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Blending globalism, long-term futures, and historical sensitivities: The audacity of Constantinos Doxiadis

Abstract

Constantinos Doxiadis devoted most of his life to urban and regional planning. His work was globalized, futuristic and extraordinarily ambitious, yet he was fascinated by local contexts, history, and ancient civilizations. The Doxiadis Associates, the Athens-based international consulting firm that he founded in the mid-1950's, completed projects in over 40 countries. His Ekistics movement had associates throughout the world and he attracted thousands of students and conference participants to Greece. After a four-year illness, he died a year before the first United Nations Habitat Conference, held in Vancouver in Summer 1976, yet he capped his prolific publication record with four books for presentation at the conference.

Keywords

Doxiadis — Ekistic — Futurism — Heritage

From the early 1950s till the mid-1970s, Constantinos A. Doxiadis (1913-1975) was an immensely prolific analyst, designer, and promoter of urban development. Doxiadis Associates, the firm that he founded and directed, was among the world's most active urban and regional planning consultancy enterprises its foundation late in 1953 to the mid-1970's. Headquartered in Athens and operating in over 40 countries, it designed some of the world's largest national housing programs, and a wide range of new city, urban expansion, and urban renewal projects¹.

Doxiadis established and promoted a “science of human settlements”, which he called “ekistics”, applying it to the entire world and to the past, present and future of human civilization.

Ekistics was, and continues to be, an interdisciplinary field embracing the social and environmental sciences. It emphasizes spatial, temporal, and graphic perspectives, linking history to planning and futurology, and using a broad range of maps, diagrams and photographs. Architecture was an important component of ekistics, but Doxiadis went far beyond its conventional disciplinary frame to incorporate the agendas of interior design, landscape architecture, civil engineering, regional science, human geography, and global studies.

So as to develop and promote ekistics, and in close association with his firm, Doxiadis established and directed the Athens Centre for Ekistics (A.C.E.), the Athens Technical Organization (A.T.O.), and the World Society for Ekistics (W.S.E.). The A.C.E. and A.T.O. were major academic enterprises which organized research, conferences, and training programs, and which published pamphlets, monographs, textbooks, and two journals, *DA Review* summarizing the output of Doxiadis Associates, and *Ekistics*,

a scholarly journal intended to further the science of human settlements throughout the world.

Doxiadis wrote or edited over 20 books and literally hundreds of articles and planning reports, and he organized 12 international conferences known as the Delos Symposia for many of the most creative intellectuals of the 1960s and early 1970s. As a combination of academic journal, field of expertise, and movement to generate policies on worldwide urban and regional development issues, *ekistics* was branded as interdisciplinary, policy-oriented and futuristic, with a special tie to the pioneering experience of Greek history, language and civilization. The term “*ekistics*” was just one of hundreds of examples of how Doxiadis deliberately used Greek language and examples, inserted into the English language, as a form of “branding” and intellectual identity. He and his close colleagues generally worked in English, the dominant global language, and they were willing to travel to and work in impoverished areas of the world that had few international visitors. They turned their Greek nationality into a competitive advantage by extolling Greek heritage, promoting the attractions of Greece to international tourism, inserting Greek terms like *metropolis* and *megapolis* into the international literature on urbanism, and using Greece’s relatively low wages and living costs to underbid rival firms from North America and Western Europe.

This paper summarizes Doxiadis’s career and rise to global prominence, and it speculates on why he is not very well known or widely discussed in contemporary architecture and planning circles. It evaluates the significance and lessons of Doxiadis’s contributions to planning, and it argues that he is worthy of considerably more attention from the architecture and planning professions than he is currently receiving. For reasons of space, and because numerous other publications discuss them, relatively little information is given here on his theoretical frameworks and specific planning projects. Most importantly though, readers are referred to his *magnum opus* (1968) *Ekistics: An introduction to the science of human settlements*, to the excellent major synthesis of his life and publications compiled by Alexandros-Andreas Kyrtis (2006), and to an article summarizing his ideas (Bromley 2003).

Life History

Constantinos Doxiadis was born in 1913 in a predominantly Greek area of what is now Bulgaria. His father was a pediatrician who moved his family to Athens and for a time served as Greece’s Minister for the Resettlement of Refugees, Social Welfare and Health. Doxiadis got his first degree in Architectural Engineering from the Technical University of Athens in 1935, and then he travelled to Germany for two years to complete a Doctorate in Architecture and Planning at the Berlin Charlottensburg University, writing his dissertation on the urban design of Ancient Greek ceremonial centers. While in Germany he was influenced by the work of Gottfried Feder on new towns and settlement strategies, by the work of Walter Christaller on central place systems and regional spatial organization, and by the work of Ernst Neufert on the standardization and mass production of buildings. Returning to Greece he worked as Chief Town Planning Officer of Greater Athens, and then as Head of Regional and Town Planning in the Ministry of Public Works.

His professional development was rudely interrupted by the Second World War, and he served as a Corporal in the Greek Army, and then as Chief of a

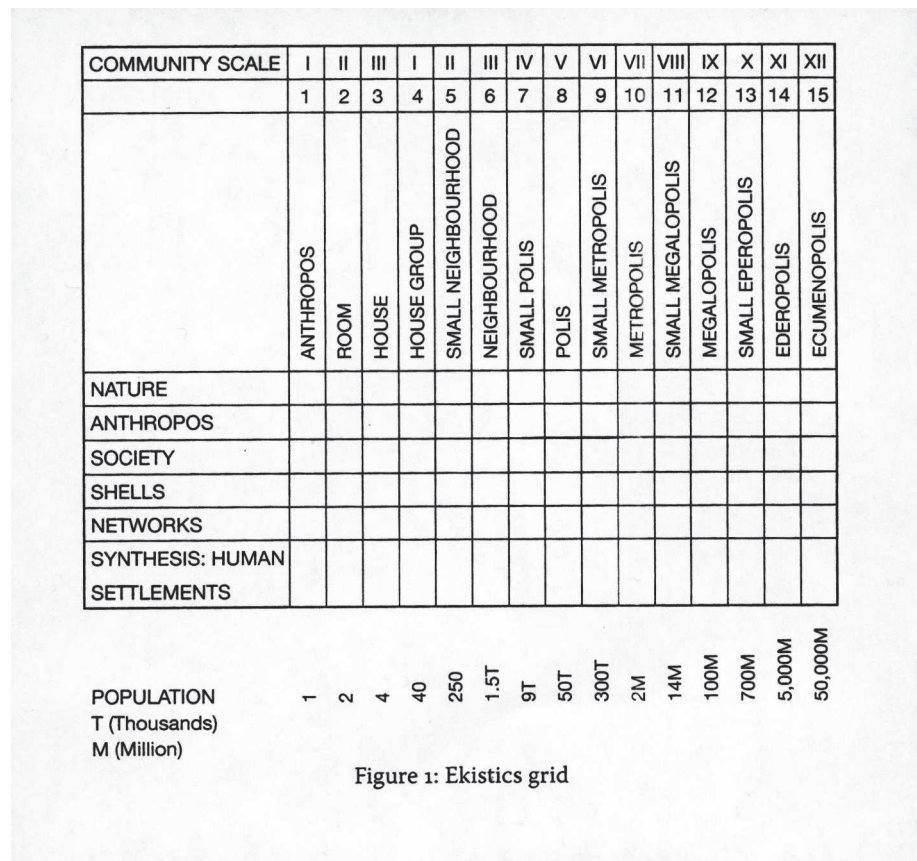


Fig. 1
Ekistics grid

National Resistance Group against the Greek Occupation. He successfully directed sabotage operations against German military supply lines, and after the end of the war he held various leading positions in the post-war reconstruction of Greece. In that reconstruction effort, he worked closely with the American administrators and technical specialists of the Marshall Plan, and he was renowned for his ability to speak English, guide and host international visitors, and promote interest in Greece's heritage and built environment. For over five years he was the central figure in coordinating reconstruction efforts and attracting international funding, but in 1950 he fell afoul of Greece's factional conflicts and was pushed out of the Greek Government.

Seeking a new start far from the tensions, rivalries, and conflicts of Athens, Doxiadis travelled with his family to settle in Australia. There he encountered problems with the recognition of his professional degrees, and though he embarked on several architectural and planning projects, his main source of income was as a horticulturalist growing tomatoes. After two years in Australia and frustrated by his failure to develop a professional career there, he and his family returned to Athens where he established a consultancy firm, Doxiadis Associates, late in 1953.

He quickly built an international network of contacts and friends who helped his firm obtain contracts. Some of the projects were in Greece, but most were in the Middle East, Pakistan and Africa, areas where North American and Western European consultants were reluctant to work, and where Doxiadis Associates could easily underbid the competition. He received substantial help from the Ford Foundation in establishing a Research Center and Training Academy in Athens, and from his old network of Marshall Plan friends in rapidly building his consultancy firm. With the firm prospering, he spent a great deal of time in the 1960s networking with leading scholars and public intellectuals around the world and lobbying

for increased global attention to the problems posed by rapid population growth and urbanization.

From the mid-1950's to the early 1970's, Doxiadis's career was characterized by extraordinary success, with a unique blend of professional and academic activity, and a rapidly-growing body of associates and followers. Global interest and concern for urban development issues was rising rapidly, and the professional, social and intellectual networks associated with ekistics played a significant role. Perhaps more than any other scholar-practitioner, Doxiadis helped to promote the term and concept of "human settlements," embracing all sizes and types of places, nucleated and dispersed, urban and rural. Building on his fascination with typologies, spatio-temporal relations, and developmental processes, he analyzed human settlements in terms of five 'elements' and a 15-level nested hierarchy of 'ekistic units'. The elements were *anthropos* (people as individuals), nature, society, shells (buildings), and networks (roads, utilities, transportation, communications and administrative boundaries). The ekistic units were: man (*anthropos*), room, dwelling, dwelling group, small neighborhood, neighborhood, small town, town, large city, metropolis, conurbation, megalopolis, urban region (small *eperopolis*), urban continent (*eperopolis*), and '*ecumenopolis*' – the inevitable interconnected world urban system of the future. He saw the elements and lower eleven ekistic units as easily definable and fully functioning, while the top four ekistic units were still in process of formation.

The United Nations Conference on the Environment held in Stockholm in 1972 led to the commitment to hold another U.N. Conference, this time on "human settlements," in Vancouver in Summer 1976. With enthusiastic support from the Government of Canada, this first "Habitat" Conference was the largest of all the U.N. conference held up till then, with 132 national governments represented, 3,400 delegates, 1,600 media representatives, and at least 7,000 participants in the parallel "Habitat Forum", a conference of Non-Governmental Organizations. In many senses, the ekistics movement provided an ideal framework for Habitat because its theories and terminology embraces all levels of urbanization, past, present and future, and could be applied to the entire world, ranging from heavily urbanized and moderately prosperous world regions to predominantly rural and relatively impoverished ones.

Tragically for the ekistics movement, however, by the time Habitat was announced, Doxiadis had been diagnosed with a terminal illness, Motor Neuron Disease (ALS/MND, Lou Gehrig's Disease), and the intensely personal nature of his leadership rapidly transitioned from key feature to major liability of Doxiadis Associates, the A.C.E., the A.T.O. and the entire ekistics movement. He devoted much of the final years of his life to developing publications and scholarly networks for the forthcoming United Nations Habitat Conference to be held in Vancouver, including four books, *Anthropopolis* (1974), *Ecumenopolis* (Doxiadis and Papaioannou (1974), *Building Entopia* (1975), and *Action for Human Settlements* (1976), all published in the two years leading up to the conference. Sadly, however, Doxiadis died a year before the conference and well before the last of the four books came out, and none of these books attracted the attention that was given to such slim conference-focused classics as John Turner's (1976) *Housing by People* or Lauchlin Currie's (1976) *Taming the Megalopolis*.

Doxiadis's years of illness, his determination to present so much to the Habitat Conference, and his premature death left Doxiadis Associates, the A.T.O., the A.C.E. and his personal legacy in a chaotic situation with serious financial and organizational problems and with inadequate leadership. He had not named and groomed successors, there was no-one who could replace his extraordinary vision and charisma, and the range and variety of Doxiadis-related activities diminished very rapidly in the 1970's. The W.S.E. and the *Ekistics* journal continued with diminished participation and frequency, and the journal has recently been revived online as *Ekistics and the New Habitat*. The Doxiadis Associates consulting firm was sold soon after his death and has changed hands several times since then, existing in name but on a reduced scale and with little relation to his legacy. Meanwhile, the training and research activities associated with the A.T.O. and A.C.E. downsized during his illness and disappeared after his death.

Ekistics as Intellectual Legacy

From its beginnings in the 1950's, ekistics was branded as "the science of human settlements" an architecture and design-based parallel to Walter Isard's economics-based *Regional Science*. Both "interdisciplinary fields" focused primarily on human activity at the regional scale, drawing on micro-behavioral principles and macro-global forces to contextualize their regional visions. Both relied heavily on the leadership and writings of the founder of the field, and both grew to become impressive global interdisciplinary and quasi-disciplinary movements. Nevertheless, both ekistics and regional science have declined substantially since the death of their founder, Doxiadis in 1975 at the young age of 62, and Isard in 2010 at the advanced age of 91. Isard's legacy is more persistent, perhaps because he lived much longer and was based in the United States, a country with a much stronger economy and global intellectual impact than Greece. Nevertheless, both movements have failed to develop strong intellectual leadership and continuing momentum since the passing of their founder.

Compared with Isard, and with almost all the scholars and intellectuals of his era, Doxiadis had extraordinary breadth in terms of space and time, stretching his forecasts and recommendations far into the future, and placing heavy emphasis on graphic illustrations and visions. His classic text, *Ekistics: An Introduction to the Science of Human Settlements*, had xxix + 527 pages of text and illustrations, including 479 maps, diagrams and photographs. He spread his illustrations across the entire spectrum of scales, from the individual person to the entire world, but he concentrated most at the intermediate levels, from the small town to *megalopolis*, the giant urbanized conurbations that characterize such areas as the north-east of the United States, the London-Ruhr-Paris triangle in western Europe, and coastal and near-coastal conurbations of north, central and southern China focused around Beijing, Shanghai and Guangzhou. Doxiadis's illustrations reflect the passion of many architects for graphics, but the focus is overwhelmingly urbanism and planning, portraying townscapes and land-use maps, rather than individual buildings.

As his reputation, firm and social networks grew in the 1960's, Doxiadis certainly relished his growing celebrity. Writers described him as "the greatest planner" (Rand 1963), a "master builder for free men" (Deane 1965) and the "remodeler of the world" (Lurie 1966). He wasn't tied or limited to any one academic discipline, and at the Delos Symposia he deliberately invited and hosted leading exponents of many different and con-

trasting disciplines, calling upon all of them to share their insights. Participants included such famous intellectuals and visionaries as Margaret Mead, Herman Kahn, Marshall McLuhan, Buckminster Fuller and Barbara Ward.

Whenever he didn't have an answer to a question, Doxiadis would call on the pertinent disciplinary specialist: economists to solve economic problems, public administrators to solve administrative problems, and so on. He assumed that all perspectives and policies could be unified behind a single long-term vision of global trends and desired futures, a vision that was overwhelmingly his vision. Such consensus was feasible when hosting up to 30 leading intellectuals and their partners on a cruise around the Aegean Sea, visiting beautiful islands and engaging in prolonged face-to-face conversations, but it could not survive broader, longer-term international scrutiny. On just one statistic, for example, Doxiadis variously projected the world's human population to rise to 15 billion, 20 billion, and even 50 billion, numbers that are surreal in our current world of pandemic disease, environmental contamination, loss of biodiversity, and accelerating climate change. Similarly, in the 1960's and early 1970's, Doxiadis assumed that national identities and political and religious differences would decline across the globe, so that conflicts would gradually fade away, facilitating a gradual shift towards world peace and global government.

As a proponent of continuing world population growth and urbanization, Doxiadis had a unique perspective, favoring low-rise grid-planned linear cities concentrating urbanization in interlocking strips of urban development with major "utilidors" - corridors that could carry all the utilities and rapid transit necessary as population and economies grew and were transformed by new technologies. Beside the utilidors, large populations could be accommodated in medium-density walkable, low-rise neighborhoods, with the utilidors gradually being extended and new neighborhoods added along the urban axes as overall population rose. His term for a continuously expanding linear city was *Dynapolis*, and he envisioned various dynapolises eventually meeting and forming *ecumenopolis*, a giant global network of urban corridors, enclosing open areas of farmland, parkland or wilderness inbetween their axes.

While urbanization would be focused axially in the dynapolises, Doxiadis envisioned that agriculture would intensify and become more technical and mechanized in some of the most fertile areas so that it could support the growing world population while requiring less than 20 per cent of the total global land area and only 2 or 3 percent of the total labor force. Even bearing in mind the needs for mining, fishing, pastoralism, environmental tourism and the growing dynapolises, this would mean that about half of the global land area could stay with, or revert to, its natural vegetation and ecosystems. The world society and economy would function as a single global city, *ecumenopolis*, seamlessly interconnected by ultra-rapid transportation and systems of communication.

Doxiadis's overall urban vision focused on a broad and growing middle class, with no special provision or construction for elites, and with the gradual disappearance of poverty. What was crucial, of course, was good design of cost-effective housing, schools, retail facilities and other amenities that could be replicated thousands of times – the opposite of what "starchitects" might envision with their focus on spectacular and unique buildings, record-breaking heights, grandiose shapes and sizes, and wealthy clients.

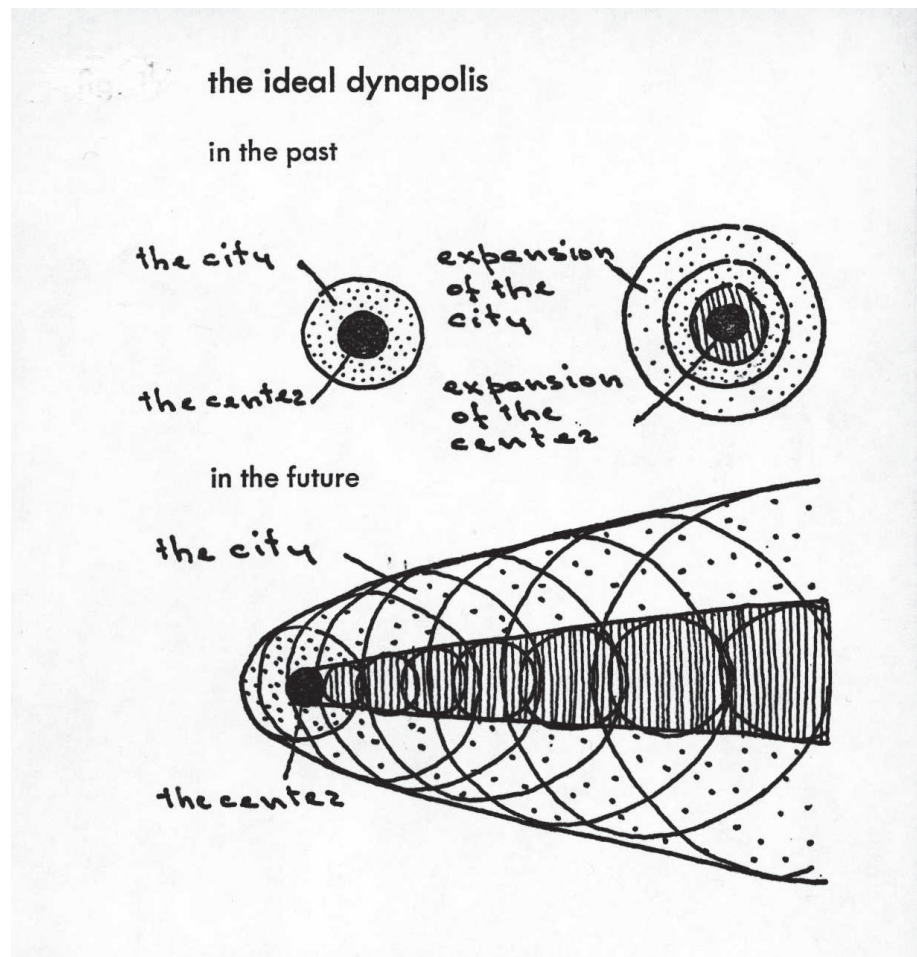


Fig. 2
The Ideal Dynapolis

Doxiadis Associates designed millions of houses for Islamabad, Karachi, the Sadr City sector of Baghdad, the mining towns of Zambia, the port city of Tema in Ghana, and numerous other areas in the Middle East and Africa. Hundreds of thousands of these houses were actually built, yet the significance of this housing is rarely acknowledged today because it is located in such non-touristic locations. Even when his housing projects are located in rich, “developed” countries, like Eastwick in Philadelphia, Park Town in Cincinnati, or Aspra Spitia in Greece, they were designed for working class families and attract little attention from architectural connoisseurs. Two exceptions that could appeal to those connoisseurs are the Apollonion in Porto Rafti near Athens, an idyllic ensemble of second homes for rich Athenians that was originally intended to be a community of artists and intellectuals, and the New Axum Cathedral of Our Lady Mary of Zion in the Tigray Region of Ethiopia, which tragically is now in the midst of a Civil War!

As a Greek citizen and a global practitioner, Doxiadis was outside the mainstream of Anglo-American academia and publishing. Awareness of his scholarship and planning practice were widespread across a broad range of countries and disciplines, but the sheer breadth and reach of his work over little more than two decades meant that few beyond the readers of *Ekistics*, the members of the W.S.E., and the international students who had studied at the A.C.E. and A.T.O. felt a close association with his work. After his death, lengthy tributes were published in *Ekistics*² and the *D.A. Review*³, but most journals in the many disciplines that his work touched on published very short obituaries or no acknowledgement at all. He received little recognition as an urban planner, architect or civil engineer,

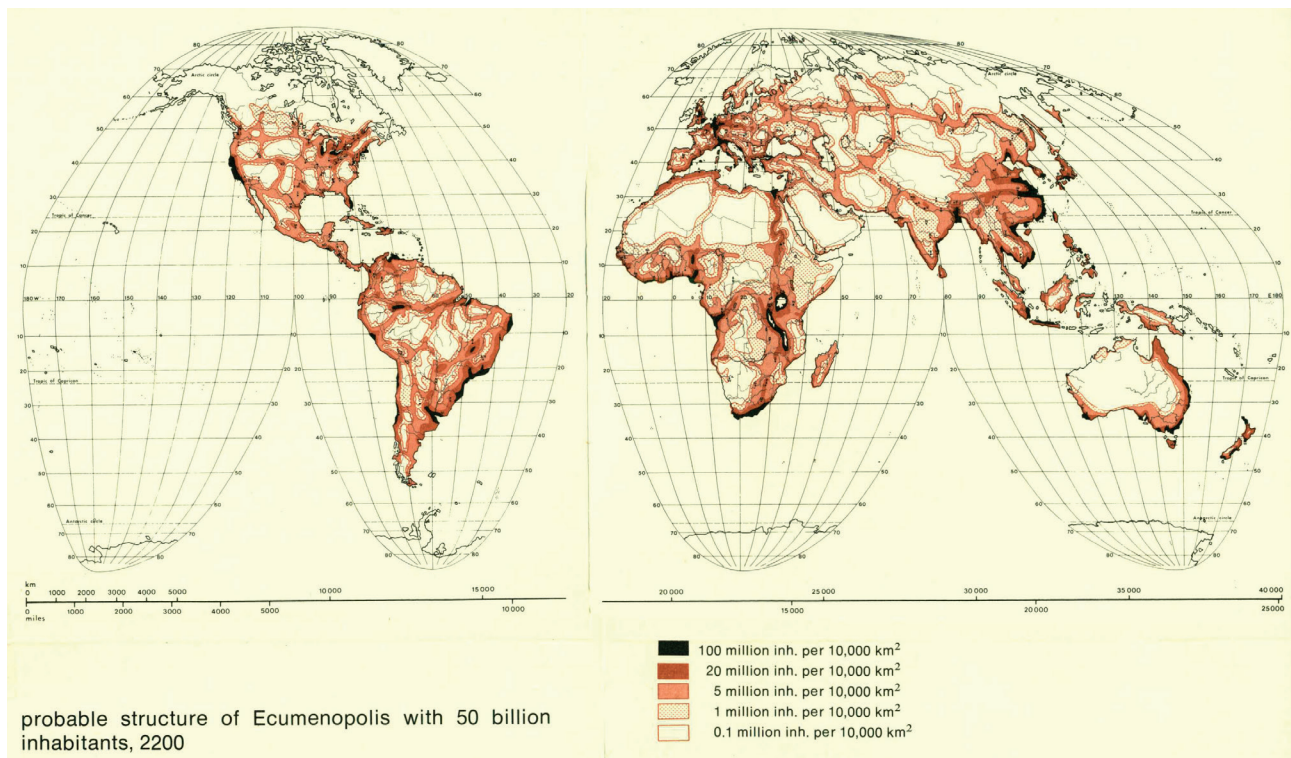


Fig. 3
Probable structure of Ecumenopolis

even though his firm employed many with those backgrounds. Among the social and environmental sciences, coverage was miniscule with the sole exception of geography, a bridging discipline with substantial readership of *Ekistics*.

The most notable characteristic of Doxiadis's scholarship was his extraordinary coverage of space and time, ranging from individuals (*anthropos*) to the entire world (*ecumenopolis*), and from ancient history to 200 years out into the future. This carried his scholarship way beyond the norms of all the associated disciplines and bestowed a very special character on *ekistics*, bridging across to archaeology, history and futurology. Long-term forecasting is inherently speculative, and no-one is likely to be alive to see whether their forecasts running more than 80 years into the future are actually correct, but there are still strong arguments that governments and intellectuals should make the effort to examine long-term trends and options, to accentuate positive trends, and to suppress negative ones. Doxiadis was one of the most ambitious and visionary thinkers of his generation, and his spatial and temporal perspectives extended way beyond those normally considered by architects, planners or engineers. Though architecture rewards the imagination of a few of its most distinguished practitioners, planning and engineering tend to focus on 5 to 50-year time horizons and on projects with low levels of risk and uncertainty. The conservatism of all three disciplines is quite notable, contrasting dramatically with Doxiadis's grandiose imagination. Indeed, in many parts of the world over the last 50-75 years, planning has pulled back from "national planning" efforts like those in the aftermath of the Great Depression, during World War II, and during the Third World "Development Decades" after World War II and has reduced itself to local land-use and transportation issues. So, the contrast with Doxiadis's perspectives has grown through time, signaling that it is better to make no forecast or long-term projection than to espouse an erroneous forecast or projection. In architecture, planning and civil engineering, it may well be that there are less visionary thinkers now than

there were 50-70 years ago when Doxiadis was at the peak of his career! Not surprisingly, the greatest problem of long-term forecasting is predicting the development of new technologies, and this is especially evident in discussing the development of *ecumenopolis*, Doxiadis's inevitable global city of the future, with almost all the world population tied into a seamlessly interconnected urban system. He imagined much greater advances in physical transportation technologies than have actually been achieved, and he failed to foresee the internet, but the internet has given humanity a taste of what *ecumenopolis* can be like. It is now possible to hold a globalized committee meeting with everyone appearing on each other's screens and hearing each other's voices, and to offer simultaneous translation into a variety of different languages. Such technologies have become cheap and widespread, though there is little sign that Doxiadis's prediction that national governments would gradually remove obstacles to global interactions is actually coming true. Almost half a century after Doxiadis's death, the global mosaic of national, ethnic, religious, cultural, ideological, gender and other forms of identity seems as complex and tangled as it has ever been. Cynicism, rather than idealism, about the roles and powers of international organizations is widespread, and there is no sign that any sort of world government is on the horizon.

Why should Doxiadis matter to today's architects and planners?

Doxiadis performed an important role by expanding spatial and temporal horizons, making audacious forecasts – some proving correct others false –, and projecting current trends a century or more into the future. He stimulated many others to envision, project and debate, and to consider longer-term trends and futures. With hindsight it is obvious that he failed to adequately understand the complexity and diversity of local societies and cultures, and the complexity and fragility of the natural environment. “The great negatives” such as pandemics, human-generated climate change, nuclear wars and international terrorism were largely absent from his futuristic scenarios. He shared the widespread modernist vision of the Post World War II Era that socio-cultural and ideological barriers would gradually disappear in the transition to a globalized society and political system. He foresaw a more peaceful and egalitarian world with population growth and urbanization accompanying the elimination of mass poverty. Much of this was “wishful thinking”, but it was still valuable to stimulate others to think and to encourage debates on vital public policy issues.

When we narrow the discussion of Doxiadis's ideas to those relating to the expansion and redevelopment of urban areas, his perspectives are equally valuable to stimulate debate, yet just as ignored by mainstream thinkers. Doxiadis was a modernist who also believed in historic preservation. He advocated relatively high-density low-rise linear urban development with neighborhood units, superblocks, and wide corridors reserved for utilities and high-speed transport. His cities were intended to be walkable and well-served by mass transit, built “on a human scale,” and yet infinitely expandable by adding new neighborhood units along the linear axis. He demonstrated this approach very effectively in the plan and early development of the city of Islamabad, and it can be applied to the development of new cities on greenfield sites. In the expansion of existing cities, however, it would require draconian controls imposed by government on landowners, forcing all new urban development to take place in one portion of the urban periphery.

Doxiadis's axial model of urban development is very favorable to historic preservation because it relieves pressure on most of the historic city by channeling growth to one sector of the urban periphery and to areas beyond that sector. It also favors mass transit, with most people living along the growth corridor and close to public transport offering access to all major destinations in the urban area. The model would work well in authoritarian political systems, or where land nationalization has been achieved, but not in typical western market economies or in countries where squatting and illegal subdivision are major means of urban expansion. By imposing strict governmental controls on urban development, it suppresses land speculation, severely constrains land markets, and facilitates long-term urban planning and the development of necessary infrastructure. Even though such measures may be politically impossible, just raising them promotes discussion and may stimulate innovation. Thus, Doxiadis's ideas are important to broaden horizons and ensure that no single perspective dominates policy-making.

Doxiadis is both an inspiration and a warning – a tremendously ambitious, optimistic and energetic figure who sought to transform global futures, and a highly flawed character who exaggerated almost every virtue into a vice, did too much, tried too hard, and ended in relative oblivion rather than eulogy or vilification. His life and work evoke comparisons with those of Daedalus and his son Icarus, mortals in ancient Greek legend. Daedalus designed the labyrinth of Knossos to contain the man-eating monster, the Minotaur, which terrorized the ancient Minoan Kingdom of Minos, the first great international trading community of the Mediterranean. When threatened, Daedalus designed wings so that he and Icarus could escape, but Icarus tried too hard and enjoyed flight too much. He flew too close to the sun, his wings melted, and he crashed to his death.

Doxiadis tried to contain a monster – a global *dystopia* which was based on population growth, growing socio-economic inequalities, rapid uncontrolled urbanization, voracious nationalism, environmental destruction, and the exploitative heritage of imperialism and colonialism.

He designed a strategy for deliberate urbanization, claiming that it would create a global *entopia* – excellent real cities which could facilitate economic, technological and social development while preserving the environment. He created a grand vision and an international network, but his vision was flawed and rapidly faded to obscurity after his death. Nevertheless, he deserves great credit for stimulating creative thinking and debate, and current generations can learn both from his failed predictions and from his more successful visions.

Notes

¹ An incomplete but valuable list of Doxiadis Associates Projects is provided at doxiadis.org/Downloads/major_projects_N.pdf.

² *Ekistics*, v. 41, no. 247, June 1976.

³ *Doxiadis Associates Review*, v. 12, no. 97, July 1976.