

Planning for healthy people/healthy places: lessons from mid-twentieth century global discourse

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(Received March 2007; final version received April 2008)

This paper aims to enrich the discourse about the reintegration of urban planning and public health. The community of planning practitioners and academics in the USA is a relative latecomer to the reintegration discussion, and is talking about it in a more constrained fashion than are counterparts in Canada and Europe – focusing on a narrowly framed research agenda about how characteristics of the built environment adversely impact human health, such as how sprawl and urban design influence physical activity and obesity. Moreover, those discussing the recently re-emerged connections, while noting the joint origins of the two fields in the late nineteenth century, miss the significance of a set of discourses involving planners, architects, urban designers and health specialists that occurred during the 1950s, 1960s and 1970s, which influenced the evolution of the reintegration efforts then underway, under the auspices of the United Nations (UN) generally and the World Health Organization in particular. We call particular attention to mid-twentieth century discussions, publications and programmes – notably the Harvard Urban Design Conferences, the Delos Symposia orchestrated by the Greek planner Constantinos Doxiadis and disseminated in the journal *Ekistics*, and efforts by the Ford Foundation, UN, and US government agencies – to deal with poverty, urban development and health. We illuminate their importance in shaping a holistic, ecological view of healthy urban planning in a global context.

Keywords: healthy cities; planning and health; Ekistics

Introduction

The aim of this paper is to enrich the discourse about the reintegration of the urban planning and public health fields. The community of planning practitioners and academics in the USA is a relative latecomer to the reintegration discussion, and is talking about it in a more constrained fashion than are counterparts in Canada and Europe. ‘To date the discourse of reconnecting the fields of planning and public health has been narrowly framed as a research agenda about how characteristics of the built environment adversely impact human health, such as how sprawl and urban design influence physical activity, obesity, and diabetes’, writes Jason Corburn. ‘[T]his framing has limited the purview of planners interested in reconnecting the fields and what books they might consider contributions to the new, healthy urban planning’.¹

Moreover, those discussing the recently re-emerged connections, while noting the joint origins of the two fields at the turn of the last century, miss the significance of a set of discourses involving planners, architects, urban designers, urbanists and health specialists that occurred

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throughout the twentieth century and which were influential in the evolution of the reintegration efforts currently underway, especially those under the auspices of the United Nations (UN) generally and the World Health Organization (WHO). We call particular attention to mid-twentieth century discussions, publications and programmes – notably the Harvard Urban Design Conferences, the Delos Symposia orchestrated by the Greek planner Constantinos Doxiadis and disseminated in the journal *Ekistics*, and efforts by the Ford Foundation, UN and US government agencies – to deal with poverty, urban development and health. We illuminate their importance in shaping a holistic, ecological view of healthy urban planning in a global context.

This ecological perspective – which recognized the dynamic inter-relationship between individuals and their social and physical environments – paved the way for the UN's series of Habitat conferences, beginning in 1972, which forged agreement on the concept of sustainable development, as well as for WHO to launch the international Healthy Cities programme in the late 1980s. WHO's Healthy Cities initiative offers a comprehensive paradigm for 'healthy urban planning', yet this approach has not been embraced by American foundations or federal agencies, whose support 'has tended to encourage a domestic planning and public health agenda focused on a limited set of hot-button issues and questions', or by the planning and public health professions.² We hope to encourage urban planning and public health practitioners, and those who support their work, to consider the continuing relevance of the mid-twentieth century discourse and its institutional expressions discussed ahead, and to broaden the scope of their efforts.

The genealogy of Healthy Cities concepts

Leonard Duhl – often called the 'father' of the Healthy Cities concept – and A. K. Sanchez acknowledge the roots of 'the modern day movement to promote health for all and sustainable development' in the work of the visionary utopian pioneers Patrick Geddes (1854–1932) and Lewis Mumford (1895–1990).³ Although Geddes died in 1932, his theories remained a vital ingredient in trans-Atlantic planning circles in the 1930s and inspired post-war reconstruction of blighted and bombed cities as well as the construction of new towns. This was largely thanks to the efforts of Jaqueline Tyrwhitt (1905–83), a British town planner, landscape architect and educator who developed applications of Geddes' ideas and edited new versions of his writings. As Lewis Mumford asserted in his 'Introduction' to Tyrwhitt's edited collection, *Geddes in India*, 'The tasks that [Geddes] undertook as a solitary thinker and planner have become the collective task of our generation. Over the terrain that he explored as a scout, a whole army is now moving into position'.⁴

Scientific Humanism provided the broader context for this progressive, pragmatic yet idealistic architectural and planning movement in a moment of optimism before the Cold War set in; it was 'a pervasive influence in all the professions [with the common ideal of a man-made future] during the post-war period For the aims of the Modernists were ultimately social, in the utilization of technology and mass production to deliver better housing, health care facilities, colleges, schools and universities for the masses'.⁵

It was in this spirit in his 1948 book *Mechanization Takes Command*, that Sigfried Giedion (1888–1968), the Swiss historian and General Secretary of *Congrès Internationaux d'Architecture Moderne* (CIAM), articulated the notion of 'man in equipoise' to guide the post-war development of the modern movement beyond functionalism to a 'new humanism':

To attain this equipoise, man must establish balance ... between the rights of the individual and the rights of the community ... between his methods of thinking and his methods of feeling; *between the different fields of knowledge* ... [and] between the human body and natural forces. *The human organism demands a balance between the organic environment and our man-made surroundings* It is time we became human again and let the human scale rule over all our ventures.⁶ [emphasis added]

Modernist prescriptions for healing afflicted city regions

CIAM president José Luis Sert (1901–82), who had arrived in New York as a refugee from Fascist Spain in 1939, stated his views on the direction for post-war modernism in 1942 in his book *Can Our Cities Survive?: An ABC of Urban Problems, Their Analysis, Their Solutions*. To signal continuity with pre-war trends, Sert began with a statement made by former CIAM president and Dutch planner, Cornel van Eesteren, to the Fifth CIAM Congress in 1937: ‘The sole object of our efforts is to develop architectural and town-planning methods that are appropriate to both the needs and the technical means of our day, so as to contribute toward giving men *healthier and happier surroundings*’⁷ [emphasis added].

Sert continues in the Geddesian tradition by calling for planning analysis and action on a regional scale: ‘The need for collaboration between the town planner and other technical specialists is evident [in regional planning] Sociologists, economists, hygienists, teachers, agriculturists, and others should coordinate their labors and share each other’s roles’. In cities, it is the role of the town planner to lead ‘a team of specialists’ in determining ‘the location of those “organs” which are the basic elements of urban life’.⁸

This collaborative approach, which builds on the nineteenth century sanitary movement, had emerged in the progressive reform era, and continued in the community health, community centre and garden city movements in the 1920s, notably as advocated by Geddes, as well as in the ‘healthful housing’ and New Deal community design initiatives of the 1930s.⁹ European social modernism provided models for these efforts.¹⁰ Notable experiments such as the Peckham Health Centre, which two doctors opened in London in 1935 as an experiment into the effect of the social and physical environment on health – ‘it was shown that participation in community endeavors, in a healthy environment, does improve individual and family health’¹¹ – continued to inspire British planners in the 1940s, even as the trend toward medical specialization and institutionalization of the welfare state contributed to its closing.¹² As Tyrwhitt advised planners in 1945 in a manual by members of the strongly Geddesian MARS group, the British section of CIAM:

The work of the Peckham Health Centre has shown that...health is not brought about by drugs, nor by vitamins, nor by developing the muscles of the body. It is the result of an active life in an environment rich in varied opportunities for mental and physical development and for free and friendly social intercourse. Healthy people do not want to be organized, but they do want opportunities to do things together.¹³

Sert and Tyrwhitt expanded on these themes in *CIAM Heart of the City: Towards the Humanism of Urban Life* – a collection they edited with Ernest Rogers, based on the proceedings of the eighth CIAM, organized by the MARS group in 1951. Shortly after Sert became dean of the Harvard Graduate School of Design (GSD) in the fall of 1953, he introduced the CIAM

discourse on ‘the need for the Core’ into Harvard’s architecture and planning programmes. Tyrwhitt was one of the first people he hired to join the faculty to help him.

Modernist prescriptions for rural reconstruction

Before assuming her new position at Harvard, however, Tyrwhitt went to New Delhi to direct the first UN Seminar on Housing and Community Planning, and create a concurrent exhibition on low-cost housing. She organized this exhibition around a Village Centre based on her Geddesian version of the CIAM ‘core’ – ‘an open space enclosed by community buildings’ and surrounded by experimental low-cost housing, ‘to show that the two are inseparable’. All of the buildings ‘could be built by self-help methods instigated by the Panchayat [village council] itself, or by a ... village cooperative’.¹⁴

Clearly inspired by Geddes’ work in India, Tyrwhitt¹⁵ described the healthful benefits of such village reconstruction: ‘The integration of mind and body, hands and the good earth is shown by the careful siting and design of a multiple purpose basic school building; a small health clinic planned in relation to environmental sanitation needs; a crafts center where production is centered on housing; and a seed store and manure producing plant, linked to the cultivation of a vegetable garden which, by being itself linked to the basic school, restarts the cycle of life’. In this work Tyrwhitt incorporated the radical quality of Geddes’ message, which aimed at promoting the movement championed by Tagore and Gandhi for a revival of the self-governing traditions of Indian villages,¹⁶ rather than adopting the approach of state guided national development as advocated by modernizers such as Nehru.¹⁷ Whereas Geddes’ proposals for India weren’t realized, Tyrwhitt hoped that implementation of his holistic vision for rural reconstruction would succeed under the auspices of the UN.

Tyrwhitt and Doxiadis

It was in New Delhi in 1954 that Tyrwhitt first met the Greek planner Constantinos Doxiadis (1913–75), who had recently established a successful international consulting practice. Soon afterward she agreed to produce a monthly newsletter for his staff, stationed throughout the Middle East, as well as UN planning experts in other developing countries. This newsletter, originally consisting of reprints of articles that Tyrwhitt came across at Harvard, grew in popularity and eventually became the journal *Ekistics* – Doxiadis’ name for a new science of human settlements.¹⁸ Tyrwhitt would be associated with *Ekistics* as editor, co-editor or consulting editor from the first issue in October 1955 until her death in 1983.

The timing of the launch of *Ekistics* was opportune. Assistance teams associated with UNESCO’s Aid programme (focused on educational and cultural exchange between East and West) that would soon become closely related to the UN Technical Assistance programme (focused on economic development) were learning, over the course of a decade, that their effectiveness required *a comprehensive approach to community development including participatory processes and appropriate technologies*. The moment of post-war optimism was brief. By the early 1950s, the development and aid programmes launched by the US government, the Ford Foundation, and the UN and its affiliated agencies were enmeshed in Cold War politics, one dimension of which was the imposition of approaches to national economic and political

development shaped by the structures of global capital. However, a participatory, community-based strategy endured as an alternative.¹⁹

While on the one hand, the work performed in the developing world by Doxiadis's consulting firm understandably reflected the nation-building agendas of its clients and theories of modernization in the early 1950s and 1960s,²⁰ the Delos symposia he hosted and the journal *Ekistics*, under Tyrwhitt's editorial leadership, featured a wide range of cultural and disciplinary perspectives, and thus fostered the dialogues among trans-national networks of progressive planners, designers, activists and social reformers concerned with urban and rural futures and the need to create a humane, healthy and sustainable environment.²¹ This contributed to the major change in prevailing conceptions of development (from state-led and focused on economic growth to community-based approaches concerned with improvements in the overall quality of life of poor populations) by the late 1960s.²²

Scientific humanism and urban design

At this same time, in her new position as Associate Professor of City Planning at Harvard, Tyrwhitt assisted Sert in launching the lecture series 'Ten Discussions on the Shape of Our Cities'. Later known as the Urban Design (UD) conferences, these lectures reframed the CIAM discourse on a 'new humanism' in the context of a critique of suburbanization, urban renewal and the redevelopment of American cities. The proceedings of the UD conferences reveal 'a determination to engage urban conditions, to affirm the interdisciplinary collaboration needed to do so, and to imagine a disciplinary vehicle with which to effectively proceed'.²³ One premise of the UD conferences was that 'basic human characteristics and qualities form the only real basis for urban design' and that 'a set of principles should be established based on these requirements that can be verified by biology', to be 'adjusted in scope and increased in number with development of physiological and psychological knowledge'. However another guiding belief was that 'enough was already known and provable to form the basis for an immediate, practical program of action, and that such a program could go a long way to translate the present chaotic urban environment into forms able to meet our changing social habits'.²⁴

Over a 15-year span (1956–1970), the UD conferences provided a forum in which architects, planners, landscape architects, developers, federal, state and local officials, social scientists, health professionals and journalists met to discuss a wide range of problems subsumed under a broad definition of healthy urban environments and possible solutions. Health concerns figured prominently, for example, at the 12th conference in June 1968, which focused on a high density, compact new city, the product of a year's work by an interdisciplinary team supported by a grant from the U.S. Department of Housing and Urban Development. Many of the people who participated in that conference also participated in similar discussions at the Delos Symposia between 1963 and 1972. These interlocking networks of people were working out solutions to a set of urban development problems in the global context in a variety of inter-related settings.

The scientific humanism of Rene Dubos and its influences

The publication in 1959 of *Mirage of Health: Utopias, Progress and Biological Change*, by the eminent microbiologist Rene Dubos (1901–1982), marked a significant development in

the convergence between ‘a long epidemiological tradition that examines the inter-relationships between disease agents, characteristics of the host, and the broader socio-cultural and environmental context’ and the holistic urban planning and design movement rooted in Geddes’ ideas. In *Mirage of Health* Dubos zeros in on the scientific, environmental and humanistic positions he first developed in 1952 in *The White Plague: Tuberculosis, Man and Society* ‘that were the mark of Dubos’ enormous influence on the thinking of the educated public, as well as on scientists ranging in expertise from biology to sociology’. David Mechanic explained: ‘In his conception a combined epidemiological/ecological approach was not simply a methodological improvement in the understanding of health, but the basis of a humanistic philosophy that could help preserve the best qualities of mankind through the awareness of the complex inter-relationship between populations and their environments He thereby anticipated by decades the current interest in the promotion of health and a safer environment by recommending a modification of how we live in and relate to the social world and to nature’.²⁵

In *Mirage of Health* Dubos explained themes he would elaborate over the next decade, and which would become a basis for the UN Habitat programme. He traced the history of philosophies of health in both Eastern and Western cultures, and patterns of disease, and showed that ‘the most effective techniques to avoid disease came out of social measures to correct the injustices and ugliness brought about by industrialization And the improvement clearly began long before the modern era in medicine was ushered in by the germ theory of disease’.²⁶ Many authors will later mine this material in framing calls for a reintegration of the fields of public health and planning.

An ecological perspective also reveals medicine as a *social science*. ‘For twenty five centuries Hippocrates has personified in the Western world [both] the practical approach of Asclepius [who treats disease], and the human traditions of Hygeia [who symbolized the belief that men could remain well if they lived according to reason]’. Dubos argued: ‘The philosophers of the Enlightenment and the practical sanitarians who followed them ... transfer[ed] the Hippocratic teachings from the individual to the social level. Out of this attitude arose the social reforms which contributed to the partial solution of the health problems in nineteenth-century Europe’.²⁷

The significance of the sanitary movement of the 1830’s for the history of mankind resides in the fact that it was the first conscious and organized effort not for the treatment of disease but for the creation of a healthier, happier world.

Dubos asserts:

Its leaders approached the problems of health with much practical skill, but it must never be forgotten that a philosophical and humanitarian doctrine was the inspiration of their practical genius. *A similar ideal might again inspire a new pioneering venture to attack the health problems of the present day. ... Knowledge and power may arise from dreams as well as from facts and logic.*²⁸ [emphasis added]

In her landmark 1961 book, *Death and Life of Great American Cities*, Jane Jacobs – who ‘electrified’ the audience at the first UD Conference²⁹ – appears to have been influenced by *Mirage of Health* (while not citing Dubos) in forming her ecological understanding of ‘the kind

of problem a city is'. Jacobs does, however, cite at length Warren Weaver's essay on science and complexity in the 1958 Annual Report of the Rockefeller Foundation (which supported her research), to explain the benefits of using biological metaphors and the need for new analytical techniques to deal with the 'organized complexity' of urban systems, which involve multiple variables 'interrelated into an organic whole'.³⁰

While Sert noted in 1957 "'organic growth" is an awful word that has so frequently been misused in recent years',³¹ Jacobs explained that the rapid advances in the life sciences had filtered 'into general knowledge; they have become part of the intellectual fund of our times. And so a growing number of people have begun, gradually, to think of cities as problems in organized complexity – organisms that are replete with unexamined, but obviously intricately interconnected, and surely understandable, relationships. This book is one manifestation of that idea'. Indeed, planners in Britain at the end of World War II had leaned heavily on ideas and images borrowed from medical science to shape their urban reconstruction plans, and similar notions were incorporated into policy and planning discourses about urban decline during the war and in the post-war USA. She also made clear, though: 'Because the life sciences and cities happen to pose the same *kinds* of problems does not mean they are the *same* problems'. The use of biological and medical metaphors to inform a wide range of approaches should not obscure the fact that there was a growing consensus around a positive concept of health and a necessary linkage between urban planning and social medicine.³²

Leonard Duhl, then a psychiatrist in the Office of Strategic Planning at the National Institute of Mental Health (NIMH) who had adopted the ecological, systems approach that had evolved since World War II, cites both *Mirage of Health* and similar passages from Weaver in his essay 'The Changing Face of Mental Health'. This essay was based on a paper presented at a conference in 1959 and included in his 1963 edited book, *The Urban Condition*. In his introduction to the book, Duhl states:

The problems of the urban environment cannot wholly be separated from a host of other critical issues of human welfare such as education, health, and personal security. This book treats these concerns as part of the larger problem of the expanding metropolis and of the development of an urban America The book adopts an ecological model of the disorganized complexity of the total urban environment.³³

The Urban Condition consists of papers originally presented at a conference in 1962, but Duhl explains that they also represent 'one culmination of the long-range program development concerns of the NIMH'. His own interest began in 1955, inspired by his colleague John Calhoun's concern with the impact of the physical environment on behaviour. Their work at NIMH led to the creation of a group drawn from many fields, including city planners, psychoanalysts, public health physicians, journalists, humanists, scientist, biologists and sociologists. 'They called themselves the "space cadets", because on the day Sputnik was launched, one of them said, "If people think the Russians are out in space, they should see us"'.³⁴ They 'became a community of scholars discussing mental health in relation to their own occupations and preoccupations and ... from the general social objectives such as justice, education and the general welfare'.³⁵ Among the participants were emerging and established leaders in the field of urban planning such as Herbert Gans, Catherine Bauer, Robert Gutman, Ian McHarg, Harvey Perloff, Eugene Rostow, Robert Weaver, Melvin Webber and Richard L. Meier. Many

of these people are attending the Harvard Urban Design Conferences, and will attend the Delos Symposia during the next 10 years.

The Ford Foundation and comprehensive community-based development

With the expansion of its resources and mission in 1950, the Ford Foundation now joined the academic and governmental efforts to pull together and support networks of people studying and devising solutions to the growing crisis in US cities. Paul Ylvisaker, who joined the Ford Foundation in 1955 as a young programme officer in the public affairs department, drew on Duhl's ideas and his work at NIMH to convince the Board of Directors to adopt a more activist approach and support what came to be known as the Gray Areas programme.³⁶

In the 1950s, the Ford Foundation funded a variety of innovative community development initiatives, including delinquency prevention and youth development; an urban extension demonstration project; and urban school reform. But to deal with the problems of Gray Areas (changing neighbourhoods on the edges of city centres, inhabited by low-income families, racial minorities and migrants from rural areas and other cities) and 'with forces and problems of such magnitude – migration, automation, racial tensions, relaxing moral standards, exploding populations, accelerating technological progress and obsolescence' – Ylvisaker and his colleagues 'thought it might be worth looking at the urban community ... as a *system*'. Since they recognized that the 'systems approach could easily be mechanistic', Ylvisaker wagered that 'the awakening of self-respect is the most powerful agent for renewing our cities'. Thus, the Gray Areas programme, launched in 1962 in four cities (Oakland, New Haven, Boston, and Philadelphia), centred on engaging local citizen participation in a comprehensive approach to neighbourhood revitalization. As he explained: 'Schools were central to the health, stability, and welfare of the Gray Areas But until educational planning was related to physical planning, physical planning tied in to social planning, and social planning translated into actions that made a discernable difference in the lives of Gray Area residents, no community could rightly say it was making the most of its resources or doing its civilizing best'.³⁷

The requirements for accomplishing the job to be done in the Gray Areas cities could serve as a prospectus for the WHO Healthy Cities programme as well, including the capacity to: see the community and its problems as a whole; set goals, fix priorities, develop new approaches, test them in action and evaluate performance against national rather than local standards; mobilize governmental as well as private resources; and involve centres of community power in order to break bottlenecks in education, employment, law, health and other fields. Some of the specific social innovations the Foundation encouraged through the Gray Areas programme were building schools to double as neighbourhood and social service centres, concentrating on literacy training for recent immigrants; relating (and even subordinating) physical to social planning; and pooling local philanthropic funds for common programmes.

The Gray Area experiment, which drew together public and private agencies and resources, presaged the Healthy City programme in another salient respect. Ylvisaker recalled: "'Coordination" was a tempting word to use as an objective, but we avoided it as far as possible. The objective was an integrating idea and common strategy, not a concentration of power that would freeze creative energy wherever it might be found in a community agency or individual'. And another important lesson learned by the Healthy Cities programme is that 'local

political leadership, in the form of the mayor ... counted heavily in getting these experiments going This commitment on the part of elected chief executives [was] a *sine qua non* for us in deciding where we would invest our support'.³⁸

The ideas of Ylvisaker, Duhl and their colleagues served as a template for Presidents Kennedy and Johnson's War on Poverty.³⁹ Duhl, in his new role as a Special Assistant to the Secretary of the new Department of Housing and Urban Development (HUD), helped adapt the Gray Areas programme into the design of the Model Cities programme (established by the Demonstration Cities and Metropolitan and Development Act of 1966).⁴⁰ MIT planning professor Bernard Frieden noted that: 'The Model Cities Program departs from earlier formulations of "fighting blight" or upgrading the physical environment of target areas. Instead the legislation stresses meeting the needs of people who live in slums, and interprets these needs broadly. It calls for a kind of planning that will cover social services as well as physical equipment, and that will pay attention to goals that have traditionally been separated from urban environmental programs: health care, education, job opportunities'.⁴¹

The participation of Daniel Patrick Moynihan, then Assistant Secretary of Labor, Mitchell Sviridoff, then director of a Gray Area programme in New Haven, and Paul Ylvisaker in the 9th UD conference in 1965 highlights the close interaction between the Ford Foundation, Federal agencies and Harvard University in the formulation of multi-disciplinary solutions to the 'urban crisis'. Through Duhl and others circulating in and out of positions at the Ford Foundation, federal agencies, Harvard and other universities receiving federal and foundation support, this 'community of interest' found an important node of interaction at the Delos symposia.

The Ford Foundation, the Delos Symposia and *Ekistics*

The Ford Foundation's US urban programmes strongly influenced its international urban interests, one manifestation of which was Foundation support for Doxiadis (which was contentious as Doxiadis had both supporters and critics in the Foundation, in the USA and abroad).⁴² The Foundation's funding, starting in 1963, allowed *Ekistics* to become a printed publication, and enabled Doxiadis to offer Tyrwhitt a full-time position. While teaching at Harvard, Tyrwhitt had become more involved in Doxiadis' organization, helping him in the summer to plan the first Delos Symposium, 'an informal gathering afloat of a small group of invited authorities from various disciplines, countries and cultures ... to discuss the issues associated with "the crisis in human settlements"'.⁴³ With Ford Foundation's support Doxiadis was able to convene the Delos Symposia annually over the next decade, constituting 'one of the most influential intellectual forums of its era'.⁴⁴ Regular participants constituted an elite of scientists, architects, planners, public officials and leaders from business and world affairs, including two Nobel laureates, Jonas Salk and C.H. Waddington, and such celebrities as Buckminster Fuller, Margaret Mead, Lady Jackson (Barbara Ward), Sir Robert Matthew, François Gigot, Charles Abrams and Lord Richard Llewelyn-Davies.

The participants at that first symposium – Duhl among them – signed the Declaration of Delos affirming: 'We are citizens of a worldwide city, threatened by its own torrential expansion and that at this level our concern and commitment is for man himself'.⁴⁵ Clearly, the Declaration of Delos One – which Tyrwhitt essentially wrote with Barbara Ward – endorsed the holistic, humanistic, communitarian ideal that underlies the thinking of Geddes, Mumford,

Dubos and Giedion, a signer: ‘The aim must be to produce settlements, which satisfy man not only as parent and worker but also as learner and artist and citizen. His active participation is essential in framing his own environment. ... Planning itself must ensure that such possibilities are not excluded by a static view of human settlements’.⁴⁶

The Declaration also called for *educational reform* – anticipating by four decades’ current similar efforts by the Robert Wood Johnson Foundation – explaining: ‘In the universities, the application of the basic sciences to human welfare has been fragmented. They have dealt with parts of man – his health, his nutrition, his education – not with the whole man, not with man in community. Thus, we [believe] ... that the institutions of higher learning ... [should]: establish ... a new discipline of human settlements; initiate basic research ... bring together specialists from other relevant disciplines to work together on projects in this field; work out new methods of training ... [leaders]; and attract some of the best young minds into this new area’.⁴⁷

Tyrwhitt gradually took on more responsibility for the Delos Symposia (she was the sole rapporteur) and *Ekistics*, which published the proceedings; in 1969, when she retired from Harvard she moved to Greece to assume these responsibilities full time. Thus, Tyrwhitt was instrumental in shaping a remarkable interdisciplinary and international discussion on growth and change in human settlements that led to a worldwide concern with sustainable development in the 1970s, and launched the healthy cities movement in the 1980s.⁴⁸

Duhl was an active voice in that conversation, attending in 1963, 1964, 1968 and 1972 (invited but unable to attend in 1965 and 1967), and a life-long member of the World Society of Ekistics (WSE). Rene Dubos, although invited often, participated only in 1972, yet his work exerted a strong influence on participants throughout the decade of symposia. The following selections from the Delos Symposia and special issues of *Ekistics*, interwoven with relevant publications by Dubos and others, illustrate an evolving understanding and growing consensus on the character of a healthy city and how to achieve it.

The Delos dialogue and related threads

At Delos Two in 1964, Charles Abrams, then Chairman of the Division of Urban Planning at Columbia University, made suggestions that anticipate current concerns: ‘We might plant more trees and create recreation that is accessible within each neighborhood, places where people can convene and rest and where children can play within easy distance of their homes. We might aim to enhance walk-ability as well as better transport. ... We might try to make cities more tolerable for the child’.⁴⁹

The publication in 1965 of Doxiadis’s article on ‘Ekistics and Public Health’, in the *International Journal of Health Education*,⁵⁰ coincided with the publication of Dubos’ book *Man Adapting* – based on his lectures on the occasion of the centennial of the Yale Medical School – which subsequently influenced Doxiadis’ thinking. Dubos acknowledges in the book’s introduction its close relation to the theme developed by one of the Delians (and his colleague at Rockefeller University), Professor Thomas Dobzhansky, ‘in his inspiring book *Mankind Evolving* (1962), which discusses the interplay between genetic factors and the environment’. In *Man Adapting* Dubos develops in greater detail the topics discussed in *Mirage of Health*, emphasizing that: ‘worldwide urban sprawl is creating a disease pattern of its own even in prosperous settlements’. And he goes on to articulate another contemporary issue: ‘The pathology

of urban and suburban life, of anti-physiological leisure in a mechanized, automated, and crowded environment, may be the twentieth-century counterpart of the tenement pathology that has prevailed in industrial countries until recent years Environmental pollution, chain smoking, dependence on drugs, overeating, underexercise, lack of social stability, and excessive mobility are but a few of the environmental factors of modern life that determine the pattern of disease wherever social success is identified with the present concept of high standards of living'.⁵¹

The message of *Man Adapting* goes beyond the need for new knowledge, calling for a new form of practice. 'The health field is no longer the monopoly of the medical profession; it requires the services of all sorts of other skills'. Dubos tells physicians: 'This collaboration will become increasingly urgent as the community demands that steps be taken, not only to treat its diseases, but also to protect its health Only through closer contacts between the medical professions on the one hand and all specialists concerned with the social order can we hope to govern our rapidly changing technological civilization in such a way as to provide better health and more desirable ways of life'.⁵²

Significantly, Dubos points to one avenue for collaboration with urban designers, noting: 'A few enlightened architects and city planners are emphasizing the need to reconsider the design of dwellings and urban developments, in order to make them better suited to the physiological and psychological requirements of human beings'.⁵³

Dubos (like Duhl) was invited to but unable to attend Delos Three in 1965, which focused on 'Problems of Living at High Densities'. But several leading thinkers that Dubos had cited in *Man Adapting* were among the participants including Dobzhansky, Giedion, Edward .T. Hall, Barbara Ward, R. Llewellyn-Davies, Margaret Mead, Harvey Perloff and Charles Haar, then a Professor at Harvard Law School who would soon become Assistant Secretary of HUD.

Delos Four, in 1966, focused on 'Nature and Human Settlements', and Delos Five in 1967, on 'Strategies for the Development of Human Settlements'.

Converging institutional interest in health and city planning

In Fall, 1968, Duhl joined the faculty of University of California, Berkeley, with a joint appointment in Public Health, and City and Regional Planning. Duhl's joint appointment signals the institutional recognition of the converging interests in those two fields. The convergence was facilitated by a 1965 White House Conference on Health convened by President Johnson to get leading experts thinking about bold ideas to address pressing health needs. Duhl pointed out at the conference, 'health care ought to be part of any community renewal program'.⁵⁴ Federal enactment of the Comprehensive Health Planning and Public Health Services Amendments of 1966 and the Demonstration Cities and Metropolitan Development Act of 1966 further facilitated convergence. The U.S Department of Health, Education and Welfare (HEW) funded a study by Delian William Nash, then at Harvard, and Bernard Frieden, at MIT, of 'Health Services Planning in Relation to Urban Planning'. This was an attempt to identify existing and potential benefits between urban planning and the planning of health services. Members of the research team reported their findings at the 1967 annual conference of the American Society of Planning Officials (ASPO), which was dedicated to 'Planning's Relation to Health and Health Facilities'. Doxiadis collaborated on the preparations. In his remarks at that conference, Michael Joroff, a member of the research team, noted

that this legislation ‘marks a major step forward by the federal government in its continuing effort to stimulate and aid the development of a formally organized process of social service planning on the state and metropolitan level to accompany ongoing physical planning efforts [and] the city planning profession has been evaluating both the broader implications of this new approach to meeting the nation’s health needs and its immediate implications for the profession’s own areas of responsibility’.⁵⁵

To frame discussion of opportunities for coordination made possible by the recent federal legislation, the U.S. Public Health Service had asked ASPO ‘to survey current health linkages in city and metropolitan planning and reach some conclusions about potentials for the future’. Harold Herman, Chief of Health Planning at the U.S. Public Health Service, reported that ‘Preliminary survey findings ... [indicate that] in the larger communities and more advanced planning agencies there is a considerable, if often informal, structural and procedural base for coordination ... [But] the interactions are sporadic and include minimal substantive involvement in health matters beyond infrequent meetings’. However, as a result of the new legislation, he explained: ‘Areawide facility planning ... will be integrated within a broader structure and scope of planning directed at defining present and emerging health needs and coordinating the disparate governmental and voluntary instruments, institutions, and organizations which share responsibility for our nation’s health’.⁵⁶

Joroff suggests ‘a significant but limited role’ in health planning for ‘city planners – whose primary qualification and responsibility is for the shaping of the physical structure and environment of the community’. As models worth emulating he noted ‘current planning activities for new town development in Reston, Virginia, and Columbia, Maryland, the work of several metropolitan planning organizations in estimating long-range land-use requirements for health facilities, and the experience of many communities in preparing the “social resources” component of community renewal programs ... [as well as] the present efforts of several cities, such as Boston and Philadelphia, which are working to provide comprehensive and coordinated programs of physical improvement and social service to residents affected by urban renewal’ – which notably resulted from Gray Areas programme investments in those cities.⁵⁷

However, ‘as much as the positive contribution of the city planning profession must be encouraged, the limits of the supporting role must be stressed with equal force’, Joroff cautioned. ‘[T]here have been many clear signs from health people that there is a line defining contribution and support, and that anything beyond is within the domain of health professionals alone Meaningful and effective health planning programs will emerge only when people with operating responsibility in the medical care and community health fields realize that such activity is a necessary and logical course of action’.⁵⁸

Bernard Frieden, in his article, ‘The Changing Prospects for Social Planning’, published that same year in the *AIP Journal*, envisioned the potential for broader collaboration, predicting: ‘If close relationships develop between urban planning and health services, special educational programs may be warranted to give planning students greater contact with advanced work in public health and medicine. Interdisciplinary academic work involving urban planning and health is a strong possibility within a few years’. Frieden added: ‘Planners with special expertise in the health field may make a different kind of contribution by taking part in research projects, and by translating health research findings into public programs. Environmental health is a high-priority area for joint research. ... It may be possible to establish linkages between health and various factors that can be improved consciously, such as living arrangements, sources of

stress, air pollution, and opportunities for recreation'. However, Frieden did point out another type of challenge: 'In planning to solve social problems, there is ... a danger of overlooking many possibilities for preventive action in areas that have not yet produced obvious problems. Perhaps the most significant opportunity of this kind lies in the new suburban communities that will be built during the next 50 years One [issue that can be anticipated] is whether the new residential areas we build will be segregated by class and income ...'.⁵⁹

Joroff's pessimism regarding conflicts between professionals who plan for the built environment and those who plan for health apparently became a preoccupation for city planners, or at least the ASPO membership, who selected the theme 'Competing Planning Systems: A Threat to City Planning' as the topic for their annual conference in 1968. However, in his paper, 'The Dimensions of Health Planning and Data Requirements to Accommodate Health Goals in Development and Implementation of Physical Planning', Dr. H.L. Blum, M.D., of the School of Public Health at UC Berkeley, echoed the view of his colleague Duhl as well as Dubos in his remarks: 'I see no threat of competition between the planning systems with which we are both concerned. Rather, by joining forces I see the way opening to a broad future for planning and planners of all systems in a truly comprehensive approach'. Yet Blum added:

'Public health' is best described as the aggregate of concerns for the health of the public and is in no way restricted to what health departments do. ... Our mutual and separate failures to associate socioeconomic status and health and our unwillingness to tangle with the physical, economic and cultural aspects of accessibility to traditional modes of health care have made the physical planners and the public healthers equally willing allies in leaving health out of general planning considerations With few exceptions, each professional, guided by the suitably illuminated tunnel vision of his own discipline, has independently sought for the silver bullet to fix some one of man's ills Now that we have discovered one another and our mutuality of concern, i.e., man and his well-being as the measure by which each of us can and must legitimately measure the success of his efforts, I do not see us in any competitive or antagonistic role. ... Common sense dictates that, since what we need to find out is what effects on man's well-being the interventions that either of us may concoct (or what new technologic breakthroughs) will have, we had best design a common, over-all scheme.⁶⁰

Other public health and urban planning professionals agreed with Blum. Donald Ardell noted in a 1969 *American Journal of Public Health* piece that public health and urban planning conventions increasingly offered workshops and special sessions about interdisciplinary collaboration, and that an American Institute of Planners committee on comprehensive health planning had recommended that planning for health facilities and services, and for factors that impact directly personal health, must become important inputs into urban planning processes.⁶¹

Dubos' call for renewed optimism

In the context of this debate over whether and how planners and health professionals might better coordinate their work, it is noteworthy that Dubos followed up his book aimed at medical scientists with *So Human An Animal*, which addressed those involved in designing the urban built environment. In this book he refers to the work of a host of planners, designers and critics – including Frank Lloyd Wright, Le Corbusier, Christopher Alexander, Philip Johnson, Jane Jacobs, Charles Abrams and Harvey Cox – in addition to his roster of continuing informants (Giedion, Mumford and Neutra). Dubos begins by stating: 'Since human beings are

as much the product of their total environment as of their genetic endowment, it is theoretically possible to improve the lot of man on earth by manipulating the environmental factors that shape his nature and condition his destiny. In the modern world, urbanization and technology are certainly among the most important of these factors and for this reason it is deplorable that so little is done to study their effects on human life'.⁶²

Perhaps more importantly in tailoring his message to speak to idealistic planners and designers, Dubos clarifies his own utopian realism: 'We can change our ways only if we adopt a new social ethic – almost a new social religion. Whatever form this religion takes, it will have to be based on harmony with nature as well as man, instead of the drive for mastery'. This perspective was essential to counter the new mood of doubt and anxiety that had replaced post-war optimism by the late 1960s. Dubos observed: 'Apprehension is most widespread and expresses itself most clearly with regard to nuclear warfare, threats to health, the rise of automation, and other ill-defined consequences of scientific technology', and noted: 'To discuss the effects of the city or suburban environment on human life is in practice tantamount to discussing the consequences likely to result from the transformation of the modern world by scientific technology'. And although he championed science, he acknowledged: 'The new pessimism derives in large part probably from the public's disenchantment at the realization that science cannot solve all human problems'. He concluded: 'Planning for the future demands an ecological attitude based on the assumption that man will continuously bring about evolutionary changes through the creative potentialities inherent in his biological nature'.⁶³

That same year also saw the publication of Doxiadis' book *Ekistics: An Introduction to the Science of Human Settlements*, which was informed by his years of practice experience as well as the discussions during the Delos Symposia. Doxiadis delineated the organizing principles of the science of Ekistics: 'Our dynamically growing settlements have problems of health; they are suffering because of their growth [W]e must start by defining normal conditions, those existing in a healthy settlement'. Significantly, Doxiadis turns to Dubos for a definition of health and concludes, 'that the health of settlements is determined by their ability to meet the requirements set by their inhabitants and the environment'.⁶⁴

It is ironic that in an editorial that summer, in the *American Journal of Public Health*, Philip Broughton, an adviser to the U.S. Public Health Service on urban and environmental health, compared the 'science' of Ekistics, as judged by the table of contents of its journal at least, favourably to the work produced by health sciences professionals who in his opinion 'have been far more concerned with the pathology of the environment than with the health criteria of environmental design prior to the point of decision'. Broughton offered his criticism in view of the recommendations of the Kerner Commission (National Advisory Commission on Civil Disorders) that included as an objective for national action: 'Removing the frustration of powerlessness among the disadvantaged by providing the means for them to deal with the problems that affect their own lives and by increasing the capacity of our public and private institutions to respond to these problems'. He argued that 'if environmental health is to become more fundamental, more comprehensive ... it must be preventive ... to move in and have impact *at the point of decision*'.⁶⁵

Lamenting that 'the health professions have not yet shown any strong capability for making an impact on environmental design' even though 'architects and planners have asked for a health input', Broughton speculates: 'Had schools of public health been more closely associated with schools of public and urban affairs; with schools of design and architecture

and planning; with schools of applied engineering and law – had they been less strongly oriented to the medical profession – might we have developed a more relevant pattern for the late twentieth century?’⁶⁶

Broughton presented his views in a paper, ‘Instruments of community policy for environmental design and control’, at the International Seminar of Ekistics held in conjunction with Delos Six in 1968, on Man and His Settlements. The linkage between city planning and public health was clearly a topic of discussion, as evidenced by this comment singled out for (unattributed) publication in *Ekistics* as representative of the discourse:

Planning for both the structure and function of cities has made it clear that there are several new professions and new opportunities for students. For instance there is a major role for the biologist and the physician to play in urban planning. They should both be part of the city planning staff. The whole question of planning for health cannot be overlooked.⁶⁷

Broughton commented on the interdisciplinary dialogue that Doxiadis had generated through the Delos symposia in his book review of *Ekistics: An Introduction to the Science of Human Settlements*, in the *American Journal of Public Health*, stating: ‘So far it has involved too few public health professionals; one hopes that it will involve more, for the author is asking the essential questions. This volume ... should be in every public health library and on the bookshelf of scholars and practitioners’.⁶⁸

At the same time, the voice of health professionals was featured more prominently within *Ekistics*. In March 1969, *Ekistics* published a Special Issue on Ecosystems that featured an article by Dubos, ‘The Crisis of Man in His Environment’, in which he countered the one-sided view that identified the phrase ‘human ecology’ with the ‘dangers that man faces in the modern world’. He reiterated: ‘In the long run, the most important aspect of human ecology is that all environmental factors exert a direct effect on the development of human characteristics, in health as well as in disease’.⁶⁹ In September 1970, *Ekistics* published a Special Issue on Anthropics: The Human Environment, in which, as Tyrwhitt noted in her Foreword: ‘almost half the authors were medical doctors, psychiatrists and psychologists; a quarter are physical planners, architects and engineers; and the remaining quarter are social scientists and anthropologists. All, however, write with an awareness of the many issues outside their own field of expertise’.⁷⁰

The UN and a world community of minds

While the small group of elites who gathered at the Delos Symposia were honing ecological insights, their influence was felt within the institutional framework provided by the UN, which supported the larger ‘world community of minds’ that was developing an ecological understanding of ‘break neck urbanization’ as a worldwide phenomenon stemming from similar causes and producing similar effects. (One indication of the larger recognition of this group is the fact that the CBS News series ‘Who What When Where Why’ featured the Delos Symposium in July 1969, in a show on ‘The Heritage of Apollo’ which aired in August of that year. Among the Delians interviewed were Margaret Mead, psychiatrist Thomas Lambo, Buckminster Fuller, and Doxiadis.) As the economist and Delian Barbara Ward stated in her 1969 report summing up the principle lessons of the cumulative experience of the UN, its consultants and agencies concerned with human settlements to date: ‘It is therefore ... better to look at the whole spectrum of city-making from the densest and the wealthiest down to the

most modest ... urban expansion rather than to isolate the urbanism of developing countries from the ... problems of developed areas. Once we recognize the interdependence of developed and developing parts of the world, Ward continued, we need to stop making sharp contrasts between decentralization and continued trends to centralization, and adopt a regional, ecological or environmental approach to urbanization as one key factor in the whole field of change brought about by scientific and technological modernization'.⁷¹

In 1971, Ward collaborated with Dubos in writing *Only One Earth: The Care and Maintenance of a Small Planet*, an unofficial report commissioned by the UN to provide a conceptual framework for participants in the 1972 Stockholm Conference on the Human Environment, as well as the general public. They concluded: 'The first step toward devising a strategy for planet Earth is for the nations to accept a collective responsibility for discovering more – much more – about the natural system and how it is affected by man's activities and vice versa. This implies ... an intensive world-wide network for the systematic exchange of knowledge'.⁷² The Stockholm Conference was the first time that attention was drawn to the need for international cooperation to solve environmental problems, without ignoring social, economic and developmental policy factors. That conference contributed to the establishment of the UN Environmental Program (UNEP), as well as a call for a larger conference on the subject. Canada hosted the first United Nations Conference on Human Settlements (Habitat I) in 1976 in Vancouver. Therefore, some argue that the Stockholm Conference marks the true origin of WHO's Healthy City project.⁷³

While Ward and Dubos are credited as the authors of *Only One Earth*, their text represents a synthesis of the advice of a large committee of scientific and intellectual leaders from various countries – including Doxiadis and many Delians – and in many ways represents the culmination of the nearly decade long international and interdisciplinary dialogue that took place during the Delos Symposia and was disseminated through *Ekistics*.⁷⁴ To celebrate this crucial linkage, in April 1972 *Ekistics* was a Special Issue on the Delos Symposia, summarizing the first nine meetings. Many of the articles, edited by Jaqueline Tyrwhitt and Gwen Bell, were later published in the book *Human Identity in the Urban Environment*.⁷⁵ And fittingly, Delos Ten, in 1972, in which both Ward and Dubos participated, was focused on Action for Human Settlements. 'I doubt whether human settlements would have been recognized as part of the human environment except for the Delos Symposia. If they had not been included in the Stockholm Conference agenda, the conference would not have been so effective', Barbara Ward – who had participated in Delos 1963–7, and 1971–2 – remarked. 'If we have this new instrument set up at the United Nations [a governing council for environmental programs], I believe it will be possible for the Delian dream to become a reality'.⁷⁶

In his address to Delos Ten, Dubos advocated a stance that later became popularized as the slogan to think globally act locally: 'The paradox inherent in the dual nature of man – namely the biological uniformity of mankind and the social diversity of human life – was at the heart of the questions discussed by the UN Conference on the Human Environment. A global approach is essential for dealing with the ecological and economic problems of the spaceship earth which affect all of us, but each human settlement has problems of its own which require local solutions'. He went on to posit: 'What made Stockholm immensely important was the creation of an awareness that it is necessary to create local ecologies which are compatible with each other, constituting sub-systems within the global ecosystem. This is likely to give a new orientation to ecological science'.⁷⁷

Thomas Lambo, who was Assistant Director-General of WHO (and who had also participated in Delos Seven in 1969), chaired the final session of Delos Ten. ‘Delos Ten represents the end of a chapter’, he observed in his concluding remarks: ‘The decade of Delos has revealed our deep concern and anxieties regarding the deteriorating situation of human settlements in the world’ today. The next decade ‘will demand disciplined action, dedication, selfless service, faith and commitment in order to achieve our objectives’.⁷⁸

During the next decade, the UN and its affiliated agencies, WHO in particular, would provide significant leadership and support for several inter-related lines of action to achieve the ‘healthy city’ envisioned by the Delians and other idealistic planners, designers and policy makers in the 1960s. WHO would be ready to run with the concept when Leonard Duhl reintroduced the idea of looking holistically at health and cities at a workshop in Toronto.

Concluding comments: the WHO Healthy Cities programme

The commonly known origin story of the Healthy Cities programme is that Leonard Duhl spoke about an ecological ‘healthy cities’ approach at a 1984 workshop – ‘Healthy Toronto 2000’ – organized by Trevor Hancock of Toronto’s Department of Public Health. Hancock recalled that Ilona Kickbusch, of the European office of WHO, saw the connection between this idea and the concept of health promotion then under development at WHO Europe, and asked Duhl and Hancock to prepare a white paper to help launch a WHO Europe Healthy Cities project.⁷⁹

Duhl and Hancock signal the link between their paper, ‘Promoting Health in the Urban Context’, and the Delos Symposia by their epigram, quoting the Oath of the Athenian City State. They echoed Delian themes in asserting ‘that the city is the vital centre of our industrialized civilization, that health is a result of the complex interactions of people with each other and their physical and social environments and that the city has a crucial role to play in the health and survival of humanity’. Further they reiterate the Delian warning that ‘the health, perhaps even the survival, of our species requires that our cities provide for us the opportunities and the environments necessary for us to grow and develop, to achieve our full potential in a mutually supportive and non-exploitative manner, without impairing the stability of the ecosystem upon which our health and survival ultimately rests’. In their review of ‘The Historical Context’ of the Healthy City idea, they borrow freely from Dubos and from Doxiadis as well as from Margaret Mead and Jane Jacobs.⁸⁰

The WHO Healthy Cities programme then intersected with a trajectory that began with the 1972 Stockholm Conference on the Human Environment, namely the European Sustainable Cities and Towns Campaign launched in 1994 to implement Agenda 21 – UN’s action programme for sustainable development that had been adopted at the UN’s 1992 Earth Summit in Rio de Janeiro. The centrepiece of the campaign was a five-network partnership, with the WHO Healthy Cities project as part of the steering group.⁸¹ Figure 1 illustrates the connections.

Histories of the Healthy City movement don’t acknowledge the robust dialogue that took place between the 1950s and the 1970s that created the intellectual foundation for the institution building that began in the early 1970s and blossomed into a worldwide movement by the late 1990s. This signified international institutional recognition of the Delian view that the concepts of health and sustainability are inextricably interconnected. The participants in the symposia, and in the Urban Design conferences shared a holistic and ecological agenda that embraced a

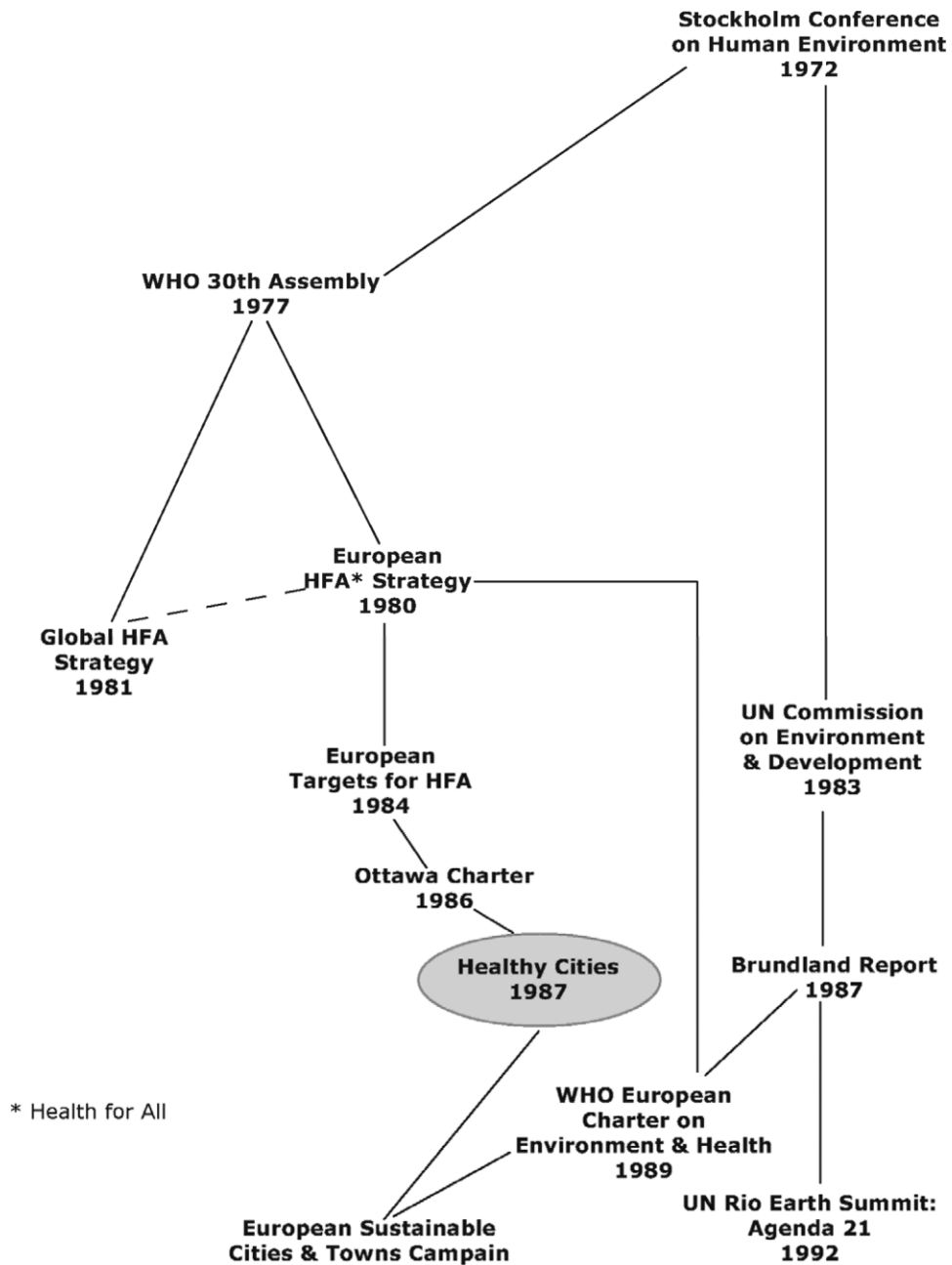


Figure 1. The first United Nations Conference on Human Settlements (Habitat I) in 1976 in Vancouver arguably marks the true origin of the WHO's Healthy City project. This chart illustrates that trajectory and subsequent developments.

wide range of interrelated social, economic, political and environmental dimensions. Discussion today both of the conceptual and practical opportunities for collaboration they explored then, as well as the limits, especially in the USA, of what they were able to accomplish, may help urban planners, designers and public health professionals to enhance their reintegration efforts.

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Notes

1. J. Corburn, 'Review Essay: Expanding the Agenda for Healthy Urban Planning', *Journal of the American Planning Association* 72, no. 1 (2006): 119–20.
2. *Ibid.*, 120.
3. L. Duhl and A.K. Sanchez, *Healthy Cities and the City Planning Process: A Background Document on Links Between Health and Urban Planning* (Copenhagen: WHO Regional Office for Europe, 1999), 4.
4. L. Mumford, 'Introduction', in *Patrick Geddes in India*, ed. J. Tyrwhitt (London: Lund Humphries, 1947), 4.
5. 'Explanatory Texts and Relevant Resources', (paper presented at the symposium on 'The Man-Made Future: Planning, Education and Design in the Mid-20th Century' Edinburgh, University of Edinburgh, September 5–7, 2003), <http://www.johnson-marshall.lib.ed.ac.uk/symposium/explanatory.html> (accessed November 2007).
6. S. Giedion, 'Man in Equipose', in *Human Identity in the Urban Environment*, ed. J. Tyrwhitt and G. Bell (Baltimore: Pelican Books, 1972), 225–6.
7. J.L. Sert, *Can Our Cities Survive?* (Cambridge: Harvard University Press, 1942), 1.
8. *Ibid.*, 222, 224.
9. American Public Health Association, Committee on the Hygiene of Housing, 'Basic Principles of Healthful Housing; Preliminary Report', *American Journal of Public Health* 28 (1938): 351–72.
10. D.T. Rodgers, *Atlantic Crossings* (Cambridge, MA: Harvard University Press, 1998).
11. L. Duhl and L. Elliot, 'Healthy Cities: Controlling the Costs of Health Care', *Health Care Analysis* 3 (1995): 332–4.
12. J. Lewis and B. Brookes, 'The Peckham Health Centre, "PEP", and The Concept of General Practice During the 1930s and 1940s', *Medical History* 27 (1983): 151–61; M. Hebbert, 'A City in Good Shape: Town planning and Public Health', *Town Planning Review* 70, no. 4 (1999): 433–53.
13. J. Tyrwhitt, 'Town Planning', in *Architect's Year Book*, ed. J. Drew (London, Paul Elek, 1945), 22.
14. J. Tyrwhitt, 'The Village Centre at the Exhibition on Low Cost Housing, Delhi, 1954', *Ekistics* 52, no. 314–315 (1985): 430–32, 489.
15. *Ibid.*
16. E. Shoshkes, 'Jaqueline Tyrwhitt: A Founding Mother of Modern Urban Design', *Planning Perspectives* 21 (2006): 179–97.
17. M.T. Berger, *The Battle for Asia: From Decolonization to Globalization* (London: Routledge, 2003).

18. J.G. Papaioannou, 'A Short History of *Ekistics*. Mary Jaqueline Tyrwhitt: In Memoriam', *Ekistics* 52, no. 314–315 (1985): 454.
19. A. Escobar, *Encountering Development* (Princeton: Princeton University Press, 1995); K. Orren and S. Skowronek, *The Search for American Political Development* (Cambridge: Cambridge University Press, 2004).
20. P. Panayioti, 'Hasan Fathy Revisited: Postwar Discourses on Science, Development, and Vernacular Architecture', *Journal of Architectural Education* 60, no. 3 (2007): 28–39.
21. E. Shoshkes, 'East-West: Interactions between the United States and Japan and their Effect on Utopian Realism', *Journal of Planning History* 3, no. 3 (2004): 215–40.
22. F.X. Sutton, *The Ford Foundation's Urban Programs Overseas: Changes and Continuities* (New York: Ford Foundation, 2000).
23. A. Krieger, 'Toward an Urbanistic Frame of Mind', *Harvard Design Magazine* 24, no. 3 (2006): 3.
24. Harvard University, *2nd Urban Design Conference: Statements for Discussion* (Cambridge, MA: Harvard University, Graduate School of Design, 1957), 3.
25. D. Mechanic, foreword to *The White Plague: Tuberculosis, Man and Society* (New Brunswick, NJ: Rutgers University Press, 1987), x.
26. R. Dubos, *Mirage of Health: Utopias, Progress and Biological Change* (New Brunswick, NJ: Rutgers University Press, 1959), 20.
27. *Ibid.*, 135, 144–6, 216.
28. *Ibid.*, 218–9.
29. J. Rossant, 'On The Revolutionary Brilliance of Jane Jacobs in 1956', *Harvard Design Magazine* 25 (2006/2007): 112.
30. J. Jacobs, *The Death and Life of Great American Cities* (New York: Random House, 1961), 429–33.
31. J.L. Sert, Introductory Remarks to the 2nd Urban Design Conference, Harvard University, April 12–13, 1957. Sert Collection, Series D093, Loeb Library, Harvard University.
32. Jacobs, *The Death and Life*, 438–9; R. Bartram and S. Shobrook, 'Body Beautiful: Medical Aesthetics and the Reconstruction of Urban Britain in the 1940s', *Landscape Research* 26, no. 2 (2001): 119–35; R. Beauregard, *Voices of Decline*. 2nd ed. (New York: Routledge, 2003); C.-E.A. Winslow, 'The Evolving Pattern of Tomorrow's Health', *American Journal of Public Health* 33 (1943): 1408–9.
33. L. Duhl, 'Introduction', in *The Urban Condition*, ed. L. Duhl (New York: Basic Books, 1963), vii–viii.
34. N. Lemann, 'The Unfinished War', *The Atlantic Online*, December 1998, www.TheAtlantic.com/politics/poverty/lemunfl.htm (accessed March 23, 2008).
35. Duhl, *The Urban Condition*, xii.
36. N. Lemann, 'The Unfinished War', *The Atlantic Monthly* 262 (1988): 37–56.
37. P. Ylvisaker, *Community Action: A Response to Some Unfinished Business* (New York: Ford Foundation, 1963), 2, 4, 10.
38. *Ibid.*, 10, 13–14.
39. C. Brauer, 'Kennedy, Johnson and the War on Poverty', *Journal of American History* 69, no. 1 (1982): 98–119.
40. Lemann, 'The Unfinished War'; J. Flower, 'Building Healthy Cities: A Conversation with Leonard J. Duhl, M.D.', *Healthcare Forum* 36, no. 3 (1993).
41. B. Frieden, 'The Changing Prospects for Social Planning', *American Institute of Planners Journal* 33, no. 5 (1967): 311–23.
42. Sutton, *The Ford*; L. Winnick, *Ford Foundation Urban History* (New York: Ford Foundation, 1989).
43. J.G. Papaioannou, A Short History.
44. R. Bromley, 'Doxiadis and the Ideal Dynapolis: The Limitations of Planned Axial Urban Growth', *Ekistics* 69, no. 415/416/417 (2002): 317–30.
45. Declaration of Delos, *Ekistics* 16, no. 95 (1963), unpaginated insert.
46. M. Chalabi, 'Recollections of Delos 1', Interview with E. Shoshkes, Hikone, 2005.
47. Declaration of Delos, *Ekistics* 16.
48. Shoshkes, 'Jaqueline Tyrwhitt: A Founding Mother of Modern Urban Design'.
49. C. Abrams, 'The Pedestrian-oriented Neighborhood', *Ekistics* 33, no. 197 (1972): 299.

50. C. Doxiadis, 'Ekistics and Public Health', *International Journal of Health Education* 8, no. 2 (1965): 60–5.
51. R. Dubos, *Man Adapting* (New Haven: Yale University Press, 1965), xviii, 252–3.
52. *Ibid.*, 404–5, 236–7.
53. *Ibid.*, 443.
54. 'White House Conference on Health: Summary Report', *Public Health Reports* 81, no. 2 (1966): 111–20.
55. M. Joroff, 'A Significant but Limited Role', in *Planning's Relation to Health and Health Facilities* (Chicago, IL: American Society of Planning Officials, 1967), 206.
56. H. Herman, 'Converging Interests in Health and Comprehensive Planning', in *Planning's Relation to Health and Health Facilities* (Chicago, IL: American Society of Planning Officials, 1967), 211, 213.
57. Joroff, 'A Significant but Limited Role', 207, 209.
58. *Ibid.*, 210.
59. Frieden, 'The Changing Prospects for Social Planning'.
60. H.L. Blum, 'The Dimensions of Health Planning and Data Requirements to Accommodate Health Goals in Development and Implementation of Physical Planning', *Competing Planning Systems: A Threat to City Planning?* (Chicago, IL: American Society of Planning Officials, 1968), 131–2.
61. D. Ardell, 'Urban Planning-Health Planning Interrelationships', *American Journal of Public Health* 59, no. 11 (1969): 2051–5.
62. R. Dubos, *So Human an Animal* (New York: Charles Scribner's Sons, 1968), xi.
63. *Ibid.*, 7, 10, 13, 56, 244.
64. C. Doxiadis, *Ekistics: An Introduction to the Science of Human Settlements* (New York: Oxford University Press, 1968), 265.
65. P. Broughton, 'Editorial', *American Journal of Public Health* 58, no. 8 (1968): 1317–9.
66. *Ibid.*
67. P. Broughton, 'On the Need for Changes in University Structures', *Ekistics* 26, no. 155 (1968): 364.
68. P. Broughton, 'Book Review. Ekistics: An Introduction to the Science of Human Settlements', *American Journal of Public Health* 59, no. 3 (1969): 569–70.
69. R. Dubos, 'The Crisis of Man in His Environment', *Ekistics* 27, no. 160 (1969): 151–4.
70. J. Tyrwhitt, 'Foreword', *Ekistics* 30, no. 178 (1970): 167.
71. B. Ward, 'The Processes of World Urbanization', in *Planning of Metropolitan Areas and New Towns* (D. o. E. a. S. Affairs) (New York: United Nations, 1969), 11–18.
72. B. Ward and R. Dubos, *Only One Earth: The Care and Maintenance of a Small Planet* (New York: W. W. Norton & Company, 1972), 213.
73. M. Dooris, 'Healthy Cities and Local Agenda 21. The UK Experience: Challenges for the New Millennium', *Health Promotion International* 14, no. 4 (1999): 365–75.
74. M. Mead, 'Habitat: Building a Global Constituency', *Habitat International* 3, no. 3/4 (1978): 283–6.
75. G. Bell and J. Tyrwhitt, eds., *Human Identity in the Urban Environment* (London: Penguin Books, 1972).
76. B. Ward, 'Exercising Stewardship over Global Resources', Barbara Ward statement, *Ekistics* 34, no. 203 (1972): 235.
77. R. Dubos, 'Exercising Stewardship over Global Resources', Rene Dobos statement, *Ekistics* 34, no. 203 (1972): 235.
78. T. Lambo, 'Epilogue to the Declaration of Delos 10', *Ekistics* 34, no. 203 (1972): 289.
79. T. Hancock, 'The Evolution, Impact and Significance of the Healthy Cities/Healthy Communities Movement', *Journal of Public Health Policy* (1993): 5–17.
80. L. Duhl and T. Hancock, *Promoting Health in the Urban Context* (Copenhagen: World Health Organization, European Regional Office, 1986).
81. M. Dooris, 'Healthy Cities and Local Agenda 21', 366.