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REBUILDING THE FUTURE:
C. A. DOXIADIS AND THE GREEK RECONSTRUCTION EFFORT (1945-1950)*

Andreas Kakridis

ABSTRACT: The importance of ideas – and the individuals propagating them – is enhanced at times of crisis. When existing arrangements are challenged, new ideas help reconfigure group interests and alliances, forge new institutions and plan the future. This paper looks at one such set of ideas, born in response to the crisis facing Greece’s post-war economy: the views of Constantinos Doxiadis, an architect, senior civil servant and policy-maker active in Greece’s recovery programme. Drawing on policy documents, publications and memoranda, the paper sketches the values, intellectual influences and methods underpinning Doxiadis’ views on reconstruction. This casts light on the origins of his later proposals for a science of ekistics, whilst also undermining the conventional notion that left-wing theorists were alone in advancing progressive views of Greek development before 1947. In fact, Doxiadis’ vision seeks to transcend the Right–Left divide by presenting economic progress as an apolitical, scientific process, which would render ideology irrelevant. Such views owe much to the intellectual tradition of interwar technocracy and played a key role in shaping the concept of economic development after 1945.

Crises – whether economic, political or social – offer fertile ground for change. They do so by undermining existing institutions and alliances, by altering the distribution of power and resources, and thus often by empowering new players at the expense of incumbents. At the same time, crises serve to delegitimise many of the established ideas about the economy and society, making room for the adoption of new ones. In fact, it is during periods of crisis that ideas matter most in history. Instead of being the “the veneer selected by individuals and groups to mystify and legitimise actions taken in their own self-interest”,¹ ideas become the perceptual lenses through which individuals and groups (re)interpret their interests, forge new institutions

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¹The formulation belongs to a critic of such “materialist” interpretations, Kathryn Sikink, *Ideas and Institutions: Developmentalism in Brazil and Argentina*, Ithaca and London: Cornell University Press, 1991, p. 5.

and plan the future.² In this sense, the propagation of new ideas is perhaps one of the main pathways through which individuals can play a critical role in times of crisis.

This paper looks at one such set of ideas, born as a response to the crisis facing Greece's post-war economy: the vision of architect and urban planner Constantinos Doxiadis and his proposals for reconstruction and a new science of "ekistics". "Winning the peace" was a challenge across Europe after 1945, one which elicited a diverse set of ideological responses. Most followed the Right-Left divide, but some – and this includes the overlooked contribution of Doxiadis in Greece – also sought to transcend it by projecting an image of science and economic progress as capable of rendering class and ideology irrelevant. Such views owe much to the intellectual tradition of interwar technocracy and played a key role in shaping the concept of economic development after 1945.

I. Rising to the Challenge

World War II left Greece's population ravaged by famine and disease, its infrastructure destroyed and its economy disarticulated. Inflation was rampant, food shortages were widespread, and some 1.2 million people were practically homeless. Estimates of physical destruction during the war and subsequent occupation spoke of 1.72 million damaged buildings, some 155,000 of which were completely destroyed.³ The political outlook was hardly any better, with the conflict between Right and Left escalating to outright civil war between 1947 and 1949. In this context, Greece's reconstruction posed a formidable challenge to anyone brave enough to take the plunge.

Against this background, Constantinos Doxiadis emerged as a problem-solver and efficient technocrat. Only a few weeks after the Nazi withdrawal from Athens, the 31-year old architect and chief supervisor of the Office of Town Planning Studies and Research impressed everyone by launching a detailed statistical exhibition of Greece's war-time depredations, complete with thorough maps and photographs.⁴ One year later, and after having participated

²For seminal contributions to this literature, see Judith Goldstein, *Ideas, Interests and American Trade Policy*, Ithaca: Cornell University Press, 1993, pp. 3 ff, and Mark Blyth, *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century*, Cambridge: Cambridge University Press, 2002, pp. 30 ff.

³Constantinos Doxiadis, *Καταστροφές οικισμών* [Destruction of towns and villages in Greece], Ministry of Reconstruction Publication Series 11, Athens 1946, pp. 60-67.

⁴This was based on his work at the Office, which he had tacitly converted into an embryonic Ministry of Reconstruction as early as 1941. The exhibition toured several

in the charter session of the United Nations, Doxiadis would return to Greece to play a key role in reconstruction efforts: whether as undersecretary and director-general of the Ministry of Housing and Reconstruction (1945-1948) or as coordinator of the Greek recovery programme and undersecretary of the Ministry of Coordination (1948-1950), he would spend the next five years setting out, supervising and implementing key aspects of Greece's post-war reconstruction plan, particularly efforts to provide shelter to the thousands of internally displaced Civil War refugees.

Doxiadis' rise to prominence can be traced to his close collaboration with Stefanos Stefanopoulos, a high-ranking member of the Populist Party and Minister of Coordination between 1946 and 1950; in fact, Doxiadis' abrupt removal from office after 1950 can be attributed to the rise of a Centrist government and Stefanopoulos' own dismissal. At the same time, Doxiadis' ascent was also due to the reshuffling of administrative authority brought about by the post-war crisis. The advent of foreign aid is particularly significant in this respect: not only because it funded much of the work carried out by Doxiadis' agencies, but because it led to the establishment of these agencies in the first place. In their attempts to establish control over aid administration and influence policy, foreign donors would often support the creation of new institutions to bypass existing administrative units. Doxiadis' positions, particularly those related to the Marshall Plan in Greece, owe much to American dissatisfaction with existing institutional arrangements.

With the help of foreign aid, the Ministry of Reconstruction launched a wide array of construction projects; many were carried out by its own crews, whilst several houses were built by their future occupants, in which case the state provided building materials and financial assistance. Drawing data from the statistical appendix to the *Complete Report of Marshall Plan Aid to Greece* (July 1948 – January 1952), we can place the total number of new houses constructed around 35,000, whereas a further 153,000 buildings were repaired.⁵ What is more, the ministry (re)constructed several hospitals, clinics, schools, administration buildings, etc.

foreign countries and was eventually transformed into the book called *Such Was the War in Greece*, published in Athens in 1946. See Alexandros-Andreas Kyrtis (ed.), *Constantinos A. Doxiadis: Text, Design Drawings, Settlements*, Athens: Ikaros, 2006, p. 342.

⁵These figures cover the 1948-1951 period and thus omit data on the first years of the ministry's operation. Only completed houses are counted (another 12,000 new houses and 32,000 repairs were in progress when the report was drafted in 1952). Constantinos Doxiadis, *Κείμενον απολογισμού του Υπουργείου Ανοικοδομήσεως* [Report of the Ministry



Fig. 1. American Mission for Aid to Greece (AMAG) chief Dwight Griswold (left) is given a tour of the Ministry for Reconstruction in December 1947.

The Minister, Dimitris Londos, stands to the right,
as Constantinos Doxiadis (centre) makes the presentation.
Doxiadis Archives, Athens © Constantinos and Emma Doxiadis Foundation

Alongside this formidable track record came an impressive amount of research carried out under Doxiadis' supervision. Within the span of a few years, the ministry produced more than 30 different research monographs, on such diverse issues as rural housing, urban design, economic development and administrative reform. At the same time, Doxiadis remained an active participant in the public debate on the country's future, producing a steady stream of newspaper articles, speeches, interviews and even a novel – all aimed at projecting his vision of post-war development.

It is this very vision that we seek to convey in the rest of this paper. Section II places Doxiadis' thesis in its historical context and emphasises those facets of the Greek reconstruction project that presage later formulations of his proposed science of ekistics. Section III then focuses on the *Plan for the*

of Reconstruction], Doxiadis Archives 8509, 1948, seeks to bridge the gap, but the document is incomplete and data are missing; figuring prominently amongst the few tables included is an estimate of the number of rooms repaired or built for Civil War refugees by 30 June 1948, which totalled 36,272.

Survival of the Greek Nation [Η επιβίωση του ελληνικού λαού], a development plan drafted by Doxiadis and his colleagues in 1946-1947; this document not only encapsulates many of its author's core beliefs, but also undermines the conventional historical notion that – prior to the announcement of the Truman and Marshall plans – the Greek Left had a monopoly on planning for industrialisation. Section IV seeks to account for the obscurity which subsequently shrouded most of Doxiadis' early work, as well as his more indirect legacies.

II. First Principles of Ekistics

Doxiadis himself would later recount how the concept of ekistics first occurred to him in April 1941, when he was returning on foot from the front and first came across the devastation war had brought upon Greece's settlements.⁶ It would not be long before references to a "new science", the "science of human settlements", would creep into his writings, even those entirely detached from architectural matters. This new field, for which Doxiadis coined the term ekistics, would aim at the "better distribution and development of the peoples on the earth's surface" and would be "the science of programming and planning, the science of determining the way to utilise the earth to peoples' advantage".⁷

In the five years of his work on reconstruction, Doxiadis put this vision into practice and orchestrated an unprecedented research programme, aimed at charting Greece's future development course.⁸ The post-war crisis provided the young architect with the first, large-scale testing ground for his theory. Enjoying the confidence and support of foreign missions and armed with

⁶ See Philip Deane, *Constantinos Doxiadis: Master Builder for Free Men*, New York: Oceana, 1965, pp. 18-19.

⁷ Constantinos Doxiadis, *Οικιστική ανάλυση. Οικιστικές μελέτες* [Ekistic analysis: ekistic studies], Ministry of Reconstruction Publication Series 1, Athens 1946, pp. 276-277. In shaping his understanding of ekistics, Doxiadis was certainly influenced by the work of interwar geographers, such as the German Walter Christaller and his central place theory. His subsequent understanding of economic development can also be seen as a "spatial application of modernisation theory", similar to that pursued by contemporary modernist geographers. See Richard Peet, *Theories of Development*, New York and London: Guilford Press, 1999, pp. 83-85.

⁸ See Doxiadis' own references to the application of ekistics by the Ministry of Reconstruction in Constantinos Doxiadis, "Ανοικοδόμηση και αρχιτέκτονες" [Reconstruction and architects], *Αρχιτέκτων* 1/1 (1948).

extensive powers,⁹ the director-general for reconstruction did not only seek to rebuild settlements; he also wanted to rebuild the science of settlements.

In accordance with its very object of inquiry, the “science of human settlements” was a multifaceted, dynamic and mutable field – one which can hardly be reduced to a handful of dimensions. Nevertheless, in what follows we shall seek to identify a few key aspects of Doxiadis’ ministerial work which highlight his maturing vision of ekistics.

Holism and Interdisciplinarity: Early Applications of the Ekistic Grid

Holism and interdisciplinarity lie at the heart of Doxiadis’ approach to the understanding of human progress. On the very first page of his 1949 book on *The March of the Peoples* [*Η πορεία των λαών*] – wherein he expounded his crude theory of historical evolution and applied it to the looming confrontation between East and West – Doxiadis would speak of a “Tower of Babel” arising from excessive professional specialisation:

The West has humbled man as a person and elevated man as a representative of a specific profession. Equilibrium was thus disturbed; everyone lost their synthetic capability to shed light on a problem in its entirety, to make it intelligible, to help in comprehending it and thus bring its solution within reach. Specialised knowledge was acquired, but the balance and harmony of thought were lost. We discovered every star, but lost the Cosmos.¹⁰

Elsewhere in the text, the author would call for the creation of a new, synthetic branch of science aimed at planning development and orchestrating the gradual integration of peoples into one, global – he would later say “ecumenical” – social and geographical unit.¹¹ Though indicative of how ekistics was first conceptualised as a generic scientific field, these statements had direct implications for Doxiadis’ view of architecture and spatial planning. Writing about ekistics in the late 1960s, he would explain how each human settlement is:

⁹Suffice it to mention that his ministry was the only one “which undertook the execution of a portion of the US aid programme, without further interference from the American Mission” (Doxiadis, *Κείμενον απολογισμού*, p. 3).

¹⁰Constantinos Doxiadis, *Η πορεία των λαών* [The march of the peoples], Athens: Ikaros, 1949, p. 13. (Unless otherwise stated, all translations are my own.)

¹¹At the same time, Doxiadis would express his disdain for scientists toiling in what he thought were obscure and inane specialties; entomology figured prominently on his list: “no matter if [in the process of moulding the new science] we lose a few specialists studying beetles in Abyssinia” (*ibid.*, p. 227).

[...] a very complex system of five elements – nature, man, society, shells (that is buildings) and networks. It is a system of natural, social and man-made elements which can be seen in many ways – economic, social, political, technological and cultural. For this reason only the widest possible view can help us to understand it.¹²

This is one dimension of the “ekistic grid”, a theoretical taxonomy created by Doxiadis and consistently employed in his work and in the publications of the *Ekistics* journal. Alongside the five elements of human settlements came five broad disciplines which contributed to their understanding and formed the scientific context of ekistics: economics, social science, political science and administration, technical and cultural disciplines.¹³

A brief glance at the work carried out by Doxiadis at the ministry reveals many overlapping research objectives, pursued simultaneously by teams of experts drawn from various fields; in other words, the reconstruction programme was the first full-scale application of the ekistic grid. Doxiadis would not merely write, supervise and commission reports on war damages, spatial planning and construction materials, but also on public administration, architectural history, economic geography, economics and public health. A multitude of experts paraded through the corridors of the Ministry of Reconstruction, forging many of the professional bonds and alliances that Doxiadis would later utilise in his business career. Engineers were in the majority, but Doxiadis also succeeded in attracting a number of younger scientists from other fields. Unfortunately, much of this network would fall into disuse after Doxiadis’ removal from office, only to be later revived in the corporate world, through Doxiadis Associates.

The Managerial Age and Planning

Interdisciplinarity and holism were important aspects of Doxiadis’ methodology, but, ultimately, reconstruction was about producing a detailed plan of action to rebuild the country. Ideas *per se* may be powerful agents of change in periods of crisis, but their vehicles are often the institutions that are created to crystallise them. Doxiadis’ emphasis on administrative reform, state intervention and planning permeates his entire work and underpins his theory of ekistics.

¹² *Id.*, “Ekistics, the Science of Human Settlements”, *Science* 170 (1970), pp. 393-404.

¹³ *Id.*, *Ekistics: An Introduction to the Science of Human Settlements*, New York: Oxford University Press, 1968, p. 55.

Greece's post-war crisis certainly presented a challenge to the existing administrative apparatus. Invariably problematic and fragmented, the civil service had been further dismantled during the Nazi occupation: public finances had collapsed, and staff numbers had ballooned. Doxiadis was fully aware of these weaknesses, but still believed in the necessity of centralised state coordination; after all, private initiative was hardly expected to emerge spontaneously from the rubbles of a war-ravaged country. What was needed was a new set of state institutions and an overhaul of the existing administration. Upon invitation by Prime Minister Nikolaos Plastiras in January 1945, he drafted a bill for the creation of a centralised state agency in charge of reconstruction.¹⁴ A couple of months later, he publicly protested the lack of state coordination and the frequent rotation of ministers, calling for the long-term appointment of people who would be trusted by all parties.¹⁵ In December 1945, he was put in charge of the reconstruction programme, a position he would hold for five consecutive years.

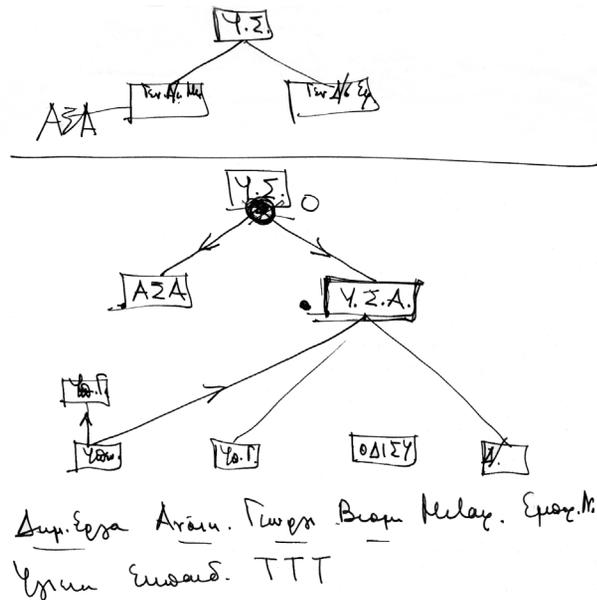


Fig. 2. Handwritten sketch of an organisation chart for the new Greek Recovery Programme Coordinating Office (ΥΣΕΣΑ) at the Ministry of Coordination, and its relationship with other administrative units (undated). Doxiadis hoped to use the new office to gain autonomy from existing administrative structures. Doxiadis Archives, Athens © Constantinos and Emma Doxiadis Foundation

¹⁴ Kyrtsis, *Doxiadis*, p. 349.

¹⁵ Constantinos Doxiadis, “Για να πετύχει η ανασυγκρότηση” [For reconstruction to be successful], *Δημοκρατική Επιθεώρηση – Αγών* (15 March 1945).

Doxiadis' managerial skills can hardly be exaggerated; at the same time, his emphasis on centralisation also reflected a personal desire for complete control and an unwillingness to work without it.¹⁶ During the first years at the Ministry of Reconstruction, he wrote extensively on the legal and administrative framework of the rebuilding process. In his opinion:

For such a colossal project to work, there can be only one competent Authority. This Authority was named the State Ekistic Authority because: (a) its power must emanate from the State, (b) the concept of ekistics, as a broader term of the science and policy of all housing problems, embraces all its competences, not just those of city-planning and building.¹⁷

At the same time, Doxiadis turned his ministry into a modern, streamlined state agency. Alongside its record of reconstruction and research, the ministry sought to improve its internal operations, organised seminars on anything from financial accounting to decoration and typing, provided medical insurance, organised summer camps and even offered subsidised meals and foodstuffs to employees.¹⁸

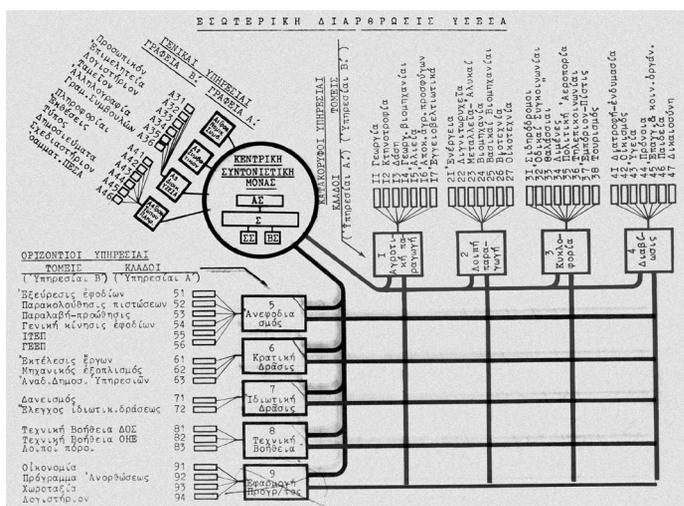


Fig. 3. A flair for organisation: internal organisation chart of the Greek Recovery Programme Coordinating Office (ΥΠΕΞΕΑ) at the Ministry of Coordination. Doxiadis Archives, Athens © Constantinos and Emma Doxiadis Foundation

¹⁶ Christopher Rand, "Profiles: The Ekistic World", *The New Yorker* (11 May 1963), pp. 49-87.

¹⁷ Constantinos Doxiadis, *Οικιστική πολιτική για την ανοικοδόμηση της χώρας με ένα εικοσάχρονο σχέδιο* [Ekistic policy for the reconstruction of the country on a twenty-year programme], Ministry of Reconstruction Publication Series 6, Athens 1947, p. 169.

¹⁸ Doxiadis, *Κείμενον απολογισμού*, pp. 59-66. Cf. Deane, *Constantinos Doxiadis: Master Builder for Free Men*, pp. 52 ff.

Doxiadis clearly saw his own ministry as a model for reform and publicly campaigned for civil-service reorganisation. In a series of articles published in the daily newspaper *To Bήμα* in 1948, Doxiadis summarised his views on the matter, calling for a new territorial nomenclature and a redistribution of competences,¹⁹ as well as improvements in employee payment, education and professional development. At the heart of his critique remained his disdain for the fragmentation of authority amongst lower echelons of the administration, where “little dictators” ruled, as he liked to quip.²⁰

For Doxiadis, the importance of centralised control and planning had a broader, theoretical justification. In his 1949 *March of the Peoples*, he prophesied the dawn of a new age, the “age of managers”, which was allegedly spreading across the globe with the same inevitability that capitalism had displaced feudalism. Speaking of its characteristics, the author would go on to explain how:

The new age is ahead of us. [...] Some call it socialist, some communist, others the age of managers (Managerial). The fact remains one: regardless of names and descriptions, this age is coming. Which are [its] key characteristics? Ideas, political and ethical systems? No! Its main feature is the rapid development of technical civilisation, the rapid change in scale, the rapid rise of all measurable factors of our lives, men, goods, production, speed and so many others. This rapid change in factor scale demands and ultimately imposes one solution: management.²¹

Deterministic naivety aside, Doxiadis was echoing a sentiment that was widely shared at the time, especially amongst members of the technical world, namely that the future belonged to an allegedly apolitical technocratic élite, which would put scientific discoveries into practice for the improvement of human lives. Ever since the interwar rise of Fordism and Taylorism,

¹⁹These articles leaned heavily on the ministry’s monograph on administrative reform, which was Constantinos Doxiadis, *Η διοικητική αναδιοργάνωση της χώρας* [The administrative division of Greece], Ministry of Reconstruction Publication Series 13, Athens 1948.

²⁰“Parliaments, governments and ministers proposing the foundation of new organs come and go, whilst various little dictators, each one possessing a magic wand called authority, a room in some Athenian building and a certain number of folders, remain in place. And these dictators wave their wands and always succeed in keeping their magical authority. Thus, there is today virtually no agency that is complete and controls all branches that belong to it,” said Constantinos Doxiadis, in “Η κρατική μας μηχανή. Η κεντρική διοίκησης της χώρας” [Our state apparatus: the country’s central administration], *To Bήμα* (31 March 1948).

²¹Doxiadis, *Η πορεία των λαών*, p. 198.

confidence in the modernising capacity of technocracy and its messianic potential for social reform had been strong amongst intellectuals. Born and educated in this aura of “technological fundamentalism”,²² Doxiadis could hardly escape the gravitational pull of these notions, which had already established themselves in Greek technical circles during the 1930s.²³ What is more, ever since the 1930s, socialist revisionists had been pointing at the rise of the modern corporation, which separated management from the ownership of production means. James Burnham’s 1941 influential book *The Managerial Revolution* popularised the notion that capitalism and socialism were being superseded by the rise of a managerial class and was probably known to Doxiadis at the time he was writing the above lines.

In Doxiadis’ eyes, planning was not just about applying scientific principles: it was about making forecasts and taking into account the inherently dynamic nature of human affairs. What is more, planning was not merely about tailoring policy to projected, future circumstances; it was about influencing and shaping those future circumstances. Thus Greek reconstruction should not aim at restoring damages and returning to the *status quo ante* – it should critically intervene to reshape and relocate human settlements. For,

[...] the country’s settlements are not in a static, but in a mutable condition, and constantly tend to adapt to the mandates of local life, which are fluid, for they depend on two variables: economic and social circumstances. Thus settlements that follow socio-economic changes at a much slower pace cannot meet life’s demands, especially under social circumstances like those prevalent today, when entire classes are living under unacceptable conditions.²⁴

From General Ekistics to Building Design: A Hierarchical Approach

Planning for the future and taking dynamics into account were key elements of the reconstruction programme. In line with Doxiadis’ attention to matters of hierarchy and interdependence, this approach was implemented at different levels of aggregation. Addressing his colleagues in 1948, Doxiadis would explain how ekistics operated at three levels: (a) general ekistics, (b)

²² Thomas J. Misa, “The Compelling Tangle of Modernity and Technology”, *Modernity and Technology*, ed. T. Misa, P. Brey and A. Feenberg, Cambridge, MA: MIT Press, 2003, p. 6.

²³ Giannis Antoniou, *Οι έλληνες μηχανικοί. Θεσμοί και ιδέες, 1900-1940* [Greek engineers: institutions and ideas, 1900-1940], Athens: Vivliorama, 2006.

²⁴ Doxiadis, *Οικιστική πολιτική*, p. 33.

urban planning, and (c) building design and construction.²⁵ This three-pronged approach is mirrored in his ministry's work.

General ekistics concerned itself with the overall distribution of settlements across the land. In an expression of top-down interventionism *par excellence*, Doxiadis set up a framework for re-evaluating settlement locations.²⁶ Within two years of taking office, his ministry had decided to relocate no fewer than 230 different settlements across the country. In terms of urban planning, the ministry produced new surveys for a multitude of towns and cities, starting with those which had been completely destroyed. Some 561 settlements were surveyed and 230 new urban plans were drafted by mid-1948.²⁷ Yet only a few of these ambitious plans were ever implemented by successive administrations.

Doxiadis' approach to building design during the Greek reconstruction programme was equally characteristic of his ekistics. Using historical and survey data on Greek housing, he commissioned several reports on the characteristics and evolution of residential buildings in various areas of the country.²⁸ Thus a series of housing typologies were created, striking a balance between maximum uniformity (to facilitate mass production of components and lower costs) and sensitivity to local peculiarities.²⁹ In further analogy to his subsequent work in the developing world,³⁰ Doxiadis also opted for

²⁵ See Constantinos Doxiadis, in "Εθνικός κίνδυνος – Προς Έλληνας και ξένους – Τι επιβάλλεται" [National danger – addressed to Greeks and foreigners – what must be done], *To Βήμα* (28 March 1948). The same break-down is employed throughout many of his writings at the time, including official publications.

²⁶ Doxiadis, *Οικιστική πολιτική*, pp. 57-62.

²⁷ Doxiadis himself compared these numbers to the 80 topographical surveys and 450 urban plans created since the foundation of the Modern Greek State. See Doxiadis, *Κείμενον απολογισμού*, pp. 14-18.

²⁸ Georgios Megas, *Θεσσαλικαί οικίσεις* [Houses of Thessaly], Ministry of Reconstruction Publication Series 4, Athens 1946; *id.*, *Η ελληνική οικία. Ιστορική αυτής εξέλιξις και σχέσις προς την οικοδομίαν των λαών της Βαλκανικής* [The Greek dwelling: historical evolution and relation to the dwellings of the peoples of the Balkans], Ministry of Reconstruction Publication Series 37, Athens 1949; Ministry of Reconstruction, *Τύποι αγροτικών πυρήνων* [Types of rural dwelling nuclei], Ministry of Reconstruction Publication Series Γ4, Athens 1946; Georgios Koliass (ed.), *Ιστορική γεωγραφία του ελληνικού χώρου. Εποικισμός, πολιτική γεωγραφία, οικονομική γεωγραφία* [Historical geography of Greece: habitation, political geography, financial geography], Athens: Ministry of Reconstruction, 1948.

²⁹ Doxiadis, *Κείμενον απολογισμού*, pp. 22-23.

³⁰ Deane, *Constantinos Doxiadis: Master Builder for Free Men*, pp. 94 ff.

the erection of housing nuclei, core building components that could later be extended, in response to family needs and the overall rise of living standards (this is what Doxiadis called “semi-permanent housing”). This approach was not only consistent with his dynamic view of human settlement, but also served to minimise the waste of materials.³¹ In this context, Doxiadis was clearly much more interested in the functionality and mutability of his buildings than in their elaborate stylistic features. After all, “There are two types of architecture, the semi-dictatorial, developed for the sake of design, and that which provides a shell in which man can shape his own life because his life belongs to him.”³²

Cost consciousness also encouraged Doxiadis to oppose temporary settlements, for they would only waste construction materials. This philosophy was put to the test when the ministry was called upon to provide shelter for the thousands of Civil War refugees flocking to the cities in the autumn of 1949:

The Ministry for Welfare immediately called for the erection of makeshift sheds. The [Ministry of Reconstruction] was opposed to this [...] for it would be a waste of resources, given that, once the upheaval had subsided, these sheds would be worthless and fall into disuse. Instead, [the ministry] proposed the repair of semi-derelict houses and the construction of new ones only when necessary. These buildings would be of semi-permanent character and, after the refugees left, they could house a portion of the urban population or be put to other uses.³³

Admittedly, actual practice fell short of Doxiadis’ original hopes, and most refugees were housed in temporary settlements.³⁴

Needless to say that most of the aforementioned tasks placed high demand on statistical data and forecasting. We have already discussed the importance of planning for the future to Doxiadis’ ekistics; anyone believing in the constant fluidity of human settlements could not shy away from forecasts. However, forecasting requires data, and Doxiadis knew that well. Unlike many contemporary authors, who produced recipes for national salvation on

³¹ Doxiadis, *Οικιστική πολιτική*, pp. 36 ff.

³² Quoted in Deane, *Constantinos Doxiadis: Master Builder for Free Men*, p. 101.

³³ Doxiadis, *Κείμενον απολογισμού*, p. 30.

³⁴ See *Το σχέδιον Μάρσαλλ στην Ελλάδα. Ο πλήρης απολογισμός της βοήθειας του Σχεδίου Μάρσαλλ προς την Ελλάδα (Ιούλιος 1948 – Ιανουάριος 1952)* [The Marshall Plan in Greece: the complete report of Marshall Plan aid to Greece (July 1948 – January 1952)], Athens 1942, pp. 17-22, as well as Doxiadis’ own account of the refugee shelter programme until 1948 in *Κείμενον απολογισμού*, pp. 30-33.

the basis of arcane theoretical principles and a handful of dubious numbers, his ministry's publications were invariably backed by painstaking statistical work. Suffice it to mention, for instance, how Doxiadis' housing typologies were based on data from several hundred thousand buildings, some 65,000 of which were surveyed by ministry employees themselves.³⁵ When others merely proposed taxing property gained during the occupation, Doxiadis sent people to Athenian land registries and actually processed information on all 36,600 buildings that changed hands between October 1940 and June 1945,³⁶ thereby making estimates of potential revenues and appropriate tax scales. This level of tireless empiricism and attention to statistical detail was not matched by any other agency in Greece at the time.

III. Planning the Survival of the Greek People

The previous section surveyed numerous facets of Doxiadis' work at the Ministry of Reconstruction; many of these would resonate in the later projects of Doxiadis Associates and his "science of human settlements". In many ways, all of these individual elements culminated in his 1947 *Plan for the Survival of the Greek Nation* [*Η επιβίωσις του ελληνικού λαού*]. Drafted by a "group of scientists", which included Doxiadis himself, this was a blueprint for national economic development spanning more than two decades. The director-general for reconstruction knew very well that this project did not fall within his ministry's competence: "Nevertheless, the fact that the country lacked a state development programme, based on broader policy lines [...] forced the [Ministry of Reconstruction] to fill the gap, so that its own work did not remain without foundations."³⁷

The *Survival Plan* thus offered the keystone of the ministry's work, the overarching framework within which all other projects were embedded. It utilised inputs from all three ekistic levels (see above), and its conclusions were in turn echoed in the work of ministerial departments. It was accompanied by an enormous statistical appendix and relied heavily on detailed projections of the country's population, consumption, investment, etc., until 1970.³⁸ Judged as an economic monograph by modern standards,

³⁵ Doxiadis, *Κείμενον απολογισμού*, pp. 20-21.

³⁶ *Id.*, *Οικονομική πολιτική*, pp. 42 ff.

³⁷ *Id.*, *Κείμενον απολογισμού*, p. 5.

³⁸ Constantinos Doxiadis *et al.*, *Η επιβίωσις του ελληνικού λαού. Εισηγήσεις εις στον Οργανισμόν Ανασυγκροτήσεως*, Τόμος Β': *Το σχέδιον* [A plan for the survival of the Greek nation: proposal to the Reconstruction Organisation, Vol. II: The plan], Ministry of Reconstruction Publication Series 33, Athens 1949.

it is simplistic, opaque and often outright mistaken; judged as a petition for foreign aid, it is unrealistic and exorbitant; but when seen in the context of contemporary Greek development discourse, it is a remarkable document, and one which has been hitherto ignored by historians. To appreciate it, we need to digress briefly into the history of Greece's development discourse.³⁹

Early Thoughts on Economic Development, 1944-1947

The post-war situation in Greece presented a formidable challenge to the country's politicians and policy-makers. The traditional economic élite – clustered around the country's few universities and financial institutions – was particularly ill-prepared for the task at hand. Some chose to remain silent on matters of long-term development, postponing such discussions to a later stage, when more immediate problems such as hyperinflation and food shortages had been addressed and the country's uncertain political future had been settled. Many others, however, regressed to the familiar qualms about Greece's inherent “poverty of land” (φτώχεια γης). In 1945, Xenophon Zolotas – one of the most prominent personalities in twentieth-century Greek economics – expressed this pessimism in a pamphlet bearing the title *Greece Must Become Viable* [*Η Ελλάδα πρέπει να γίνει βιώσιμος*]. The obvious implication was that Greece was not viable, not least because of overpopulation and shortages in natural and financial resources. What is more, the country's industrial prospects were meagre. In Zolotas' view – which was hardly unique at the time – territorial expansion and foreign aid inflows were Greece's only hopes of becoming viable.⁴⁰

Regardless of the exact nature and causes behind this pessimism,⁴¹ such views did not go uncontested. A solid group of Left intellectuals, many of them affiliated to Greece's Communist Party (KKE), was busy formulating its own vision of national development, where survival did not rely on foreign territories or capital. The *People's Republic Draft Programme*, approved by the

³⁹ For a detailed discussion of Greece's development discourse, see Andreas Kakridis, *Greek Economists and the Quest for Development (1944-1967)*, Ph.D. thesis, Panteion University of Social and Political Sciences, Department of Sociology, Athens 2009.

⁴⁰ Xenophon Zolotas, *Η Ελλάδα πρέπει να γίνει βιώσιμος* [Greece must become viable], Athens: Argyris Papazisis, 1945, pp. 9-13.

⁴¹ These fall largely outside the scope of this paper. See Andreas Kakridis, “*Deus ex machina?* Truman/Marshall Aid, Engineers and Greece's Post-war Development Discourse”, *Journal of Modern Greek Studies* 27/2 (2009), pp. 241-274, as well as Christos Chatziiosif, “Απόψεις γύρω από τη βιωσιμότητα της Ελλάδας και το ρόλο της βιομηχανίας” [Views on Greece's viability and the role of industry], *Αφιέρωμα στον Νίκο Σβορώνο* [Festschrift for Nikos Svoronos], ed. V. Kremmydas, C. Maltezou and N. M. Panagiotakis, Heraklion: University of Crete Press, 1986.

7th KKE Congress in 1945, summarised the Left's bid for post-war development: an industrially developed Greece was both desirable and feasible, as long as foreign exploitation ceased and power was conferred to a new political authority (the people's republic) and a strong state apparatus. These views, which were moulded after the Comintern line on development in the periphery, were popularised through *Ανταίος*, a fortnightly journal published by a group of left-wing intellectuals. Dimitris Batsis, the editor of *Ανταίος* and author of the 1947 monograph *Heavy Industry in Greece [Η βαρεία βιομηχανία στην Ελλάδα]*, is generally considered the most prominent figure of the group.

Between themselves, the 1945 *Draft Programme* and the 1947 *Heavy Industry* were the earliest attempts to formulate a long-term plan for Greece's economic recovery. This hardly comes as a surprise, especially to anyone familiar with the 6th KKE Plenum, dating back to January 1934, which asserted the country's industrial "viability" and proposed focusing on the domestic growth potential and severing the exploitative ties with foreign capitalists. During the interwar period, socialist and fascist/corporatist intellectuals were amongst the first to reject liberalism and the "poverty of land" thesis. The outcome of World War II silenced the majority of theorists of fascist-corporatist leanings, thus clearing the way for the Left to enter the development discourse with an intellectual head start. What is more, let us not forget that by the time the old political guard landed in Piraeus in 1944, the Left's National Liberation Front (EAM) had already been running the largest portion of the country for several years.

What is surprising, however, is that historians tend to forget another community which had an early start in the quest for development alternatives. Unlike the *Ανταίος* team, this was not a group defined along political lines, but a professional community, and one that had already been proclaiming Greece's industrial viability for several decades: engineers.

After 1910, engineers' professional status had been upgraded and the importance of technology as an instrument of state intervention was increasingly being recognised. The need for technical expertise in large public works and construction gave impetus to a process whose main landmarks were the granting of university status to the National Polytechnic and the consolidation of most technical agencies in a single, new Ministry of Transport in 1914. In 1923, the Technical Chamber of Greece (TEE) was founded, and ten years later it numbered more than 2000 members, half of whom were under the age of 35.⁴² Hence, a young and vocal professional community was created,

⁴² Christina Agriantoni, "Οι μηχανικοί και η βιομηχανία. Μια αποτυχημένη συνάντηση" [Engineers and industry: an unsuccessful meeting], *Ιστορία της Ελλάδος του 20ού αιώνα*, Τόμος 2: *Ο Μεσοπόλεμος, 1922-1940* [The history of twentieth-century Greece, Vol. II: The interwar period, 1922-1940], ed. Christos Chatziiosif, Athens: Vivliorama, 2002, pp. 269 ff.

which sought to participate in discussions about the country's economic future, including its capacity to develop a viable and modern industrial sector. During the 1930s, through its several journal outlets, the engineering world would constantly reiterate its confidence in domestic development potential, criticise industrial policy and encourage greater intervention and corporatism.⁴³ Round the same time, Doxiadis was graduating from the School of Architecture and departing for further studies in Berlin.

Amidst the furor raised by the clash between Right and Left, the role of the technical world in shaping the post-war development discourse has hitherto been overlooked. Having said that, we should point out that the Left included a substantial number of engineers and natural scientists *sensu lato*, who had even founded a Society for the Pursuit of Science and Reconstruction (ΕΠ-ΑΝ). Yet, at the other end of the spectrum, little or no attention has been paid to the remarkable work carried out by Doxiadis and his own group of scientists, working within the walls of the Ministry of Reconstruction.

Doxiadis' Survival Plan: An Overlooked Contribution

The *Plan for the Survival of the Greek Nation* was written by a group of scientists⁴⁴ headed by Doxiadis between the summer of 1946 and winter of 1947, that is, at a time when Greece's war reparations and territorial claims were still in the air and the US had undertaken no commitment to finance Greek – or European – reconstruction.⁴⁵ Its purpose, as we have seen, was to provide an overarching framework for reconstruction, by charting the country's future economic trajectory and tailoring policy to a set of long-term development objectives; thus, for instance, the plan aimed to restore

⁴³ See, for instance, Emmanouil Loulakakis, "Η βιομηχανία ως παράγων της εθνικής μας οικονομίας [Industry as a factor of our national economy], *Τεχνικά Χρονικά* (1932), pp. 605-616; Apostolos Koutsokostas, "Επί της βιομηχανικής πολιτικής του Κράτους" [On the state's industrial policy], *Τεχνικά Χρονικά* (1934), pp. 1002-1003; and Nikolaos Kitsikis "Τεχνική εισήγησης επί της οικονομικής μελέτης των τεχνικών ζητημάτων. Το Ανώτατον Οικονομικόν Συμβούλιον" [General proposal on the economic appraisal of technical issues: the Supreme Economic Council], *Τεχνικά Χρονικά* (1932), pp. 4-18.

⁴⁴ Besides Doxiadis, the senior group comprised two electrical engineers (Maggioros and Delendas) and one agronomist (Vallidis); these were assisted by a further agronomist (Kapsokefalos), a civil engineer (Tsitsis) and three economists (Chalkiopoulos, Kanellopoulos and Tzannetakis).

⁴⁵ The first issue would be settled with the Treaty of Paris (10 February 1947), whilst Truman's announcement of aid to Greece and Turkey would come on 12 March 1947. Bear in mind, however, that negotiations had been underway throughout 1946 and Doxiadis was probably well-informed of developments afoot. This may also explain the pragmatism (if not outright pessimism) with which Doxiadis wrote on these matters.

per capita consumption to its pre-war level by 1949 and attain pre-war GDP levels in 1954.⁴⁶ Other targets included the rise of per capita consumption by 1% annually until 1965 and 2% annually from that point onwards.

To these ends, the planners made explicit predictions about Greece's future population size and age composition. Using Doxiadis' estimates of war damages and a lot of numeric sleight-of-hand, they then calculated the annual investment necessary to maintain such levels of consumption. Thus they came up with the country's annual required output – which, however, was not equal to actual production. An overall shortfall of some 212 billion dr.⁴⁷ would have to be covered from foreign sources, and the *Survival Plan* already made allowance for a long-term loan of 98.3 billion dr.; the remaining 113.7 billion was equal to the country's war damages and should in principle be covered by reparations.⁴⁸ What is more, an additional 62.3 billion dr. would have to be offered as aid for consumption purposes alone. Though perfectly in line with the estimates carried out by other Greek agencies at the time,⁴⁹ these figures were exorbitant; when expressed in 1948 dollar values, the projected aid requirements until 1954 totalled between \$2.4 and \$2.7 billion, depending on the amount of war reparations allotted to Greece.⁵⁰ In 1946, when these estimates were being made, Britain was facing mounting difficulties in funding Greek economic relief, and there were few guarantees that large sums of aid would be flowing into the country any time soon. Fortunately, by the time the *Plan* went to press in September 1947, the

⁴⁶ Doxiadis *et al.*, *Η επιβίωσις του ελληνικού λαού*, p. 63.

⁴⁷ All units were expressed in 1938 drachmas. Note that the total investment foreseen by the *Plan* was 466.6 billion, roughly three times Greece's total pre-war GDP. When spread over 25 years, this is a modest figure, far smaller than what was actually attained by the country over the *Plan*'s horizon.

⁴⁸ Doxiadis was grimly aware of the fact that Greece would only receive a fraction of this sum and thus called for alternative sources of finance. Doxiadis *et al.*, *Η επιβίωσις του ελληνικού λαού*, pp. 173-174.

⁴⁹ See, for instance, Reconstruction Organisation, *Πρόγραμμα ανασυγκροτήσεως της χώρας. Σχέδιον ανασυγκροτήσεως των τεχνικών βάσεων της ελληνικής οικονομίας* [National reconstruction programme: a plan for the reconstruction of the Greek economy's technical base], Athens: Ethniko Typografeio, 1947. Though titled the "National reconstruction programme", this document was not a real plan, but a medley of investment projects, which still called for \$2.17 billion in aid over five years, to be followed by a further \$3.53 billion over the subsequent decade and a half.

⁵⁰ To put this figure into perspective, suffice it to mention that Greece's total US aid receipts between 1944 and 1953 did not exceed \$1.2 billion and were still considered very generous in per capita terms. See Bank of Greece, *Τα πρώτα 50 χρόνια της Τραπέζης της Ελλάδος* [The first 50 years of the Bank of Greece], Athens 1978, p. 353.

Truman Doctrine had been announced and the American Mission to Greece was already administering additional aid. Unfortunately, the additional destruction wrought by the Civil War and the substantial use of aid to fund military operations soon rendered most of the *Plan*'s predictions irrelevant.⁵¹

Despite being of limited practical use, the *Survival Plan* is an interesting document to anyone studying the history of development theory and planning in Greece. First of all, it was a text fully embedded within the aforementioned "viability" debate – even its title suggested that the country's very life was at stake. Secondly, it was a document prepared by scientists working within the state apparatus and who declared their full confidence in the country's capacity to industrialise and develop with the maximum use of its own resources. In this sense, Doxiadis' *Survival Plan* undermines the conventional notion that in the crucial years between Greece's liberation and the announcement of the Truman and Marshall plans, the Left stood alone in championing Greece's capacity for growth and industrialisation.

The theoretical principles underpinning Doxiadis' *Survival Plan* are steeped in the post-war drive for modernisation.⁵² The entire text is predicated on the assumption that countries go through uniform, successive stages of development, and predictions for Greece's future could be based on past experience from developed nations. In full accordance with standard stage-theories of development, the *Plan* speaks of four development phases, going from primitive production to industrial maturity and eventual decline. Progress is identified with the transition from tradition to modernity, from agriculture to industry. Needless to say that the *Survival Plan* expected Greece to have attained industrial status by 1970, by which time 30.7% of GDP would come from secondary production and some 360,000 workers would be employed in industry (compared to just 120,000 in 1940). "Poverty of land" was not an issue

⁵¹ One of the frequent themes of Doxiadis' newspaper articles after 1948 was the importance of civilian vs. military aid. As he would write on one occasion, "If supplies and weaponry have to be increased, if machine guns and mountain artillery need to be given to the army, this should not have to mean removing supplies and weaponry from the Greek people, who support and encourage this very army [...]. Peoples' supplies and weaponry are their houses, their farms, their roads and sea ports, the large productive works. And they are just as necessary as artillery and machine guns." (see Doxiadis, "Εθνικός κίνδυνος").

⁵² For an introduction to the notion of modernisation in social science, see Michael Latham, "Modernization", in *The Cambridge History of Science*, Vol. 7: *The Modern Social Sciences*, ed. T. M. Porter and D. Ross, Cambridge: Cambridge University Press, 2003, pp. 721-734. For a more targeted discussion of modernisation and development economics, see Colin Leys, *The Rise and Fall of Development Theory*, Bloomington and Indianapolis: Indiana University Press, 1996, pp. 9 ff., and Peet, *Theories of Development*, pp. 65 ff.

for the authors of the *Survival Plan*, who also urged for the maximum use of Greece's domestic resources and full employment, thus touching upon two of the principal pillars of the Left's development vision. In further correlation to Batsis' 1947 *Heavy Industry* monograph, the *Survival Plan* paid special attention to metallurgy and electrification.⁵³

It goes without saying that the development philosophy incorporated into the *Survival Plan* is linked to Doxiadis' own theory of social evolution. This was essentially an organic theory, leaning heavily on a biological analogy between nations and living organisms. In the preface, which is signed by Doxiadis alone, he explained how, "Nations are living organisms, evolving from primary and rudimentary forms to more integrated ones. As all living organisms, peoples go through various stages of development."⁵⁴

This biological analogy not only permeates Doxiadis' interpretation of history, but also extends to his understanding of human settlements. As he would argue in his 1968 *Ekistics*, "[...] human settlements are very complex biological individuals. Human settlements can be neither cells nor bodies nor organisms. We are, therefore, entitled to consider them as biological individuals of a higher order than cells or organisms."⁵⁵ What is more, in parallel to the economic juxtaposition of agriculture to industry, Doxiadis would often contrast rural to urban life. Let us not forget that for all his critique of cities, Doxiadis was "devoid of bucolic romanticism" and looked ahead to the transformation of the planet's surface into a single ecumenopolis.⁵⁶

Doxiadis' organic world-view entails some interesting implications for the means to attain human development. First of all, it ties in well with his strong paternalism and confidence in "divine" [technocratic] intervention. If backward nations are like little children, then they have to be parented and educated along the way:

It's no use saying that all nations are equal, all are alike, all have the same freedoms; for they are neither equal, nor alike, nor can they have the same freedoms. A small child cannot have the same freedoms as a grown-up, or an educated man be as free as an ignoramus.⁵⁷

Another, equally subtle implication of Doxiadis' organic view, and one it shares with all modernisation theories, is that development stages are uniform across organisms, with "younger" nations following in the exact footsteps

⁵³ Doxiadis *et al.*, *Η επιβίωση του ελληνικού λαού*, pp. 26, 398, 133-135.

⁵⁴ *Ibid.*, p. 17.

⁵⁵ Doxiadis, *Ekistics*, pp. 41-42. Cf. the biological references in *Η πορεία των λαών*, pp. 77 ff.

⁵⁶ Deane, *Constantinos Doxiadis: Master Builder for Free Men*, p. 60. See also Constantinos Doxiadis, "Ecumenopolis: Toward a Universal City", *Ekistics* 13/75, pp. 3-18.

⁵⁷ Doxiadis, *Η πορεία των λαών*, p. 252.

of their forefathers.⁵⁸ Herein lies one of the principal divides between the *Survival Plan* and the Left's bid for post-war development. Whereas both sides emphasised the role of planning and rejected fatalistic complaints about Greece's inherent "poverty of land" and "non-viability", the Ministry of Reconstruction did not share the Left's disdain for foreign interference. In fact, the entire *Survival Plan* was predicated on the influx of foreign capital (whether in the form of loans, grants or war reparations) to make up for Greece's shortfall in available resources. To communist authors such as Batsis or Serafeim Maximos, this was tantamount to no development at all.⁵⁹ To translate their point into Doxiadis' analogy, left-wing intellectuals felt that grown-ups were deliberately keeping the younger nations in perpetual infancy, consciously "underdeveloping" and exploiting them. This clear-cut dependency thesis, and its implications for foreign economic relations, was one of the key differences between the development visions of "bourgeois" and communist intellectuals.⁶⁰

In the eyes of the Left, heavy industry was key to national independence and the overthrow of foreign exploitation. The Left's programme was founded on this assumption, which modelled Greek development after the Soviet Union's experience of rapid industrialisation. On the other hand, the Ministry of Reconstruction may have believed in Greece's industrial viability, but this did not mean that industry would overrule all other objectives. Doxiadis' *Survival Plan* was built around target growth rates for per capita consumption, thus paying much greater attention to individual standards of living. Many industrial projects were relegated to the programme's second five-year phase, whilst greater emphasis was placed on housing construction. As early as 1945, Doxiadis was proclaiming that the rebuilding of towns and villages was the *sine qua non* of economic development, the key to the solution of all other problems; without it, "all other talk of Grand Ideas and Aspirations is simply ironic".⁶¹

⁵⁸ Doxiadis *et al.*, *Η επιβίωση του ελληνικού λαού*, p. 39. Incidentally, this was the basis of the *Survival Plan*'s forecasting methodology: for example, Greece's future fertility rates and incremental capital-output ratios were based on data from other countries which had passed through the same stage of development in the past (the UK, France, Germany, Italy, etc.).

⁵⁹ See Dimitris Batsis, *Η βαρειά βιομηχανία στην Ελλάδα* [Heavy industry in Greece], Athens: Kedros, 1977 [1947], and Serafeim Maximos, *Τα μεγάλα προβλήματα της χώρας. Τα ξένα σχέδια ανοικοδόμησης* [The country's big problems: foreign reconstruction programmes], *Ανταίος* 2/3 (1946), pp. 81-85.

⁶⁰ Kakridis, *Greek Economists and the Quest for Development (1944-1967)*.

⁶¹ Constantinos Doxiadis, "Η ανοικοδόμησης. Το μεγάλο ελληνικό πρόβλημα" [Reconstruction: Greece's great problem], *Το Βήμα* (23 September 1945).



Fig. 4. Constantinos Doxiadis (left) in conversation with King Paul and Queen Frederica at the Athens opening of the “Electricity and Recovery” exhibition, 3 May 1950. Doxiadis Archives, Athens © Constantinos and Emma Doxiadis Foundation

Coming from a man who devoted his life to human settlements, this bias in Doxiadis’ interpretation of development is hardly surprising. Writing in the ministry’s bulletin of 1949 on the relative importance of investment in housing, Doxiadis conceded that building factories, dams, ports and roads were noble causes, but:

We’d be right [to build them] if we had already secured that [other portion of our] wealth, for which these works are destined, i.e. if we had sheltered our Country’s human factor. But this is not the case. It would be a grave mistake for any country – but especially for Greece, which is poor in natural resources – to overlook the fact that the human factor is the principal component of its productive wealth, thus abandoning its people until grand works were built for their future.⁶²

⁶² *Id.*, “Ανοικοδόμησις και ανασυγκρότησις” [Rebuilding and reconstruction], *Δελτίον Υπουργείου Ανοικοδομήσεως* (23 February 1949).

In the later years of the reconstruction programme, when most politicians and economists had embraced Greece's industrial viability and were making verbose promises of rapid industrialisation, Doxiadis would devote increasing attention to the role of human capital and housing, as a counterweight to this rhetoric. In some cases, as the quote above illustrates, this would mean speaking of the "poverty of land" again.⁶³ Regardless of the theoretical nuances of this argument, Doxiadis was clearly opposed to any cut-backs to his housing project, which he saw as integral to economic development – not to mention also a source of employment for some 30,000 engineers.⁶⁴

Needless to say, these were not the only things dividing Doxiadis' development vision from that of Batsis or the Left in general. In fact, most differences stemmed from their diametrically opposed political positions. To Batsis and the Communist Party, Greece's road to progress had to pass through radical political reform and the establishment of a "people's republic" as an interim stage to socialism; the Minister of Reconstruction did not share these aspirations and made no reference to nationalisation, radical political reform or anything as subversive. Despite this obvious ideological tint in the analysis, the authors of the *Survival Plan* went to great lengths to present their work as detached from ideological matters:

The general directions of the programme must not be influenced by the *a priori* political views of any single party. On the contrary, [these directions] must be based on the totality of facts about the country and its environment, thus forming the foundation on which political views and theories could be based.⁶⁵

At the same time, the Left was inviting all "true" and "progressive" scientists to join in the reconstruction effort, regardless of their ideological leanings. The author of the *Ανταίος* editorial on 15 August 1945 explained how,

⁶³For an early formulation of Doxiadis' views on the importance of human capital (and the concomitant priority of housing), see his three articles in the 12, 13 and 14 September 1947 issues of *Το Βήμα* newspaper. For a critique of the resources devoted to housing and an argument in favour of restoring the productive mechanism first and then building houses, see Xenophon Zolotas, "Ανασυγκρότηση και βιωσιμότης. Κριτική του προγράμματος" [Reconstruction and viability: a critique of the programme], *Το Βήμα* (12 September 1948).

⁶⁴The importance of construction in providing employment and growth was also highlighted by Kyriakos Varvaressos, *Έκθεσις επί του οικονομικού προβλήματος της Ελλάδος* [Report on Greece's economic problem], Athens: Savallas, 2002 [1952], pp. 349 ff. – to the obvious dismay of most contemporary economists, who accused him of denying Greece its industrial future.

⁶⁵Doxiadis *et al.*, *Η επιβίωση του ελληνικού λαού*, p. 37.

“Their ideological preferences cannot divide [true scientists] if they want to participate – not in abstract political discussions – but in the solution of Reconstruction’s pressing and concrete problems, to the service of the people and the progress of the land.”⁶⁶ Thus, from one of the two sides’ most stark differences, there also emerged one of their principal similarities: the constant – and futile – appeal to “pure”, apolitical science. Along with it came also the equally familiar – and far from futile – call for interdisciplinary cooperation:

[...] the fertility of a harmonic cooperation between different disciplines and the need for a coordinated and planned way of doing research and studying the land’s problems makes the creation of a single scientific agency imperative. This agency would assemble all these scattered efforts and forces. Today, more than any other time, unilateral efforts, whether in terms of specialty, or in terms of political tone, are of no service to the grand project of Reconstruction.⁶⁷

IV. Epilogue

The *Plan for the Survival of the Greek Nation* was drafted by a group of scientists working within the state administration, at a time when Greece’s economic viability was still the subject of much controversy. Its optimistic tenor and drive for technocratic intervention – indicative of Doxiadis’ modernist mindset and his broader philosophy of ekistics – undermines the conventional notion that communist theorists in the 1944-1947 period stood alone in championing Greece’s capacity for autonomous growth and industrialisation. Nevertheless, Doxiadis’ *Survival Plan*, along with similar programmatic efforts carried out under the auspices of the Reconstruction Organisation (OA) and the Supreme Board for Reconstruction (ASA) in the 1940s, would quickly sink into oblivion. Later authors would either make condescending allusions to these programmes or ignore them altogether. Despite their many and obvious flaws, these early programmes hardly deserved their fate, especially since most major infrastructure and industrial projects undertaken in the next couple of decades seemed to have sprung out of their pages (for example, lignite extraction, electrification, aluminium processing, refining, hydroelectric plants, etc.). So how can we account for their subsequent obscurity?

⁶⁶ Editorial, “Στους προοδευτικούς επιστήμονες” [To progressive scientists], *Ανταίος* 1/6 (15 August 1945), p. 141.

⁶⁷ *Ibid.*

Given the ongoing battle for political supremacy, fought both on a military and on an ideological plateau in the 1940s, the stance of communist theorists is the easiest to interpret. The Left systematically projected itself as the only political force with a genuine vision for reconstruction and a detailed programme for its realisation. Thus, it comes as little surprise that other planning efforts were underplayed, and their reliance on foreign finance – which fitted their comprador mentality and perpetuated Greek dependence – was relentlessly criticised.

Outside the communist Left, things were much more complicated. Embroiled in the power struggle within the mainstream camp, various individuals and groups were vying for larger shares of power (and funding) in the reborn, post-war Greece. For all his confidence in interdisciplinary cooperation, Doxiadis was still an engineer, and so were most people employed at the first planning agencies.⁶⁸ This caused dismay amongst economists, who were simultaneously seeking to affirm their professional status in the post-war state apparatus. This conflict is aptly summarised by the dispute between Doxiadis and Zolotas, by far Greece's most prominent economist in the post-war era and vice-president of ASA, of which Doxiadis was also a member.

Back in 1944, during his first, brief stint as governor of the Bank of Greece, Zolotas had established an “economic plan coordination committee”, composed of economists and technicians. This was promptly dissolved after his departure, and henceforth Zolotas remained a firm critic of the lack of adequate economic planning.⁶⁹ Just three weeks after his appointment as vice-president of ASA, Zolotas resigned, for, “despite [his] protests, [he] saw that since engineers had been given the initiative, [ASA] was headed for a technical, rather than an economic plan”.⁷⁰ Though simmering for some time, the conflict between Doxiadis and Zolotas erupted in the summer of 1949. In a bitter exchange of articles in the newspaper *To Βήμα*, the two men⁷¹ quickly did away with niceties and went to the crux of the problem:

⁶⁸ Thus, for instance, the OA used no fewer than 117 (out of a total of 132) civil and electrical engineers, mechanics, geologists, agronomists, etc., to draft its 1947 reconstruction programme.

⁶⁹ Xenophon Zolotas, “Ανασυγκρότησις χωρίς σχέδιον,” [Reconstruction without a plan?], *To Βήμα* (5 February 1946).

⁷⁰ *Id.*, “Οικονομική και τεχνική πλευρά” [Economic and technical side], *To Βήμα* (29 June 1949).

⁷¹ Doxiadis actually replied to Zolotas in two ways: having written a courteous and matter-of-factly official response, he also wrote an anonymous letter signed by a “Greek technician”, wherein he accused Zolotas of outright slander. Zolotas' response indicates that he had few doubts as to the identity of the letter's author.

Let me express my reservations on the economic opinions of engineers, as I will gladly let them express reservations on my understanding of technical matters. If we persist in this line, we must entrust engineers with the drawing of economic plans and economists with the construction of technical works!⁷²

It is utterly wrong [...] to try to transform the country's problems into professional ones, when in fact they are not and cannot be so. The reconstruction plan is neither economic, nor technical, it is a **political** plan, and only a **synthetic** approach can lead us out of this chaos.⁷³

If the anonymous author feels that the efforts for a solid economic plan and organic and coordinated measures to attain economic stability and promote reconstruction are “professional”, then this proves how narrow and professional his own thought is; it would be best for him not to get involved in broader problems he is in no position to comprehend.⁷⁴

The dispute between Doxiadis and Zolotas was symbolic of the rising tension between the two professional communities. Over the subsequent decade, the pendulum would swing, and economists would take the reins of development planning and policy-making. Doxiadis' calls for a synthetic approach would remain largely unanswered. Nevertheless, there is little doubt that engineers – Doxiadis perhaps more than anyone else – were amongst the first respondents to Greece's post-war crisis and played a key role in rejecting fatalism and introducing new ideas about Greece's economic future. Nor is there any doubt that their vision of a technocratic, apolitical development process became an integral component of the post-war vision of development.

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⁷² Xenophon Zolotas, “Είναι οικονομικόν σχέδιον ή συμπτωματική πολιτική;” [Is this an economic programme or coincidental policy?], *To Βήμα* (21 June 1949).

⁷³ Constantinos Doxiadis, “Η βοήθεια δια την ανασυγκρότησιν. Πως τίθεται το θέμα από τους ειδικούς;” [Aid for reconstruction: how do the specialists see things?], *To Βήμα* (24 June 1949). (Emphasis in original.)

⁷⁴ Zolotas, “Οικονομική και τεχνική πλευρά”.