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**DISCUSSION PAPER**

by

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on

John Dyckman's

Determinants of Metropolitan Structure

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### "The Determinants of Metropolitan Structure"

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Discussant

Metropolitan structure is concerned with the location, arrangement, and interrelationships between social and physical elements of the city, their spatial distributions, and the interactions between these distributions set in the context of changing urban environments, real and perceived, that residents of the metropolis create and inhabit. This understanding of structure (Bourne et al., 1971) reinforces our interpretation of the city as a system comprising a set of linked elements that in turn constitute multitudinous subsystems, made up of subsets of elements, that interact with each other in a complex way over the spatial domain of the metropolis.

This notion of metropolitan structure, positioned as a backdrop to Dr. Dyckman's paper, "The Determinants of Metropolitan Structure", suggests that the choice of the paper's title could imply the underlying assumptions, stated below, that may be relevant to the discussion at hand.

1. That a heightened knowledge of the complex and dynamic interrelationships and behavior of the myriad vector components that determine metropolitan structure can serve to enhance our potential to intervene, directly or indirectly, at the metropolitan level to modify and shape more decidedly the structure of metropolis as it grows into the future.
2. That the increasing understanding we gain from our knowledge of the way the determinants of metropolitan structure operate can also enable us, in some corresponding measure, to develop our insight and appreciation of the nature and role of the interlocking sets of individual and collective values that mold and color the multiplicity of incremental decisions and actions over time manifest in the spatial arrangements of activities, and related built elements, that comprise the accretion we recognize, in the aggregate, as metropolis.

3. That the continuous striving between metropolitan activity elements that takes place to secure operationally an acceptable spatial structure to achieve activity ends, is potentially responsive to metropolitan system-wide intervention, especially if such intervention is oriented towards optimizing the performance of the component sub-systems to which the activity elements pertain.

These three assumptions lead to a fourth, expressed as an hypothesis in tandem:

- That the structure of metropolis is susceptible to manipulation and guidance; and that this susceptibility constitutes a real potential to create urban environments having the capability of molding more appropriately built responses to perceived activity needs and desires in accordance with the value systems held by metropolitan communities.

The goal or aspiration that this hypothesis represents is, of course, somewhat utopian in character; and its achievement requires, perhaps, heroic optimism about our ability to shape the structure of metropolis into the future. Nevertheless, it behooves us to explore ways to reinforce progressively the potential to manage the development of metropolitan structure, and realize this potential. But to identify the ways of doing so is not a simple task even at the individual metropolitan scale; and viewed on the world scale that this Conference Committee is concerned with makes the task a very difficult one indeed. We are well aware that metropolises exhibit their own, particular sets of developmental opportunities and restrictions, rooted largely in socio-cultural, economic and physical factors, that in different combinations impress through varied mechanisms their unique character stamps on extant structures - and will continue to do so into the future - in terms of systems configuration, constituent components, and overall clarity and quality. As a result, it can be argued, there are as many solutions

to the structural shaping of metropolitan growth as there are metropolises. Paradoxically, the pessimistic amongst us may well give us hope by scaling down the magnitude of the problem by asserting that resources of all kinds are far too few, especially in developing countries, to promote and manage the future structuring and restructuring of metropolis to bring about living environments better than those presently existing; and that merely to discuss ways to conserve present levels into the future would constitute a challenging goal.

Be that as it may, a discussion of the determinants of metropolitan structure, and the means we have of manipulating or conditioning these, might fruitfully start by taking a brief look at some of the conventional wisdom that surrounds and influences our thinking on the matter. This appraisal may succeed in sweeping away cobwebs to reveal a common base of understanding as a first step to formulating in general terms a constructive approach towards metropolitan structuring. It assumes that while we are probably in agreement with Dr. Psomopoulos's prediction that metropolis will continue to grow in size and proliferate in number, accommodating over time proportionally more of the world's growing population, we may well question some independent assertions that follow, though not necessarily for the reasons stated.

Problems of metropolis are metropolitan problems: Not always so, T.A. Broadbent reminds us: many so-called 'urban problems' are social problems pre-existing (at the national scale) that are revealed and laid bare by the economic processes that concentrate these wider-ranging problems within metropolis in a highly perceptible way (Broadbent, 1977). Eg., problems of income distribution, and of shelter and services for the urban poor; problems of management in cultures that fail to value its worth, of little relevance at the village scale but critical to the well-being of fast-growing metropolitan areas. Metropolis itself did

not create these problems; thus their cure calls for measures that stretch far beyond metropolitan limits.

Metropolitan size is the crucial metropolitan problem: A questionable assertion if we can intervene to shift more effectively the form and structure of future metropolis away from radial growth patterns, and instead, for instance, towards lineal and multi-nuclear configurations that allow for the interpenetration of urban/non-urban space with reduced activity concentrations, and the emergence of specialist centers that articulate metropolis by providing functional identification and comprehension. If there exists for metropolis a single crucial problem, it resides more in the future rate of its accumulated growth rather than in ways to curb growth to fit a preconceived finite size.

With scale, the metropolis becomes more self-sufficient: There is truth in this statement in regard to earlier manifestations of metropolis that served not only as a repository of renewable labor resources and of support services, but also accommodated in their entirety major commercial and industrial firms. But today's metropolis, even in some developing countries, with vastly improved communications and transport technology, finds upper incomes able to settle well beyond the metropolitan boundary with a growing quaternary sector following in their wake. Meanwhile, commerce and industry, consolidating and developing organizationally at national and international scales, disperses productive components across metropolitan areas and their regions. The result is the increasing interdependence of metropolises, and of their hinterlands. Nevertheless, the formal and informal sustenance and development of a large labor pyramid, with a highly specialized apex of skills, still constitutes for metropolis, with its critical population mass, its single most important and self-generating purpose vital to a nation's economic and cultural advancement.

City residents create the environments, real and perceived, that they inhabit: This allegation (taken from Bourne) may have validity at the small town level, but in metropolis residents have virtually no role in the creation of their high rental environment. Capital formation, concentrated in relatively few private financial institutions, "floats" across national and metropolitan borders seeking to optimize investment returns; while national government agencies invest directly in metropolis, or approve investment aid, according to their own criteria. Those that "call the shots" are increasingly divorced from the locale, responding to market factors and national "norms" insensitively attuned to the particular needs of a given metropolitan area.

Individual values find satisfactory responses more readily in metropolis:

There is truth to this assertion in that metropolis offers its "incorporated" residents a wide selection of goods and services to satisfy individual lifestyles; and a wide range of "off-the-peg" built commodities - houses, apartments, offices - built by third parties that in the mass constitute, in effect, a "metro-condominium" high-rise complex. "Metro-condominium", however, offers to community residents fewer opportunities for individual, extramural expression through design, color and landscaping adaptations than those enjoyed by the "marginal" squatter communities in the metropolis of developing countries. But it can be argued that the metropolitan communities of more advanced nations are too physically mobile to find a root need for value expression.

Metropolis is too unweildy to shape: This depends on our determination to do so, the skills available, the methods we use, and the strategic level we are content to operate at. If we define a "cone of opportunity" for setting limits on future growth options, and recognize within it metropolitan "inevitableities" - and attempt to capitalize on these - policy plans incorporating operational

strategies at the structure level that employ infrastructure design and investment programs, especially for transport facilities, as development spearheads, we stand some chance of molding the structure of metropolis to some purpose. This "carrot" approach requires funds, and its concomitant "stick", calls for legal enforcement resources, both difficult to come by in developing countries. Nevertheless, if we can inculcate in decision-makers' minds a systems approach to metropolitan problem-solving in favor of a reliance on independent, politically-oriented projects, we will take a positive step towards establishing metropolitan growth frameworks more conducive to providing structured opportunities for institutionalized and individual development initiatives, flexibly responsive to community needs, yet integrated into the multiplying metropolitan matrix.

References:

Larry S. Bourne, et al., Internal Structure of the City: Readings on Space and Environment. Oxford University Press, New York, 1971.

T.A. Broadbent, Planning and Profit in the Urban Economy. Methuen & Co. Ltd., London, 1977.