioning Sociology: Victor Branford, Patrick Geddes, and the Quest for Social Reconstruction*. Albany: State University of New York Press.
- Sheail, J. 1997. Scott Revisited: Post-war Agriculture, Planning and the British Countryside. *Journal of Rural Studies*, 13(4), 387–98.
- Short Outline of the Core, 1952. In *The Heart of the City: Towards the Humanisation of Urban Life*, edited by J. Tyrwhitt, J.L. Sert, and E.N. Rogers. New York: Pellegrini and Cudahy, 164–8.
- Shoshkes, E. 2004. East–West: Interactions between the United States and Japan and their Effect on Utopian Realism. *Journal of Planning History*, 3(3), 215–40.
- _____, 2009. *Jaqueline Tyrwhitt and Transnational Discourse on Modern Urban Planning and Design, 1941–1951*. *Urban History*, 36(2), 262–83.
- _____, 2010. Martin Meyerson and Jaqueline Tyrwhitt and the Global Exchange of Planning Ideas. *Journal of Planning History*, 9(2), 75–94.
- _____, 2013. *Jaqueline Tyrwhitt: A Transnational Life in Urban Planning and Design*. Farnham, UK: Ashgate.
- _____, 2014. Visualizing the Core of an Ideal Democratic Community: Jaqueline Tyrwhitt and Post-war Planning Exhibitions, in *Exhibitions and the Development of Modern Planning Culture*, edited by M. Amati and R. Freestone. Farnham: Ashgate.
- Shoshkes, E. and S. Adler. 2009. Planning for Healthy People/Healthy Places: Lessons from Mid-20th century Global Discourse. *Planning Perspectives*, 24(April), 197–217.
- Tyrwhitt, J. 1945. Town Planning. *Architects' Year Book*, 1, 11–29.
- _____, 1946a. Training the Planner, in *Planning and Reconstruction*, edited by T. Todd. London: Todd, 209–13.
- _____, 1946b. *Planning and the Countryside*. London: Art & Educational.
- _____, 1947. Editor's note. *Patrick Geddes in India*. Edited by J. Tyrwhitt. London: Lund Humphries.
- _____, 1948a. Reconstruction: Great Britain. *TASK* 7/8, 20–4.

INTRODUCTION

- _____, 1948b. Opening up Greater London. *National Municipal Review*, 37(11), 592–6.
- _____, 1949a. Introduction, in P. Geddes, *Cities in Evolution*, Second edition, abridged, edited by The Outlook Tower Association and APRR. London: Williams and Northgate, ix–xxvii.
- _____, 1949b. The Size and Spacing of Urban Communities. *Journal of the American Institute of Planners*, 15(2), 10–17.
- _____, 1950. Society and Environment: A Historical Review, in *Town and Country Planning Textbook*, edited by APRR, London: Architectural Press, 96–145.
- _____, 1951. The Valley Section: Patrick Geddes's World Image, *JTPI*, Jan. 37(3), 61–66.
- _____, 1953. The Core and the City, *The Architects Year Book*, 5, 39–48.
- _____, 1954. Ideal Cities and the City Ideal. *Explorations* 2, 38–50.
- _____, 1955a. The Moving Eye. *Explorations* 4, 90–5.
- _____, 1955b. Chandigarh. *Journal of the Royal Architectural Institute of Canada*, 32(353), 11–20.
- _____, 1955c. The City Unseen. *Explorations* 5, 88–96.
- _____, 1957. The Village Centre, IFHTP Proceedings of the South East Asia Regional Conference, New Delhi, 1954, 220–5.
- _____, 1958. Fatehpur Sikri. *Architectural Review*, 123(733), 124–8.
- _____, 1959. The Civic Square. *Canadian Architect* (April), 55–65.
- _____, 1962. Education for Urban Design. *Journal of Architectural Education*, 17(3), 100–2.
- _____, 1963. Shapes of Cities That Can Grow. *Architectural Association Journal*, 79(876), 87–102.
- _____, 1965. The Ekistic Grid, *Architectural Association Journal*, 81(894), 10–15.
- _____, 1966. Education for Urban Design: Origin and Concepts of the Harvard Program, in *The Architect and the City*, edited by M. Whiffen. Cambridge, MA: MIT Press.
- _____, 1968. Chios. *Architects' Year Book*, 12, 194–230.
- _____, 1980. Working with Charles Abrams. *Habitat International*, 5(1/2), 35–6.
- _____, 1998. *Making a Garden on a Greek Hillside*. Limni: Denise Harvey.
- Tyrwhitt, J. and B. Colvin. 1947. *Trees for Town and Country*. London: Lund Humphries.
- Tyrwhitt, J., J.L. Sert, and E.N. Rogers. 1952. *The Heart of the City: Towards the Humanisation of Urban Life*. New York: Pellegrini.
- Urban Design, 1956. *Progressive Architecture*, 37(8), 97–112.
- Ward, Colin. 1976. *Housing: An Anarchist Approach*. London: Freedom Press, Chapter 4.
- Watts, K. 1997. *Outward from Home: A Planner's Odyssey*. Lewes: Book Guild Ltd.
- Weissmann, E. 1978. Human Settlements—Struggle for Identity. *Habitat International*, 3(314), 227–41.
- Welter, V. 2002. Post-War CIAM, Team X and the Influence of Patrick Geddes. Available at: <http://www.Team10online.org/research/papers/delft1/welter.pdf> (accessed: September 28, 2013.)
- _____, 2006. Everywhere at Any Time Post-Second World War Genealogies of the City of the Future, in *Man Made Future*, edited by I.B. Whyte. London: Routledge, 59–77.
- White, B. 1974. *The Literature and Study of Urban and Regional Planning*. London: Routledge.

A note about primary sources

Tyrwhitt's papers are mainly in the Jaqueline Tyrwhitt Collection in the Royal Institute of British Architects (RIBA) Architectural Library, Drawings &

INTRODUCTION

Archives Collection, in London. There are also Tyrwhitt papers in the Sir Patrick Geddes Collection, Strathclyde University Archives, Andersonian Library, in Glasgow and in the Patrick Geddes Centre for Planning Studies, Edinburgh University Library, Special Collections, in Edinburgh. Tyrwhitt's personal collection of CIAM papers is in the Archives of the Institute for History and Theory of Architecture (gta Archives), Swiss Federal Institute of Technology (ETH), in Zurich. There are papers related to Tyrwhitt in the CIAM Archive and Jose Luis Sert Archive, Special Collections, Frances Loeb Library, Harvard Graduate School of Design, in Cambridge Massachusetts, at the Ford Foundation Archive in New York City, and the Constantinos A. Doxiadis Archive, Benaki Museum, Athens.