RISE OF LUXURY URBANITY AS A SYSTEM: SYDNEY CBD

Part one: 1950s-1970s

The New City / thenewcityjournal.net

John Muscat / August 2024

Contents

1. Introduction

In 1971, after a lifetime researching and explaining the Central Business District, American geographer Raymond Murphy gathered his knowledge together in *The Central Business District: A Study in Urban Geography*. Murphy defined the CBD as a region "draw[ing] its business from the whole urban area and from all … classes of people."[1] But that definition would soon be redundant.

Since at least the 1980s, central areas of many world cities like Sydney have evolved from classic industrial era CBDs into more exclusive socio-economic phenomena. The mid-twentieth century brought tensions between a growing suburban periphery driven by mass motorisation and a stagnating, post-industrial inner-city. After an interval at the crossroads, urban centres were refitted as global high-amenity enclaves. These former industrial-mercantile junctions, which distributed goods across whole regions, now radiate little more than inflated land and property prices. Some call this a "shift from the city as a site of production to one of consumption."[2] Disruptive events like financial crises and the recent Covid-19 pandemic shaped the course of this evolution.

Sydney's classic CBD morphology peaked in the 1970s and has been fading ever since. Occasionally, the emerging phenomenon rates a mention in academic literature and popular journalism, but there is still no consensus about its character or economic logic. Many seem reluctant to concede its discontinuity from the classic CBD, fearing to unmask a new stage in the concentration of privilege.

Politicians, property developers and academics tend to downplay the CBD's loss of functional centrality in Greater Sydney. Since the 1950s, the legacy CBD's relative share of metropolitan jobs has plummeted from almost a half to around a tenth, and in today's post-material conditions owes more to a disproportionate allocation of amenities than any unique productivity advantage. The pandemic forced some recognition of reality but notions of

---

[1] Murphy, Raymond E, *The Central Business District: A Study in Urban Geography* (1971), 2008 edition, Aldine Transaction, p 2

[2] Punter, John, "Urban design in central Sydney 1945-2002: Laissez-Faire and discretionary traditions in the accidental city", *Progress in Planning*, 63 (2005), p 16. The widely recognized distinction was first proposed by German sociologist Max Weber in *The City* (1921)

natural centrality persist. "The CBD is Dead, Long Live the Central Social District" proclaimed an article by former NSW Cities Minister Rob Stokes.[3] Suggestions that CBD-centric planning is bad for housing affordability, commuting or small business formation are generally disputed.

Image 1: George Street, Sydney CBD, 1964 and 2019

For a better perspective it is useful to contrast features of today's 'post-CBD' with elements of the classic CBD structure as identified by urban geographers in the literature.

While the spatial order of the old industrial-mercantile CBD was arranged around functions, the contemporary 'centre' is laid out for amenities. This new urban logic, called 'luxurification' by some scholars[4], takes form as an upward spiral of amenity enhancements, feeding off soaring peaks in the land value cycle, gentrification on a global scale and 'sustainable urbanism.' On very high-priced sites developers will typically maximise returns by

---

[3] Stokes, Rob, "The CBD Is Dead. Long Live the Central Social District", *Sydney Morning Herald*, 29 December 2022

[4] For example, Alessandro Busa in *The Creative Destruction of New York City: Engineering the City for the Elite*, 2017, Oxford University Press, p 89

substituting capital for land, building larger and taller structures. Scaling up amenities in the structures and on the surrounding ground plane can augment capital. Thus luxurification is sweeping through most features of the CBD landscape, reaching office, retail, leisure-hospitality and residential building stock as well as the streetscapes, transit facilities and public spaces in between. In the office sector, where the CBD vacancy rate is now at a 30-year high, this is commonly referred to as a "flight to quality".[5]

Drawing on concepts proposed by urban geographers, at least five internal trends have been converging to make Sydney's post-CBD:

1. Breakdown of the unipolar 'core-frame' structure made up of service and industrial functions arranged in concentric rings, and rise of multipolar high-amenity precincts, each resembling a walkable resort-style campus.

2. Spread of the upmarket 'primary retail core' as a general feature beyond the 'Peak Land Value Intersection' into other functional zones.

3. Decline of the downmarket 'secondary retail zone' in conjunction with gradual restrictions on motor vehicle access and confinement of entry to passenger rail corridors and bicycle paths.

4. Reshuffling of workspace across emerging precincts, inside and outside the traditional office core, offering amenities like harbour views, landscaped foreshores, green-rated buildings and revamped streetscapes around transit-hubs.

5. Penetration of residential development into the CBD, even the former retail and office cores, from the peripheral 'zone of transition'.

These will be considered over phases of Sydney CBD's evolution from the 1950s to present times. But first it is necessary to consider how urban geographers defined the classic industrial era Central Business District.

---

[5] Kwan, Campbell, "Firms behind falling Sydney office values", *Australian Financial Review*, 18 July 2024, p 27

2. Murphy and Vance on the classic CBD

Out of concern for the future of downtowns at a time of advancing post-war suburbanisation, there was a surge of interest in CBDs amongst American geographers during the 1950s. Researchers Raymond Murphy and James Vance, who developed the Central Business Index Method to identify CBD boundaries, were the most prominent along with their rivals Edgar Horwood and Ronald Boyce, famous for the Core-Frame Model of the CBD.

Using their early 1950s field work in nine mid-sized CBDs across the United States, Murphy and Vance published a series of seminal articles in the journal *Economic Geography* including "Delimiting the CBD" (1954)[1] and, together with statistician Bart Epstein, "Internal Structure of the CBD" (1955) [2]. "Interest in the district has been increasing rapidly in recent years," explains the 1954 article, owing to emerging problems of routing through traffic and providing parking space. Moreover, "business men, who have seen their large investments in the district threatened by the growth of outlying shopping centers, are striving mightily to maintain the supremacy of this central area."[3]

Image 2: Tulsa, Oklahoma, CBD, 1953 (*Murphy & Vance, 1954*)

---

[1] Murphy, Raymond E and Vance, J E, "Delimiting the CBD", *Economic Geography*, Vol 30, 1954, pp 189-222
[2] Murphy, Raymond E, Vance, J E and Epstein, B J, "Internal Structure of the CBD", *Economic Geography*, Vol 32, 1955, pp 21-46
[3] Murphy and Vance, 1954, op cit, p 189

Across the two articles, Murphy and Vance weighed up alternative ways of delimiting the CBD before settling on a preferred model. The 1954 article proposes three possible methods: "population distribution and related phenomena; valuation of land or of land and buildings; and land use." They consider the "population and related data" approach hamstrung by too many gaps in the data and insufficient without a land use map.

Image 3: Cincinnati, Ohio, CBD, 1950s (*The Enquirer*)

By contrast, land values, leaving out the complication of building values, "furnished a more promising basis for delimitation." Murphy and Vance explain:

> [We] experimented with a method that seems to be more broadly applicable. This involves the use of a system of index numbers. Thus the ... land value ... for the highest-valued lot was represented by the number 100; the value of each other lot was shown by the number corresponding to its percentage of the value of the peak value lot. The

line enclosing those lots with indexes of 5 or higher seemed best to represent the edge of the CBD.[4]

Earlier in the article they refer to "the [CBD] street intersection around which the average front-foot lot value is highest … this *peak land value intersection*, as it is here called, is likely to be the locality with the maximum pedestrian concentration, and not infrequently, the point of greatest vehicular congestion."[5] They add that "from this center, various measures of intensity ordinarily decline toward the edges of the [CBD]."[6]

The Land Value Method entails, essentially, identifying the Peak Land Value Intersection (PLVI) and tracing the values of lots or blocks spreading outwards in concentric circles until values decline to five percent of PLVI value. Lots at this value mark the outer boundary of the Central Business District (land values have risen more uniformly since the 1950s so this would be less meaningful today).

Image 4: Downtown Cincinnati, 1950s (*The Enquirer*)

Ultimately, however, Murphy and Vance feel that this technique fails to discriminate among land uses, which leads them to explore the Land Use Method. As a starting point, they set out to determine "what were and were not typical central business uses."[7] Amongst essential CBD functions, they list "retailing of goods and services for a profit and the performing of

---

[4] Ibid, p 198
[5] Ibid, p 190
[6] Ibid, p 190
[7] Ibid, p 203

various office functions."[8] Murphy and Vance observe that although these uses are found elsewhere in the city, "their area of maximum concentration is the CBD, where they are oriented around the peak land value intersection and *where they serve the city as a whole* [emphasis added]."[9]

Image 5: Grand Rapids, Michigan, CBD, 1960s (*Grand Rapids Public Library*)

On the other hand, wholesaling, factories, and residential units are not considered real CBD uses. Further, "absence of the normal profit motive excludes from the characteristic CBD list municipal and other governmental buildings and parks, churches and other religious establishments … public and other non-profit making schools."[10] Later, these exclusions came under criticism from writers like Horwood and Boyce, who maintain that this method of CBD measurement based on the intensity of only commercial or profit-making activities is subjective and arbitrary.

Having decided what are typical CBD uses, Murphy and Vance describe a mapping procedure for measuring the intensity of such uses in central city blocks around the PLVI. They call this land use approach the Central Business Index Method, which applies two measurements. The Central

---

[8] Ibid, p 203
[9] Ibid p 203
[10] Ibid 203

Business Height Index is obtained by dividing the total floor space area of all 'central business uses' in a block by the total ground floor area of the block. Secondly, the Central Business Intensity Index represents the percentage that the total floor space area of 'central business uses' in a block makes up of the total floor space at all levels in the block.

Without delving into technical detail, to qualify as CBD in character, a block must have a Central Business Height Index of 1 or more and a Central Business Intensity Index of 50 per cent or more. The indices were accompanied by certain rules stating, amongst other things, that a CBD block must in some way be contiguous with other CBD blocks.

When they came to write "Internal Structure of the CBD" in 1955, Murphy, Vance and Epstein settled on a fusion of the Land Value Method or "5 per cent line" and a developed Central Business Index Method. By this time, they apparently shifted to land value as the prime explanatory factor:

> There is the basic aspect, land values, which underlies the whole matter. And there is that most readily observable aspect, land use, which is, in considerable part, a city's adjustment to land values.[11]

Image 6: Sacramento, California, CBD, 1933 (*Underwood Archives*)

---

[11] Murphy, Vance and Epstein, op cit, 1955, p 21

The "5 per cent line" was used to pinpoint the PLVI and determine "eleven land value classes" made up of lots radiating away from the PLVI with successively declining values. The developed Central Business Index Method was applied to map the arrangement of land uses around the PLVI according to a threefold classification of business use types: retail, financial-and-office, and non-central (like manufacturing, wholesaling, and public facilities).

"In every case," write the authors with reference to their nine CBD case studies, "the peak value intersection is found to be located within a few hundred feet of the geographic center."[12] It was also found that "land values decrease rapidly at first as one leaves the peak intersection, but this decline becomes less and less rapid towards the edges of the District."[13]
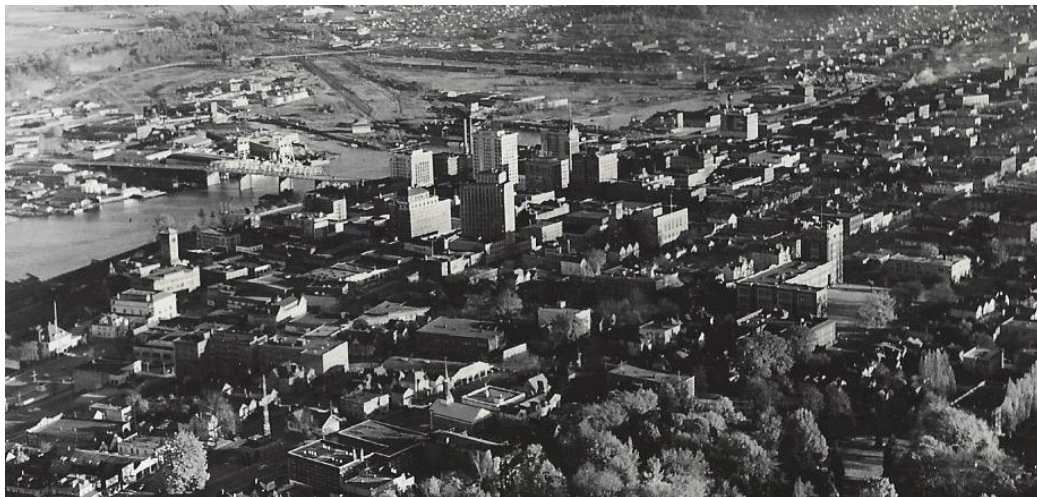

Image 7: Tacoma, Washington, CBD, 1950s

With these land value contours as background, they develop four concentric "walking-distance zones" to study the arrangement of land uses. Zone 1 encompasses 100 yards from the PLVI while Zones 2, 3 and 4 encompass 100-200 yards, 200-300 yards and 300-400 yards from the PLVI respectively (100 yards equates to 92 metres).[14]

The high concentration of Zone 1 "is reflected in the great number of people on the streets and in the high valuation placed upon the land."[15] Retail uses predominate, occupying more than half the space, followed by

---

[12] Ibid, p 24
[13] Ibid, p 24
[14] Ibid, p 26
[15] Ibid, p 27

the service-financial-office group. Non-central business uses occupy only twelve percent of the space. "The great relative importance of retail business uses in the zone is to be expected," explain the authors, "*since the location gives access to the maximum number of customers* [emphasis added]."[16]

Variety stores, particularly department stores, "have a tendency to be concentrated near the center of the CBD" and lead the proportion of space occupied in Zone 1. This is attributable to their economies of scale and high 'stock-turn velocity'. These are followed by general offices and then clothing stores, "often located near department stores in order to share the customers attracted by the larger stores."[17]

Image 8: Seattle, Washington, CBD, 1958 (*Seattle Municipal Archives 57682*)

On the other hand, types of retail that do "not justify the high costs of the central zone" like automotive and household goods stores are poorly represented. Also largely absent from Zone 1 were "service trades" such as personal and business services, as they "do not yield great enough returns to pay the costs of a very central location."[18] Just as scarce were hotels, "which require considerable space for effective operation [and are]

---

[16] Ibid, p 32
[17] Ibid, pp 33-34
[18] Ibid, p 34

handicapped by the congested traffic close to the center."[19] No residences, factories or wholesale establishments were found in the zone.

Image 9: Downtown Detroit, Michigan, late 1940s (*The Detroit News*)

Murphy, Vance and Epstein report that "the service-financial-office group reaches a maximum in Zone 2 and then declines outward", and yet still occupies more space in Zone 4 than in Zone 1.[20] More specifically, general offices have their largest representation in Zone 2, but headquarters offices and financial establishments – largely banks – are most important in Zone 3. "Ordinarily, headquarters offices have less need for centrality than general offices," they observe.[21]

Retail uses decline from 55.5 percent in Zone 1 to 33 percent in Zone 2 and 25 percent in Zone 4. Variety or department stores decline from 35 percent of space in Zone 1 to a trivial 4.5 percent in Zone 4. Non-central business

---

[19] Ibid, p 34
[20] Ibid, p 36
[21] Ibid, p 38

uses increase from 12 percent in Zone 1 to 23.5 percent in Zone 4, where residential and wholesale "attain their greatest relative importance."[22]

While land values drive these zonal variations, there is evidence of an additional "rough clustering of establishments, mutually dependent upon one another." For example, "the well-known tendency of department stores to locate near each other."[23] Each department store "is likely to have its coterie of smaller stores – clothing stores, drug stores, five-and-ten cent stores – located close at hand."[24] Not only do these businesses seek a location "where the pedestrian count is high," but they also profit "by being available to the customers attracted by the others."[25]
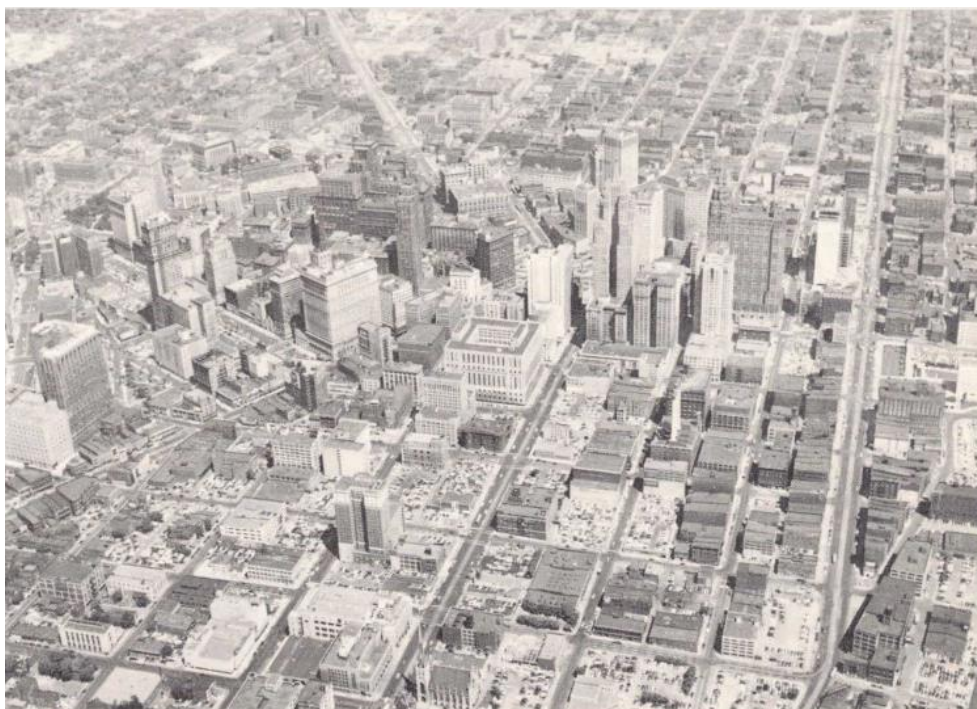

Image 10: Detroit, CBD, 1950s (*Horwood & Boyce, 1959*)

Turning to the CBD's vertical dimension, retail business uses usually predominate on the ground floor because "this is the level most accessible to customers." But departments stores mostly occupy two floors. Service-financial-office uses "dominate the uppers floors" and "most tall buildings are office buildings in which all of the space at higher levels is devoted to

---

[22] Ibid, p 37-38
[23] Ibid p 40
[24] Ibid, p 41
[25] Ibid, p 41

offices."[26] While "it might be thought that in [Zone 1] the tallest buildings would be concentrated … this is generally not the case." Even though "substantial buildings often occur around the peak value intersection, a little farther from this point even taller buildings are likely to be found."[27]

CBD development also shows a dynamic tendency to advance "along certain fronts" and retreat from others, forming "zones of assimilation" and "zones of discard." Typically located in the zone of assimilation are "specialty shops, automobile showrooms, drive-in banks, headquarters offices, professional offices and newer hotels."[28] The zone of discard hosts "low-grade establishments" like "pawn shops, family clothing stores, bars, low-grade restaurants, bus stations, cheap movies; and credit jewellery, clothing and furniture stores."[29]
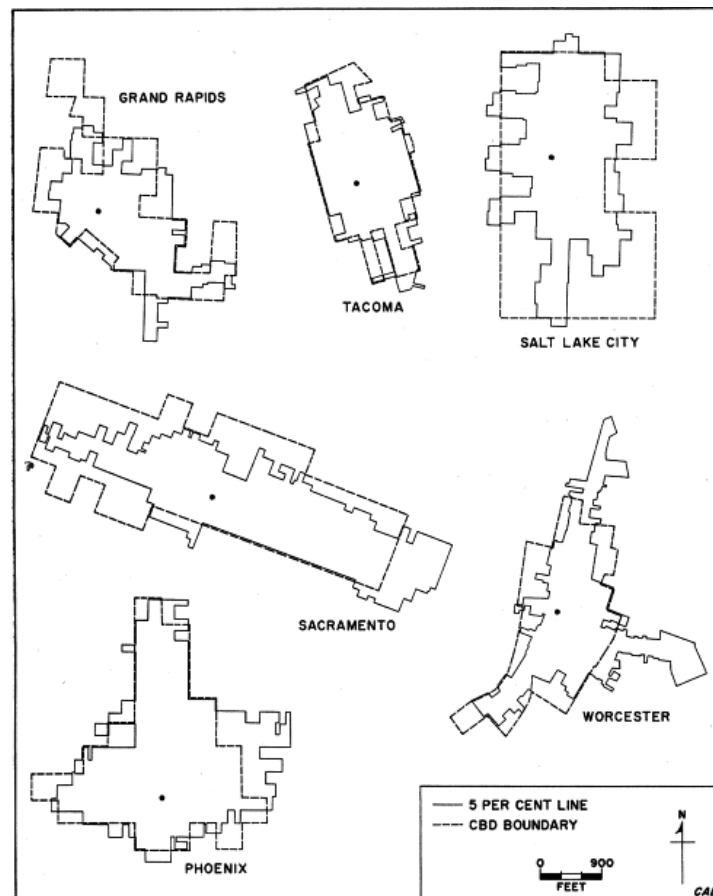

Figure 1: Examples of five per cent line and CBD boundary (*Murphy & Vance, 1955*)

---

[26] Ibid, p 40
[27] Ibid, p 44
[28] Ibid, p 42
[29] Ibid, p 42

Related to these zones, geographer Richard Preston used Murphy and Vance techniques in 1963 to elaborate a concept of the 'transition zone'.[30] "Peripheral to the central business district of the city there exists a transition zone", wrote Preston, distinguished by "the presence of numerous marginal operations."[31] It is "characterized by mixed commercial and non-commercial land uses, which are at once, fairly intensive and decidedly variable in quality."[32] Born out of the CBD's historic proximity to an inner industrial ring and associated transport and storage facilities, the zone's activities "often form cushions between the CBD and heavy industrial districts or large railroad yards."[33]

Since these various layers of activity revolve around the all-important peak intersection, *the PLVI system* is a reasonable shorthand label for the classic CBD as conceived by Murphy and Vance. The system assigned a place to different grades of activity around the most accessible point inside the CBD for people entering from far-flung parts of the whole metropolitan region. Their conception is commonly referred to as 'hard core' in the literature (although Murphy rejected that label) because they apply the label 'CBD' to a relatively constrained area which arbitrarily excludes the outer layer of so-called 'non-CBD uses' (Zone 4).

---

[30] Preston, Richard E, "The Zone in Transition: A Study of Urban Use Patterns", *Economic Geography*, Vol 42, 1966, Issue 3, pp 236-260
[31] Ibid, p 236
[32] Ibid, p 244
[33] Ibid, p 249

3. Horwood and Boyce on the classic CBD

The 'hard core' focus is a point of difference from the work of Horwood and Boyce, also urban geographers. In their book *Studies of the Central Business District and Urban Freeway Development* (1959)[1] they too consider various ways of delimiting the CBD: retail sales attraction, land values, daytime population, and functional classification. After surveying the CBD literature, they conclude that "no one method or combination of methods has enough reliability to constitute a complete general theory of central city spatial activity." But the functional classification approach "comes closest to providing a framework for research."[2]

Image 11: Baltimore, Maryland CBD, 1950s (*Horwood & Boyce, 1959*)

The Murphy and Vance Land Value Method is considered to have "merits" and does "shed some light on the extreme concentration of highly valued land."[3] However, the necessary data is not available in most cases. Horwood and Boyce would have been expected to look more favourably on the Central Business Index Method, since it comes under the preferred functional classification approach. Yet they reject it as arbitrary and weak

---

[1] Horwood, Edgar M and Boyce, Ronald R, *Studies of the Central Business District and Urban Freeway Development*, University of Washington Press, Seattle, 1959
[2] Ibid, p 8
[3] Ibid, p 5

for the purpose of differentiating the quality and productivity of competing land uses.

Their own contribution to the functional classification method is the well-known "core-frame concept." Horwood and Boyce analyse a range of historical and other contemporary research, surveys and studies identifying core and peripheral sub-regions in the make-up of central business areas. They then develop a method of delimiting these areas by distilling their general characteristics. These characteristics or 'properties', more refined than the broad commercial use classifications applied by Murphy and Vance, are presented in comparison tables.
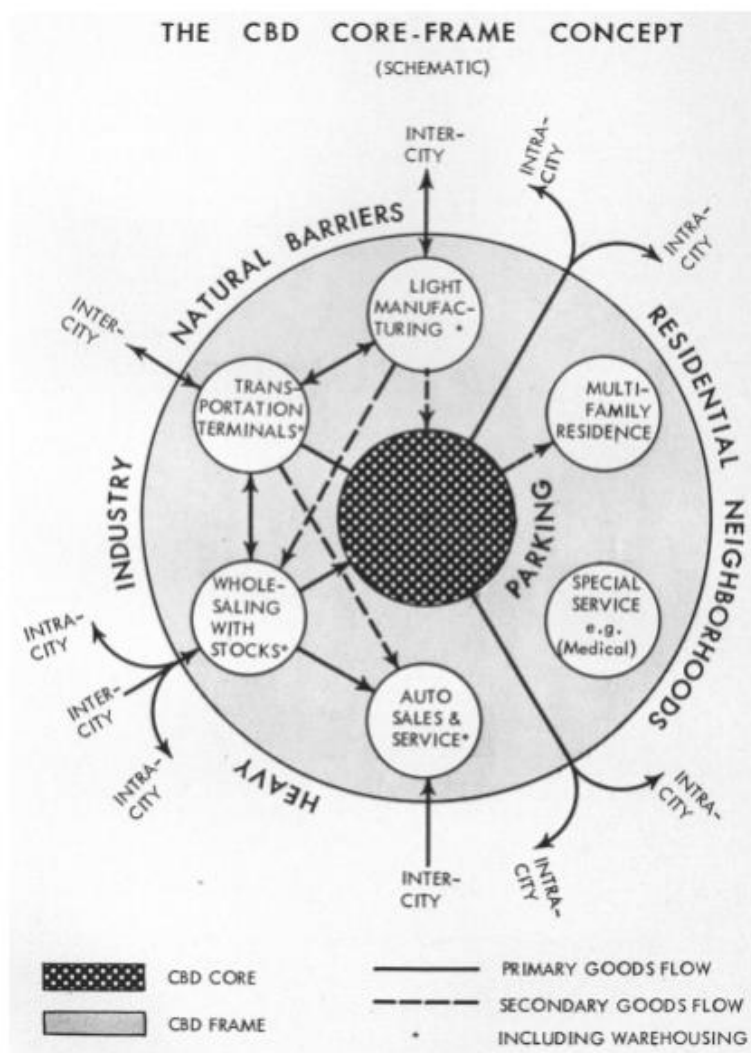

Figure 2: The CBD Core-Frame Concept (*Horwood & Boyce, 1959*)

The procedure for mapping land uses receives only scant attention, however, described in passing as "unit-areas analysis, presumably blocks

or portions thereof." There is no "recourse to numerical parameters of measurement such as the indices used by Murphy and Vance."[4]

Below are the tables presenting general properties of core and frame, with their typical land uses appearing in the third column:

Table 1

GENERAL PROPERTIES OF THE CBD CORE[5]

Property	Definition	General Characteristics
Intensive land use	Area of most intensive land use and highest concentration of social and economic activities within metropolitan complex	Multistoried buildings Highest retail productivity per unit ground area Land use characterized by offices, retail sales, consumer services, hotels, theaters, and banks
Extended vertical scale	Area of highest buildings within metropolitan complex	Easily distinguishable by aerial observation Elevator personnel linkages Grows vertically, rather than horizontally
Limited horizontal scale	Horizontal dimensions limited by walking distance scale	Greatest horizontal dimension rarely more than 1 mile Geared to walking scale
Limited horizontal change	Horizontal movement minor and not significantly affected by metropolitan population distribution	Very gradual horizontal change Zones of assimilation and discard limited to a few blocks over long periods of time
Concentrated daytime population	Area of greatest concentration of daytime population within metropolitan complex	Location of highest concentration of foot traffic Absence of permanent residential population
Focus of intracity mass transit	Single area of convergence of city mass transit system	Major mass transit interchange location for entire city

---

[4] Ibid, p 14
[5] Ibid, p 16

| Center of specialized functions | Focus of headquarters offices for business, government, and industrial activities | Extensive use of office space for executive and policy making functions
Center of specialized professional and business services |
| Internally conditioned boundaries | Excluding natural barriers, CBD boundaries confined only by pedestrian scale of distance | Pedestrian and personnel linkages between establishments govern horizontal expansion
Dependency on mass transit inhibits lateral expansion |

Table 2

GENERAL PROPERTIES OF THE CBD FRAME[6]

Property	Definition	General Characteristics
Semi-intensive land use	Area of most intensive non-retail land use outside CBD core	Building height geared to walk-up scale Site only partially built on
Prominent functional subregions	Area of observable nodes of land utilization surrounding CBD core	Subfoci characterized mainly by wholesaling with stocks, warehousing, off-street parking, automobile sales and services, multifamily dwellings, intercity transportation terminals and facilities, light manufacturing, and some institutional uses
Extended horizontal scale	Horizontal scale geared to accommodation of motor vehicles and to handling of goods	Most establishment have off-street parking and docking facilities Movements between establishments vehicular
Unlinked functional subregions	Activity nodes essentially linked to areas outside CBD frame, except transportation terminals	Important establishments Linkages to CBD core (e.g., intercity transportation terminals, warehousing) and to outlying urban

[6] Ibid, p 20

		regions (e.g., wholesale distribution to suburban shopping areas and to service industries)
Externally conditioned boundaries	Boundaries affected by natural barriers and presence of large homogenous areas with distinguishable internal linkages (e.g., residential areas with schools, shopping, and community facilities)	Commercial uses generally limited to flat land Growth tends to extend into areas of dilapidated housing CBD frame uses fill in interstices of central focus of highway and rail transportation routes.

Despite the differences of approach, many of these CBD properties display points of similarity with the findings of Murphy and Vance. In a 1961 review of their book in *Economic Geography*, Murphy maintains that the ideas of Horwood and Boyce "are nothing very new."[7]

Image 12: Seattle, CBD, 1950s (*Horwood & Boyce, 1959*)

---

[7] *Economic Geography*, Vol 37, 1961, p 186-187

The Horwood and Boyce core is generally comparable to walking-distance Zones 1 and 2 proposed by Murphy and Vance. It is the "area of most intensive land use and highest concentration of social and economic activities within the metropolitan complex." The core is "the area of highest buildings," with "horizontal dimensions limited by walking distance scale." Further, it is the "location of highest concentration of foot traffic" and "land use is characterized by offices, retail sales, consumer services, hotels." There is an "absence of permanent residential population" and reference is made to "zones of assimilation and discard limited to a few blocks."

Characteristics of the frame seem, moreover, roughly comparable to walking-distance Zones 3 and 4. These include "area of most intensive non-retail land use outside the CBD core" and a "horizontal scale geared to accommodation of motor vehicles and to handling goods." The most typical uses are "wholesaling with stocks, warehousing, off-street parking, automobile sales and services, multifamily dwellings, intercity transportation terminals and facilities, light manufacturing, and some institutional uses." A few of these uses are described as "linkages to the CBD core" and "complementary functions" performed for the core.

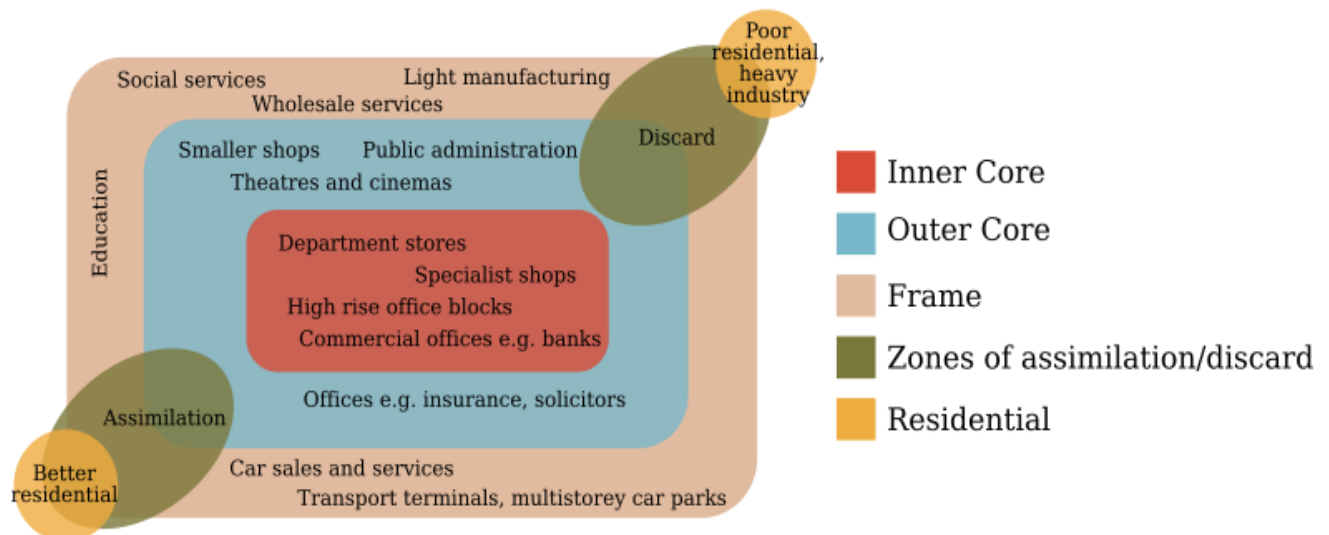**Figure 2: Core Frame Model (*Wikipedia*)**

Horwood and Boyce stress that despite their different properties, core and frame "are really one unit,"[8] even though distinct and independent, while in

---

[8] Ibid, p 21

his review Murphy rejects the claim that he and Vance "were concerned only with delimiting the 'hard core' of the CBD." Their respective observations about CBD structure may ultimately be consistent, regardless of contrasting methods, concepts, or terminology. Some of the disagreements just come down to size and dimensions, since Murphy and Vance studied mid-level CBDs while Horwood and Boyce reviewed top-tier centres as well.

Another Horwood and Boyce table setting out "primary differences between CBD core and CBD frame" could apply to distinctions between walking-distance Zones 1-2 and Zones 3-4:

Table 3

PRIMARY DIFFERENCES BETWEEN CBD CORE AND CBD FRAME[9]

Factor	Primary Characteristics	
	In CBD Core	In CBD Frame
Land utilization	Intensive	Semi-intensive
Site utilization	Fully built on	Partially built on
Building types	Similar	Dissimilar
Growth	Upward	Outward
Business linkages	Internal	External
Parking space	Very limited	Generally adequate
Transportation mode	Pedestrian	Vehicular
Transportation foci	Intracity	Intercity
Boundary determinants	Internal factors	External factors

[9] Ibid, p 22

4. Rannells on the classic CBD

While Murphy, Vance, Horwood and Boyce were more prominent, no account of 1950s American CBD studies can be complete without John Rannells, author of the widely cited *The Core of the City: A Pilot Study of Changing Land Uses in Central Business Districts* (1956).[1] There is little to suggest Rannells was influenced by his better-known contemporaries while developing his own 'functional classification' approach to CBD delimitation.

For Rannells the key lies in drilling down to the level of individual business establishments and uncovering "how they function and interact with each other."[2] While Murphy and Vance attributed the location of businesses in large part to land values, Rannells takes an "activities approach" focused on patterns of relationships between activities in "systems of action." Such systems operate within "processes" like the availability of buildings and urban infrastructure. "The entire complex of urban activities," he writes, "may thus be described by tracing these manifold connections or linkages between establishments."[3] Each new establishment is "a unit in the chains of action" and "tends to locate where the forces of its expected linkages will be in equilibrium."[4]

Rannells developed a technique combining city block survey data with a fine-grid map of the CBD area. This is used to work out a 'center of gravity', 'density profile' and 'radius of dispersion' for establishments divided into five 'business groups', retailing, business services, consumer services, manufacturing and wholesaling. Patterns of combinations in the locational relationships between these groups were then identified. Rannells applied this type of analysis to the case of Philadelphia, using data from the *Philadelphia Central District Study* (1950).

As a rule, he found that "activities which require contact with people tend to cluster in areas which have the best mass transit facilities or where there is heavy pedestrian traffic, while activities characterized by handling of goods in bulk tend to locate where they have access to heavy

---

[1] Rannells, John, *The Core of the City: A Pilot Study of Changing Land Uses in Central Business Districts*, Columbia University Press, 1956, reprinted by Greenwood Press, Westport, Connecticut, 1974
[2] Ibid, p 3
[3] Ibid, p 19
[4] Ibid, p 20

transportation facilities."[5] Non-goods-handling or "persons-assembling" activities are retailing (R), business services (B) and consumer services (C) whereas the goods-handling activities are manufacturing (M) and wholesaling (W). Within the non-goods-handling grouping, for instance, a sub-linkage between retailing and consumer services is noticeable, probably because they both need access to high volumes of pedestrian traffic.

Image 13: Philadelphia, CBD, 1950s (*Horwood & Boyce, 1959*)

The geographic spread of these groups diverges, so that within Philadelphia's CBD "the goods area is roughly that occupied by ... manufacturing: east of Broad and north of Market [Streets] ... the non-goods area includes the old and new business centers, extending from Fourth to Nineteenth [Streets], south of Market."[6] In the "goods area" the M-W combination is by far the most numerous followed by M-R and W-R. The C-R combination is strongest in the "non-goods area" followed by C-B and B-R.[7]

---

[5] Ibid, p 148
[6] Ibid, p 159
[7] Ibid, p 160

Here again, notwithstanding differences in approach, points of similarity with the work of Murphy, Vance, Horwood and Boyce can be found. Fundamental to reaching equilibrium is "a process in which the space needs of users are somehow matched by the utility of the buildings."[8] Rannells acknowledges the importance in this of land value or rent per unit of space: "the economic value of a certain style of building, located near certain groups of related establishments, is something which may command high rents compared with an identical building less favorably located."[9]

He describes the CBD in familiar terms as the city's "greatest concentration of buildings and of commerce, its most congested area of pedestrian and vehicular traffic" with "a concentration of activities not found elsewhere, especially those central offices and banks, retail stores, theaters, and the like which serve the entire metropolitan area."[10] This resembles the Horwood and Boyce core. But Rannells also hints at something like an integrated core-frame idea:

> The [CBD] area should certainly not be limited to the main concentration of high-rent commercial buildings. On the complete description of central city activities, these merely provide accommodation for selected groups of establishments whose operations could scarcely be understood without studying their relationships with other kinds of establishments in the central district.[11]

---

[8] Ibid, p 43
[9] Ibid, p 45
[10] Ibid, p 51
[11] Ibid, p 52

5. The CBD in transition

Despite their different methods, these researchers arrived at a comparable CBD structure. They identified a dense concentration of blocks at the centre, distinguished by upscale retail interspersed with related service businesses, operating side-by-side with surrounding blocks which were generally less intense and more downscale in character. The latter hosted some of the maritime and land transportation terminals and storage facilities which connected the dominant centre with the broader metropolitan region. Each of these components formed part of an integrated functional division of labour. Under this PLVI-Core-Frame system, CBD functions catered to workers and shoppers of diverse occupational and social backgrounds, using all modes of mass transport.

Image 14: Chicago rail yards, 1954 (*The LIFE picture collection*)

By the 1950s, however, central primacy was under challenge from the momentum of suburban growth. The wave of CBD research was undertaken mostly to explore suitable responses. Murphy and Vance called for specialisation of functions, arguing "there is no excuse for Non-central Business uses of land being continued in the CBD … this precious land should be used as efficiently as possible for purposes that will intensify and

stimulate greater prosperity in the district."[1] Horwood and Boyce found "that as a city becomes larger, a greater percentage of retail sales occurs in outlying shopping areas." Their answer was more transport access capacity, both rail and an extended freeway system. "[T]he inner-distributor loop is an important innovation in highway development," they thought.[2] Rannells avoided prescriptions but observed that "Philadelphia is at present executing a comprehensive construction program of expressways which will by-pass the congested street system and serve to bring vehicular traffic into the city center and also will give through traffic easy passage."[3]

Shirley Weiss of the University of North Carolina detected signs of an alternative way forward. In her influential review of the CBD literature, *The Central Business District in Transition* (1965)[4], Weiss foreshadowed the coming importance of street amenities:

> Ideas for pedestrian-way business districts have spread ... This movement would appear to be only the beginning of a changing concept of the role of the CBD, supported by new demands for services and facilities downtown by a growing working force, increased levels of income, and a changing composition of the urban population.[5]

Similar ideas were taken up in the 1970s by the prominent Sydney planning consultant George Clarke, as we will see in Chapter 12. Over coming decades, specialisation of functions, improved transport access and, notably, amenity upgrades would all feature in the CBD's struggle for survival.

---

[1] Murphy and Vance, op cit, 1955, p 46

[2] Horwood and Boyce, op cit, p 104

[3] Rannells, op cit, p 67

[4] Weiss, Shirley F, *The Central Business District In Transition: methodological Approaches to CBF Analysis and Forecasting Future Space Requirements*, Research Paper No.1, City and Regional Planning Studies, Department of City and Regional Planning, University of North Carolina, Chapel Hill NC, 1965

[5] Ibid, p 36

6. Scott on Sydney's classic CBD
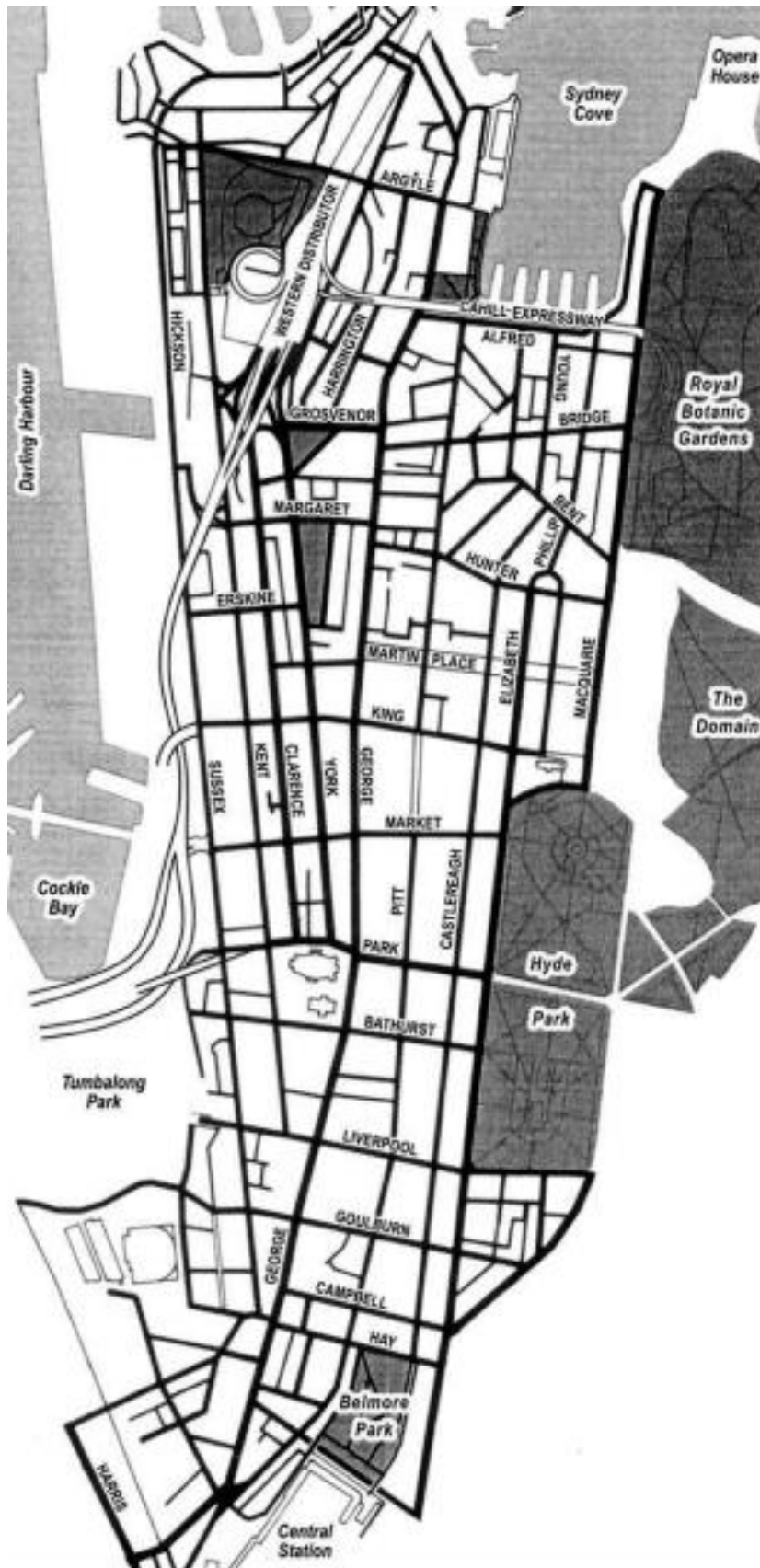
Map 1: Sydney CBD street map (*Punter, 2005*)

Geographer Peter Scott of the University of Tasmania conducted field work on the structure of Australian state capital city CBDs over 1956-1957 and published his findings in *Economic Geography*, "The Australian CBD" (1959)[1]. Echoing American counterparts, Scott observed that "Australia's leading cities, in common with most other Western metropolitan centers, have suffered increasingly from traffic congestion and suburban competition in retail trade."[2] With this in mind, he set out to survey and delimit Australia's CBDs "by applying the Central Business Index Method advanced by Murphy and Vance."[3]

Image 15: Sydney CBD looking from the north, late 1940s (*State Library NSW*)

Scott recites some major aspects of central Sydney's distinct topography:

> Sydney's CBD, in sharp contrast to Melbourne's, is fairly rigidly circumscribed by barriers to outward expansion. Accordingly, it occupies a smaller surface area, but has greater vertical development, more sharply differentiated land values, and suffers more from suburban competition. Sydney's traffic problems are further aggravated by its narrow streets, which are much narrower than the

---

[1] Scott, Peter, "The Australian CBD", *Economic Geography*, Volume 35, Issue 4 (1959)
[2] Ibid, p 290
[3] Ibid, p 291

main streets of Melbourne ... Suburban competition in Sydney is also favored by the location of the CBD; in none of the other capital cities ... is the CBD so far off center.[4]

Other writers have also stressed the importance of topographical features in Sydney CBD's development. RTM Whipple of the Department of Town and Country Planning at the University of Sydney, a decades-long analyst of Sydney CBD spatial economics since the 1950s, wrote "that its growth is constrained horizontally by Sydney Cove to the North, Darling Harbour to the West, Hyde Park and the Botanical Gardens along the whole of its eastern boundary and central railway and goods yard to its South. It is a very compact area."[5] Architect Darrel Conybeare points out that "Sydney's entire CBD centre fits neatly into a space equivalent in size to Central Park, New York."[6]

According to John Punter, an urban design academic at Cardiff University, Sydney CBD

> is some six square kilometres in size ... only four kilometres north to south and 800 metres at its widest – essentially a peninsula protruding into Sydney Harbour ... At its widest it only accommodates 10 mainly narrow north-south streets, and there are a similar number of cross streets creating long, thin city blocks. These were originally occupied by building lots with about 20-metre frontages.[7]

In a more elaborate account, Punter wrote the CBD

> is essentially a wedge-shaped peninsula protruding into Sydney Harbour ... At its widest built-up area only accommodates ten quite narrow north-south streets, and there are a similar number of cross streets creating long narrow city blocks and an irregular grid. There is no street hierarchy and most streets are about 40 metres wide measured from opposing property boundaries ... Central Sydney is a

[4] Ibid, pp 291-292

[5] Whipple, RTM, "relationship between land values and uses in Sydney's central area", *Journal of property Finance*, Vol 6 No 4, 1995, pp 65-67

[6] Conybeare, Daniel, "Sydney - A Unique Place: Reinforcing the City's Image & Identity", *Urban Design Quarterly,* July 1991, p 16

[7] Punter, John, "From the ill-mannered to the iconic: Design regulation in central Sydney 1947-2002", *Town Planning Review*, 75(4) 2004, pp 406-408

very constricted area with a complex pattern of blocks and property boundaries placing a premium on site amalgamation for redevelopment. It has a street plan that is hardly suitable for intense development beyond a floor space ratio (FSR) of about 6:1, though it has had to accommodate many buildings two and a half times that density.[8]
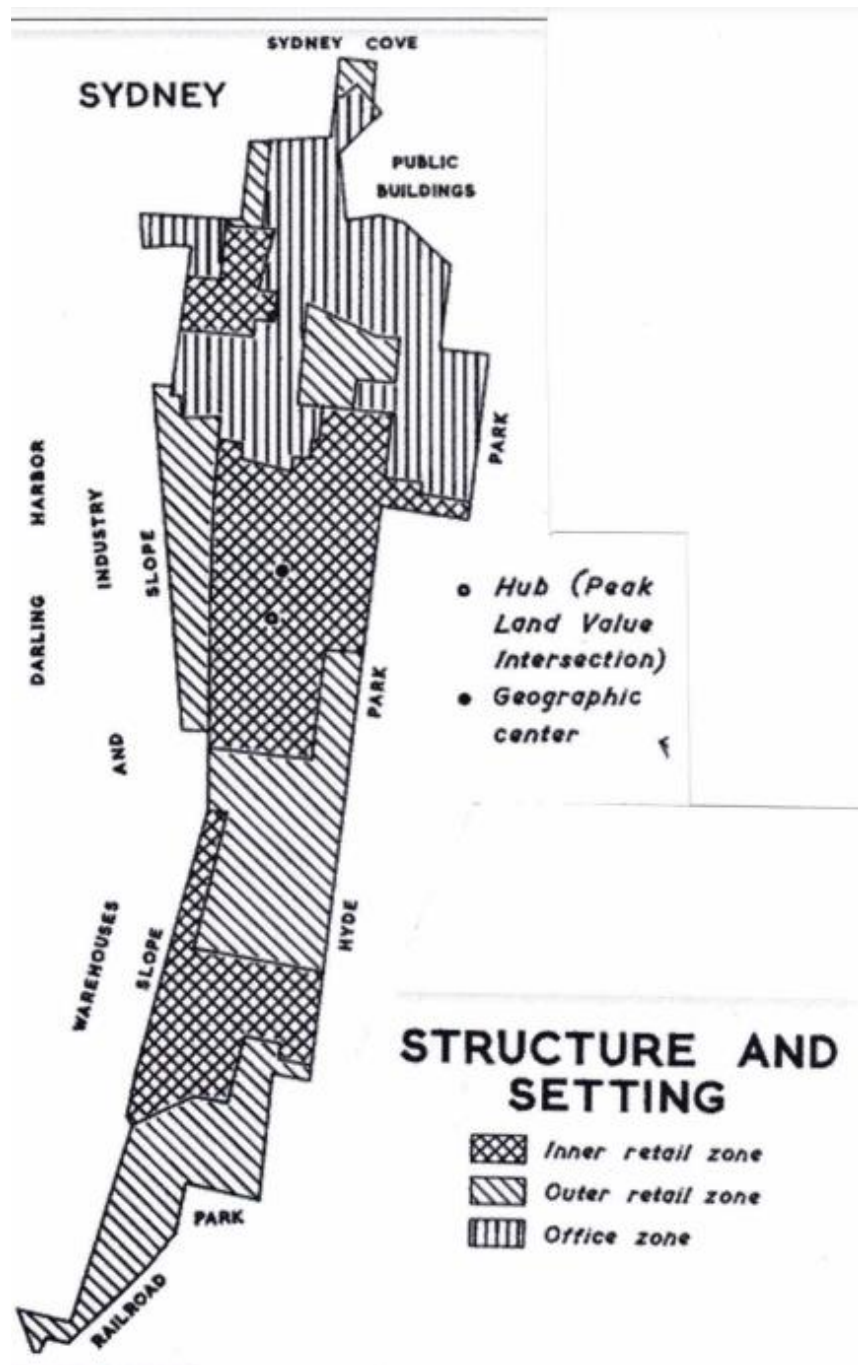
Map 2: Map of Sydney CBD zonal structure (*Scott, 1959*)

[8] Punter, John, op cit, 2005, p 20

Shaped by their own topography, finds Scott, each Australian CBD "has a distinctive zonal structure comprising not only separate retail and office districts but also inner and outer retail zones."[9] As in the United States, the inner retail zones tend to be compact and occupied by stores "demanding a central location." Typically, they are a "strongly nucleated group of department, variety, and women's clothing stores." Moreover "both Sydney and Adelaide have secondary inner zones, mostly of low-grade stores."[10] Apparently Australian CBDs, especially Sydney, displayed even more social class diversity in the character of their functions than American CBDs.

Scott produces a map of Sydney's CBD's zonal structure (**Map 2**) which does not identify the street boundaries by name.[11] But it appears to show an "inner retail zone" bounded by Martin Place (north), Elizabeth Street (east), York Street (west) and Park Street (south). North of Martin Place there is a minor "outer retail zone" enclosed by Hunter, George and Elizabeth Streets. Surrounding this is the "office zone" stretching eastward to Macquarie Street, westward to upper Clarence Street and northward to Circular Quay/Sydney Cove.

Another outer retail zone appears south of Park Street to Liverpool Street and west of York Street to lower Clarence Street. Stretching south from Liverpool Street down to around Hay Street at the far southern tip of the CBD, there is a minor inner retail zone, apparently related to the group of nineteenth-century built department stores oriented to Central Railway Station (distinct from the more northern underground rail loop opened in and after the 1920s). The residual southern portion of the CBD to Railway Square is more outer retail zone.

Turning to the office zone or office quarter, where it "abut[s] directly onto the inner [retail] zones, as in Sydney, Perth and Hobart, the line of demarcation tends to be particularly rigid."[12] Scott observes that "the location of the office district relative to the component retail zones has an important bearing on how near the peak land value intersection (hereinafter called the hub) approaches the geographic centre."[13] In the
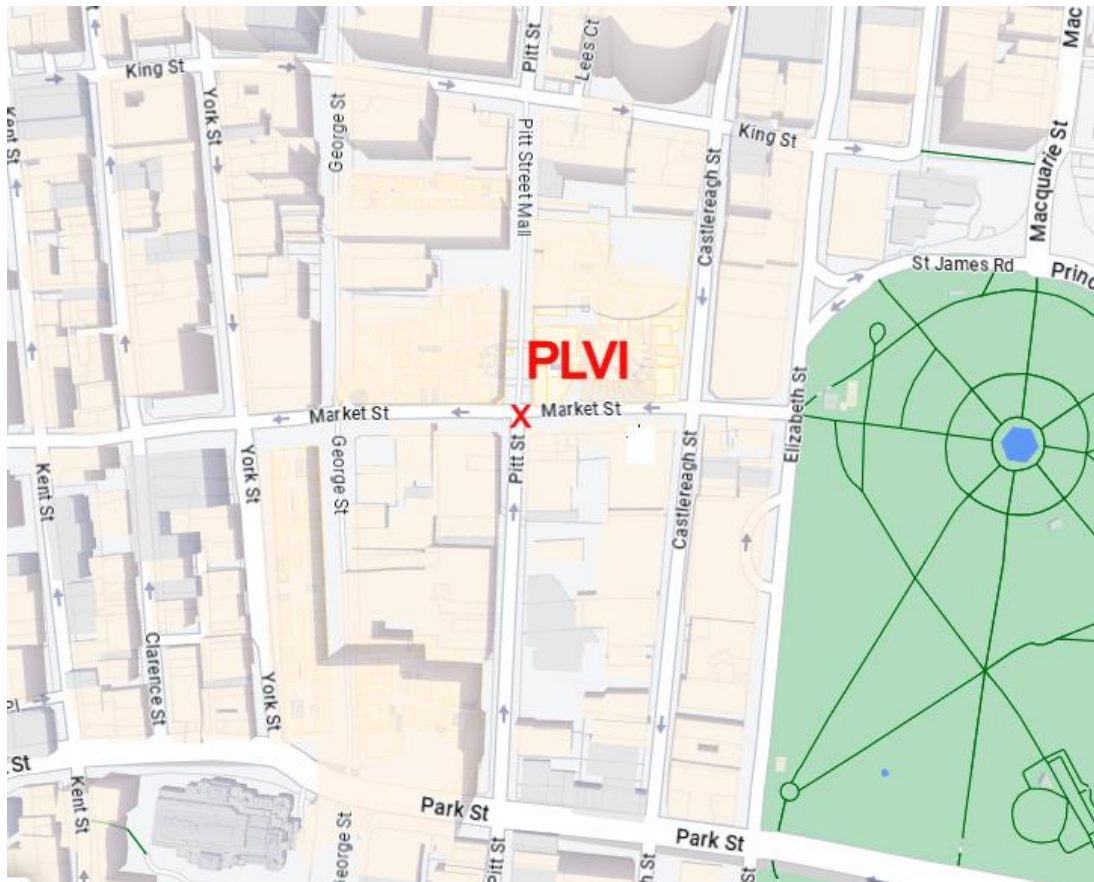
---

9 Scott, op cit, p 292
10 Ibid, p 293
11 Ibid, p 292
12 Ibid, p 294
13 Ibid

case of Sydney, "the location of the office quarter ... has helped to pivot the CBD not far from the hub [PLVI]."[14]


Map 3: Sydney's classic CBD Peak Land Value Intersection (PLVI)

In Map 2 and another map illustrating his discussion of the inner retail zone, Scott locates Sydney's PLVI at the intersection of Pitt (north-south) and Market (east-west) Streets. According to Norman Edwards' account of the CBD's genesis from 1788 to 1856, that locality's commercial importance can be traced to Governor Macquarie's relocation of the public markets there in 1811.[15] This intensified during Sydney's growth as a commercial entrepot. The colony's "central business axis" expanded southward from the docks of Sydney Cove along a narrow corridor straddling George Street, the town's "spine" or major route from north to south. Market Street intersects with George Steet one block westward from Pitt Street.

---

[14] Ibid
[15] Edwards, Norman, "The Genesis of the Sydney Central Business District 1788-1856" in Kelly, Max (ed), *Nineteenth Century Sydney: Essays in Urban History*, Sydney University Press in association with Sydney History Group, 1978, p 39

In the twentieth century the PLVI's status was reinforced by new transport infrastructure. The world's first electric swing-span bridge, Pyrmont Bridge, over Darling Harbour (1902) became a major traffic thoroughfare from the west leading into Market Street, "emptying travellers from the western suburbs" into the CBD[16]. Stations of the City Circle underground rail loop included St James (1926) facing Market Street on Elizabeth Street two blocks east of the PLVI, and Museum (1926) on the corner of Elizabeth and Liverpool Streets. Other City Circle stations were made possible by the Harbour Bridge, Wynyard (1932), Town Hall (1932) and later Circular Quay (1956). William Street, a major traffic thoroughfare from the eastern suburbs, enters the CBD a block south of St James.
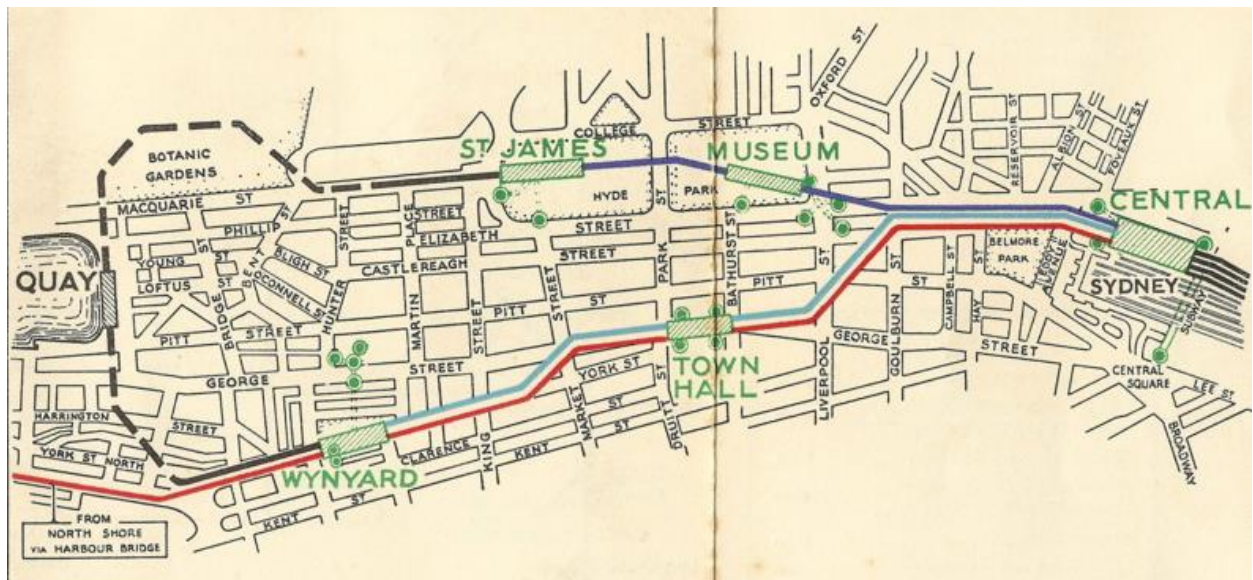
Map 4: Sydney Underground Railway Map (*NSW Commissioner for Transport, 1939*)

Scott's term for the department store nucleus of the inner retail zone is "the retail node." Department stores generally catered to "the middle and higher income classes or the popular middle classes" and occupy central sites.[17] By comparison, Sydney's "lower income level stores … lie some distance south of the hub [PLVI]."[18] More of the higher income stores specialised in clothing accessories while more of the popular stores sold home furnishings. "Each of the other capital cities [besides Adelaide] has a central

---

[16] McArthur, Ellen, "Towards a Theory of Retail Evolution: An Australian History of Retailing in the Early Twentieth Century", Thesis for Doctor of Philosophy, University of Technology Sydney, 2005, p 51
[17] Scott, op cit, p 295
[18] Ibid

block containing two or three [department] stores," writes Scott, "while the remaining blocks with department stores have … only one store apiece."[19]

In Sydney the single block with more than one department store had at least four. Farmers, McCathies', Hordern Brothers and E Way & Co were on the block bounded by Market, Pitt, King and George Streets, that is the north-west quadrant of the PLVI. David Jones – enjoying "the widest appeal of any Sydney store" – occupied a block fronting Market Street in the south-east quadrant of the PLVI. Gowings was located on the corner of George and Market Streets, in the south-west quadrant of the PLVI.

Image 16: Intersection of Pitt and Markets Streets (PLVI), Sydney, 1933-42 (*State Library NSW*)

As urban historian Peter Spearitt points out, the Central Station oriented department stores south of the retail node "found it hard to compete when Farmers (1926), David Jones (1927), and Gowings (1927) opened new stores in the centre of town along the Market Street axis, handy to the new city railway stations."[20] Forced to rely on their mail order service or suburban branches, stranded stores beyond the PLVI eventually vacated

---

[19] Ibid, p 298
[20] Spearritt, Peter, *Sydney's Century: A History*, UNSW Press, Sydney, 2000, p 213

their CBD sites, including Anthony Hordern (1973), Mark Foys (1980) and Grace Brothers (1992). Early in the twentieth century, Australian department stores "adopted a range of innovations to break down nineteenth-century barriers of income and social class"[21] and into the 1970s these non-central stores still had a working-class clientele.
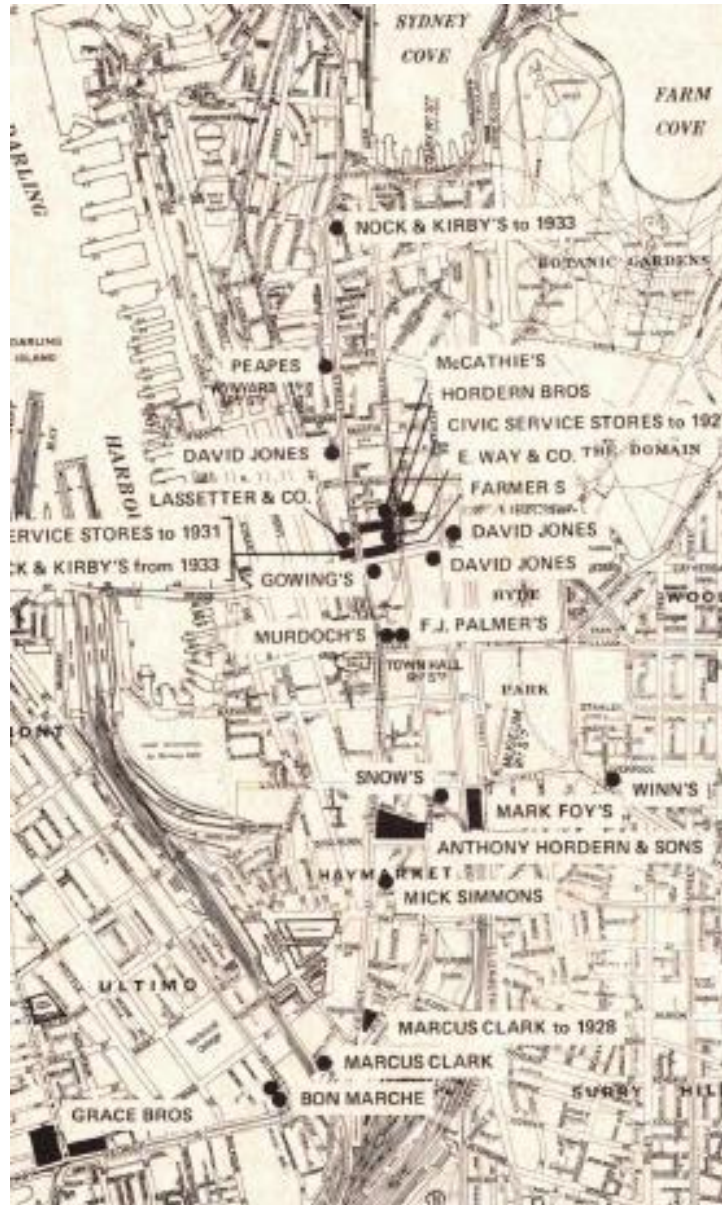
Map 5: Sydney CBD department stores between the wars (*Wolfers, 1980*)

Howard Wolfers writes that between the wars, Sydney CBD stores arranged themselves to take advantage of the social class diversity of surrounding localities at the time. Some stores

---

[21] McArthur, op cit, p 59

situated away from the [CBD] centre, attempted to attract both high and low income earners, and this was reflected in the type and quality of the merchandise they sold. They were so located as to take trade from people in the factories and such inner city [working class] residential areas as Woolloomooloo, Surry Hills, Paddington, Glebe, Darlington and Redfern which were within walking distance of either the George Street South or Oxford Street stores. The stores in the central city area close to the financial district attracted a greater proportion of white collar workers and high income earners; and the tastes and income of these groups encouraged a greater concentration, in comparison with other areas, of the 'top class' stores, such as Farmer and Company, David Jones and Peapes.[22]

These arrangements probably lasted into the early 1970s. Scott thought the pattern of pedestrian flows shaped a city's retail node. "Thus in Sydney," he writes, "where the inner [retail] zone is served mainly by four underground stations, the [retail] node is remarkably central to the distribution of mean points."[23] This refers to points central in the location pattern of each type of store. Scott distinguishes between this retail node dominated by department stores and parts of the inner retail zone where other grades of store cluster. For example, "all variety stores of the Woolworths type occupy key positions," typically between department stores or near traffic terminals or both. "Three out of eight variety stores in Sydney are along Pitt Street north of the hub."[24]

Of inner retail zone stores in general, there are "three main clusters distinguishable by their quality."[25] Major concentrations of "medium-grade stores" are found near the node or PLVI, a secondary cluster of "high-grade stores" is oriented to professional offices or the office zone, and "low-grade stores" operate amongst the department stores "serving the popular trade."[26] Non-specialist women's wear shops "occupy peripheral main-street sites in all cities." While those specialising in outerwear or

[22] Wolfers, Howard, "The big stores between the wars" in Roe, Jill (ed) *Twentieth Century Sydney: Studies in urban & social history*, Hale & Ironmonger in association with The Sydney History Group, 1980, pp 28-30
[23] Scott, op cit, p 299
[24] Ibid
[25] Ibid
[26] Ibid

underwear are generally nearer the node, they "typify the low-grade quarter of Sydney."

Scott describes all the above as "primary inner retail elements." By element he appears to mean a store type. In contrast, "the major secondary elements of the inner retail zone, in sequence outward from the node, are jewellers, florists, chemists, food stores, coffee lounges, men's clothiers, and gift stores."[27] Minor secondary elements include camera stores, outlets for dress materials, beauty parlours, photo studios, wine saloons, and art and music stores.

Image 17: Looking west into Market Street, Sydney CBD, 1950s (*State Library NSW*)

In larger CBDs like Sydney, jewellers are widely dispersed, but "the higher-grade stores tend to cluster in a single street – Castlereagh [Street]."[28] Chemists are dispersed along main pedestrian routes, so that although they predominate in the inner zone, they locate in parts of the outer zone near station approaches and "certain streets may also cater primarily for office

___

[27] Ibid, p 302
[28] Ibid

workers – Hunter [Street] in Sydney."[29] Men's clothing stores tend be found on main-streets marginal to the inner zone, especially those, again, leading from the office zones, in a linear pattern "or clusters, as southwest of the hub in Sydney."

The "outer retail zone" also has primary and secondary elements, and each of these has major and minor components.

There are three major primary elements, activities which require substantial floor space like furniture and hardware stores and automobile showrooms. "Since furniture is normally bought on special shopping expeditions," notes Scott, they "benefit from clustering … In Sydney the main cluster lies south of the node, well within the CBD."[30] While hardware stores in the larger cities had been remote from the PLVI, Scott notes that "in recent years one large Sydney establishment has moved successfully from the northern margins of the CBD to within 300 yards of the node [the Nock and Kirby store]."[31] On hardware stores, he adds:

> Hardware, like furniture, is usually bought on special shopping expeditions, so that their outlets tend to show similar distributions. In Sydney the correspondence is particularly strong, for one-half of both types of store have congregated around the Pitt-Bathurst intersection. But, significantly, Sydney also has some important hardware stores in George Street, where they cater especially for lunch-time purchases by office workers. [32]

While American automobile showrooms were mainly located outside CBDs, they could be found in peripheral areas of larger Australian CBDs like the outer retail zone. Scott observes that these establishments were usually "farther from the node than … any other major element."[33]

Major secondary elements of the outer retail zone "follow the outward sequence of shoe repair depots, milk bars, outlets for electrical goods, cafés, and stationers."[34] Scott suggests there is more heterogeneity amongst these

---

[29] Ibid, p 303
[30] Ibid, p 304
[31] Ibid, p 305
[32] Ibid
[33] Ibid, p 306
[34] Ibid

activities, and "departures from the norm are more numerous … than in the case of the inner retail elements." Eating places like cafés serving cakes, "or in Melbourne and Sydney small tea and coffee lounges," tend to congregate in "areas transitional between the inner and outer zones, particularly along pedestrian routes to the stations."[35] Scott elaborates: "Sydney has substantially more eating places than Melbourne, but this is partly attributable to the *inclusion within the CBD of the southern zone of discard* with its Chinese cafés and even cafés retailing fish [emphasis added]."[36]

Image 18: Pitt Street, Sydney CBD, 1940 (*State Library NSW*)

Stores selling radio and electrical goods are the only secondary outer element with a strong tendency to cluster. They fall into two distinct but overlapping groups:

> Thus small stores specializing in such appliances as toasters, lamps, heaters, and radios occur closely associated with men's clothing

---

[35] Ibid, p 307
[36] Ibid

stores on the margins of the inner zone; they would constitute a secondary inner element. Larger stores specializing in such lines as washing machines, refrigerators, cookers, and radiograms are closely associated with furniture stores which they resemble in function; they would constitute a primary outer element.[37]

Still within major elements of the outer retail zone, stationers have "a slow rate of stock turn" and "tend to move outward from the node." CBD stationers "differ from their suburban counterparts in that few handle newspapers; these are mainly sold from kiosks, stalls, and especially street vendors."[38]

Minor elements of the outer retail zone "include optometrists as well as stores selling sports goods, floor coverings, furnishings, antiques, leather goods, toys, records, sewing machines, and army disposals."[39]

Moving from the retail zones to the office zone, Scott finds, like the American researchers, that offices were generally less sensitive to location and demonstrated much greater vertical development. Many of the larger office buildings were owned by insurance companies "at the very core of the office zone" and were "separated from the inner retail zone by a buffer area in which outer retail or marginal office elements predominate on the ground floor …"[40]

Functions classified as minor office elements were evident "in the ground-floor structure" and upper floors host major primary elements like "insurance companies, shipping firms, and the professions." These intermixed with minor primary elements including "headquarter offices, stock and station agents, airline offices, stock and share brokers, and accountants."[41] The only major secondary element was "clubs and societies" while overlapping secondary minor elements were "outlets for office equipment, real estate agencies, travel agencies, and newspaper publishing."[42]

---

[37] Ibid
[38] Ibid
[39] Ibid, p 306
[40] Ibid, p 308
[41] Ibid
[42] Ibid

Professional offices are a special category, "largely independent of the pull of central business." For instance, lawyers converge on the courts and "city clubs for professional and businessmen tend to cluster near professional offices on the fringes of the office zone."[43]

Having investigated various retail store types or elements with identifiable patterns of location, Scott discusses "dispersed elements," which were nevertheless commonest in the outer retail zone and more so in the inner retail zone than the office zone. They included "hotels, booksellers, restaurants, tobacconists, tailors, receiving depots for dry cleaning, and barbers."[44] He observes that a public house (pub) on each corner was "generally the case in Sydney." In particular: "King Street, which for the most part runs between the office and retail zones, has the greatest density with hotels on no less than ten of its twenty corners."[45]

Image 19: King Street, Sydney CBD, 1940 (*City of Sydney*)

[43] Ibid, p 309
[44] Ibid, p 310
[45] Ibid, p 311

Tobacconists tended to locate near men's clothing stores and offices. In larger CBDs like Sydney, "the high rents near the node preclude the specialist [tobacconist] and favor the kiosk, so that Sydney's central shopping block, for instance, has seven kiosks and not a single specialist; but in the office zone specialists abound."[46] Barbers were almost as numerous in the office zone as in the inner zone, "and show[ed] a stronger tendency than tobacconists to locate near men's clothing stores and offices."[47] Tailors in the larger cities "predominate in the outer zone and are more numerous in the office quarter than in the inner zone."[48]

Bank branches were the most numerous of the dispersed elements. In "Sydney, banks tend to become increasingly more numerous in the inner retail than in the outer zone, while strong concentrations of headquarter banks are evident in the office quarter, notably in … George Street."[49]

Perhaps in line with the 'hard core' focus of Murphy and Vance, Scott's concept of the CBD did not encompass the wharf, warehousing, wholesaling, goods railway yard and light-manufacturing precincts around Darling Harbour, Walsh Bay and Central Station. These ran along the western and southern edges of the retail and office zones. R W Archer was another urban economist and town planner who studied Sydney CBD since the 1950s. Writing in 1969, he noted that "Peter Scott defined a much smaller CBD in 1956 when he applied the … indices developed by Murphy and Vance to Sydney … George and York Streets provided his western boundary and Bent and Grosvenor Streets his main northern boundaries."[50] Scott does not cite Horwood and Boyce. But his inner retail and office zones arguably correspond to their core, and his outer retail zone together with surrounding industrial-wholesale areas to their frame.

While Scott neglected the western corridor, a delimitation study of "Sydney's wholesale district" by geographer Peter Simons using the techniques of Murphy and Vance was published in 1966.[51] Wholesaling as

---

[46] Ibid
[47] Ibid
[48] Ibid, p 313
[49] Ibid, p 312
[50] Archer, R W, "The Efficiency of the Sydney Central Business District: The Public Authority Contribution", *Australian Planning Institute Journal*, July 1969, p 65
[51] Simons, Peter L, *Sydney's wholesale District*, Research paper, Department of Geography, University of Sydney and the Geographical Society of New South Wales, 1966

defined by Simons consists primarily of selling merchandise direct to retailers and other commercial or industrial users, or buying merchandise on behalf of such persons or companies. "Proximity to the transport nodes and break-of-bulk points associated with the CBD", he writes, "can be assumed to be a great advantage to many types of wholesalers".[52] For Sydney, "an **entrepot** of considerable importance in the South-West Pacific [emphasis in original]",[53] the Darling Harbour Goods Yard and Central Parcels Office, adjacent to Central Station, were particularly important.
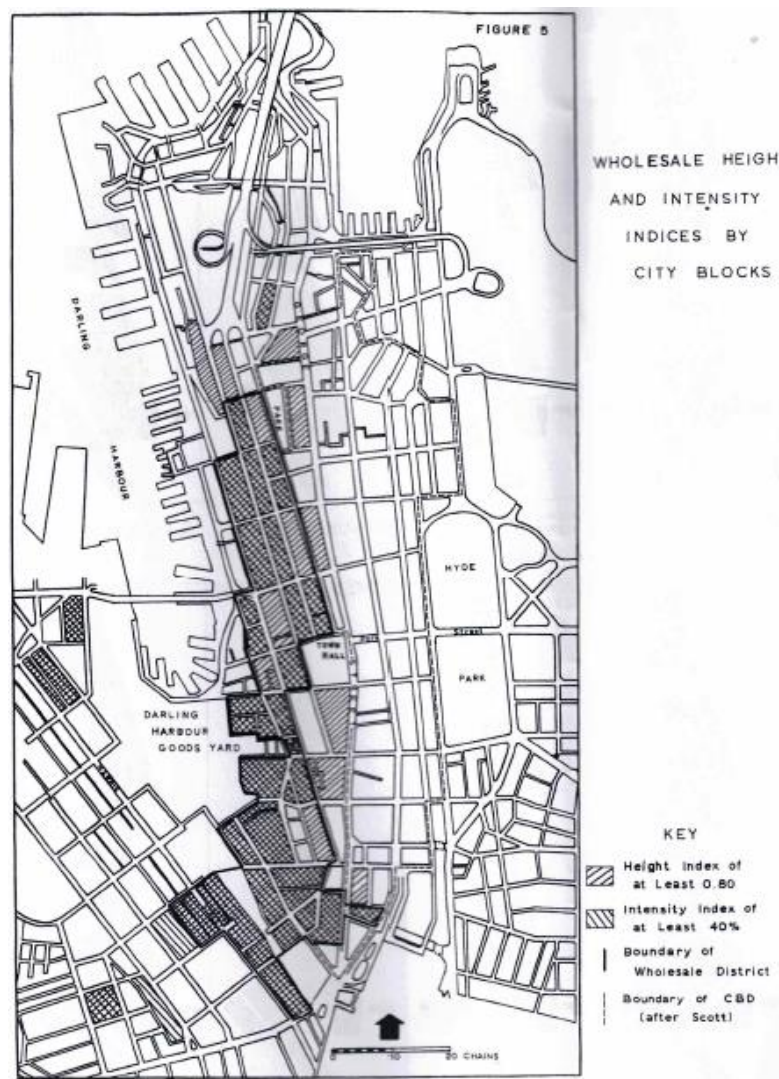
Map 6: Sydney CBD Wholesale District (*Simons, 1966*)

Simons adapts the Central Business Index Method by substituting wholesale floor-space for CBD floor-space, developing an intensity index

---

[52] Ibid, p 5
[53] Ibid, p 13

and a height index for wholesaling. Using these, a wholesale district is delimited with its eastern boundary, generally, along York Street on a north-south axis, from Margaret Street down to Druitt Street, and further south along Sussex Street on a north-south axis from Bathurst Street down to Hay Street, and with its western boundary along the docks of Darling Harbour down to the Goods Yard. Simons observes that "Scott's [western] boundary of the CBD passes down York Street" and in addition "the concept of a gradient of land values away from this intersection [the PLVI] is strongly supported" by his own data.[54] Breaking down the results according to commodity group, he finds that

> [w]ithin the wholesale district several sub-districts were identified. The more definite sub-districts were softgoods [mostly apparel] in York Street and Rawson Place; electrical goods in Clarence Street; metals, machinery and hardware in Kent Street. Jewellery and glassware seemed to be concentrated in York and Clarence Streets … At the southern end of the wholesale district, the city markets [Hay Street] were associated with firms handling perishables such as poultry, fish, meat and milk. The existence of these sub-districts is probably a result of the advantages of contiguity, and of the costs of occupancy being equated with the margins obtained by the wholesalers.[55]

[54] Ibid, p 7
[55] Ibid, p 21

7. Whipple on Sydney's classic CBD

In 1995, R T M Whipple published his own application of the American delimitation research to Sydney CBD, combining land value data from the Valuer-General of NSW for 1956, 1962 and 1968 and a land use survey conducted by a private firm in 1970-71.

Whipple starts with an overview of various American researchers, which fall into two camps. The first includes Rannells and his predecessors of the linked-establishments functional classification approach, Robert Murray Haigh, Robert Mitchell and Chester Rapkin, and Wroe Alderson and Robert Sessions of the *Philadelphia Central District Study.* The second camp is Murphy and Vance.

"Whereas the Haig-Mitchell and Rapkin-Alderson and Sessions perspective may be characterized as a functional approach," writes Whipple, "the Murphy and Vance studies were rather morphological in nature for they were more concerned with form than with function."[1] In contrast to Scott, he focuses on the Murphy and Vance "5 per cent of the peak valued lot contour" rather than their Central Business Index Method. The article draws on both camps but, again, does not cite Horwood and Boyce.

Whipple makes brief observations about the functional structure of Sydney CBD which differ marginally from Scott's:

> Its overall land use structure may be described briefly as follows. The office zone is bound largely by George Street to its West and Martin Place to its South [the east bounded by Hyde Park-Botanical gardens]. The area south of King Street to Park Street and to the East of George Street is the retail core. The long corridor west of George Street is the traditional warehousing and manufacturing area, while the remainder is occupied mostly by small properties offering low rent space: it may be regarded as the down-town support area. Street blocks within the office zone are relatively short, thus affording easy pedestrian access to its parts. Bus services and the underground rail loop give the central area a *high level of internal accessibility and*

---

[1] Whipple, op cit, p 65

> *ready access to the wider metropolitan area* and national transport
> system [emphasis added].[2]

Nevertheless, he locates the PLVI at the same point as Scott. Applying the
Murphy and Vance "5 per cent line" method of delimitation, Whipple
presents three land value contour maps of Sydney CBD for the data years
1956, 1962 and 1968. He finds that "the major peaks giving the [map]
surface its distinctive form are at the corner of Market and Pitt Streets and
King and Pitt Streets ... the former is the location of the retail heart of the
study and is the traditional peak-valued intersection."[3] The Market-Pitt
peak is described as *leptokurtic*, that is a particularly sharp peak with land
values dropping steeply from that point.
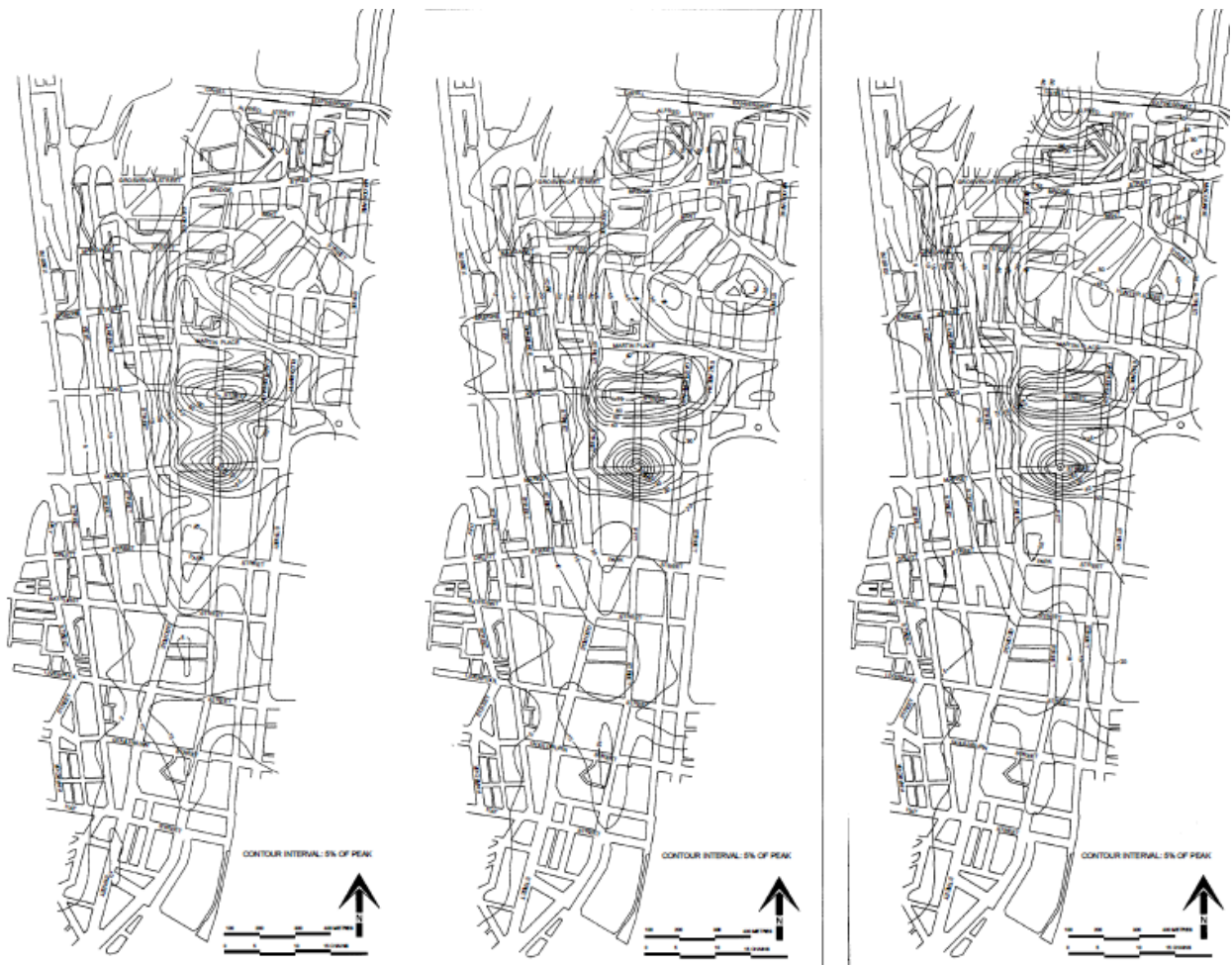
Map 7: Sydney CBD land value contours, 1956, 1962 and 1968 (*Whipple, 1995*)

Whipple reports:

---

[2] Ibid, p 67
[3] Ibid, p 76

Note also the fairly consistent location of the 5 per cent contour [on his land value contour maps]. For each year it "snakes" its way North-South between Sussex and Kent Streets. If, following Murphy and Vance, this criterion is invoked to delimit the CBD, its western boundary has been rather stable over the years but this line would include a fair proportion of wholesaling and industrial uses which are specifically regarded by Murphy and Vance as non-central in character. It is interesting to observe that no such line exists for the other three sides [of the CBD]. Indeed, the contours do not have a North-South orientation along the eastern boundary but do along the northern boundary. Such a "rule" for delimitation would appear inappropriate to Sydney. It is possible that the land value surfaces in the small central areas studied by Murphy and Vance were far less complex and less affected by topographical constraints.[4]

In short, the "5 per cent line" delimitation rule does not hold true in Sydney's case. The boundary line includes industrial uses (non-CBD for Murphy and Vance) on the western side associated with the waterfronts and railway goods yard of Darling Harbour, and overshoots the CBD on the eastern side where Hyde Park-Botanical Gardens constrains expansion. Whipple seems to have a point that apart from these topographical issues, Murphy and Vance drew their conclusions from simpler 'medium sized' cities with populations in the 100,000 to 200,000 range. By the late 1950s Sydney was a metropolis of around 2 million people.

The Murphy and Vance exclusion of non-private sectors was also questioned. "To ignore them (as Murphy and Vance did) in an attempt to understand the central district is to disregard a most important component of the phenomenon itself."[5] Nevertheless, in Sydney CBD almost 70 per cent of space was taken up by trading enterprises and less than a quarter was occupied by non-private sectors (this encompasses all uses of space, so it is consistent with a high proportion of office space being occupied by the public sector).

Whipple had more success with the linked-establishments functional classification approach. The largest functions classified in the survey were

[4] Ibid
[5] Ibid, p 79

administration, retailing and financial which took up 19, 15 and 13 percent of the CBD's floor area respectively.[6] These together accounted for almost half the floor area. Of the remaining functions, professional services occupied 6 per cent, wholesaling without stocks 5 per cent, and 'group welfare' 5 per cent. Following were communications, manufacturing (including building and construction), residential and parking with 3-4 per cent each. "Goods-handling functions occupy about one quarter of the total space," he found.[7] Despite the dominance of certain activities, Sydney CBD showed a notable degree of functional diversity.

Image 20: Darling Harbour, early 1950s (*State Library NSW*)

Yet the city also exhibited a "relative concentration of functions in buildings," especially in the case of non-goods handling functions. The land use survey recorded 1,519 buildings plus 67 vacant sites. But the three largest users of space, retail, administrative and financial functions, were found in only 679, 322 and 353 buildings respectively. By comparison, wholesaling without stocks, which used up far less overall space, occurred in 393 buildings.[8]

---

[6] Ibid, p 79
[7] Ibid, p 79
[8] Ibid, p 80

Whipple divided the land use classifications into five groups and arranged them in order of value of the land they occupied, from highest down to lowest:

Table 4

LAND USE CLASSIFICATION GROUPS (*Whipple, 1995*)

Group 1	financial, professional services, transport (non-goods, that is commuter)
Group 2	communications, personal welfare, retailing, personal services
Group 3	utility installations, vacant sites, administration, business services, group welfare, wholesaling without stocks, health, goods transport, residential
Group 4	entertainment, vacant space, education, parking, religion
Group 5	wholesaling with stocks, goods storage, manufacturing, building and construction, repair

"The most obvious feature of the five-group taxonomy," he found, "is the assignment of the goods-handling categories (except retailing) to the lowest valued land."[9] As in the United States, "buildings housing goods-handling functions (except retailing) are associated with the lowest location quality."[10] This is another way of describing land which is furthest away from the PLVI.

In contrast, "the higher the position of a function in the hierarchy [of net income generating activities], the higher is the land value of the buildings within which it is housed."[11] For example, "typical office space uses tend to rank highest." Whipple reports that "the results show quite clearly that the market … tends to allocate functions to buildings having distinctive positions on the land value surface."[12]

Office functions appear to occupy higher valued land than retailing, in contrast to the findings of Murphy and Vance, Horwood and Boyce, and Scott. However, Whipple's broad classifications do not distinguish between

[9] Ibid, p 92
[10] Ibid, p 94
[11] Ibid
[12] Ibid, p 95

primary and secondary retail, and he used data from a period extending into the late 1960s, by which time a shift was underway. This will be discussed in Chapters 8 and 9.

While use locations in Sydney CBD were influenced by land values, Whipple also found there were correlations among land uses, or clustering, based on shared characteristics.
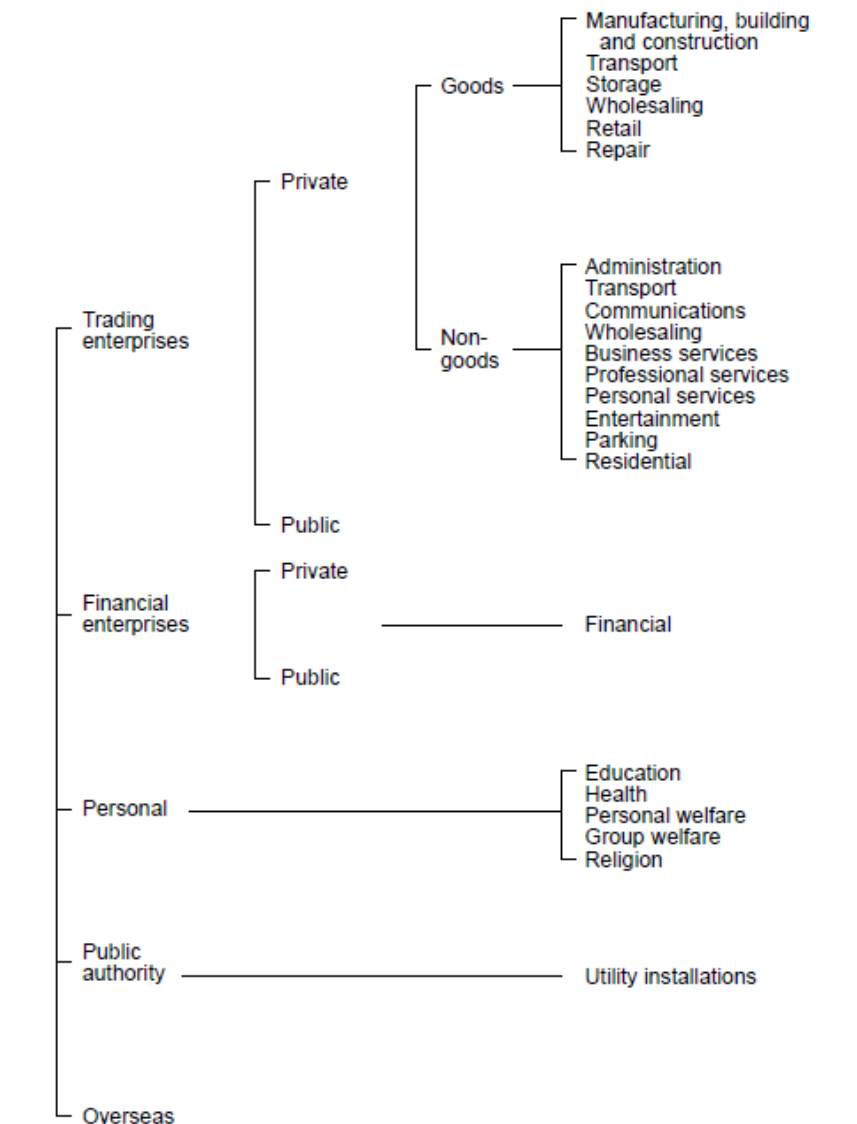

Figure 3: Sydney CBD land use classifications 1968 (*Whipple, 1995*)

In terms of the land use classifications, Groups 2 and 4 made up of retailing, personal services, group welfare, wholesaling without stocks, business services, personal welfare, parking and health "have similar accessibility requirements". More specifically, "accessibility for people acting either in

their personal roles or as members of other establishments."[13] Whipple seems to mean these establishments need locations which are accessible to people in general, who are not necessarily their employees, suppliers or business partners, including those without a specific destination.

Although entertainment, education and religion also seek locations accessible to pedestrians, they "comprise well-defined special purpose destinations … gathering places which serve people in groups for relatively longer visit durations and mostly during non-business hours."[14]

On the other hand, Group 5 consisting of wholesaling with stocks, goods storage, repair, manufacturing, building and construction "require[s] accessibility to vehicular and rail transit facilities and combine to produce an environment inhospitable to pedestrians."[15]

Groups 1 and 3 comprised of residential, communications, administration, professional services, financial and transport (non-goods) need "locations offering accessibility to people who visit them mainly in their official capacities for long or short stays."[16] While "the members of the other … groups attract people from without, [this group's] functions tend to look to one another."[17] In particular, "there is a higher degree of interaction between the business functions than among members of the other groups – interactions in the form of persons movement, paper work and information."[18]

Whipple's general conclusion is that "associations in the central district are split into three components devoted to persons movement, goods handling by day and the business community."[19] Although he does not use these terms himself, this sounds like a retail core, an industrial frame, and an office core.

Whipple found Sydney CBD to be "consistent with the generalisations arrived at by Haig, Mitchell and Rapkin, Rannells, and Alderson and

---

[13] Ibid, p 96
[14] Ibid
[15] Ibid
[16] Ibid, 98
[17] Ibid
[18] Ibid
[19] Ibid

Sessions."[20] As predicted by the functional classification approach, "movement requirements, modes and purposes of interaction are major factors underlying the disposition of functions among themselves … and in the land values associated with the buildings they occupy."[21] The five groups "were characterized by fundamentally different movement requirements: persons moving as individuals, persons moving to places of mass gathering, goods movement and non-persons-non-goods movements."[22]

Generally, "the goods-handling and mass destination functions tend to be on the lower floors of buildings with low land values [while] business functions tend to support the highest land values and occupy upper level space."[23]

Like Rannells, Whipple makes no mention of Horwood and Boyce. Still, there are resonances of an integrated core-frame structure in his account of two general types of functional linkages. Non-goods handling uses needed central locations with high volume pedestrian access, and more scattered goods handling uses depended on traffic and freight infrastructure. As for the Murphy and Vance approach, this may have misfired on delimiting the CBD's outer boundary but not on the PLVI as a prime factor in the distribution of graded activities. Whipple found this clearly applied to Sydney.

[20] Ibid
[21] Ibid, p 101
[22] Ibid, p 103
[23] Ibid

8. Sydney CBD in transition: the boom of 1957 to 1966

The most consequential year in the history of Sydney after 1788 may have been 1957. A series of developments happened to converge around that time which unleashed a massive, one-off expansion of CBD office space and a land value revolution which is felt to this day. Both R W Archer and R T M Whipple presented much-cited papers in 1967 about Sydney's CBD redevelopment boom from 1957 to 1966.[1] As it turned out, this was just an opening phase of "the greatest building boom in any city in Australia's history,"[2] which crashed spectacularly in 1974.

Archer uses the Sydney City Council's then definition of the CBD, termed 'the inner city area'. Bounded by Circular Quay in the north, the area was delimited by Macquarie (east), Elizabeth (east), Goulburn (south), Harbour (west), Day (west), Sussex (west) and Essex (west) Streets. More specifically, he identifies a northern sector, the Primary Development Area, bounded by Circular Quay and Macquarie, King and George Streets.[3] This generally overlaps with Scott's office zone, but instead of Martin Place the southern boundary is King Street, a block further south.

Whipple says "office space is confined generally to the north of King Street, bounded by Macquarie Street to the east and York Street the west [and presumably Circular Quay to the north]; this area embraces a smaller 'core' office zone between King and George Streets."[4] An accompanying map of Sydney CBD's classic form depicts this and other zones (**Map 8**):

> The major retail core is contained by and on both sides of George, Castlereagh and Park Streets. There is a minor core contained by the blocks bounded by George, Liverpool, Elizabeth and Goulburn Streets. Wholesaling and manufacturing comprise the greater proportion of the [CBD] area and extend from the City Markets,

---

[1] Archer, R W, "Market Factors in the Redevelopment of the Central Business Area of Sydney, 1957-1966" and Whipple R T W, "Redevelopment and the Real Estate Market in Sydney's Central Area", both in *Urban Redevelopment in Australia: papers presented to a joint urban seminar held at Australian National University, October and December, 1966*, published by Urban Research Unit, ANU, 1968, pp 273-303 and 250-272 respectively.

[2] Daly, Maurice T, *Sydney Boom, Sydney Bust: The City and Its Property Market, 1850-1981*, G Allen & Unwin, Sydney, 1982, p 38

[3] Archer, op cit, 1968, p 274

[4] Whipple, op cit, 1968, p 251

bounded by part of George Street and the whole of York Street to the east and Darling Harbour to the west.[5]

SURVEY AREA ——
OFFICE ZONE
MAJOR RETAIL
MINOR RETAIL
WHOLESALE & INDUSTRY
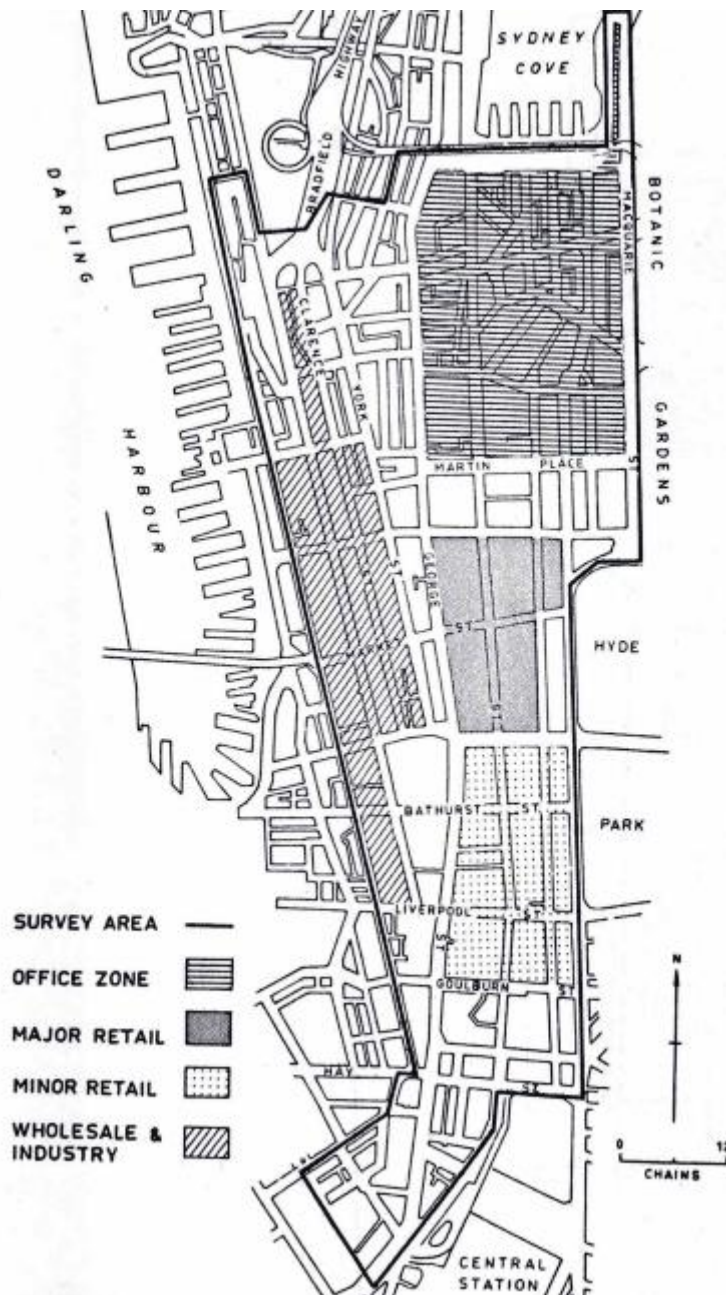
Map 8: Sydney CBD functional zones (*Whipple, 1968*)

As Archer points out, the scale of the pre-1966 boom is apparent from the value of new buildings completed, rising from $2.9 million in 1956 to $50.7 million in 1964.[6] Apart from the enormous leap in activity, Archer feels that "its high degree of concentration" was a particularly important feature of

---

[5] Ibid
[6] Archer, op cit, 1968, p 275

the boom. Close to 90 percent of the $195 million spent on new building between 1956 and 1966 in the 'inner city area' (CBD) was for offices.[7] This expenditure of some $175 million on new office buildings represented 75 per cent of all office and bank construction activity in the wider City of Sydney Council area.[8]

Moreover, around 75 per cent of the $195 million was spent in the Primary Development Area. "Two of the blocks in this … area had the equivalent of more than six additional floors added to the whole block," writes Archer, "while another four blocks had the equivalent of over four additional floors added."[9]

According to Whipple, between 1950 and 1963 the grose building area north of Goulburn Street increased by 7.9 million square feet or 19.19 per cent. The precinct bounded by Circular Quay and George, Macquarie and King Streets, with 40.81 percent of total CBD floor space by 1963, accounted for 69.80 per cent of the increase.[10] Since this north-eastern segment is dominated by office space, most of the addition "went to the same sector."

Of the twenty largest private buildings completed in the 'inner city area' (CBD) from 1956 to 1966, Archer finds fourteen were located within the Primary Development Area.[11] In all but two of the cases, redevelopment replaced the floor space of the previous building many times over. Sixteen were office buildings and others built primarily for other purposes included substantial office space.[12]

All of this was conditioned by the CBD's topographical features. Whipple suggests the concentration of offices in this vicinity can be ascribed to its "relatively level topography" and "comparatively short street blocks."[13]

The initial burst of activity, writes Archer, was by owner-occupier firms facing a bulging post-war backlog. Early projects of this type were Kodak House (379 George Street), extensions to the Farmer's department store

---

[7] Ibid, p 276
[8] Ibid
[9] Ibid, p 277
[10] Whipple, op cit, 1968, p 253
[11] Archer, op cit, p 286
[12] Ibid
[13] Whipple, op cit, 1968, p 253

(north-west sector of the PLVI), the Union Club (Bent Street), the ICI Building and Unilever House (both East Circular Quay).[14]
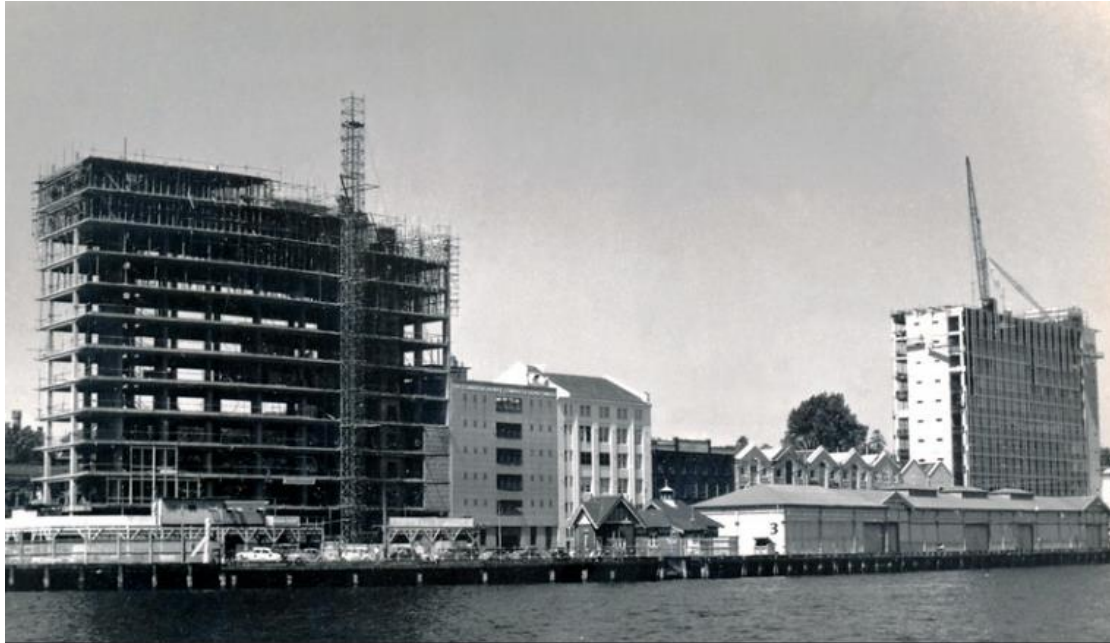

Image 21: ICI Building and Unilever House, East Circular Quay, 1956 (*Fred Saxon*)

The timing can be traced to easing of wartime restrictions. By 1956 building materials like structural steel became freely available and in 1957 rent controls on new commercial premises were lifted. "After the relaxation of building controls", wrote Whipple, "an element in demand in post-war office building construction has been that of overcoming the back-log created during the previous fifteen years or so".[15] This was reinforced by high general growth in the metropolitan, state, and national economies, and increases in office employment.

Another factor noted by Archer was "the acceptance of more generous space and building standards for office workers."[16] Whipple thought there was a need to replace functionally obsolescent structures given that "the life of a city office building is rated at about 75 years, but many of the buildings housing office functions in the central area [were] nearer 100 years."[17] He adds that "whereas in the older pre-war buildings, it [was] common to have densities of one person per 50 square feet, the market is

[14] Archer, op cit, 1958, p 275
[15] Whipple, op cit, 1968, p 266
[16] Archer, op cit, 1968, p 279
[17] Whipple, op cit, 1968, p 266

now requiring an increased standard which is running at 120-160 square feet per person."[18]

One of the most far-reaching events of this time, acknowledged by Archer and most historians of Sydney, was the NSW Government's 1957 decision to lift the 150-foot building height limit which had been in force since 1912. A Height of Buildings Advisory Committee was created to "review all proposals for buildings higher than 150 feet and to veto or recommend acceptance of such proposals subject to, in effect, a maximum floor area ratio of 15 to 1 plus basements."[19] In Chapter 11 the steps leading up to this reform will be explored in more detail.

Archer claimed "the 'demonstration effect' of new buildings accelerated the effect of events around this time on other potential users of new buildings. Boosterism played a particular role in the concentration of investment in Primary Development Area office projects:

> ... it is not a simple process of the production of office space to meet an existing demand but rather a mixed process of an initial demand resulting in new office buildings with these new office buildings having a 'demonstration effect' to other office users (both private and government) and generating an increase in demand. This interaction process is actively encouraged by the property development firms and real estate agents.[20]

As in the United States, metropolitan trends loomed large over the CBD, curbing opportunities for investment in other types of buildings. "The general post-war suburbanization of population and employment was the main factor limiting new building for retail, wholesale and entertainment activities in the [CBD]," writes Archer.[21] Moreover, "Schedule 7 of the Local Government Act effectively prevented residential development in the inner city area prior to 1965."[22]

"In 1945 more than three-quarters of Sydney's paid workforce lived within 10 kilometres of the [CBD] but by 1971 less than half did", writes Peter

---

[18] Ibid
[19] Archer, op cit, 1968, p 300
[20] Archer, op cit, p 277-278
[21] Ibid, p 280
[22] Ibid

Spearritt, and "[i]n 1961 the central city and the remainder of the city municipality held 26 and 19 percent of Sydney's paid workforce respectively, but over the next decade the figures dropped to 19 and 15 percent".[23] The City of Sydney share of metropolitan retail sales or turnover declined from 43.8 per cent in 1953 to 13.6 per cent in 1974.[24]

Brought on by a series of chance events, the boom propped up a CBD in relative decline as a metropolitan centre.

Map 9: Pre-boom private office core

In the case of office development, aspects of the time but also the place were geared for concentration. Archer writes that pre-boom "the area of the largest office buildings was in Martin Place up Pitt, Spring and Castlereagh Streets into O'Connell Street."[25] These streets were "generally fronted by 7 to 13 storey buildings and accommodated the main offices of the banks and insurance companies as well as the stock exchange."[26]

---

[23] Spearritt, op cit, pp 123-124
[24] Ibid p 215
[25] Archer, op cit, 1968, p 281
[26] Ibid

Archer describes this as something of a core within a core, "the private office core of the city."[27] Government sector offices appear to have been more prominent in other parts of the Scott-Whipple office zone.

This "well defined core" of private sector offices was convenient for tenants, constituted the largest market for office space, minimised risks for property investors, and was reasonably close to public transport servicing the PLVI. But since the number of available sites was limited, redevelopment spread to adjacent streets, forming a new enlarged core:

> These streets were Hunter, Bligh and Elizabeth Streets. When the Australia Square and Royal Exchange Buildings are completed they will have the effect of integrating sections of George and Bridge Streets into the new private office core in the area bounded by Bridge, Gresham, Bent and Elizabeth Streets, Martin Place and George Street.[28]

The changing CBD landscape extended development further afield. Opening of a new City Circle Station at Circular Quay in 1956 "precipitated the emergence of a new office development sector" and completion of the Cahill Expressway in 1958 "made Circular Quay the second most accessible point in the city," presumably after the Market-Pitt intersection.[29]

On the overall distribution of new construction across the CBD, Whipple observes that "there have been 43 buildings with a net leasable area of 2,474,968 square feet completed or under construction outside the office space core area since 1954 ... this is compared with 74 buildings erected or under construction within the core itself having a total net leasable area of 5,816,555 square feet – or 70.16 per cent of the total."[30] He calculates that 15.5 percent of the buildings demolished to make way for new construction were existing office blocks.[31]

These developments naturally had a dramatic impact on land values in general, signalling a prospective shift away from land price contours of the

---

[27] Ibid
[28] Ibid
[29] Ibid
[30] Whipple, op cit, 1968, p 262
[31] Ibid, p 261

PLVI system. The spread of elevated land values northwards from the PLVI area is visible on the land contour maps in Whipple's 1995 article (**Map 7**).

Archer reports that between 1952 and 1962 land prices in the CBD's northern sector spiked by no less than 100 per cent.[32] The 26-storey AMP Building at Circular Quay, with its distinctive concave façade, was Australia's first International Style skyscraper. Over the ten years to its completion in 1962, the adjacent Customs House site rose in assessed value from $220,000 to $1,140,000.[33] The AMP Building, an early project exploiting looser height restrictions, replaced the Farmers and Graziers Building, one of the warehouses and wool stores still ringing the Quay. As the AMP Society is a life insurance mutual, historian Paul Ashton was prompted to write: "finance capital was conspicuously supplanting pastoral capital."[34]

Image 22: AMP Building under construction, Circular Quay, 1960 (*City of Sydney*)

Further up Circular Quay at Bennelong Point, 1957 was the year Jørn Utzon's transformational design for the Opera House was accepted. Before

---

[32] Archer, op cit, 1968, p 275
[33] Ibid, pp 282-283
[34] Ashton, Paul, *The Accidental City: Planning Sydney Since 1788*, Hale & Ironmonger, Sydney, 1993, p 78

then, the site was occupied by a tram depot alongside a working waterfront. The Opera House played a part in detonating the land value bomb (incidentally, Delloite recently assessed its "social value" at $11.4 billion[35]).

Changes to the tax system fuelled the trend to office concentration as well. In 1956 the NSW State Government introduced a land tax on unimproved capital value which matched an equivalent Council charge. Archer explains how these taxes affected CBD land owners surrounded by a raging development boom:

> The prospect of a more intensive use of land such as a large modern office building replacing small obsolete one or an office replacing a warehouse will generate an increase in land values. A successful redevelopment project along these lines will generate a number of imitations and there will be a general increase in the site value of all the surrounding land with this potential use ... when the site values are reassessed for rating and tax purposes ... increases in cash outgoings can be large enough to markedly lower the profit and net income from the current use of the property and encourage the owner to develop the site or to sell it for redevelopment to the more intensive use.[36]

A land value surge of this magnitude could not but change the way real estate was owned and financed. Of the twenty largest private buildings that Archer researched, completed in the 'inner city area' from 1956 to 1966, most were still developed by their existing owners and occupiers rather than development firms.[37] Marking an emerging trend, however, three of the twenty were built on leased sites and another seven had lease-back arrangements with a head lessee.[38] Only five buildings were insurance company offices but eleven were owned by insurance companies.[39] Half of them by the AMP Society, which was closely associated with rising property developers Lend Lease and L J Hooker.

[35] *Valuing 50 years of Australia's Icon*, Deloitte Access Economics, 2023
[36] Archer, op cit, 1968, p 282
[37] Ibid, p 285
[38] Ibid, p 286
[39] Ibid, p 285

Archer reports that "the property development firms have only emerged over the last ten years and will probably further expand their operations … they are also facilitating and complementing the expansion of insurance company equity investment in real estate."[40] Developers were not property investors themselves. They conceived, executed, and sold projects leased from the land owners, while earning profits at the building and sale stages. By this time life insurance firms were purchasing such redevelopment sites and leasing the completed building to a head tenant for virtually its whole economic life.[41]
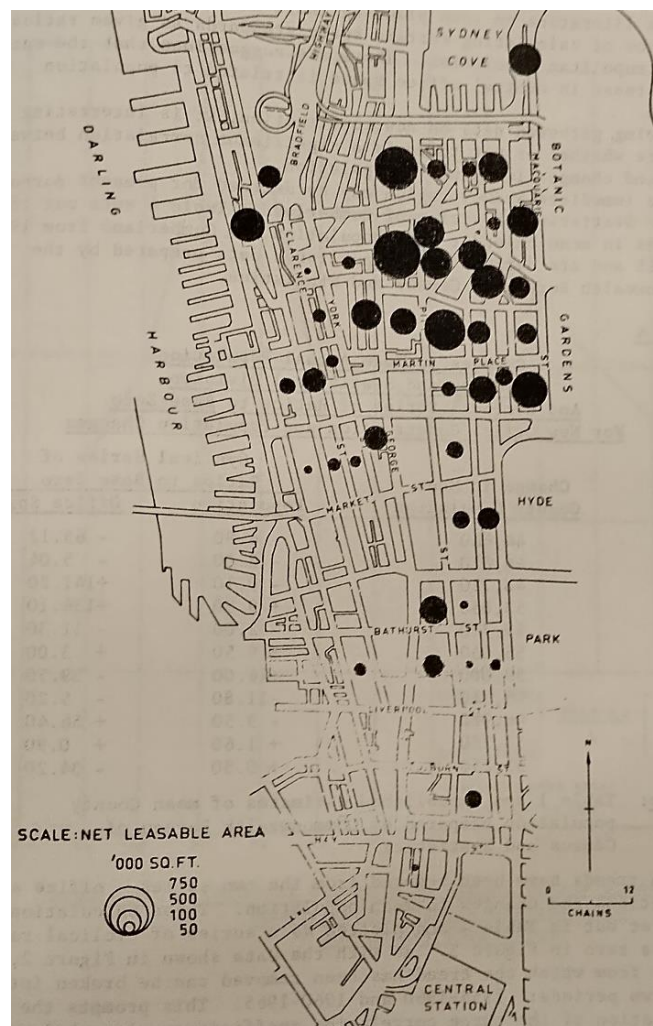
Map 10: Location of Sydney CBD office construction 1954-1966 (*Whipple, 1968*)

On the other hand, "the possibility of selling a large office building to a firm as owner-occupier [had become] rather limited."[42] The rate of return on

---

40 Ibid, p 286
41 Ibid, p 289
42 Ibid, p 289

operating funds for, say, a manufacturing firm was around 12 to 17 per cent, preferable to the 7 or 9 per cent achievable from ownership of a head office.[43] Particularly since life insurers were charging low, stable rents for very long leases.

The decline of owner-occupiers was yet another factor accelerating redevelopment in the CBD. While they had only redeveloped their head offices "every forty years or so," the property developers "were 'turning over' redevelopment projects and were … 'opening up' the market for office space for moderate and smaller sized firms … to support large scale projects which could attract the investment funds of the life insurance companies."[44]

Whipple's investigation of office building completions in Sydney CBD between 1954 and 1969 (extrapolated) discloses that 20.61 were by private 'existing owners', 60.94 per cent by 'other private developers' and 18.43 per cent by government.[45] Existing owners can be generally equated to owner-occupiers. Referring to other private developers, "this source of supply quickly gathered momentum and overtook the volume provided by the 'existing owners' in 1960 and has maintained its lead ever since."[46]

As Archer explains, "some life insurance companies had started to switch from purchase-lease and mortgage loan financing … to a leaseback arrangement."[47] The insurance firm "thus retained the freehold of the site and the benefit of any long term rise in land values and at the same time leasing the building and land to a substantial business firm for a long period at a rent guaranteeing a minimum return."[48] In this way the seven largest life insurers operating in Australia "increased their real property assets from $71 million in 1957 to $399 million at 1965 and the relative importance of these property assets as a proportion of their total assets rose from 4.0 per cent to 9.3 per cent over the same period."[49]

[43] Ibid, p 295
[44] Ibid, p 297
[45] Whipple, op cit, 1968, 257
[46] Ibid, p 259
[47] Archer, op cit, 1968, p 289
[48] Ibid
[49] Ibid, p 293

CBD buildings, especially office blocks, were now sought after as much for their capital returns as to meet the demand for workspace. In the boom's culminating phase, real levels of demand for space were lost sight of altogether.

9. Sydney CBD in transition: the boom of 1968 to 1974

Developments in real estate finance were a focus of Maurice Daly's classic account of the boom's later phase from 1968 to 1974, *Sydney boom, Sydney bust* (1982)[1]. As already mentioned, like downtowns in the United States, Sydney CBD was in decline relative to suburban growth when the boom broke out:

> In 1966 Sydney's central business district employed 292,344 people – only 18 per cent of Sydney's total workforce of 1,145,287 people; by 1971, the CBD employment figure had fallen to 191,000, just 15 per cent of the workforce. As the workforce declined, some activities, such as manufacturing and retailing, which had once been regarded as essential aspects of the functioning of the CBD, had dwindled. They became relatively insignificant in terms of total floor space within the CBD and in terms of their contribution to Sydney's total output in manufacturing and retailing. The CBD share of total metropolitan sales had fallen to 14 per cent in 1968-1969, and to 11 per cent by 1973-74.[2]

Daly traces the boom's origins to another boom, Australia's mining expansion of the 1960s, which raised the country's profile across international business circles. The scale of investment in mining projects reshaped Australia's capital market at a time of drastic changes in world finance. Deficit financing of the Vietnam War transferred a large pool of American dollars to transnational banks operating mostly out of London. The so-called 'Eurodollar market' developed into a "new, large and somewhat unfettered source of funds for large projects."[3]

One consequence of the "meshing" of international and national capital markets in the 1960s was a change in the destination of capital inflows. Direct investment in manufacturing accounted for nearly two-thirds of total direct foreign investment into Australia during the early 1960s, but fell as low as 13 per cent by 1971-72.[4] The beneficiaries were banking, finance and property, which

[1] Daly, op cit
[2] Ibid, p 37
[3] Ibid, p 4
[4] Ibid, p 7

produced a dramatic change in the function of the central business district (CBD) of Sydney. As its manufacturing and retailing base declined, financial activities took their place. Thus banks, finance houses, and related business services such as accounting, were at the centre of a boom in office construction which began in the mid-1960s and accelerated during the mineral boom.[5]

"Directly through development companies, or indirectly through finance companies," writes Daly, "a critical proportion of the foreign capital which flowed into Australia between 1969 and 1972 was invested in the Sydney property market."[6] Sydney CBD "became the centre of feverish competition for sites."[7]

While CBD lots could be purchased in the late 1950s for $322 to $645 per square metre, by 1968 the record site-price had reached $2,193 per square metre.[8] Lend Lease paid $3,042 per square metre for the old Theatre Royal in 1969 (corner of King and Castlereagh), and in 1970 the Hotel Australia site (corner of Martin Place and Castlereagh) was sold to MLC, another life insurance mutual, for $4,053 per square metre.[9]

"A further six sites in the same area were acquired during 1970," says Daly, "and values moved from $3,548 per square metre for the Royal Prince Alfred Yacht Club site [Rowe Street], to $4,891 per square metre for the Equity Trustees building, and $4,977 per square metre for the King's Hotel [corner of King and Pitt]."[10] These are areas described by Archer as having been absorbed into "the private office core."

Over the three years from 1970 to 1973 that it took to assemble parcels of the former McDowell's department store (corner of George and King), the price of sites escalated from $3,141 to $5,863 per square metre.[11] By 1973 the Commonwealth Bank was buying an office block (corner of George and

---

[5] Ibid, p 6
[6] Ibid, p 8
[7] Ibid, p 38
[8] Ibid
[9] Ibid
[10] Ibid
[11] Ibid

Margaret) for a record $8,063 per square metre when the median price of a whole quarter acre block was just over $9,000.[12]

A parallel boom in office building swept over London in the mid-1950s drawing British property companies to the insurance and pension funds. By the mid-1960s office investment in south-east England reached saturation point. As British investors began looking further afield, "Sydney was especially ripe for redevelopment."[13]

Image 23: Martin Place, Sydney CBD, 1954 (*State Library NSW*)

Forty-five years of building height restrictions and architectural styles of the 1920s and 1930s limited the functional scope of prevailing office building stock. "The Martin Place offices were typical," writes Daly, "they were massively ornate, generally no higher than 10 storeys and possessed an uneconomic allotment of floor space such that net lettable area rarely exceeded 50 per cent of gross building area."[14] By comparison, Carol Willis explains in *Form Follows Finance* (1995), her history of early twentieth century skyscrapers in New York and Chicago, that "good plan efficiency … was the ratio of the net rentable space to the gross floor area … a plan was

---

[12] Ibid, p 14
[13] Ibid, p 40
[14] Ibid, p 40

considered efficient if the area of rentable space was 65 to 70 percent of the gross floor area."[15]

Having recounted the convergence of causes documented by Archer and Whipple, Daly explains:

> The year 1958, therefore, marked the beginning of the redevelopment of Sydney's CBD. The region from north of Martin Place to Circular Quay [generally Scott's office zone] consisted of four-to-five-storeyed brick or stone warehouses, bond stores, and government departments which were marked out for particular attention. Sites in the area were cheap at $215 to $323 per square metre (17 years later peak prices were 3600 per cent higher) and quite substantial sites could be purchased.[16]

From 1957 to 1961 Australian and foreign firms looking to meet their expanding post-war needs accounted for half of the new buildings and British insurance companies for one third. Over the next four years as two and a half times more buildings were erected, consistent with Whipple's findings, "the proportion of offices built by firms for their own use fell to one quarter of the total, and the growth of general office buildings owed much to the leadership of British insurance companies."[17] Australian development or life assurance companies were involved in 10 per cent of redeveloped sites between 1957 and 1966.[18]

This influx of capital produced larger buildings and, despite expanded supply, more expensive rents. One building taller than 20 floors was built between 1957 and 1961 but seven were completed in the following four years.[19] Over 1962 to 1966, "nine office blocks of 16 and 20 storeys were built compared to four in the previous four-year period."[20] Projects for higher buildings often gravitated northward to Circular Quay because of "prestige views" and the "advantage of locations with harbour views."[21]

---

[15] Willis, Carol, *Form Follows Finance: Skyscrapers and Skylines in New York and Chicago*, Princeton Architectural Press, New York, 1995, p 85
[16] Daly, op cit, pp 40-41
[17] Ibid, p 43
[18] Ibid
[19] Ibid
[20] Ibid
[21] Ibid

Daly found that "rent for office space rose (from $46 a square metre in 1957, to $64 per square metre in 1967, to $81 per square metre in 1971); premium sites fetched from $107 to $129."[22]
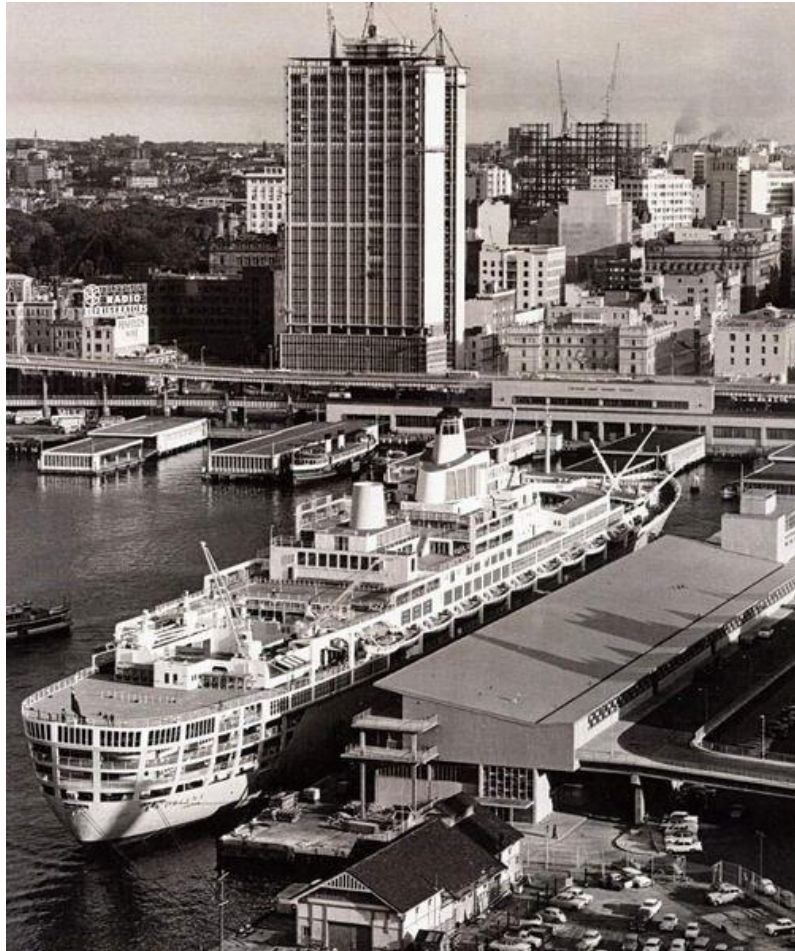
Image 24: Circular Quay, AMP Building, 1961 (*State Library NSW*)

Apparently, developers were attracted to locations with potential for value appreciation more than functional "walking distance zones" near the PLVI or areas offering Rannellsian linked-establishments. The assemblage of strategic sites by around a dozen British development companies transformed the Scott-Whipple office zone:

> Arndale in George Street, adjacent to Goldfields House; Abbey in Young Street opposite the AMP centre, in Margaret Street; two properties in Bligh Street; one in Bent Street; one in Pitt Street; and the future Hilton Hotel site spanning George and Pitt Streets. British Land held the former Petty's Hotel in York Street, two Pitt Street sites

---

[22] Ibid, p 46

and another in Castlereagh Street. Grosvenor obtained key sites in Margaret and Jamison Streets, and large sites in Kent and Sussex Streets. Hammerson had three locations in Phillip Street and one in York Street. Continental had a site in Macquarie Street; and Centrovincial held two sites in George Street.[23]

But as the boom peaked, Daly is clear that domestic Australian life offices and superannuation funds also had "a major effect on its course." As of 1973 these types of institutions owned 53 sites in Sydney CBD. The AMP Society held 27, Colonial Mutual 10, National Mutual four and the State Superannuation Board five.[24] "The largest projects were owned by the institutions: The MLC which had only four developments, was responsible for the 225-metre-high, 60-storey MLC Centre on the corner of King and Castlereagh Streets; the AMP Society built the 184-metre, 50-storey AMP Centre in Bridge Street; the Australian Temperance and General mutual Life Assurance Society Ltd built the 43-storey, 168-metre centre in Castlereagh Street ... The AMP Society was also responsible for the Pitt Street Centrepoint complex bedecked by a garish 255-metre tower."[25] How these and comparable projects transformed the CBD landscape and consequently the PLVI system will be discussed in Chapter 11.

Daly confirms that projects were as much "developer-institution collaborations" in this phase of the boom as earlier, and most were "variations on the purchase-and-leaseback theme." By 1977 the property portfolios of AMP and MLC represented 22 per cent of their total assets.[26]

Overall, an incredible 210 buildings were erected in Sydney CBD from 1958 to 1976 and 84 of them after 1971.[27]

Inevitably this high wave of investment capital came crashing down. The British firms in particular "introduced a competitive and speculative element which was, to a large degree, responsible for the eventual over-supply of space and collapse of the market."[28] The total supply of lettable space in Sydney jumped by 1.3 million square metres between 1960 and

---

[23] Ibid, p 47
[24] Ibid, p 56
[25] ibid
[26] Ibid, p 55
[27] Ibid, p 46
[28] Ibid, p 47

1973.[29] An additional 772,000 square metres was due on the market after 1974, but at the end of 1973 some 556,000 square metres was left uncommitted.[30] Only 20 per cent of new space was firmly committed in 1974. Rent levels dropped by around 20 per cent.[31]

Image 25: Centrepoint Tower, Market Street, under construction, late 1970s

The Sydney CBD office market had well and truly crashed by 1976, when 18 per cent of the floor area was vacant including 13.6 per cent of total office space. "Vacancies were highest in the core area of the CBD," writes Daly, "where 31 per cent of all offices were vacant, and if the secondary areas of Kent and Sussex Streets were added, the proportion rose to 51 per cent ... Buildings built between 1970 and 1976 made up 31 per cent of office space in the CBD, but accounted for 44 per cent of vacancies."[32]

---

[29] Ibid, p 62
[30] Ibid
[31] Ibid
[32] Ibid

The boom and bust were concentrated in time and place, substantially though not exclusively in the Scott-Whipple office core, and driven by transient causes. Real business demand for a CBD location was not the dominant factor. As Daly puts it: "investment patterns began to become divorced from the realities of demand."[33] The PLVI system, however, could not but have been permanently disrupted by such a scale of redevelopment. Confirming that the groundwork was laid for a long-term shift in the CBD's morphology, urban planner James Fitzpatrick found that 50 per cent of the office projects approved in 1970-1971 (but not necessarily commenced) were sited south of King Street, beyond the office core, compared to just 18.6 per cent over the previous 13 years. Fourteen of these post-1970 projects were sited even further south, below Liverpool Street in the secondary retail zone.[34]

In her paper *History of Australian Capital City Centres Since 1945* (1997), urban researcher Susan Marsden writes of this time:

> One of the dynamics shaping the Australian economy overall as well as the capital cities has been the 'rapid regeneration of CBDs forming an important part of the asset underpinning of the banking and insurance sector'. The larger the city grows the higher its land values, the bigger the profits to be made and the faster its redevelopment. With increasing competition for space only those activities which gained large benefits or great profits from city centre development would locate in the centre and, in response to rising prices, in high-density buildings. For these reasons, high-rise office blocks have come to dominate most city centres and to extend their domain by colonising 'frame' districts.[35]

---

[33] Ibid, p 36

[34] James D Fitzpatrick, "Future Trends in Office Building Developments in the Sydney Inner City Area, *Royal Australian Planning Institute Journal*, October 1971, p 143.

[35] Marsden, Susan, *A History of Australian Capital City Centres Since 1945*, Australian National University, Urban Research Program, Research School of Social Sciences, Working Paper No.61, October 1997, p 31

10. At the metropolitan crossroads: 1950s to 1970s

The NSW Government's momentous decision to lift CBD building height restrictions in 1957 seems inevitable in retrospect. But it was controversial at the time and attracted strong criticism from old-style technical urban planners into the 1980s. Debates about height limits were tied up with broader discussions about whether to embrace decentralising trends induced by mass motorisation and aspirations for decent home ownership or reinforce growth in the traditional city centre.

Approaches to metropolitan planning were guided, in theory, by the County of Cumberland Planning Scheme, passed into law by the NSW Parliament in 1951. Generally, the County's boundaries encompassed the greater Sydney metropolitan region of the time. Among key problems, the plan nominated "over-centralisation and congestion of industry; congested and confused traffic; slum housing."[1] These were expected to be made worse by a predicted rise in the County's population from 1,702,000 in 1948 to 2,227,000 in 1972.[2] As it turned out, that forecast was only around half the actual growth rate. This unforeseen surge put paid to one of the much-touted features of the Scheme. The encircling green-belt died a death of a thousand cuts.

Under the plan, people and jobs were to be distributed between a *central zone* and some twenty dispersed *urban districts*. Central zone included the CBD and adjoining areas focusing on government and administration, higher education, commerce and industries associated with the port and transport terminals. Urban districts, also referred to as 'dispersal centres', 'growth areas', and 'satellite towns', comprised communities largely self-sufficient in shopping, entertainment, education, culture and amenities, with local industrial areas.

"Much of the over-centralisation and congestion in the inner areas of the County", said the Scheme's 1948 report, "are due to [the] radial pattern" of the existing transport system.[3] It was envisaged that central and outer districts would be interconnected by the extension of rail lines and an

---

[1] Abercrombie, Lachlan, *Metropolitan Planning for Sydney 1948-1988: Looking to the Past to Learn for the Future, Faculty of the Built Environment*, UNSW, October 2008, p 25
[2] Spearritt, Peter and DeMarco, Christina, *Planning Sydney's Future*, Allen & Unwin, Sydney, 1988, p 16
[3] County of Cumberland Planning Scheme Report, Cumberland County Council, Sydney, 1948, p 165

upgraded road network made up of various classifications of road-links, such as new long distance 'motorways' or 'expressways'. For one writer the County of Cumberland Scheme was "Sydney's first notion towards decentralisation and the formation of a multi-centred city."[4]
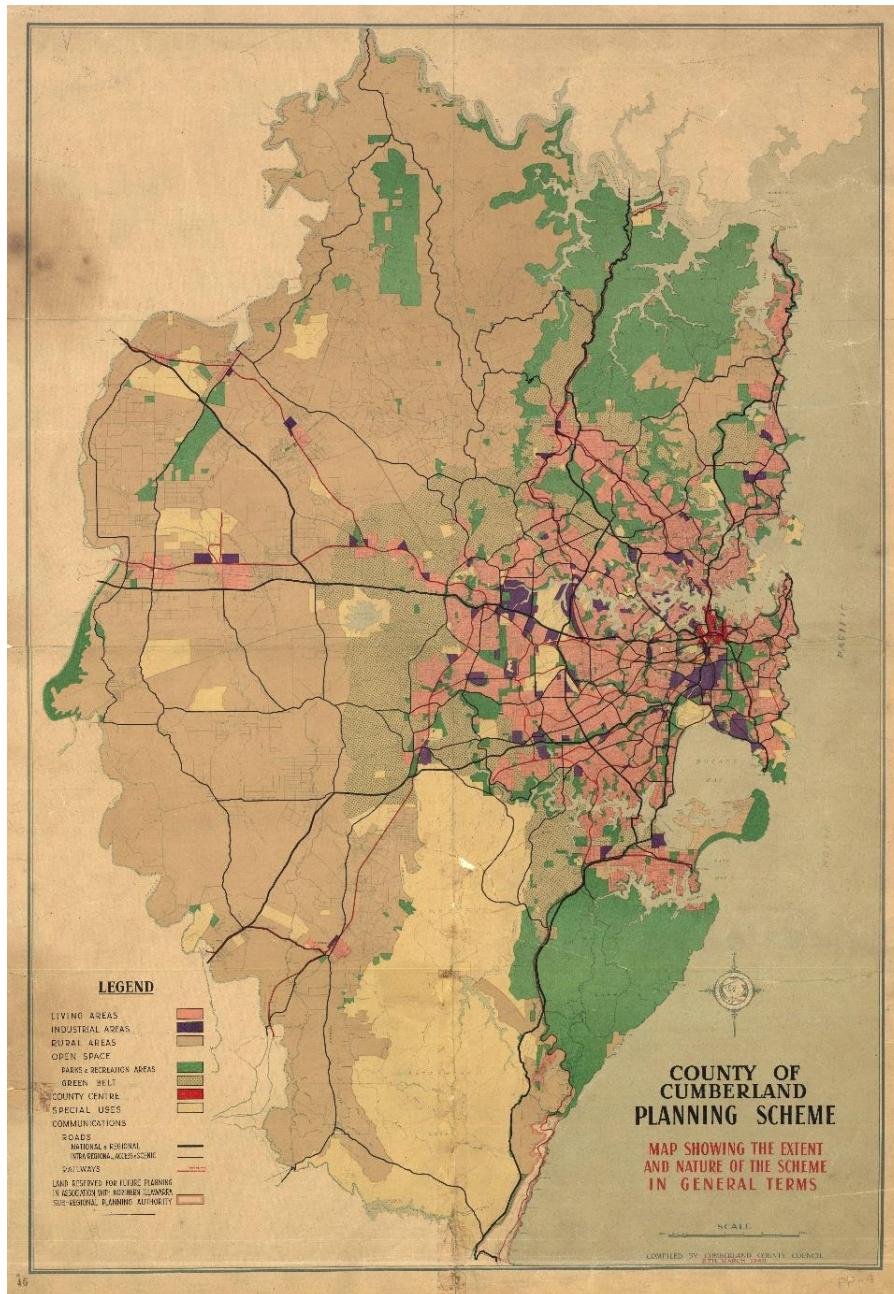
Map 11: County of Cumberland Planning Scheme Map, 1948

Denis Winston's *Sydney's Great Experiment: The Progress of the Cumberland County Plan* (1957)[5] remains one of the best accounts of the Scheme. Then

---

[4] Abercrombie, op cit, p 28

[5] Winston, Denis, *Sydney's Great Experiment: The Progress of the Cumberland County Plan*, Angus and Robertson, Sydney, 1957

Professor of Town and Country Planning at the University of Sydney and former president of the Australian Planning Institute, Winston was an influential voice in town planning circles and fervent advocate of decentralisation. The word was used in a dual sense as intra and extra metropolitan, dispersal to outer metropolitan zones as well as rural centres. He welcomed the plan as a worthy attempt to manage Sydney's explosive post-war growth. "An important consideration in the County Scheme," writes Winston, "is that the proposals follow broadly a natural trend … that is to say, the general trend towards decentralization … planned dispersal is therefore merely strengthening a natural and useful trend …"[6]

Image 26: George Street, Sydney CBD, 1962 (*State Library NSW*)

Only decentralisation, he argued, offered genuine solutions to mounting problems like traffic congestion. "All surveys show that it is the centralization of employment within the County that is the essence of the traffic problem."[7] The answer was to "provide alternative centres of employment more closely related to the new suburban living areas, and ease congestion at the centre by dispersing the destination points."[8] Since Australians had taken to motor vehicles with gusto, there were few

---

[6] Ibid, p 56
[7] Ibid, p 50
[8] Ibid, pp 50-51

alternatives: "the number of motor vehicles per thousand of population is now over twice that of the United Kingdom and … commercial vehicles per thousand of population now actually exceed those in the United States."[9] Peter Spearritt and Christina DeMarco describe the growth of car use in Sydney after 1947 as "spectacular", rising from 13 per cent of all trips in that year to 47 per cent in 1960 and 72 per cent in 1971.[10]

Dispersal also offered an escape from "the slum areas, chiefly near the centre of Sydney: these included more than 40,000 dwellings which could only be described as unfit for human habitation and a further 80,000 homes which were structurally in bad condition …"[11]

Winston's views on CBD development followed accordingly:

> Generally speaking the higher the building, or rather the greater the total floor space of the building, the greater is its capacity for goods and people and therefore the greater its influence on the traffic in the streets around it. The provision of wider roads and better transport services alone would only enable more people to reach the already overcrowded centre.

> The only really effective means for improving traffic conditions is the limitation of floor space … This is the purpose of the device known as the "floor space index" … Action on these lines in Sydney, accompanied by a real decentralization movement … is even more necessary than improved roads and more bridges … The traffic problem of Sydney, as of most great cities, is the problem of too many people and too many goods trying to get in and out of a restricted area … the solution lies in … the careful relation of building bulk to the size and arrangement of the streets and transport services.[12]

This was the standard view of professionals like town planners and city engineers at the time. As Spearritt and DeMarco note of Winston, "many of Australia's leading town planners and economists agreed with him."[13] Likewise geographers such as K W Robinson of Sydney University, who

---

[9] Ibid, p 53
[10] Spearritt and DeMarco, op cit, p 28
[11] Winston, op cit, p 40
[12] Ibid, p 88
[13] Spearritt and DeMarco, op cit, p 37

observed in 1952: "it was natural that the important [CBD] thoroughfares should run north-south, as they followed the ridges and shallow valley sides … [t]hey gave access to Sydney Cove in the north and the western highway in the south, while the cross-streets ran from Cockle Bay (the modern warehouse zone) to the Domain."[14] But his account of central Sydney's development from 1820 to 1952 concludes as follows:

> Nowadays the streets are too narrow and activity is too confined to be efficient. The access advantages derived from the peninsular character of the city and its wharfage facilities, are offset by the inadequacy of space for building and transportation. For this reason, the site which was adequate for a gaol in 1788 has become a veritable confusion in modern times. The streets existing in 1821 provided adequate coverage for the area, in terms of the actual space which they occupied. Yet for the same area at present there are many more streets, carrying a volume of traffic out of all proportion to their size. The original pattern remains, but it has been augmented and strained far beyond its capacity.[15]

Image 27: Sydney CBD, early 1960s (*City of Sydney*)

---

[14] Robinson, K W, (1952), "Sydney, 1820-1952 a comparison of developments in the heart of the city", *Australian Geographer*, 6:1, p 12
[15] Ibid

Winston was considered a pupil of British town planner Sir Patrick Abercrombie and his New Towns movement, which descended from Ebenezar Howard's Garden City movement. At Winston's invitation Abercrombie toured Australia in 1948 and the County of Cumberland Scheme was informed by the Greater London Plan of 1944, which he shaped. Abercrombie's influence is noticeable in Winston's claim that decentralisation "can save the County of Cumberland from becoming just another Manchester or Chicago."[16]

Sydney's Great Experiment was completed in 1956, before the decision to lift building heights. Over time, the NSW Government walked away from features of the County of Cumberland Scheme culminating in abolition of its administrative apparatus in 1963. Urban planners and commentators who came to prominence in the 1960s and 1970s like Hugh Stretton, Peter Harrison, Leonie Sandercock, Max Neutze, Ian Alexander and Patrick Troy were critical of the course Sydney had taken following landmark events of the 1950s. Like Winston, they saw decentralisation as the only sound response to metropolitan problems which began to seem intractable.

From the perspective of today's urban land value crisis, their warnings were remarkably farsighted. They accused successive NSW governments of failing to remedy over-centralisation and fixating on the CBD while manipulating City of Sydney Council for dubious ends.

In 2006 Australian National University academic Hugh Stretton was voted one of Australia's ten most influential public intellectuals. First published in 1971, his *Ideas for Australian Cities* became a widely-read touchstone for urban policy professionals. Stretton opens the chapter about Sydney declaring, with reference to the CBD, "Sydney is a government town."[17] Along with the "wharves, rails, quay, domain, bridge, opera, town hall", enough of the "commonwealth and state skyscrapers" are publicly owned "to shape any private structures and movements between them."[18] Stretton was writing half way through the second phase redevelopment boom of

[16] Winston, op cit, p 82

[17] Stretton, Hugh, *Ideas for Australian Cities*, 3rd Edition, Transit Australia Publishing, Sydney, 1989, p 240

[18] ibid

1968-1974. He claimed "the state concentrates its own offices in the city centre, and does nothing effective to deter others from doing the same."[19]

The County of Cumberland Scheme, "which had very civilized purposes", made only modest progress before it was abandoned:

> … many of the planners' ambitions were frustrated. Many of their new roads and most of their railways were not built. The old city centre continues to grow without limit. Little except retailing has gone out to the suburban centres … Sydney's traffic problems are worse than ever. As an inevitable result of its continuing growth and central concentration, most of its land is dearer and its living and productive costs are probably higher than ever.[20]

Little was done to reorient the city's transport system beyond radial CBD-centric routes:

> … it is into *the radial routes* – and their further boosting and congestion of the centre – that much of Sydney's transport investment still goes … it probably helps the [urban districts] to attract more … retailing … But they have little chance of sharing out any of the other central activities of the metropolis. Government might still help to make a cluster work if it distributed plenty of its own offices and the other activities it controls to the [urban districts]. Whatever advice it may have had from its planners, the New South Wales government so far concentrates jobs and customers' traffic into the single old centre more resolutely than any other Australian or American state government does [emphasis added].[21]

In 1966 Whipple had found that 40 per cent of office space in privately owned buildings was occupied by government agencies. Ten years later the Sydney CBD Survey (1976) found that this was the case for 38 per cent of total office space.[22] Even so, the NSW Government had established a stand-alone Department of Decentralisation in 1966 and its State Planning Authority issued a successor plan to the County of Cumberland Scheme in 1968, the *Sydney Region Outline Plan 1970-2000*. Both made the right

---

[19] ibid
[20] Ibid, p 243
[21] Ibid, pp 247-248
[22] Sydney CBD Survey (1976), Land Use Survey, City of Sydney Council, p 43

noises but were met with official indifference or resistance, as Stretton explained:

> … the planners agonize often and perceptively about the problems and costs of over-centralisation. But with one problem after another, that is all they can do. They condemn the unplanned, uncontrolled growth of the city centre. More central employments 'ought' to disperse to suburban centres or to other cities. Among devices for achieving this the government might impose building limits or punitive taxes on the existing centre, move some of its own activities out … or even push some growth towards other states. The last is of course unthinkable.[23]

"In [Max] Neutze's words," writes Stretton, "decentralisation was everyone's policy but no one's program."[24] Since "nothing new [was] proposed to beat the old centre's gravity", Sydney could "merely expect pressures, congestions, rocketing land prices."[25]

Image 28: George Street, Sydney CBD, 1957 (*State Library NSW*)

---

[23] Stretton, op cit, p 254
[24] Ibid
[25] Ibid, p 255

In her accounts of Australia's erratic forays into metropolitan urban planning, *Cities for Sale* (1975) and *Property, Politics and Urban Planning* (1990), Leonie Sandercock observed that for NSW politics in the late 1940s, "decentralization had been an essential part of the vision of a better post-war world."[26] Her highest concerns included "the failure of efforts to decentralize and to control land prices".[27] Sandercock too attributed collapse of the County of Cumberland Scheme to poor follow-through on transport projects, but also to "most local councils [which] were reluctant to complete local planning schemes, preferring to exercise … discretionary control over private developments …"[28]

Prominent amongst these was Sydney City Council, under which "the old city centre continued to grow without limit, increasing traffic problems and land prices."[29] Sandercock thought the city suffered from "Manhattan Syndrome". Overall, "there was some improvement in the living and working relationship in regard to manufacturing and retailing employment, [but] there was no restraint on the build-up of employment in central and inner areas, which accounted for 37 per cent and 18 per cent of metropolitan employment in 1966."[30]

Present-day urbanists maintain that action to decentralise office work would have been futile in any event. They argue it is in the nature of office-based occupations to concentrate in the CBD, invoking what may be called 'the CBD agglomeration myth'. Simon Kuestenmacher, demographer and writer for *The Australian* newspaper, restated the myth in a recent column:

> Why did our cities feature dominant CBDs in the first place? As our economy transitioned from manufacturing towards knowledge work, office jobs made an ever-growing share of the workforce. But why did these jobs cluster in the CBD? Why weren't they spread out evenly across the city? To some degree zoning practices are responsible but mostly it was the nature of these new office jobs that led to the

[26] Sandercock, Leonie, "Sydney: Development without improvement", *Property, Politics, and Urban Planning: A History of Australian City Planning, 1890-1990*, Second Edition, Transaction Publishers, 1990, p 232
[27] Ibid, p 221
[28] Ibid, p 224
[29] Ibid
[30] Ibid

clustering effect. A knowledge job benefits from being co-located with other knowledge jobs.[31]

In contrast, geographers have traced the origins of CBD locations to landforms, physical features and associated convergence points in the era of fixed-route maritime and railway transportation. As George W Hartman put it in "The Central Business District: A Study in Urban Geography" (1950):

> The first substantial developments of "towns and cities" in the United States generally were made at locations most advantageous to trade and commerce … at a junction of overland trade routes, along a navigable stream or water body, at some other inland break-of-bulk or change-of-ownership transportation site, or at some strategic point favourable for mining, manufacturing, or resort activities … [32]

Image 29: Darling Harbour and Pyrmont docks, 1947 (*Sea Museum Collection*)

---

[31] Kuestenmacher, Simon, "The CBD won't die, but it does need to change", realcommercial.com.au, *The Australian*, 5 August 2021, pp 10-11

[32] Hartman, George W, "The Central Business District – A Study In Urban Geography", *Economic Geography*, Vol 26, No 4, October 1950, p 237

Raymond Vernon explained in *Metropolis 1985* (1963), his influential interpretation of the 1956-59 New York Metropolitan Region Study, that:

> We have already indicated the historical process by which the great cluster of wholesalers, central offices, banks, and related activities come to be located in the New York Metropolitan Region. The Port begat the wholesalers; these strengthened the pull upon the financial institutions; finance attracted central offices; the latter drew the advertising agencies and others; and each new accretion reinforced the old ...[33]

This was certainly true of the harbour city of Sydney. "As the major port in the State", writes Maurice Daly, "Sydney provided the transport, storage, financial, and commercial systems whereby the products of the interior could be delivered to the world, and the conjunction of the port with the central business district implied a tight clustering of such activities in the CBD."[34] In urban economics textbooks like that of Arthur Sullivan, explanations for the development of office districts at such sites emphasised transportation costs. Office-based activity "has higher transportation costs because it uses people – with high opportunity costs – to transmit output ... the office industry, with its higher transportation costs, occupies land closest to the city centre."[35] Allowing for the retail core, the office core was as close as possible to the PLVI in the classic CBD.

But things changed, as Daly points out, when "better transport systems removed the need to be adjacent to the port for warehousing and wholesaling [and] the motor vehicle took population, manufacturing and retailing into the suburbs."[36] Mention can also be made of containerised freight and air transport. Geographer Jean Gottmann, ironically a progenitor of the CBD agglomeration myth, identified the emergence of urban areas dominated by office work free of fixed-location infrastructure or resources. In *The Coming of the Transactional City* (1983), Gottmann wrote that

---

[33] Vernon, Raymond, *Metropolis 1985: An Interpretation of the Findings of the New York metropolitan Region Study*, Anchor Books, Doubleday & Co, New York, 1963, p 113
[34] Daly, op cit, p 37
[35] O'Sullivan, Arthur, *Urban Economics*, Fifth Edition, McGraw-Hill Irwin, New York, 2003, p 175
[36] Daly, op cit, p 37

> … the expanding activities in the cities have shifted from manufacturing work and distribution to transactional work and related services. That means, in terms of buildings, a transfer of emphasis from industrial plants to offices … I believe that it has announced the liberation from constraining work on the land, at the machines … In these new ways of life the individual expects to obtain greater freedom in arranging his own conditions of living, the use of time, and the use of space.[37]

In these circumstances the concept of "typical central business uses" was no longer as meaningful as it seemed to Murphy and Vance in the 1950s. Hans Carol of the University of Cincinnati argued in 1960 that their handling of the concept was, in any event, undeveloped and failed to "follow [the] line of thought further as a theoretical or practical basis for the decision as to what are and are not CBD functions."[38] Carol came up with the more rigorous concept of "absolute centrality", applying to functional uses which not only "serve the city as a whole" (CBD and metropolitan hinterland) but exist for that particular purpose. By the late 1970s, however, very few, if any, uses met this definition.

One flaw of the CBD agglomeration myth is that the location of office supply is superficially equated with the location of office demand. One of the urban policy academics coming to prominence in the 1970s, Ian Alexander of the University of Western Australia, wrote extensively on Sydney's pattern of office location. His article "Office Decentralisation in Sydney" (1978) recognises that "while other economic activities have shown an increasing degree of dispersal away from their traditional central locations, offices have remained highly centralised."[39] Unlike in the United States, "where the majority of new office development in many urban areas [was] occurring in the suburbs", explains Alexander, "in Sydney, the central area accounted for more than 75 per cent of the value of new office buildings over the 1960-75

[37] Gottmann, Jean, *The Coming of the Transactional City*, University of Maryland Institute for Urban Studies, 1983, pp 12-14

[38] Carol, Hans, "The Hierarchy of Central Functions Within the City", *Annals of the Association of American Geographers,* Vol 50, No 4, Dec 1960, p 421

[39] Alexander, Ian, "Office Decentralisation in Sydney", *Town Planning Review*, Vol 49, No 3, Jul 1978, pp 402-403

period."[40] These years correspond to both stages of the CBD's pumped-up redevelopment boom.

Alexander did detect "some signs that this traditional centralisation is beginning to break down."[41] Around 100 firms moved to suburban centres between 1965 and 1975 while a further 120 or so commenced operations in suburban centres. This represented a very modest trend, however, since these relocating firms accounted for only around 2,000 jobs or 1 per cent of the central area's 1971 office employment. By comparison, London diverted 115,000 jobs away from the central area over the decade to 1975, equivalent to 15 per cent of central London's office employment in 1971.[42]

Image 30: Circular Quay and Sydney CBD, circa 1965

Based on a survey of factors causing the relocation of Sydney office firms in 1975, Alexander found that the decision was often "heavily influenced by internal factors" and "factors relating to the evolution of the firm [rather] than from any revaluation of *locational* needs."[43] Highly ranked factors

---

[40] Ibid, p 406
[41] Ibid
[42] Ibid
[43] Ibid, p 407

leading to relocation included "no room for expansion", "high cost of existing location" and "reorganisation of operations".[44] On professional and business service firms, commonly assumed to need a CBD location, "interviews indicate that the actual *intensity* of contact with [their] clients is not necessarily strong" and "most professional firms in outer suburban centres thought such [a CBD] advantage was largely mythical."[45] Alexander stresses "the importance of non-quantifiable factors in the office location process."[46]

A second survey ranking location factors for offices in CBD and suburban locations found that "availability of premises" ranked highest for CBD offices, well above "access to associated business" and "access to business services", which ranked eighth and ninth respectively.[47] Alexander comments that

> [t]his points to the process of office supply leading demand rather than simply responding to it. While office developers claim to be doing the latter, it is clear that the pattern of vacancies at any one time exerts a strong influence on the pattern of office dispersal. This influence is accentuated in times of oversupply like that prevailing at the time of writing. There is little doubt that in Sydney office developers are playing a greater part in the office location process than are the planners ... the developers have virtually had a free hand in city redevelopment, and office building in the centre proceeded at boom rates for several years from the mid-1960s. This is one reason for the vast imbalance between supply and demand evident at the present time.[48]

Offices weren't necessarily built where firms wanted to locate but firms necessarily located where offices were built. Max Neutze, an urban policy academic at the Australian National University in the 1970s, had similar views on the agenda-setting role of property investors and developers:

---

[44] Ibid, p 407
[45] Ibid, p 411
[46] Ibid
[47] Ibid, p 408
[48] Ibid

While few developers have much influence on the pattern of new development the options in the case of redevelopment are a good deal wider ... Central city office redevelopment has frequently been initiated by investors and developers. Since the office space is so highly localised these redevelopments have consolidated the pattern of development rather than changing it.[49]

This was a particular problem in the case of "Sydney [which] stands at one extreme in the urban pattern because ... its [CBD] site is more confined than that of any other mainland capital ... [and] ... its city centre is far from the geographical centre of the urban [metropolitan] area".[50]

Alexander maintains "there is evidence to suggest that the pattern of relocation to inner centres may be as much a product of office space availability and imperfect market knowledge as of any real inability to function in outer centres."[51] He thought government offices should have been deconcentrated and "developers need[ed] to be encouraged to invest less in the central area and more in the suburbs, so as to improve office availability in non-central locations".[52] That was not an unusual proposal at the time. R W Archer found in 1969 that the "efficiency" of Sydney CBD was severely compromised by "failure to prevent overdevelopment of office sites."[53] But Alexander felt that the types of measures taken in the United Kingdom, including office development permits, would "probably never be politically acceptable given the powerful financial interests that are involved in office development."[54]

Later, Alexander explored the problems of office location across English-speaking countries in a full-length book, *Office Location and Public Policy* (1979). He confronts the CBD agglomeration myth head on. Noting that "the classic explanation for the clustering of office activities in city centres" has been "need for direct personal contact in transacting business",[55] he continues:

[49] Neutze, Max, *Urban Development in Australia*, Allen and Unwin, Sydney, 1977, pp 234-235
[50] Ibid, p 3
[51] Alexander, op cit, 1978, p 413
[52] Ibid, p 414
[53] Archer, op cit, 1969, p 72
[54] Alexander, op cit, 1978, p 414
[55] Alexander, Ian, *Office Location and Public Policy*, Longman, London and New York, 1979, p 8

Although such beliefs still persist strongly, it will be shown … that there is now considerable evidence to show that, given information flows are an important locational consideration for office activities, they are by no means an absolute constraint upon location.[56]

Alexander proceeds to cite a wave of research from Sweden and Britain on "developments in communications technology that allow the replacement of face-to-face meetings by other means" and the classification of business contacts as routine "programmed" contacts or more complex "orientation" contacts.[57] The former could be transacted as easily from a decentralised location while the latter "form only a small proportion of a typical office firm's contact patterns" and "only involve a minority of office personnel."[58] Orientation contacts could also be conducted from a non-central base even if extra travel is involved. Meetings "involving discussion, problem solving, and information seeking could be carried out using relatively simple telecommunications."[59]

Image 31: AMP Building office floor, early 1960s (*State Library NSW*)

Suburbanisation trends over the 1960s and 1970s demonstrated that this applies as much to "detached" head offices as it does to branch offices or

---

[56] Ibid, p 8
[57] Ibid, p 13
[58] Ibid, p 13 and p 25
[59] Ibid, p 59

plant-attached offices. "[E]ven the largest headquarters can fulfil their need for personal contacts from locations well outside the CBD."[60] Silicon Valley is a case in point. Such findings would have been confirmed by arrival of the internet and more advanced mobile communications technologies, not to mention work practices mainstreamed during the covid pandemic (in Work From Home highly qualified 'knowledge workers' themselves have felt they could be just as productive away from office centres, debunking the CBD agglomeration myth).

At one point Alexander revisits Murphy and Vance, quoting a researcher who thought the idea of central business uses "rested primarily on inference … [their] work concentrated too much on pattern and too little on process."[61] Proponents of the centralisation hypothesis relied on scant "proof other than revealed preference", which was "overtaken by events, since the days when all office activities were automatically drawn to a central location are long since gone."[62] If decentralisation was not more pronounced, it was because "locational inertia [kept] them in a central location"[63] and, importantly, "some firms – particularly those in the insurance and banking sector - have invested heavily in central office building."[64] State planning and transportation policy was a factor in locational inertia:

> Australian cities have shown a high degree of suburbanisation of population and economic activity … However, office developers and detached office activities have shown a particular propensity to locate in the central areas. Part of the explanation for this difference is that the comprehensive freeway networks in US cities, that have been a major agent encouraging office relocation, are absent from Australian cities.[65]

In the book, Alexander expands on the office-occupier survey results presented in his 1978 article:

[60] Ibid, p 33
[61] Ibid, p 16
[62] Ibid, p 17
[63] Ibid p 18
[64] Ibid, p 20
[65] Ibid, p 41

As is the case elsewhere, most of Sydney firms surveyed rent rather than own premises. This makes them highly dependent on the availability of premises to rent ... 74 per cent of offices regard this as an important location factor ... the particular location chosen is often affected by where suitable premises in terms of costs and size can be found.

Developers supposedly build on the basis of expected demand. But much development is highly speculative, and is often only based on sketchy analysis of the likely market for space. The all too frequent emergence of chronic oversupplies of office space in central areas is evidence of this.[66]

Stretton was in no doubt that Sydney's office centralisation was an orchestrated phenomenon:

... rising rates of destruction and renewal are made profitable by the land values of overbuilt office centres. Nor are such policies adapting democratically to 'the peoples' locational decisions: they work in favour of the interests of tiny minorities of central investors and developers ... Plenty of Sydney people – planners, politicians and others – like to regard their centralized over-growth as natural, unavoidable, an international phenomenon. It is nothing of the sort. Sensible schemes to limit and disperse central office building have been proposed since 1953 – and regularly murdered by politicians and central investors. For nearly half a century London has limited its central office development to less than half the densities Sydney was building throughout the 1960s.[67]

After discussing features of the 1970s office over-supply, later examined in more detail by Daly, Stretton repeats:

So the celebrated office boom at Sydney Cove was not a response to strong office demand from people who needed to do business there. It was a calculated risk by the office builders, gambling on inflation and rising building costs and especially on the *extreme centralist*

[66] Ibid, p 50
[67] Stretton, op cit, p 249

policy which was visible in the government's own office activity …
[emphasis added][68]

Looking back at the County of Cumberland Scheme and the early 1950s, Daly observed that "the falling number of workers in the CBD seemed natural and inevitable, and the CBD was viewed increasingly as simply the largest in the hierarchy of centres in the metropolitan area, and one which would continue to decline in importance."[69] That it followed a different course to renewed metropolitan primacy can be ascribed to political choices which made central office development highly profitable for the property-finance industry. Hoisted on fabricated props, the CBD would come to need an ongoing program of such choices to hold onto its artificial status.

Image 32: Construction Worker Resting, Sydney Opera House, 1966-67 (*Robert Emerson Curtis*)

---

[68] Ibid, p 268
[69] Daly, op cit, p 37-38

11. Rise of a modern skyline, 1950s and 1960s

Why did politicians, of all major parties, promote such lucrative conditions for CBD office developers? "Sydney's urban image and identity", explains architect and planner Darrel Conybeare, "is inextricably linked to the natural setting of this centre on the visually spectacular foreshores of Sydney Harbour".[1] The city's image seems to have been a preoccupation of state government officials at the time. In 1964 Nigel Ashton was appointed first Commissioner of the State Planning Authority, which replaced the Cumberland County Council. Ashton recalled:

> I always saw Sydney as an image but I don't think those in the City Council did. I was influenced by Kevin Lynch, an American planner who had written a number of books about cities including *Image of the City*. In 1961 when I went around the world to look at cities I went to see him in Boston and I was impressed by his idea that a great city is remembered by it's image more than any other attribute. You think of London, Paris, Berlin (before it was destroyed) or Leningrad, it's the image that stays in people's minds. Sydney had an image. And because of financial pressures high rise buildings tended to stay in the centre and have created a new image.[2]

Over time this general sentiment began to colour the language of formal planning instruments like *Sydney Region Outline Plan 1970-2000* (1968). While declaring that "the concept of decentralisation has long been built in to thoughts on State development", some parts of the plan were ambivalent:

> The choice lies between permitting an already critical congestion problem to become worse, or attempting to steer a considerable part of the likely future growth of office employment to other commercial centres in the existing suburbs or in the new cities which are proposed.

> This must be done without prejudicing *the essential role of Sydney as the main commercial centre in Australia and as a commercial and financial centre of increasing world importance*. There are however

[1] Conybeare, op cit, p 16
[2] Ashton Paul, *Planning Sydney: Nine planners remember*, Council of the City of Sydney, Sydney, 1992, pp 6-7

grounds for believing that the two objectives are not incompatible. [emphasis added][3]

The cause of cultivating a certain image of Sydney as the shimmering gateway to Australia loomed large over the events of 1957. After all, Melbourne had just commanded the world's attention as host of the 1956 Olympic Games. More to the point, Melbourne City Council removed its own 132-foot building height limit in 1955 to permit the 20-storey ICI House office project, potentially Australia's tallest International Style modernist skyscraper.

Image 33: Melbourne's ICI House, 1958 (*Wolfgang Sievers*)

Authorities in NSW were bound to prioritise the CBD even if, as Stretton wrote later, "at best they were incompetent attempts to keep Sydney on top as 'Australia's premier city'."[4] To this end "such height limits as the city had were suspended at the first suggestion that one skyscraper might go to Melbourne instead."[5] The *Sydney Region Outline Plan,* added Stretton, "beat … the drum for 'Australia's premier city' as often as it warn[ed] against its overgrowth."[6] Leonie Sandercock observed that "this celebratory tendency

[3] *Sydney Region: Outline Plan 1970-2000 AD, A Strategy for Development*, A Report by the State Planning Authority of New South Wales, 1968, p 33
[4] Stretton, op cit, p 273
[5] Ibid, p 254
[6] Ibid

certainly appears with monotonous regularity on page after page of the 1968 plan."[7] The same point was made by engineer Paul Fitzwarryne of the University of NSW in 1971: "the Sydney City Commissioners and later the City Council have authorised a rapid expansion of the central business district for no apparent reason other than to stay ahead of Melbourne …"[8]

Image 34: Circular Quay and Sydney CBD, 1970

Writing of that time, moreover, Peter Harrison, former Chief Town Planner of Canberra and influential urban research academic, records that "the office-building boom has been widely acclaimed as tangible evidence of metropolitan progress; the Lord Mayor [Sydney City Council] has proudly claimed that Sydney is 'growing faster than any other city in the world', a phenomenon which the Premier [NSW] described as 'exhilarating'."[9] Looking back from the 2000s, academics Donald McNeil, Robyn Dowling and Bob Fagan wrote of this tendency to idolise central development: "we suggest that Sydney's global city status is based firmly on an essentialization of the CBD and historic core."[10]

---

[7] Sandercock, op cit, p 229

[8] Quoted in Lawrence, R J, "Social Welfare and Urban Growth", in *The Politics of Urban Growth*, R S Parker and P N Troy editors, Australian National University Press, Canberra, 1972, p 111

[9] Harrison, Peter, "Planning the Metropolis – A Case Study", in Parker and Troy, op cit, p 95

[10] McNeill, Donald, Dowling, Robyn and Fagan, Bob, "Sydney/Global/City: An Exploration", *International Journal of Urban and Regional Research*, Vol 29.4, December 2005, p 939

The city's political leadership was primed to embrace a series of glittering visions offered to them by the architecture profession over decades starting in the mid-1950s. According to one account, the "move to skyscrapers may have been American-influenced but was, to a large extent, architect-led, with the Royal Australian Institute of Architects [RAIA] acting as prime mover in bringing skyscrapers to Sydney and tipping public attitudes to the built environment towards American and away from British influences."[11] In 1955 the RAIA was urged along this path by Osborn McCutcheon, principal of the architectural firm behind Melbourne's ICI House and a height-limited office block for ICI in Sydney.[12]

Architects had some powerful symbols at their disposal. Jennifer Taylor, historian of Australian tall office buildings between 1945 and 1970, writes that

> ... following World War II the services and aesthetic of the modern office building were desired in Australia by both clients and architects. These were built by the multinational corporations and by local companies and investors, particularly insurance companies, seeking the progressive and prestigious image and performance for self promotion or economic return. The glazed building had particular appeal as it symbolised American prosperity ... [there was] an imagery of modern efficiency that these buildings were seen to represent.[13]

As it happened, this architectural style complemented the new approaches to real estate finance unleashed by the booms of 1957-74. "Lever House, New York, 1951, provided an accessible model for a tall, freestanding curtain-wall building, "says Taylor, "that was rapidly accepted and proliferated around the world, including in Australia."[14] Author of the magisterial *Architecture in Australia: A History* (1968), John Freeland, described these structures as "unignorably impressive advertisements ('prestige buildings' they were euphemistically called) for the insurance

---

[11] Farrelly, E M, "The Sydney height of buildings story: an examination of the intellectual, cultural and political background to development control in Sydney City Centre 1900-1960", PhD Thesis in the Faculty of Architecture, University of Sydney, 1997, p 414
[12] Ibid, p 415
[13] Taylor, Jennifer, *Tall Buildings, Australian Business Going Up: 1945-1970*, Craftsman House, 2001, pp 15-16
[14] Ibid, p 22

companies for whom they were almost always all built", adding that "the glass boxes were as much fashion buildings as any Australian buildings have ever been."[15]

Image 35: Lever House, Manhattan (*Wikipedia*)

While town planners and traffic engineers highlighted congestion and land values to promote decentralisation – the Town Planning Association of NSW was more sceptical about raising the height limit than RAIA[16] – architects deployed aesthetics for centralisation. Large-scale modern structures were only viable in high rent and land value zones like CBDs. British architecture critic J M Richards wrote that the skyscraper was a "child of four grandparents: steel-frame building construction, the electric lift, *high city land-values*, and American belief in competitive advertising" [emphasis added][17]. One emerging advocate of modernist architecture was Harry Seidler, whose office towers would later appear as landmarks over

---

[15] Freeland, J M, *Architecture in Australia: A History*, Penguin Books, 1988, p 298
[16] Farrelly, op cit, p 256
[17] Richards, J M, *An Introduction to Modern Architecture*, Pelican Books, 1970, pp 71-72

the skyline of central Sydney. A member of the RAIA's Acts and Regulations Committee, he campaigned vocally for the complete deregulation of development.

Seidler invited his mentor and Bauhaus founder Walter Gropius to address the RAIA's 1954 convention in Sydney. This mirrored Sir Patrick Abercrombie's 1948 visit at the instigation of Denis Winston. John Punter observes that "there was … extensive architectural opposition expressed to any controls, reinforced by Walter Gropius's talk in Sydney in 1954."[18] Gropius also delivered a speech to the ABC and contributed an article to the *Sydney Morning Herald*. Subjects like the economics of office location or agglomeration economies did not feature in his arguments for modernist architecture, which focused on culture and aesthetics. "The conditions created today by a highly developed science," he told the ABC, "seem to present a flaming challenge that we should seize this grandiose opportunity to add quality to quantity for a final cultural success."[19] Seidler published his own opinion piece in the *Herald* a month later. "Although few of us would argue against its technical achievements", he wrote of modernism, "we seem reluctant to accept its cultural and aesthetic aims."[20]

Image 36: Walter Gropius (left) and Harry Seidler in Sydney, 1954 (*State Library NSW*)

[18] Punter, op cit, 2005, p 26
[19] www.goethe.de/ins/au/en/kul/arc/bau/21661590.html
[20] Seidler, Harry, "We are clinging to the outmoded", *Sydney Morning Herald*, 22 June 1954

These articles were part of a longer *Herald* series, coinciding with the RAIA convention, which debated the merits of modernist design. The newspaper was considered "progressivist" on architectural issues and became a forum for agitators against Sydney's building restrictions. Walter Bunning, one Australia's most prominent architects and another modernist, was a regular contributor in the 1950s. On returning from a trip to New York in 1956, Bunning waxed lyrical about Manhattan's Lever House and Seagram Building. Of Lever House, he wrote, "[t]his green-glass-faced building ranks as the most handsome skyscraper of the post-war world ... [and] ... makes a telling argument in favour of amending the zoning laws at present under consideration ..."[21] Another architect and *Herald* contributor, John Fisher, admired the "clean-cut envelope of glass and aluminium" and emphasised the views made possible by tall glazed towers, which became a dominant factor in Sydney office location. "With the exciting prospect of harbour and city at their feet [sceptics] would not reduce the glass by one square inch."[22]

Image 37: Opera House under construction, 1965 (*City of Sydney*)

The choice of Jorn Utzon's design for the Opera House in 1957 emerged from this clamour for an urban form conducive to modernist aesthetics. Internationally renowned modernist architect Eero Saarinen sat on the

---

[21] Bunning, Walter, "New York's Newest Boom in Building", *Sydney Morning Herald*, 14 August 1956
[22] Fisher, John, "Curtain-Walls, And What They Achieve In Building", *Sydney Morning Herald*, 19 February 1957, p 11

project judging panel. RAIA members did more than just suggest the location for a theatrical venue when they held a special meeting in 1955, attended by Bunning, to recommend Bennelong Point as the building's site. "We believe this to be an outstandingly suitable site, which, if properly developed, would provide a setting for the Opera House which would be unrivalled throughout the world", say the minutes, and "[s]uch a harbour setting would, at the same time, be characteristic of Sydney and provide a landmark for travellers …"[23] During his visit to Sydney, Saarinen agreed and told the *Herald* "one of [the site's] great merits is the absence of surrounding buildings, leaving the architect free to break all the traditions of previous buildings in Sydney if he wished to."[24]

Bunning exclaimed later that "nineteen-fifty-seven has been the most vigorous year in our architectural history",[25] about which Jennifer Taylor maintained "there [was] little doubt that the introduction of the glazed office building to Australia resulted from aesthetic preference rather than economic advantage."[26]

In 1954 the NSW Government had reacted by setting up a special advisory committee of "experts" to investigate changes to the Height of Buildings Act. Committee members included the president of the NSW Chapter of RAIA and the City Building Surveyor of Sydney City Council, who was instructed by Lord Mayor Pat Hills of the Labor Party to advocate for raising the 150-foot height limit. Around that time the Vice-President of Hilton Hotels International was touring Australia to consider sites for a hotel project, and Hills was anxious to ensure Sydney edged out rivals like Melbourne. He issued a forceful public statement: "we are prepared to assist anyone, in the way of getting over building regulations and other problems, to build new modern tourist hotels in Sydney."[27]

While the Council's political leadership, embodied by Hills, opposed the height restriction, officers like City Engineer R D Stevenson and his predecessor A H Garnsey supported the County of Cumberland Scheme

[23] Pitt, Helen, *The House: The dramatic story of the Opera House and the people who made it*, Allen & Unwin, Australia, 2018, p 72
[24] Ibid, p 95
[25] Bunning, Walter, "Our Most Vigorous Architectural Year", *Sydney Morning Herald*, 17 December 1957
[26] Taylor, op cit, p 115
[27] Farrelly, op cit, p 237

program of decentralisation and a restrictive Floor Space Index to prevent CBD skyscrapers. Garnsey was "a confirmed advocate of decentralisation, orbital motorways and the garden suburb."[28] Stevenson's consistent position, as expressed in a council minute, was that "present development has already led to heavy traffic in the city ... lifting the height limit would only mean more development, more people, more congestion."[29]

Stevenson solicited professional advice from Denis Winston who supported "practical control of building height and bulk" and Peter Harrison, who thought it remarkable that Sydney "with the least adequate street system of all Australian capitals allows the greatest height (and consequently bulk) of building."[30] He considered "some form of building bulk limitation ... a most urgent requirement."[31] Harrison's concerns about the CBD's topographical constraints were in line with those of Winston and K W Robinson.

For inner-city Labor council aldermen and parliamentarians, the highest priority was to protect their working-class voter base from spreading commercial development. Views on raising the height limit varied. Many thought it would focus office construction on the traditional business district and forestall incursions into residential areas. At any rate, in 1956 the expert committee's recommendation in favour of lifting the limit was accepted by the state Labor Government and legislation came into effect the following year. Explaining his reasons, Premier Joe Cahill singled out the role played by architects:

> Mr Cahill said an advisory committee set up in 1954 had recommended changes in the Act. Since then the agitation for the lifting of the 150ft limit had "gathered force". Architects and others had complained about it.[32]

By this time the County of Cumberland Scheme had already stalled and Sydney's over-centralisation persisted. In those conditions Cahill's decision catalysed other factors behind the CBD office boom documented by Archer, Whipple and Daly.

---

[28] Farrelly, op cit, p 416
[29] Farrelly, op cit, p 253
[30] Ibid, p 255
[31] Ibid
[32] "Skyscraper Move By Cabinet", *Sydney Morning Herald*, 12 September 1956

Image 38: Qantas House, Chifley Square, under construction, 1956

The height limit was replaced by a floor-space ratio described by Paul Ashton as "an extremely crude instrument", while Punter thought the Height of Buildings Advisory Committee (HOBAC) was handed "infinite discretion" to determine outcomes. What eventually became known as the Minister's Ordinance "allowed a basic floor space ratio [FSR] of 10:1 and an additional 2:1 for open plazas, colonnades and pedestrian access through or around the building", with no mandatory height cap.[33] FSR measures the relationship between the gross floor area of a building and the total land area of the site. "The crucial matter of floor-space ratios was manipulated", notes writer Geoffrey Moorhouse, "increased so generously from the norm that Sydney's ratios ever since have been about twice what is permitted in

---

[33] Luczak, Krystyna and Morrison, Francesca, "Sydney's Struggle to Urban Maturity", *Urban Design Quarterly*, July 1991, p 7

European cities."[34] HOBAC was either unable or unwilling to resist the coming avalanche of construction.

"The results were always going to be a dramatic change in the height and bulk of urban development", reflects Punter, "because this was what the architects, developers and insurance companies wanted."[35]

The powerful dynamics of central city redevelopment, sweeping across deindustrialising inner cities at the time, featured in another book by Ian Alexander, *The City Centre: Patterns and Problems* (1974). This in-depth review of the CBD literature draws extensively on the work of Larry Bourne, a Canadian urban geographer. Bourne identified a "process of intensification of land use through redevelopment" in the form of "space-intensive activities [that] were constantly replacing space-extensive activities, since it is 'generally uneconomic' to replace an existing structure 'with anything but a more intensive use'."[36] This "phenomenon can be attributed to the high prices that most central-area sites command: non-intensive uses become an increasingly poor investment."[37] Of course, "more intensive use" usually means bulkier and taller buildings. Following Bourne's line of thought, Alexander explains that

> The changing functional composition of the central areas over the time span also illustrates this process: in general terms there has been an increase in the significance of activities high in the rent-paying hierarchy at the expense of those of lower rent-paying ability. Thus offices have increased considerably in relative importance … whilst public, wholesaling and industrial activities have declined in importance … This is symptomatic of the decentralization of certain types of retailing establishment, particularly those handling heavy goods, from the area.[38]

Moving to another dimension of Bourne's findings, Alexander writes that "there appears to be a process of land-use succession operating, which is gradually diminishing the areal importance of activities that have a low

[34] Moorhouse, Geoffrey, *Sydney: The Story of a City*, Harcourt, 1999, p 249
[35] Punter, op cit, 2005, p 28
[36] Alexander, Ian, *The City Centre: Patterns and Problems*, University of Western Australia Press, Perth, 1974, p 136
[37] ibid
[38] Ibid, p 139

productivity/space ratio and cannot afford to continue occupying expensive central-area sites."[39] In fact, "it is an expected outcome of the competition for land that occurs between activities in the land market ... [w]hether it is a desirable trend seems open to serious question, for the importance of certain economic activities of low rent-paying ability and of non-profit oriented uses in the city centre has already been demonstrated."[40]

This process is consistent with the Archer and Daly accounts of how Sydney's office booms played out over 1957-1974. For urban policy academic Pauline McGuirk, they were "fuelled by the CBD's transition from a general-purpose city centre to a specialist financial and business centre."[41] In his chapter for the book *Why Cities Change: Urban development and economic change in Sydney* (1982), Daly encapsulates the pre-transition CBD as follows:

> The CBD of the 1950s comprised buildings accommodating: the storage and distributional roles associated with the port; offices associated with these activities; the banking, insurance and manufacturing headquarters which combined with the government functions in organising the economy; the small scale manufacturing concerns traditionally located in the centre; and the retailing, entertainment and specialist professional services which catered to a metropolitan population.[42]

While proponents of modernist design claimed it was more functional – "form follows function" – the effect on urban environments like CBDs was to narrow this diverse range of functions. McGuirk and fellow academic Phillip O'Neill explain that, pre-transition, "there was little intersectional competition for CBD space across retailing, office and government zones."[43]

---

[39] Ibid, p 139
[40] Ibid, p 139
[41] McGuirk, Pauline, "Planning Central Sydney", in *Making Space: Property Development and Urban Planning*, edited by Andrew MacLaran, Routledge, London, 2003, p 126
[42] Daly, Maurice T, "Finance, the capital market and Sydney's development", in *Why Cities Change: Urban development and economic change in Sydney*, edited by Cardew, Richard, Langdale, John and Rich, David, Geographical Society of New South Wales, George Allen & Unwin, 1982, p 48
[43] O'Neill, Phillip M and McGuirk, Pauline, "Reconfiguring the CBD: Work and Discourses of Design in Sydney's Office Space", *Urban Studies*, Vol 40, No. 9, August 2003, p 1756

Built forms and street lines, as described by various writers, were conditioned by their functional purpose under the PLVI system:

"low rise, with the large majority of ... buildings of two and three storeys, and the more imposing structures, the government offices, the large warehouses and the townhouses in some places of four, five or occasionally six levels above ground";[44]

"visually unified and spatially coherent; buildings, between six and ten storeys high, defined the streets and the golden glow of Sydney sandstone gave the city its colour";[45]

"limit-height budget blocks that pushed out to the building line, presenting a planar wall to the street";[46]

"narrow streets ... lined with 12- or 13-storey, back-of-pavement buildings with narrow internal courtyards";[47]

"traditional, introverted perimeter [block] development rising 12 or 13 storeys";[48]

"the solid/void pattern of the city ... one of masses defining streets".[49]

Image 39: Market Street, Sydney CBD, 1962

[44] Webber, Peter, "The Nature of the City", in *The Design of Sydney: Three Decades of Change in the City Centre*, edited by Webber, Peter, The Law Book Company Ltd, Sydney, 1988, p 18
[45] Morrison and Luczak, op cit, p 6
[46] Taylor, op cit, p 93
[47] Punter, op cit, 2004, p 411
[48] Farrelly, op cit, p 413
[49] Taylor, op cit, p 24

Before the boom functional surroundings shaped buildings but afterwards finance-driven towers made their own surroundings. Architects and designers Francesca Morrison and Krystyna Luzcak put it this way:

> Sydney, more than any other Australian city, identified with and embraced the vitality exhibited by the American prototype. Thus the erosion of the fabric of the city was begun by the superimposition of a new physical and spatial concept. Based on the idea of elements sitting freely in space, it was in contrast to the existing pattern in which buildings defined an enclosed space – street walls of buildings began to give way to single towers set in plazas or on low podiums.[50]

In similar vein, Jennifer Taylor thought "the tall building transformed the city's physical fabric by the wanton destruction of the earlier buildings cleared to make room for its construction … and the shifting of the solid/void pattern of the city away from one of masses defining streets towards freestanding blocks standing in unrestrained space."[51] Although Taylor does not mention the PLVI system, she illustrates how the new style of development disrupted that morphology:

> The freestanding, glazed building, whether accepting an established street alignment or set back, was conceptually and physically *distinct from its setting*. As with the general modernist tendency, *context was inconsequential* and plazas tended to divorce, rather than unite, the building with the city … the building proclaimed its *autonomy and indifference* [emphasis added].[52]

Morrison and Luzcak identify the drivers for architects as "the possibilities of the new building and construction technologies and the end of post war limitations in materials and finance."[53] Of one Sydney office block, Freeland writes it "was the first to use a fully rigid steel frame and hollow steel floors, the first to employ 'light-weight' construction with its increase in speed of erection and consequent savings in cost, and first to use a true curtain wall filled with windows and anodised aluminium spandrels, and

---

[50] Morrison and Luczak, op cit, p 6
[51] Taylor, op cit, p 24
[52] Ibid, p 48
[53] Morrison and Luczak, op cit, p 6

the first to be designed on a modular system throughout."[54] For developers, Morrison and Luzcak identify the drivers as "windfall returns gained from the economies of scale that the new form of construction offered."[55]

The functional purposes of the buildings appear to have been a lower priority. As architectural scholar Peter Webber suggests, "there was a positive incentive for buildings to be different from their neighbours – not to relate to them but to compete with them for attention."[56]

Perhaps inevitably, as Punter observes, "HOBAC's initial decisions allowed a number of very tall but variable height and FSR towers to punctuate the downtown skyline without any consistent rationale."[57] Some of the most notable included "the first genuine tower building to come before HOBAC", the AMP Building at Circular Quay (FSR 15:5), ANZ Bank, corner Pitt and Hunter Streets (FSR 13:21), Pearl Assurance House, Castlereagh Street (FSR 14:1), Royal Exchange, Pitt Street (FSR 14:85), P&O Building, corner Elizabeth and Hunter Streets (FSR 14:85) and Harry Seidler's Australia Square, corner of George, Bond and Pitt Streets (FSR 20:1 overall).[58]

Thus ensued "Manhattan syndrome in full flight", as Spearritt called it, a race for the title of tallest skyscraper.[59] Topping out in 1962, the twenty-six floor AMP Building was in 1967 surpassed by the 35-storey State Office Block, Phillip Street, until the forty-eight levels of Australia Square rose higher that same year, only to be outdone by the forty-five storey AMP Centre, Bridge Street, in 1975 and 60-storey MLC Centre, Martin Place, in 1977.[60]

Like most freestanding tower proposals in Sydney CBD, large-scale lot amalgamation ("superblocks") was a precondition for projects like the AMP Building and Australia Square. "Although in principle the new buildings followed New York's Seagram Building and Lever House," write Morrison and Luczak, "Sydney's street pattern and block size did not accommodate

---

[54] Freeland, op cit, p 299
[55] Morrison and Luczak, op cit, p 6
[56] Webber, op cit, p 22
[57] Punter, op cit, 2004, p 414
[58] Ibid
[59] Spearritt, p 236
[60] See Moorhouse, op cit, pp 250-251

them as easily as Manhattan's grid."[61] At first, for this reason, "the greater freedom offered by development at the fringes of the traditional city centre allowed for a generation of buildings of unaccustomed shape or scale", explains Taylor.[62] In Sydney's case this happened along "the northern edge of the city, from Kent Street to Macquarie Street ... encompassing the sweep of Circular Quay and ramped access to the Harbour Bridge ... [the] area was largely occupied by warehouses and slums."[63] Eero Saarinen identified why this offered an ideal site for the ultra-modern Opera House.

Image 40: East Circular Quay, circa 1960 (*State Library NSW*)

Before 1957, limit-height modern office blocks had already begun to appear across this belt. Caltex House was built in Kent Street, part of the CBD's western industrial-warehouse zone, and the ICI Building and Unilever House sprung up in East Circular Quay, still a working waterfront. AMP was later attracted to the eastern parts of Circular Quay by the chance to push for repeal of the height limit. As reported in Archer's account of the

---

[61] Morrison and Luczak, op cit, p 7
[62] Taylor, op cit, p 94
[63] Ibid, p 107

first boom, the AMP Building was instrumental in annexing Circular Quay to the office core. Bourne's process of intensification and succession at work. But it took almost two years and forty meetings to secure HOBAC's approval, "with a 55 percent coverage of the large site made up of consolidated lots."[64]

How to make use of the residual spaces between unattached towers emerged as a perennial CBD problem. They were always at risk of degenerating into the proverbial 'concrete jungle'. Many American downtowns used them to meet the growing demand for parking, but in space-constrained Sydney vehicles were generally directed into basements. Taylor writes that "the economics of the construction of a multi-storeyed office building dictated maximum utilisation of the site."[65] Within the typical FSR envelope, "the cost of building to a greater height was offset by the greater prestige of office space on the upper floors hence, there was an economic incentive to build high which, as a by-product, resulted in larger areas of public space to be landscaped at ground level."[66]

Developers "could achieve a sense of generosity through landscaping, roof gardens and spacious foyers."[67] On suitable sites the introduction of a double-height entry space or mezzanine level "increased the volume and the visual interest of the foyer, and improved the proportions of the street façade."[68] Sometimes the facades, entrances, and foyers of "new buildings became venues for the exhibition of contemporary public art", like the works of sculptor Tom Bass at the P&O, ICI and AMP buildings.[69]

Inevitably, though, simple attention to visual amenity was not enough to activate urban spaces without ample provision for pedestrian usage. "On less constrained sites construction of a podium offered a different approach to the definition of base from [tower] shaft", explains Taylor.[70] For instance, "the AMP Building ... steps back only slightly between podium and tower, using a recessed colonnade at the lowest tower level."[71] This sheltered

---

[64] Ibid, p 58
[65] Ibid, p 94
[66] Ibid, p 111
[67] Ibid, p 94
[68] Ibid
[69] Ibid
[70] Ibid, p 104
[71] Ibid

colonnade together with hard landscaping and seating for passers-by formed elements of a modest urban plaza in the AMP Building's forecourt, facing Circular Quay. Architecture scholar Henry Margalit lamented, however, that in this case "the sensed divide between a specific locality and the placelessness of modern commercial towers could not quite be overcome."[72]

Image 41: AMP Building, facing Circular Quay, mid 1960s (*City of Sydney*)

Since freestanding towers now had the status of financial assets, the often-vexing problem of residual space could potentially detract from their value. The AMP Building was only a precursor of far more sophisticated schemes to integrate skyscrapers with street-level pedestrian amenity. As foreshadowed by Shirley Weiss, made-over passageways were soon followed by distinct leisure destinations.

For many the archetype is Seidler's Australia Square, on a 5,000 square metre site enclosed by George, Pitt and Bond Streets and Curtin Place, in

---

[72] Margalit, Harry, *Australia: modern architectures in history*, Reaktion Books, 2019, p 195

the Scott-Whipple office zone north of Martin Place, but outside R W Archer's pre-boom 'private office core'. Built between 1964 and 1967, Australia Square "became a key precedent for the departure from the street-enclosing building."[73] Margalit writes that developer Dick Dusseldorp created

> a finance arm that would allow large-scale projects to exceed the scope of the prevailing pattern of the single owner-occupier. His landmark scheme was Australia Square, an office tower and public plaza that amalgamated some thirty properties [around eighty titles]. The finance vehicle was Dusseldorp's Lend Lease corporation and the urban vision was Seidler's, founded on his contention that Sydney's historic street network played little role in fostering a mixed urbanity of work and leisure.[74]
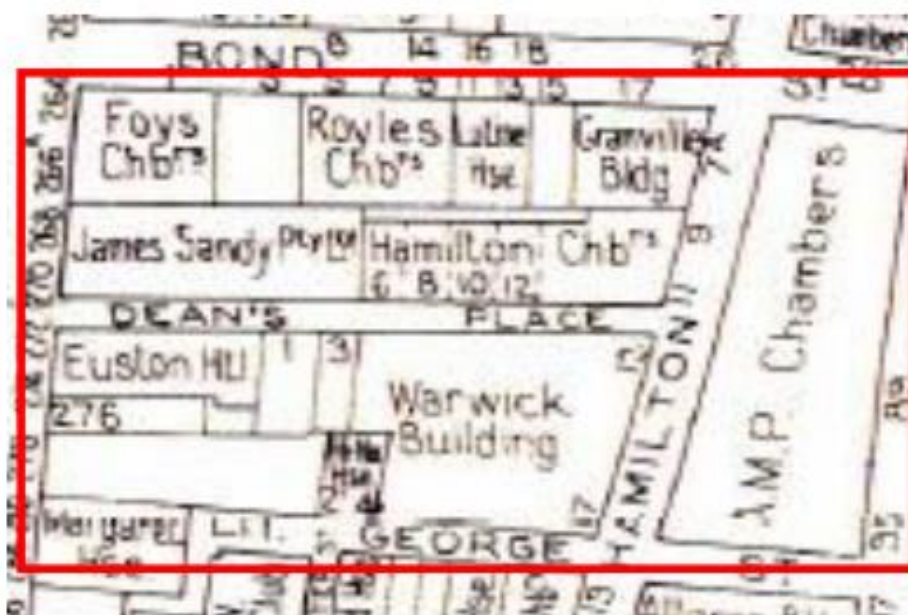
Map 12: Lots amalgamated for the Australia Square project[75]

Dusseldorp turned to foreign financiers, notes Seidler's biographer Helen O'Neill, as local banks, accustomed to the PLVI system, "thought that Lend Lease and Seidler were completely mad ... in having bought up what was considered to have been a severely over-valued site of land thought to be ludicrously far from Sydney's finance hub, Martin Place."[76] The tower was

---

[73] Punter, op cit, 2005, p 34
[74] Margalit, op cit, p 195
[75] TKD Architects, *Modern Movement Architecture in Central Sydney*, Heritage Study Review, March 2019, p 91
[76] O'Neill, Helen, *A Singular Vision: Harry Seidler*, Harper Collins, 2013, p 187

designed for upscale tenants in the corporate, finance and professional sectors. Punter says the project entailed "painstaking land assembly of an entire block, including the city-owned laneway that bisected the site."[77] Yet Australia Square became Sydney's most influential expression of the tower-and-plaza template. John Freeland claims it was

> the first practical demonstration of the precepts of architects ... of developing obsolete parts of the cities by amalgamating a number of titles to small portions of city land into one larger tract and erecting on it, not the site-covering block that had been the standard approach since the 1830s, but tall soaring spires containing the same total floor area but which left a half or more of the ground area open and uncluttered. The result ... would be better and more pleasant spaces both within and between the buildings.[78]

Image 42: Australia Square Tower, George Street, 1968 (*City of Sydney*)

---

[77] Punter, op cit, 2005, p 33
[78] Freeland, op cit, 302-305

An impressive array of amenities was essential to overcome an unfavourable location in the CBD's traditional PLVI morphology. The standout feature is a slender "circular tower of fifty storeys" located on George Street providing most of the office space, "with the remainder taken up in an elevated thirteen-storey linear block enclosing the plaza to the east", fronting Pitt Street.[79] "More than any other urban building of its time in Australia", writes Taylor, "the cylindrical concrete shaft of the tower … most fully presented the modern vision of an urban utopia of freestanding sculptural objects standing in open plazas."[80]

Margalit observes that the plaza is "modelled on traditional Italian precedents, and is cobbled and shielded from the traffic of the major flanking thoroughfares."[81] Taylor refers to "Seidler's wish to avoid vehicular conduits with their snarling traffic racket rebounding off the channel-defining walls."[82] Over time structural segregation of pedestrians and motor traffic became a prized objective of CBD developers and architects:

> … like the sort of utopian metropolis envisaged by Walter Gropius and Le Corbusier: proud, prismatic buildings standing healthily apart from the picturesque fragmentation of the old cities, with urban parks and squares separated from the noise and stench of vehicular traffic.[83]

Margalit feels the plaza, "positioned for midday sun, … remains among Sydney's most successful eating squares, contained entirely within a commercial precinct."[84] Set on two levels owing to the fall across the site, a circular shopping arcade was built under the higher George Street level and the lower eastern Plaza Building has no ground floor but clusters of columns, allowing a free flow of access from Pitt Street. The arcade has been described as "the 'gourmet circle', a ring of better than usual take-

---

[79] Margalit, op cit, p 196
[80] Taylor, op cit, p 79
[81] Margalit, op cit, p 196
[82] Taylor, op cit, p 258
[83] Ibid, p 259
[84] Margalit, op cit, p 196

away food and beverage facilities" opening out to "a scattering of tables, chairs and sun umbrellas."[85] Taylor thought

> … the successful sociability of the plaza spaces come from the locational geography of the site. It is, in effect, a broad pathway connecting two concentrated population zones of the central business district. So Australia Square is a desirable route. It is also a resting place for the high-rise denizens, when they emerge to feed and socialise. So Australia Square is a desirable destination.[86]

Alignment of leisure destinations with convenient walking routes, if possible, was useful to draw people away from the magnetic pull of the PLVI. The plaza heralded future CBD trends in another way. Blurring the line between private and public space cleared the way for campus-like settings. O'Neill reports Seidler saying: "To create that on *private* land … [was] a great stroke of genius on [Dusseldorp's] part."[87]

Image 43: Australia Square Plaza, 1968 (*City of Sydney*)

---

[85] Taylor, op cit, p 251
[86] Ibid, p 259
[87] O'Neill, op cit, p 193

Other notable tower-and-plaza (or forecourt) developments, of this and a later period associated with *City Of Sydney Strategic Plan 1971*, included Seidler's MLC Centre at Martin Place, another AMP tower called AMP Centre on Bridge Street, Town Hall House in Sydney Square behind the Town Hall, Qantas International Centre near Lang Park, St Martin's and National Mutual towers on Market Street, Prudential Building corner of Elizabeth Street and Martin Place, and McKell Building in Rawson Place. One more example was King George Tower on the corner of King and George Streets, designed by architect John Andrews. Writes Margalit:

> Andrews proposed a truncated square, almost triangular in plan, that leaves the corner free of the building … The truncated plan of the tower allowed sun into the street corner itself, which was sunken through a cascading set of circular seating pods. Lowering the corner plaza removed pedestrians from the street traffic, with the intention of creating spaces of repose to counter the bustle of this major intersection … the building played its role in subverting the dominant pattern of building to the street alignment … sentiment had shifted against the car to the extent that prevailing urban legibility could be surrendered to spatial reinvention.[88]

While discussing influences on city-form at this time, Margalit explained that "Seidler, working with the city council, produced schemes for the separation of pedestrian and vehicular traffic, using elevated walkways and a reconfigured urban grid that could view buildings as free-standing objects on this new raised plane."[89] He elaborates, importantly, that "such was the depth of the antipathy towards cars that these massively ambitious schemes were seriously considered both from an urban planning viewpoint and from an investment one."[90]

To enhance the ground plane around their futuristic skyscrapers, insurance companies and architects engineered a new urban logic, entrenching a distinction between walking-for-purpose and walking-for-leisure. In the classic functional CBD, walking-for-purpose was largely compatible with driving because both were directed at similar ends. Amongst the

---

[88] Margalit, op cit, p 211
[89] Ibid, p 201
[90] Ibid, p 201

"movement requirements" assigned by Whipple to five use-classification groups, foot-traffic aspects can be described as walking-for-purpose. Hence photographs from the 1940s to the 1970s depicting crowds of pedestrians on footpaths happily co-existing with heavily trafficked streets.

Image 44: King George Tower, George Street, 1989 (*City of Sydney*)

On the other hand, walking-for-leisure is incompatible with open vehicular access. This early transitional period saw the inception of a contest for space between the CBD's traditional daytime population and office tower developers, now cultivating a generation of white-collar amblers. The new inter-spatial leisure destinations were naturally geared for the tastes of upscale professionals. Over time, restrictions on private motor vehicles, the most widely used mode of transportation across non-core suburbs, were a factor in narrowing the social diversity of CBD pedestrians. Another was gentrification of surrounding residential areas in the late 1960s to 1970s, as discussed in Chapter 12. Disruption of the PLVI system's gradation of functions drew this complaint from Hugh Stretton:

> None of this need trouble the very rich … As they monopolize more of the centre, the rising rents must drive out more and more of the artistic, squalid, surprising, wayward, intellectual, picturesque, marginal and shoestring activities which are a main part of a good city's attraction and diversity … Or chiefly, it just gets more offices;

and inside them, not much further diversification of activity, but more and more of the same activities, and people not more but less diversified than before.[91]

Put another way, Stretton observed that "office work steadily displaced other work and "office buildings displaced others and monotonized more of the physical and working diversity of the city." [92]

The CBD's character changed dramatically as Bourne's process of intensification and succession began to encroach on the industrial-wholesale corridor west and south-west of York Street. Notes Peter Spearritt, "many of the trades and activities forced out by the office boom were labour-intensive operations, from women in the sweated clothing trades to brewery workers to employees of the PMG (post and telephone)."[93] Geographer Robert Fagan observes, in his examination of industrial change in Sydney over 1950-70, that "the central industrial area had been the historical base of industrial production since the mid nineteenth century ... It stretched first from the southern fringes of the CBD, featuring clusters of firms in printing and publishing, the rag trade, small engineering and brewing."[94]

Whereas space-extensive industrial plants generally relocated to the western suburbs in the post-war period, before and under the County of Cumberland Plan, many light, smaller operations remained in the centre. But, writes Fagan, after the 1950s "intense competition from other land uses such as ... office development forced up rents and land prices in the central area."[95] Between 1954 and 1971, say geographers Peter Murphy and Sophie Watson, "inner Sydney's share of the metropolitan total of factory building fell from a third to a fifth ... by 1971 the inner areas had lost some 60,000 manufacturing workers, a third of the 1945 total."[96]

---

[91] Stretton, p 264
[92] Stretton, p 267
[93] Spearritt, op cit, p 237
[94] Fagan, Robert, "Industrial Change in the Global City: Sydney's New Spaces of Production", in *Sydney: emergence of a world city*, Oxford University Press, South Melbourne, 2000, pp 145-146
[95] Ibid, p 146
[96] Murphy, Peter and Watson, Sophie, "Restructuring of Sydney's Central Industrial Area: Process and Local Impacts", *Australian Geographical Studies*, Vol 28, Issue 2, 1990, p 190

Although Whipple found that in 1968 "goods-handling functions occup[ied] about one quarter of the total [CBD] space", the Sydney CBD Survey (1976) reported that industrial floor space fell by as much as 45 percent between 1971 and 1976.[97] CBD building space demolished between 1953 and 1966 equated to 15.5 per cent of the new office space added up to 1966, and "many of the demolished buildings were warehouses."[98]

This had a drastic effect on the wholesale district delimited by Peter Simons. As at 1963, wrote Simons, Ellis Nugent and David Rich in *Why Cities Change*, "74 per cent of Sydney's consumer goods wholesalers were located in the City of Sydney LGA … The activity dominated land use along the western side of the CBD in a long established wholesaling district, which alone contained 26 per cent of all concerns, including the main concentration of hardware wholesalers."[99] They observe that

> The nature and extent of locational change can be seen by comparing the 1957 and 1977 positions of the 2,382 consumer goods wholesalers identified in 1963 … more than half the firms surviving throughout the period changed their general location … Overall, wholesalers were located further away from the inner city by 1977 … 59 per cent of the new firms which survived were located outside the City of Sydney, and the movement of 433 firms away from the city centre compared with only 64 relocations towards it … There is also striking evidence of dispersal from the city centre by hardware wholesalers. Their mean distance from Sydney Town Hall increased by 3.6 km between 1965 and 1977.[100]

The authors call this one manifestation of "a change in the physical appearance and economic function of the CBD associated with the growth of office based activities."[101] When wholesaling firms were questioned about their reasons for leaving, "rates and rents too high" was nominated as the third most important of six reasons proposed.[102] R W Archer thought that apart from higher land values and rents, rising volumes of traffic

---

[97] Sydney CBD Survey (1976), op cit, p 62
[98] Whipple, op cit, 1968, p 261
[99] Nugent, Ellis, Rich, David and Simons, Peter, "Organisational and locational change in Sydney's wholesaling industry", in Cardew, Langdale and Rich, op cit, 1982, p 140
[100] Ibid, p 142
[101] Ibid, p 144
[102] Ibid, p 145

brought on by over-building were a factor: "This congestion has accelerated, if not caused, some of the relocation of activities such as retailing, wholesaling, manufacturing and entertainment out of the C.B.D., so reducing the range of C.B.D. activities ..."[103]

In contrast to his account of the pre-transition CBD, quoted earlier, Daly sums up the post-transition district this way:

> Government and big business became the dominant forces. In 1971 workers engaged in public administration comprised 12 per cent of the total workforce ... the CBD became the nerve centre housing head offices of the new or expanding companies and the associated plethora of government, financial or professional services called into being by the developments in the economy. Finance and business services came to dominate the CBD; in 1971, 30 per cent of the workers in the CBD were employed in these sectors and by 1976, 56 per cent of total floor space of the CBD was taken up by offices.[104]

Image 45: Darling Harbour wharves, 1930 (*National Library of Australia*)

---

[103] Archer, R W, "the Efficiency of the Sydney Central Business District: The Public Authority Contribution", *Australian Planning Institute Journal*, July 1969, p 64
[104] Daly, op cit, in Cardew, Langdale and Rich, 1982, p 52

The office boom's destructive impact on industrial jobs extended to the CBD's working-class leisure venues. "The importance of pubs in interwar Sydney is graphically portrayed in a map of central Sydney's pubs produced in 1933", writes Spearritt, "which showed that the heaviest concentrations were around Circular Quay, the wharf and warehouse area to the west of George Street and around the Haymarket … Many of these hotels were demolished in the office boom of the 1960s and 1970s."[105] Spearritt also laments the demolition of some notable cultural landmarks and drawcards, including "one of Sydney's most elegant establishments", the Hotel Australia in Martin Place, as well as "some of the best-known live theatres", Theatre Royal in King Street and the Tivoli Theatre on the corner of Hay and Campbell Streets.[106] To these may be added "a number of gracious nineteenth-century [shopping] arcades that gave the city so much of its old character" like the Royal, the Piccadilly, the Sydney, the Imperial, and Her Majesty's.[107]

By the early 1970s, state and city politicians, 'exhilarated' by the office juggernaut, confronted a new problem which came to preoccupy CBD planning ever since. How to reconcile two conflicting imperatives. First, to safeguard the CBD's contrived *raison d'etre* as the dominant site for office supply – as opposed to office demand – thus forestalling the emergence of rival suburban locations identified by Ian Alexander as North Sydney, Burwood, Chatswood and Parramatta, and second, to mitigate the loss of amenity from over-development in such a confined area. In desperation the authorities reached for a series of municipal 'strategic plans' to arrest the precipitous decline in shoppers and visitors coming to the CBD.

---

[105] Spearritt, op cit, p 217
[106] Spearritt, p 238
[107] Turnbull, Lucy, *Sydney: Biography of a City*, Random House, New South Wales, 1999, p 301

12. The new guard at City of Sydney Council, 1952-1971

Over a large part of HOBAC's reign, City of Sydney Council retained a nominal power to process development applications but it lacked legislative status. According to a view quoted by Punter, the state effectively relegated "the value of a Council development consent to practically nothing more than a permission to apply for consent under HOBAC."[1] The Council had been trying to gain state ministerial approval for a statutory instrument since duly adopting City Engineer Garnsey's draft Planning Scheme in 1952. Such schemes were mandated by the County of Cumberland Plan and represented an opportunity to control over-development and congestion in the CBD.

The draft scheme's proposed floor-space ratios, however, "of six-to-one for class B industrial areas; eight-to-one for City shopping centres; and ten-to-one for the business centre" aroused strong opposition from property owners, some of whom formed the Pitt Street Property Owners' Defence League.[2] Opposition was fuelled by the state government's dislike of the scheme and later decision to review the 150-foot building height limit. Lifting of the limit in 1957 effectively "introduced a quasi floor-space index for the City of Sydney" in any event, though an indulgent and discretionary one.[3] Since hostility from property interests showed no signs of abating, the Council procrastinated and ultimately voted in 1958 to delete floor-space controls from its draft scheme. "The majority of aldermen … were not swayed by [City Engineer Stevenson's] opinions and arguments, despite their advocacy by eminent town planners, amongst them Professor Denis Winston."[4] But the deletion was still not enough to endear the scheme to the state's minister for local government.

The Council was typically subjected to this kind of pressure and manipulation to embrace the state's image of Sydney. For most of the 1960s, Council approvals conformed to a code known as 'Rankin's rules', after City Building Surveyor John Rankin. Paul Ashton describes it as "rather eccentric" and "far less demanding than that of the Height of

---

[1] Punter, op cit, 2005, pp 38-40
[2] Ashton, 1993, op cit, p 75
[3] Ibid, p 78
[4] Ibid, p 80

Buildings Advisory Committee."[5] The code was a loose formula for preserving sunlight access by relating the height and breadth of buildings to the width of the street. But perversely, explains Punter, "the new rules required building setbacks in accordance with the width of the road and the site, and the site area, but these sought to progressively widen the streets rather than control the bulk and height of the building in relation to the existing street."[6] Hence "they broke up the harmony of the street alignment." For architecture scholar Peter Webber, the code "resulted all too often in narrow useless forecourts, exposure of ungainly side walls and discontinuation of awnings."[7]

Binding the Council's hands on building approvals was far from being the state's trump card. Four times since the city was incorporated in 1842, NSW state governments exercised their constitutional power to dismiss an elected Council and appoint Commissioners. Labor's 24-year rule over the state ended on 13 May 1965 with the election of a conservative Liberal-Country Party coalition under Robert Askin. Ashton points out that the Labor dominated City Council "had not placed any obstacles in the way of redevelopment in the central business district, as evidenced in the staggering growth over the half-dozen years which transformed the City's skyline."[8] All the same, Askin sacked the Council on 13 September 1967 and appointed three Commissioners with instructions to loosen restraints even more.

This intensified the unprecedented 1968-74 office building frenzy documented by Maurice Daly. "The Commissioners were rushed with development applications which were all passed", writes Ashton.[9] They "received and approved … applications for a total of thirteen million square feet (1.214 million square metres) of gross office accommodation."[10] According to Leonie Sandercock, they "approved $300 million worth of development applications on a ten-to-one floor-space index whereas the planners were urging a six-to-one index."[11]

---

[5] Ibid, p 80
[6] Punter, op cit, 2005, p 38
[7] Webber, op cit, p 22
[8] Ashton, op cit, 1993, pp 91-92
[9] Ibid, p 92
[10] Ibid, p 94
[11] Sandercock, op cit, p 239

Askin legislated changes to City of Sydney boundaries, carving out parts of working-class neighbourhoods like Paddington, Glebe, Forest Lodge, Camperdown, Newtown, Erskineville, Darlington, Alexandria, Redfern and Waterloo, and scheduled a city election for 1969. Hoping to pre-empt the outcome, developers flocked to put their proposals before the departing Commissioners, who approved 103 applications in 1969 compared to 38 in 1968. Favourable boundaries ensured that the "anti-Labor but progressive" Civic Reform Association (CRA) came out of the council election ahead of Labor, for the first time in 17 years.
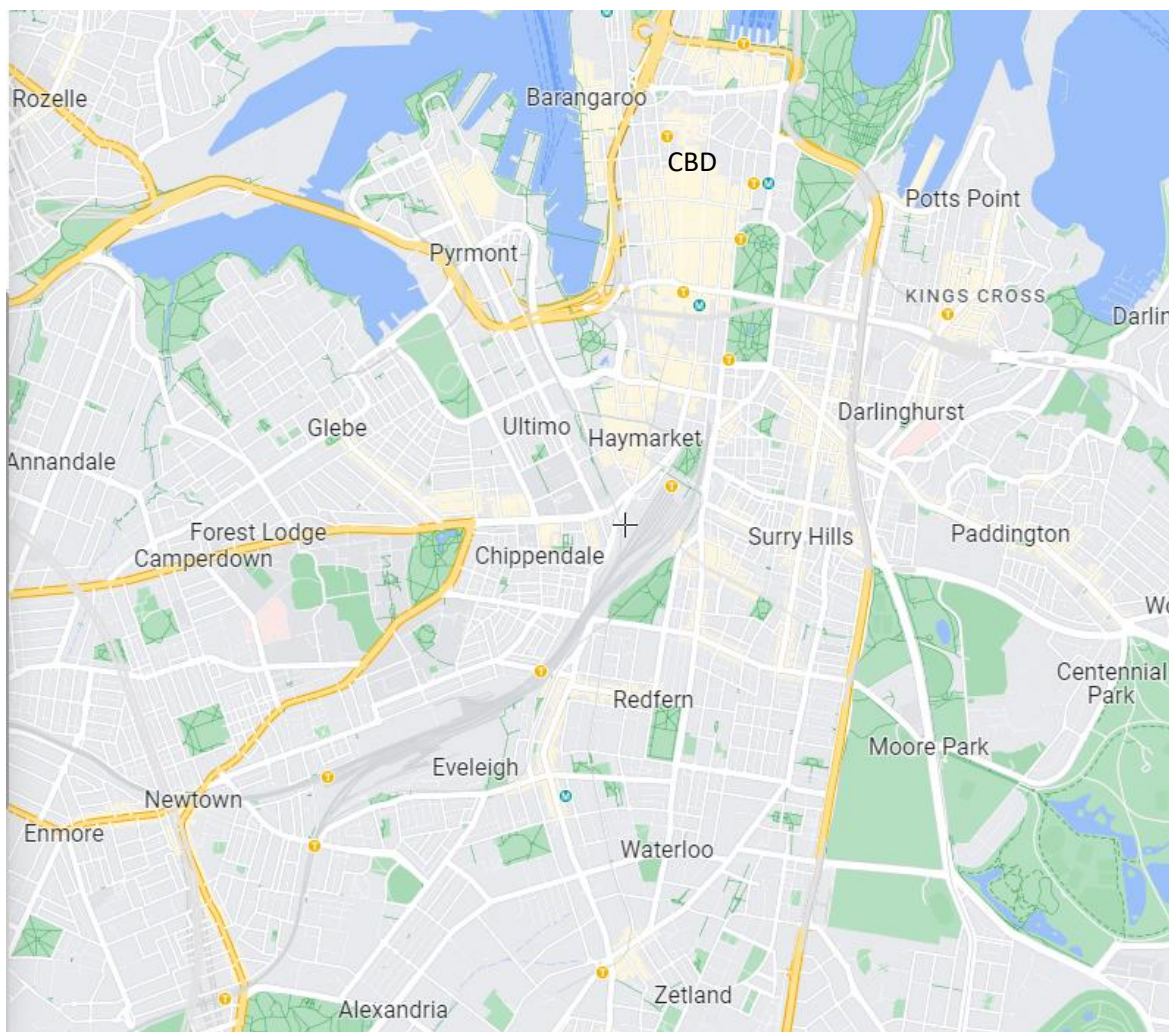
Map 13: Inner-city neighbourhoods surrounding Sydney CBD

Ashton writes that the CRA's "primary constituency was the City's financial, manufacturing and retailing interests", some of which were under pressure from the office boom.[12] A successful CRA candidate, Andrew Briger, thought

---

[12] Ashton, op cit, 1993, p 91

"the high rent structure in many areas of new redevelopment had squeezed out those functions with a low profit margin and this, in turn, had led to the deadening of the city."[13] Before the election, noted Briger, "the CRA had realised that the orderly planning of the city was a necessary prerequisite to taking office."[14]

In 1966 they commissioned town planner James Colman to prepare a plan. Colman observed in his 1967 report, updated in 1970, *A Plan for Sydney: A New Approach to Panning the Metropolis*, that "Sydney, like all great cities, has a number of districts, or 'quarters' which are devoted to particular urban functions … these urban compartments … reveal strong differences in form, architecture …"[15] Having described, in effect, the CBD's traditional PLVI-Core-Frame system, Colman made the point that "recent development has tended to blur some of these distinctions."[16] A new dynamic was shifting the old functional pattern:

> Firstly, what is happening in that largest-of-all sector of city development – commerce and office accommodation. On 19th July, 1965, the Lord Mayor of Sydney stated in the Sydney Morning Herald that during the preceding four years a total of 45 office buildings, costing approximately $94,000,000 had been completed, and that a further 29 buildings ($105,000,000) were under construction. Today there are signs that this boom has passed its peak [it hadn't], but the magnitude of investment in central area commercial accommodation is still staggering … [17]

> Before passing from the subject of commercial development, we should comment on the changes at street level – the way in which the smaller functions and details of the townscape have been altered as a consequence of large-scale office projects nearby. The free play of the economy, unrestrained by plans or social values, has led to the almost total extinction of small enterprises which previously had lent colour and variety to the commercial centre of the city. One by one

[13] Briger, Andrew, "The Politics of Planning: The 1971 City of Sydney Strategic Plan", in Webber, op cit, p 38
[14] Ibid, p 41
[15] Colman, James, *A Plan for Sydney: A New Approach to Planning the Metropolis*, A Report for The Civic Reform Association of Sydney, Second Edition: February 1970, p 34
[16] Ibid
[17] Ibid, p 37

> the small restaurants, the pubs, the theatres, the specialty shops are being forced to one of three alternatives – get out, raise their prices, or specialise in the 9-5 weekday office trade which has led to the death of downtown Sydney at night and at weekends.[18]

Colman's recommendation: "The time has surely come for new civic initiatives, for new administrative and professional procedures in city government and planning … we must devise and carry through a new plan for the city …"[19] Under such a plan, "walking in the city should be a physical, emotional and intellectual pleasure."[20] Hence the CRA's 1968 Annual Report stated that "there is a need … for a new overall design which, when implemented by public authorities and developers, will result in the emergence of whole areas designed not only for utility, but also as more pleasant places in which to live, play and work."[21]

This signalled a recognition of new realities in the post-transition CBD. Since the organic PLVI-system had been disrupted, some type of planning intervention would be necessary to reconstruct functional diversity. This was considered to depend, ironically, on better amenities for "pleasure", "play" and other non-functional experiences. Consensus along those lines was building up in sectors like retail and other CRA constituencies. Referring to "development applications [which] were processed and rubber stamped at an alarming rate" by the Commissioners in 1969, Briger said "this matter was viewed by us with increasing alarm."[22]

For a solution the CRA turned to an urban planning profession in the midst of a cultural revolution. "The building of a contemporary urban design ideology was driven by various forces", wrote urban research academics Robert Freestone and Sarah Baker, including "the rise of the environmental movement, a collision between silent generation and emerging baby boomer values …"[23] Profound demographic shifts were taking place across Sydney's metropolitan core at the time. Peter Spearritt calls it "a striking

---

[18] Ibid, p 38

[19] Ibid, p 6

[20] Ibid, p 72

[21] Briger, op cit, p 42

[22] Ibid, p 43

[23] Freestone, Robert and Baker, Sarah, "Urban policy transfer and paradigm shift: the City of Sydney Strategic Plan 1971", *Journal of Urbanism: International Research on Placemaking and Urban Sustainability,* Vol 15, (2022), p 2

level of embourgeoisement."[24] Reporting in 1985, Ronald Horvath and Benno Engels explain that

> ... gentrification, generally involving a decline in traditional working-class residents and a simultaneous increase in professional white-collar residents, has been occurring in inner Sydney since 1966. This increase of professional, technical, administrative and clerical workers corresponds to changes in the employment structure of the inner city.[25]

As a proportion of the City of Sydney LGA workforce, they find, "professional and administrative" rose from 12.5 percent in 1966 to 22.6 percent in 1981, while "working class" declined from 45.1 per cent to 15.9 per cent over the same period.[26] "Between the 1966 and 1971 censuses the percentage of professional and higher paid white-collar workers in the Sydney workforce rose by only 0.5 per cent", notes Spearritt, "but in the area covered by the [inner city] Paddington postcode it rose a remarkable 7 per cent, 14 times the metropolitan average."[27]

Image 46: Vietnam War protest at Sydney Town Hall, 1970 (*Sydney Morning Herald*)

---

[24] Spearritt, op cit, p 202

[25] Horvath, Ronald and Engels, Benno, "The residential restructuring of inner Sydney", in *Living In Cities: Urbanism and society in metropolitan Australia*, edited by Ian Burnley and James Forrest, Allen & Unwin, 1985, p 147

[26] Ibid, p 148

[27] Spearritt, op cit, p 202

The professional class were different in culture and lifestyle as well as occupational status. Urban scholar Sean O'Hanlon recalls in his book *City Life: The New Urban Australia* (2018) that "trends were beginning to appear in Sydney where, by the mid-1970s, the trendies had begun to spread out from their initial beachheads in Paddington, Balmain and Glebe to form an arc of settlement that was increasingly circling the southern end of the CBD."[28] The "trendies", as he calls them, were "a well-educated generation seeking a more cosmopolitan ambience."[29] Their aspirations left an imprint on the CRA's agenda.

This expanding class of young university-educated professionals also made their presence felt inside Town Hall. "It was a diametric clash of world views; last-gasp of the old guard versus flourish of the new. The engineers wore cardigans and wrote upper case along rulers; the planners wore leather jackets, shoulder-length hair and hand-sketched their ideas in 6B."[30] The City Building Surveyor at the time, John Doran, remembered that "the new team members in the Planning Department were by and large all from outside the Council and didn't have any of that background ... They introduced what was considered then to be a bohemian attitude to the Council. They were known as the thongs and tee-shirt branch because that's what some of them wore."[31]

From 1965 Briger and fellow CRA candidate Leo Port had come under the spell of Colman's colleague George Clarke, charismatic principal of the influential town planning consultancy Clarke Gazzard and Partners. Briger considered him "a prominent and avant-garde town planner" and "a man of intense passion where town planning was concerned with a dedication which almost bordered on the fanatic."[32] Interviewed by Paul Ashton in 1992, Clarke recalled that as a young architecture student in the 1950s, he fell in with the radical circle around University of Sydney philosopher John Anderson, the Freethought Society, a prototype of the progressive social

[28] O'Hanlon, Seamus, *City Life: The New Urban Australia*, Newsouth, Sydney, 2018, p 110
[29] Ibid, p 132
[30] Farrelly, E M, "Sydney's Pied Piper of planning", *Sydney Morning Herald*, 12 March 2005
[31] Ashton, op cit, 1992, p 84
[32] Briger, op cit, p 43

movements of the 1960s and 1970s. "We were a mixed group of Socratic enquirers and Marxists", said Clarke.[33]

After gaining a qualification in architecture, Clarke studied town planning under Denis Winston. "I had decided in Second Year Architecture that I wanted to be an 'urbanist' and *not* an architect", he told Ashton.[34] When he joined Cumberland County Council as a planning officer in August 1954, Winston told him, "It's wonderful George, that you've joined the great crusade." But Clarke's interests lay in a different direction. Having won a scholarship at the end of 1955, he left Cumberland County Council for travel overseas to explore currents in urbanism. Postgraduate study followed at London University and the Massachusetts Institute of Technology (he was a student of Lewis Mumford), which awarded him a Master's in City Planning.

By the 1970s, Clarke's career was interwoven with inner Sydney's ascendant "professional white-collar residents" – he himself lived in Paddington, ground-zero of gentrification – and their search for "a more cosmopolitan ambience". According to one writer, there was a "huge pent-up energy for change in Sydney at the time, and the widespread belief in Clarke as leader to that end."[35] Architect Andrew Andersons recalled that his influence "came at a time when Sydney's young professionals were desperate …"[36]

Clarke said of Australian urban planning that

> ninety-nine or more percent of people who thought of themselves as 'town planners' or 'urban planners' or 'regional planners' or 'town and country planners' were specialised either in suburban 'subdivision' of 'estates', or in the broad scale, broad brush planning to do with suburbs, metropolitan areas or regions, road and rail networks, and all that sort of thing. There were very few people who had any feel (or knowledge or training) whatsoever in the problems and opportunities of the inner, higher-density areas, or of the city centre. The urban micro-geography and real estate economics of the

---

[33] Ashton, op cit, 1992, p 19
[34] Ibid, p 18
[35] E M Farrelly, op cit, 2005
[36] ibid

CBD core and frame, were understood by only a handful of business (retail and real estate) people, who kept their secrets well.[37]

This contrasted with his own "specific interest in high density city planning and urban design and the management of urban change in city centres."[38] He approached metropolitan planning and city-centre planning as distinct and almost mutually-exclusive spheres. Relations between core and periphery were of only marginal importance for him. The County of Cumberland Scheme

> was mostly concerned with zoning and reservation of land so as to shape and form the entire metropolis – the metropolitan area, the mother-city region. The County Planners were concerned with deconcentration to regional sub-centres, with open spaces and green belts and with decentralising industrial areas ... But with respect to the City, they simply lumped most if not all of the City – the core of the city and the frame of the city and the inner districts and precincts – into this blob they called County Centre ...[39]
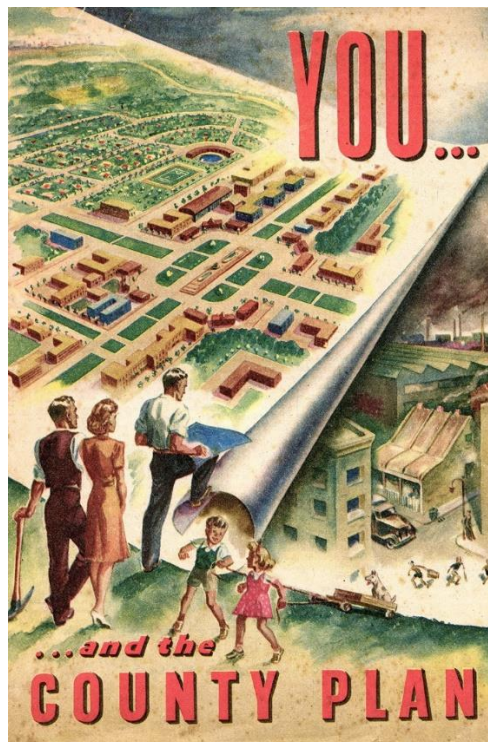

Image 47: County of Cumberland Plan poster, 1948

---

[37] Ashton, op cit, 1992, p 16
[38] Ibid, p 23
[39] Ibid, p 25

Clarke claimed to be one of the few who understood the spatial order of the CBD, which he treated as a world unto itself. In a paper published in 1967, he called for more survey research to plan "the complex micro-geography and economic patterns of [the] city centre." On the "state of the art" in "understanding the nature of the core", he wrote that:

> The history of Central Business District Studies is a comparatively recent one. Most of them date only from the nineteen fifties, although valuable pioneering work was done by Haigh in 1927. Alderson and Sessions and Mitchell and Rapkin in the early fifties, by Murphy, Vance and Epstein (1954), John Rannells (1956) and Horwood and Boyce (1959).[40]

"Then, in 1959", he says, "Peter Scott applied some of these insights and techniques to Australian Central Business Districts, in a pioneering paper which is too little known by either city aldermen or planners."[41] Clarke's principal point was that if the authorities in Sydney, for example, had used this literature as a guide for research, they may have detected and addressed emerging trends. Instead, "we are now faced with surplus land and buildings in the old CBD, which after 170 years of southward growth and shift, is now shrinking in size and returning northward towards its point of origin at Sydney Cove" because of "the suburbanisation of both retailing and industry [which] has since transformed Sydney into a poly-nucleated metropolis."[42]

This refers to decline of the nineteenth century department store area around Central Station – an 'outer retail zone' according to Scott – and reorientation of the CBD up towards the PLVI and later Circular Quay. But Clarke seemed blasé about the first office boom, which was ending as he wrote, and displayed no inkling or concern about the more intense and wide-ranging phase which was about to take off. His disquiet about the impact of decentralisation on the CBD did not extend to the effects of office centralisation on the rest of Sydney (during the 1992 interview, his only

---

[40] Clarke, George, "Understanding the Nature of the City Core", *The Shire and Municipal Record*, 15 January 1967, p 917
[41] ibid
[42] Ibid, p 918

criticism of concentrated office location related to the 1968 Redevelopment Scheme for Woolloomooloo, outside the CBD).

Ideas on how to deal with the suburbanisation of activity were potentially of interest to a struggling CRA constituency, the retail sector. In *Why Cities Change*, Richard Carew and Peter Simons point out "the City of Sydney's share of metropolitan retail sales fell from 52.2 to 29.3 per cent between 1949 to 1962 and … from 18.8 to 13.6 per cent between 1969 and 1974."[43] On another indicator, "the changing balance between proportions of retail sales and of resident population across the metropolitan area", they write that "the resulting sales/population index for the City of Sydney fell throughout the 1949 to 1974 period."[44] The authors continue: "Though there has been a dramatic decline in the percentage of Sydney's retail sales in the CBD, the rate of decline has been moderated by sales to office workers. Retail expenditure of city office workers accounts for between 40 and 50 per cent of the CBD's retail turnover."[45]

Why cities Change includes an article by Ian Alexander on the distribution of office development, however. "[D]espite the 40 per cent increase in central office space brought about by the 1965-1975 development boom", he writes, "there was only a small increase in central employment levels … In fact by the mid 1970s the number of central office jobs showed signs of a decline."[46] Over-supply was a factor together with "a continuing trend towards more office floorspace per worker."[47] As Maurice Daly reported, "the approval of an absurd 4.85 million square metres of new projects between 1967 and 1975 … [occurred] … at a time when the workforce of the CBD was falling – by 5.6 per cent between 1966 and 1971."[48]

Carew and Simons observe that "one of the most visible postwar changes in retailing has been the development of planned shopping centres … essentially, they are integrated shopping complexes in single ownership and management."[49] Today car-based suburban shopping centres tend to be viewed through a patronising lens. But in the 1960s-1970s they

---

[43] Cardew, Richard and Simons, Peter, "Retailing In Sydney", in Cardew, Langdale and Rich, op cit, p 160
[44] ibid
[45] ibid
[46] Alexander, Ian, "Office suburbanisation", in Cardew, Langdale and Rich, op cit, p 57
[47] Ibid, p 71
[48] Daly, op cit, 1982, p 65
[49] Cardew and Simons, op cit, p 156

represented a revolution in consumer lifestyles and powerful challenge to downtowns. According to Kelly Gregg of Toronto University, in North America "post-war suburban centres ... linked retail success to the pedestrian shopping experience ... [and] ... this link propelled the then un-tested assumption that planning downtowns to mimic suburban shopping centres by pedestrianizing main streets would revitalize downtown retail districts."[50] Gregg claims that advocates of this course "presented dramatic and futuristic ideas to separate pedestrian and automobile traffic by grade."[51] In some cities, including Sydney, these matched tendencies stimulated by the tower-and-plaza template.

Image 48: Fulton Street Pedestrian Mall, Fresno, California, 1964 (*Gregg, 2018*)

This became a future point of collaboration between the Civic Reform Association and Clarke. Articles by him on this theme had been appearing in Australian planning journals since the early 1960s. They offer an insight into why he acquiesced in the full scope of Sydney's office boom. Clarke presents as a passionate advocate of the advanced tower-and-plaza model. He may have parted company with Denis Winston's cause, but would later

---

[50] Gregg, Kelly, "Conceptualizing the pedestrian mall in post-war North America and understanding its transatlantic transfer through the work and influence of Victor Gruen", *Planning Perspectives*, March 2018, 34 (1) pp 1-2
[51] Ibid, p 2

still say "in our hearts, we were utopian crusaders, out to change the urbanising world."[52]

The 1960 article "Urban Renewal in the U.S." highlighted Chase Manhattan Bank's skyscraper project in Lower Manhattan. "The site is bigger than usual for such buildings; it amalgamates several smaller parcels. This extra space being put to good use."[53] Clarke continues: "Nestling at the foot of the great tower is an open plaza where pedestrians and pigeons enjoy one another's company while water flows in fountains and flags fly overhead."[54] The tower block thus "renders itself both physically and psychologically attractive to people … Meanwhile the crowded office workers gain a stimulating space in which to meet and breathe."[55] There are also glowing references to Manhattan's Rockefeller Centre, Lever House and Seagram Building.
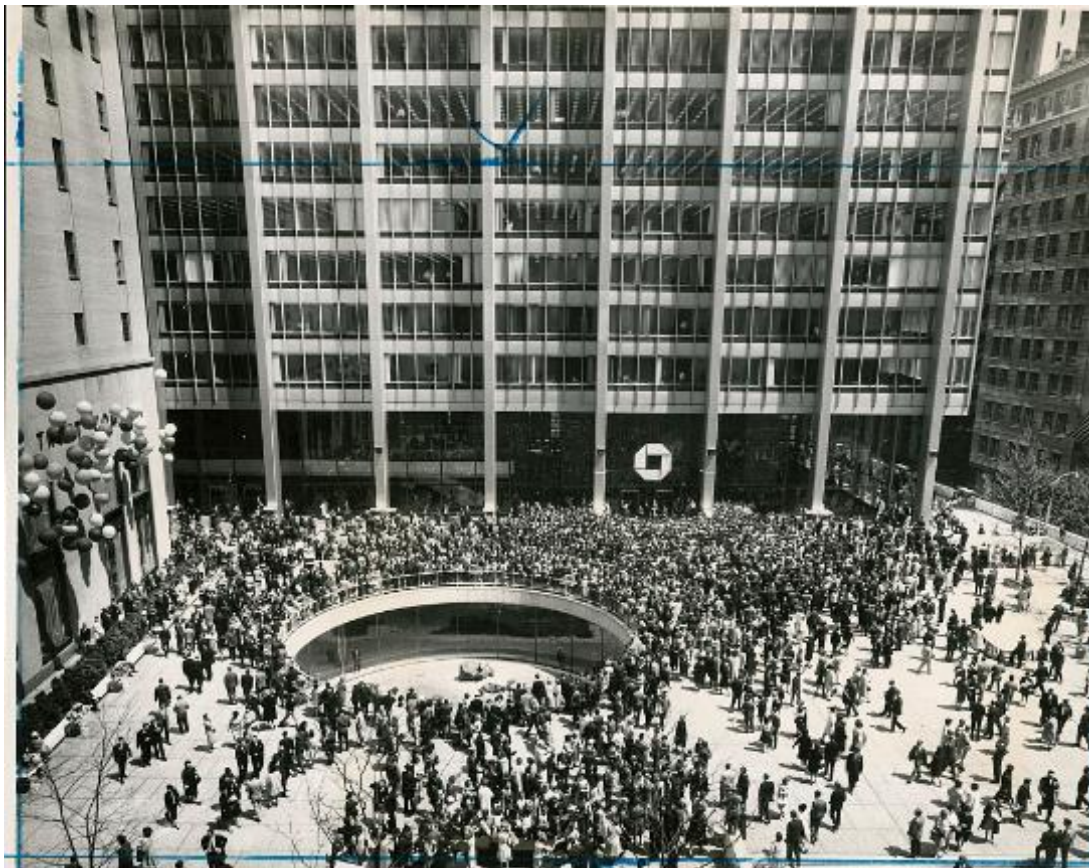

Image 49: Chase Manhattan Bank Plaza, Manhattan, 1964 (*Library of Congress*)

---

[52] Ashton, op cit, 1992, p 19
[53] Clarke, George, "Urban Renewal in the US", *Journal of the Australian Planning Institute*, March 1959, p 14
[54] Ibid, p 14
[55] ibid

Clarke saw the tower-and-plaza template as a nucleus for comprehensive urban renewal. Much grander than uncoordinated pedestrian walkways and destinations. This style of private commercial development would be the engine of a reconfigured central district. Renewal called for pumping-up land and property prices, which were an essential driver and explicit aim: "Retail trade is declining in the central areas, where property values are also falling."[56] He was interested in tall freestanding towers because, under suitable floor-space ratios, they underwrote the creation of residual space for upgraded white-collar pedestrian amenity. There is nothing to suggest that he thought much about businesses needing a CBD location to exploit agglomeration economies.

The CRA may not have understood that Clarke's method of promoting mixed-use development – as demanded by their non-office constituencies – had intense office construction at its core. Colman and Clarke were colleagues and had similar ideas about the CBD as a pleasure ground, but Clarke had a particular view of the mechanism for achieving it. Perhaps Colman adverted to this, writing "the mixed development project is more a reaction to the complexities of real estate economics than it is a conscious answer to a major social problem."[57]

From Clarke's perspective, "it is always difficult to create such pedestrian spaces where land is costly and in private ownership, but it can be done if private developers and local government get together to work out a balanced design."[58] In any event, "the old way of building one small structure on a tiny lot wedged in between two other small structures, all facing onto a hopelessly outmoded street, is as obsolete as the hansom cab", he wrote.[59]

"Comprehensively designing large pieces of a city to a co-ordinated plan" was the only option.[60] One 90,000 square metre project, "right in the middle of downtown [Baltimore], where the financial centre and the shopping centre overlap", was held up as a model:

---

[56] Ibid, p 16
[57] Colman, op cit, p 38
[58] Clarke, op cit, p 14
[59] Clarke, George, "Urban Renewal", *Journal of the Australian Planning Institute*, September 1960, p 36
[60] ibid

Only five existing buildings are to be kept, the remainder will be replaced with eight new office buildings … Most of the existing streets will be closed and discarded. The area will be divided into several pedestrian precincts, with parks and malls.[61]

Image 49: Ed Bacon circa 1960 (*Edward N bacon Collection, University of Pennsylvania*)

Clarke claims to have been influenced by the famed American city planner Ed Bacon, head of the Philadelphia Planning Commission between 1949 and 1970. Bacon was known for his large-scale renewal projects in stagnant parts of the central city. Penn Center, for example, "included three large office towers, a pedestrian mall, and an underground concourse where retail and business was to be located."[62] Clarke told Paul Ashton that "Philadelphia in the 1950s, when I was in the United States, seemed to be the model of city government and city planning which I wanted to try and introduce to Australia."[63]

Like the visits of Sir Patrick Abercrombie in 1948 and Walter Gropius in 1954, Bacon's trip to Sydney in 1966 coincided with a turning point in thinking about the city's development. Along with modernist architects, Clarke was not averse to invoking the perceived glamour and vitality of America for his purposes. Freestone, who has written about "the Americanisation of Australian planning", thought Clarke "would

---

[61] ibid
[62] en.wikipedia.org/Penn_Center_Philadelphia
[63] Ashton, op cit, 1992, p 44

presumably have met Bacon on the latter's Australian tour in 1966 where he addressed the national congress of the Australian Planning Institute and stirred public interest in his calls for action to prevent Sydney's city core descending into a 'dead heart'."[64]

At this time, the Australia Square project, built over 1962-67, typified many of Clarke's ideals on a moderate scale. Developer Dick Dusseldorp was, for him, "a remarkable person, perhaps one of the greatest urbanists, one of the greatest contributors to Australia between 1955 and 1980."[65] Apparently the two had a professional relationship but not on projects in the City of Sydney. Clarke can reasonably be described as a player, in the role of intellectual publicist, amongst the various coalitions of insurance companies, construction firms, international financiers, modernist architects and booster politicians behind the office boom.

His early 1960s writings deal extensively with the proliferation of Citizens' Action Committees engaged in urban renewal projects across the United States. Clarke was particularly impressed by the willing participation of "private "group[s] of supposedly competitive and self-interested business men and investors."[66] Giving little thought to how their financial interest would shape the character of remade localities, he lamented that "we don't yet have in Sydney the new type of civic organisation which is necessary to sponsor, promote, and then to implement and build the plans and designs."[67] But that changed when the CRA became a force in municipal politics.

As Bridger recalled, Clarke "realised the CRA stood a good chance of gaining office and that Leo Port and I were committed to introduce a new dimension to town planning at the Town Hall." On the other hand, Clarke disdained the 'Redfern Irish Mafia', Labor's political machine based in working-class neighbourhoods around the CBD like Redfern, Woolloomooloo, Surry Hills, Pyrmont and Ultimo (see **Map 13**). "Nothing useful would be done", declared Clarke, son of a corporate executive, "for as long as the Sydney Town Hall remained under the control of Tammany Hall

---

[64] Freestone, op cit, p 10
[65] Ashton, op cit, 1992, p 32
[66] Clarke, op cit, 1959, p 15
[67] Clarke, op cit, 1960, p 37

and the local decadent leagues of the ALP."[68] The Redfern Irish Mafia "seemed only to be concerned with its members and supporters in the inner suburbs … and was uninterested in the central business district."[69]

Before the election, his firm and the CRA collaborated on a plan to pedestrianise the section of Martin Place between George and Pitt Streets. "The major east-west thoroughfare that traversed the very heart of the central district ", as Briger called it, "where the historic GPO building and the Cenotaph, the sacred shrine to many Australians, were located."[70] The proposal was rebuffed by the three Commissioners, including John Shaw, former army engineer, decorated World War II veteran, prisoner of war, and Department of Main Roads Commissioner. Shaw reportedly said: "bloody rubbish … We need Martin Place as part of a through-traffic way from Pyrmont to Woolloomooloo … Stuff and bloody nonsense … Having places where cars can't go … We ought to knock down Sydney Hospital and the (then) Bank of New South Wales Head office, and extend Martin Place both eastward and westward."[71] But the idea met with more success after the election. Shaw's outburst may have been the last gasp of functionalist Council leadership that thought about the CBD in a metropolitan-wide context.

The CRA's first order of business on achieving office was to commission a comprehensive plan of the kind recommended by Colman. Manoeuvring through various Council committees and sub-committees, Briger and Port asked Clarke to prepare a consultants' brief for issue to parties interested in being considered for the commission. The project was advertised and submissions were received. They thought the best proposal came from Urban Systems Corporation Pty Ltd, a consortium under the direction of Clarke himself. In May 1970, the Council resolved to commission and adopt the proposal of Urban Systems Corporation. The *City of Sydney Strategic Plan* (CSSP) was essentially drafted by Clarke at the head of a team at his firm with input from other members of the consortium. Following an elaborate process of public exhibition and consultation, the Council resolved on 2 August 1971 "to adopt in principle the objectives, policies

---

[68] Ashton, op cit, 1995, p 94
[69] Ashton, op cit, 1992, 26
[70] Briger, op cit, p 43
[71] Ashton, op cit. 1992, pp 36-37

and action priorities as a formal expression of Council's intention concerning city development."[72]

On 20 July 1971 the state government had, in fact, moved to pre-empt the Council's adoption of the plan by finally gazetting the long dormant statutory City of Sydney Planning Scheme of 1952. As watered-down, this made little impact. In contrast, despite having no legal status, the CSSP had long lasting effects on Sydney CBD as a series of guidelines. The 1971 Plan will be considered in more detail in Part 2, along with the triennial reviews of 1974, 1977, 1980 and 1983. Briger summarised its achievements as follows:

> In December 1971 a new Floor Space Ratio Code and a Parking Code were approved and the long-term process of implementing the integrated city-wide pedestrian network commenced following the closure of the first section of Martin Place to vehicular traffic. This led to numerous streetscape improvements in what was referred to as the "greening" of the city. Most notable amongst these were Sydney Square, the Circular Quay and Dixon Street (Chinatown) malls, Railway Square, Wynyard Place … [73]
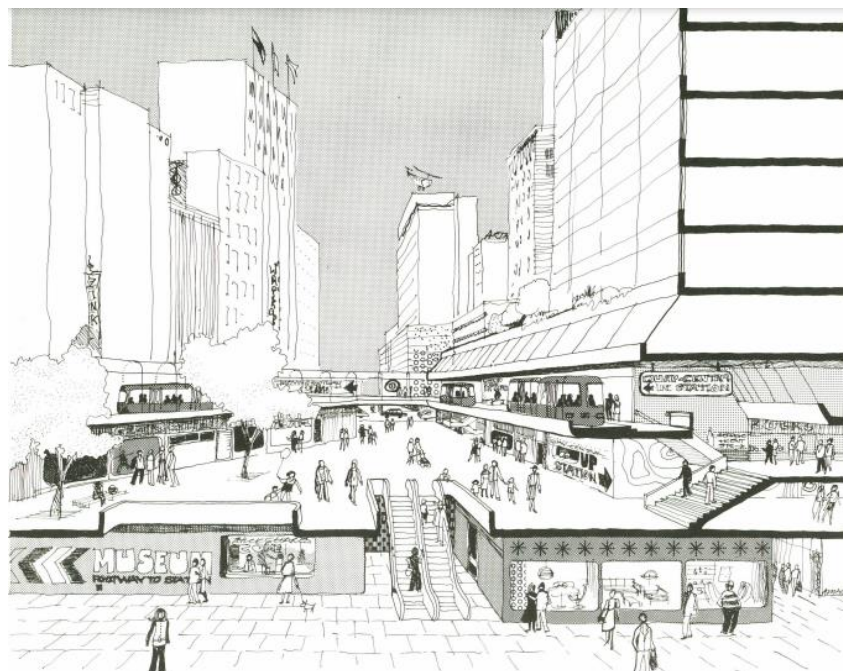

Image 50: Artist's impression of pedestrian mall (*City of Sydney Strategic Plan 1971*)

[72] Briger, op cit, p 52
[73] ibid

Freestone claimed the plan "presented a new approach departing from dry legalism to the promise of a genuine urbanism based around aspirations and actions, driven by research, grounded in a human-centred urbanism, and drawing from progressive influences from abroad."[74] And yet it did not achieve the original purpose for which City of Sydney submitted a draft planning scheme. There was no reversal of over-centralisation in metropolitan Sydney. Nor did it bring CBD office development under control, as promised by the CRA. Outmigration of "functions with a low profit margin" continued apace. The strategic plans sought to resolve the over-development versus amenity dilemma, not by controlling building volumes, but by sacrificing the CBD as an open district and gradually raising barriers to vehicle access. Leonie Sandercock thought that

> Overall the strategic plan seems likely to reinforce all those inequalities mentioned earlier that result from over-concentration in the centre of a large metropolis … the diversity of the city itself [CBD] is reduced by increasing rents, contrary to the rhetoric of the plan. It must be doubted whether 'the series of strategies and actions' can achieve the stated objectives of encouraging diversity and a better city environment. It may be that the way to retain the city's residential population, to encourage diverse land uses such as retailing … and to ease traffic congestion, is to *reduce* the floorspace ratio, to encourage lower densities and to disperse the workforce to metropolitan centres.[75]

Judging by her interpretation, the plan just codified Bourne's process of intensification and succession:

> But the *Strategic Plan* favours bigness. This is indicated by its restrictions on the development potential for small sites, its encouragement of site amalgamation and its implicit encouragement of the provision of premium office space … Despite its reformist rhetoric the CRA council had no intention of restraining the growth of the city, as is evident from the figures for the number of buildings completed, under construction, or given approval since 1971 … In July 1973 there were 49 multi-story buildings, with an average height

---

[74] Freestone, op cit, p 1
[75] Sandercock, op cit, pp 241-242

of twenty-five to thirty storeys, under construction. A further 96 were proposed, 80 of which had planning approval.[76]

Ian Alexander found that the CSSP's Floor Space Ratio Code "theoretically provided for some degree restraint", but "because of a change in calculating the FSR (net floor space was used rather than gross) – ratios under the 1971 Code are in fact up to 20 per cent higher than their equivalents under the preceding arrangements."[77] He calls the FSR Code a "paper tiger", while Harry Siedler used similar language: "something of a toothless tiger."[78] The plan was more successful if the intention was to elevate returns on land and property investment. Economist Elizabeth Savage reported in a 1974 paper that average rates of return on CBD sites in the area reserved for higher commercial density under the 1971 Code were 13.31 per cent compared to 10.41 per cent in an adjoining area.[79]

Image 51: Sydney CBD, 1969 (*City of Sydney*)

---

[76] Ibid, p 242

[77] Alexander, Ian, "Strategic politicking in Central Sydney", *Royal Australian Planning Institute Journal*, November 1978, p 124

[78] Ashton, op cit, 1995, p 98

[79] Savage, Elizabeth, "Some effects of floor-space-ratio and bonus regulations on rates of return: A case study for Sydney CBD", *Environment and Planning B*, 1974, Volume 1, p 163

Deconcentrating office construction was never a priority for Clarke. Tall freestanding office towers were an essential component of his model for urban renewal. In common with state official Nigel Ashton, moreover, skyscrapers defined his image of the city:

> ... another major urban planning and design objective of the 1971 City of Sydney Strategic plan: to preserve and enhance what one of my MIT Professors named 'The Image of the City' (refer the book under that title by Kevin Lynch, MIT Press, Cambridge, Massachusetts, published in the early sixties). Sydney's pre-dominant 'image' is its concentrated north-south lineal cluster of tall buildings sharply defined by the COSSP, along its eastern and western sides, dramatically visible from all directions, most popularly recognised across an expanse of Harbour water, with the Sydney Opera House and/or Sydney Harbour Bridge in the foreground ... [80]

This explains why the state government grew generally tolerant of the CSSP. Apparently, the long history of tussles over Sydney's image had finally drawn to a close. Now both the state and the city council, with prodding from Clarke, converged on the same glittering vista of skyscrapers-on-the-harbour.

Part 2 will take up the story from the 1970s to present times.

John Muscat is editor of *The New City* (thenewcityjournal.net), a web journal of urban affairs, and a Sydney lawyer.

Contact: thenewcity@live.com.au

References

Abercrombie, Lachlan, *Metropolitan Planning for Sydney 1948-1988: Looking to the Past to Learn for the Future,* Faculty of the Built Environment, UNSW, October 2008

Alexander, Ian, "Office Decentralisation in Sydney", *Town Planning Review*, Vol 49, No 3, Jul 1978

---

[80] Ashton, op cit, 1992, pp 52-53

Alexander, Ian, "Office suburbanisation", in *Why Cities Change: Urban development and economic change in Sydney*, edited by Cardew, Richard, Langdale, John and Rich, David, Geographical Society of New South Wales, George Allen & Unwin, 1982

Alexander, Ian, "Strategic politicking in Central Sydney", *Royal Australian Planning Institute Journal*, November 1978

Alexander, Ian, *Office Location and Public Policy*, Longman, London and New York, 1979

Alexander, Ian, *The City Centre: Patterns and Problems*, University of Western Australia Press, Perth, 1974

Archer, R W, "Market Factors in the Redevelopment of the Central Business Area of Sydney, 1957-1966" in Urban Redevelopment in Australia: papers presented to a joint urban seminar held at Australian National University, October and December, 1966, published by Urban Research Unit, ANU, 1968

Archer, R W, "The Efficiency of the Sydney Central Business District: The Public Authority Contribution", *Australian Planning Institute Journal*, July 1969

Ashton Paul, *Planning Sydney: Nine planners remember*, Council of the City of Sydney, Sydney, 1992

Ashton, Paul, *The Accidental City: Planning Sydney Since 1788*, Hale & Ironmonger, Sydney, 1993

Briger, Andrew, "The Politics of Planning: The 1971 City of Sydney Strategic Plan", in *The Design of Sydney: Three Decades of Change in the City Centre,* edited by Webber, Peter, The Law Book Company Ltd, Sydney, 1988

Bunning, Walter, "New York's Newest Boom in Building", *Sydney Morning Herald*, 14 August 1956

Bunning, Walter, "Our Most Vigorous Architectural Year", *Sydney Morning Herald*, 17 December 1957

Busa, Alessandro, *The Creative Destruction of New York City: Engineering the City for the Elite*, 2017, Oxford University Press

Cardew, Richard and Simons, Peter, "Retailing In Sydney", in *Why Cities Change: Urban development and economic change in Sydney*, edited by Cardew, Richard, Langdale, John and Rich, David, Geographical Society of New South Wales, George Allen & Unwin, 1982

Carol, Hans, "The Hierarchy of Central Functions Within the City", *Annals of the Association of American Geographers,* Vol 50, No 4, Dec 1960

Clarke, George, "Understanding the Nature of the City Core", *The Shire and Municipal Record*, 15 January 1967

Clarke, George, "Urban Renewal in the US", *Journal of the Australian Planning Institute*, March 1959

Clarke, George, "Urban Renewal", *Journal of the Australian Planning Institute*, September 1960

Colman, James, *A Plan for Sydney: A New Approach to Planning the Metropolis*, A Report for The Civic Reform Association of Sydney, Second Edition: February 1970

Conybeare, Daniel, "Sydney - A Unique Place: Reinforcing the City's Image & Identity", *Urban Design Quarterly,* July 1991

County of Cumberland Planning Scheme Report, Cumberland County Council, Sydney, 1948

Daly, Maurice T, "Finance, the capital market and Sydney's development", in *Why Cities Change: Urban development and economic change in Sydney*, edited by Cardew, Richard, Langdale, John and Rich, David, Geographical Society of New South Wales, George Allen & Unwin, 1982

Daly, Maurice T, *Sydney Boom, Sydney Bust: The City and Its Property Market, 1850-1981*, G Allen & Unwin, Sydney, 1982

Economic Geography, Vol 37, 1961, p 186-187

Edwards, Norman, "The Genesis of the Sydney Central Business District 1788-1856" in Kelly, Max (ed), *Nineteenth Century Sydney: Essays in Urban History*, Sydney University Press in association with Sydney History Group, 1978

en.wikipedia.org/Penn_Center_Philadelphia

Fagan, Robert, "Industrial Change in the Global City: Sydney's New Spaces of Production", in *Sydney: emergence of a world city*, Oxford University Press, South Melbourne, 2000

Farrelly, E M, "Sydney's Pied Piper of planning", *Sydney Morning Herald*, 12 March 2005

Farrelly, E M, "The Sydney height of buildings story: an examination of the intellectual, cultural and political background to development control in Sydney City Centre 1900-1960", PhD Thesis in the Faculty of Architecture, University of Sydney, 1997

Fisher, John, "Curtain-Walls, And What They Achieve In Building", *Sydney Morning Herald*, 19 February 1957

Freeland, J M, *Architecture in Australia: A History*, Penguin Books, 1988

Freestone, Robert and Baker, Sarah, "Urban policy transfer and paradigm shift: the City of Sydney Strategic Plan 1971", *Journal of Urbanism: International Research on Placemaking and Urban Sustainability,* Vol 15, (2022)

Gottmann, Jean, *The Coming of the Transactional City*, University of Maryland Institute for Urban Studies, 1983

Gregg, Kelly, "Conceptualizing the pedestrian mall in post-war North America and understanding its transatlantic transfer through the work and influence of Victor Gruen", *Planning Perspectives*, March 2018, 34 (1)

Harrison, Peter, "Planning the Metropolis – A Case Study", in *The Politics of Urban Growth*, R S Parker and P N Troy editors, Australian National University Press, Canberra, 1972

Hartman, George W, "The Central Business District – A Study In Urban Geography", *Economic Geography*, Vol 26, No 4, October 1950

Horvath, Ronald and Engels, Benno, "The residential restructuring of inner Sydney", in *Living In Cities: Urbanism and society in metropolitan Australia*, edited by Ian Burnley and James Forrest, Allen & Unwin, 1985

Horwood, Edgar M and Boyce, Ronald R, *Studies of the Central Business District and Urban Freeway Development*, University of Washington Press, Seattle, 1959

James D Fitzpatrick, "Future Trends in Office Building Developments in the Sydney Inner City Area, *Royal Australian Planning Institute Journal*, October 1971

Kuestenmacher, Simon, "The CBD won't die, but it does need to change", realcommercial.com.au, *The Australian*, 5 August 2021

Kwan, Campbell, "Firms behind falling Sydney office values", *Australian Financial Review*, 18 July 2024

Lawrence, R J, "Social Welfare and Urban Growth", in *The Politics of Urban Growth*, R S Parker and P N Troy editors, Australian National University Press, Canberra, 1972

Luczak, Krystyna and Morrison, Francesca, "Sydney's Struggle to Urban Maturity", *Urban Design Quarterly*, July 1991

Margalit, Harry, *Australia: modern architectures in history*, Reaktion Books, 2019

Marsden, Susan, *A History of Australian Capital City Centres Since 1945*, Australian National University, Urban Research Program, Research School of Social Sciences, Working Paper No.61, October 1997

McArthur, Ellen, "Towards a Theory of Retail Evolution: An Australian History of Retailing in the Early Twentieth Century", Thesis for Doctor of Philosophy, University of Technology Sydney, 2005

McGuirk, Pauline, "Planning Central Sydney", in *Making Space: Property Development and Urban Planning*, edited by Andrew MacLaran, Routledge, London, 2003

McNeill, Donald, Dowling, Robyn and Fagan, Bob, "Sydney/Global/City: An Exploration", *International Journal of Urban and Regional Research*, Vol 29.4, December 2005

Moorhouse, Geoffrey, *Sydney: The Story of a City*, Harcourt, 1999

Murphy, Peter and Watson, Sophie, "Restructuring of Sydney's Central Industrial Area: Process and Local Impacts", *Australian Geographical Studies*, Vol 28, Issue 2, 1990

Murphy, Raymond E and Vance, J E, "Delimiting the CBD", *Economic Geography*, Vol 30, 1954

Murphy, Raymond E, *The Central Business District: A Study in Urban Geography* (1971), 2008 edition, Aldine Transaction

Murphy, Raymond E, Vance, J E and Epstein, B J, "Internal Structure of the CBD", *Economic Geography*, Vol 32, 1955,

Neutze, Max, *Urban Development in Australia*, Allen and Unwin, Sydney, 1977

Nugent, Ellis, Rich, David and Simons, Peter, "Organisational and locational change in Sydney's wholesaling industry", in *Why Cities Change: Urban development and economic change in Sydney*, edited by Cardew, Richard, Langdale, John and Rich, David, Geographical Society of New South Wales, George Allen & Unwin, 1982

O'Hanlon, Seamus, *City Life: The New Urban Australia*, Newsouth, Sydney, 2018

O'Neill, Helen, *A Singular Vision: Harry Seidler*, Harper Collins, 2013

O'Neill, Phillip M and McGuirk, Pauline, "Reconfiguring the CBD: Work and Discourses of Design in Sydney's Office Space", *Urban Studies*, Vol 40, No. 9, August 2003

O'Sullivan, Arthur, *Urban Economics*, Fifth Edition, McGraw-Hill Irwin, New York, 2003

Pitt, Helen, *The House: The dramatic story of the Opera House and the people who made it*, Allen & Unwin, Australia, 2018

Preston, Richard E, "The Zone in Transition: A Study of Urban Use Patterns", *Economic Geography*, Vol 42, 1966, Issue 3

Punter, John, "From the ill-mannered to the iconic: Design regulation in central Sydney 1947-2002", *Town Planning Review*, 75(4) 2004

Punter, John, "Urban design in central Sydney 1945-2002: Laissez-Faire and discretionary traditions in the accidental city", *Progress in Planning*, 63 (2005)

Rannells, John, *The Core of the City: A Pilot Study of Changing Land Uses in Central Business Districts*, Columbia University Press, 1956, reprinted by Greenwood Press, Westport, Connecticut, 1974

Richards, J M, *An Introduction to Modern Architecture*, Pelican Books, 1970

Robinson, K W, (1952), "Sydney, 1820-1952 a comparison of developments in the heart of the city", *Australian Geographer*, 6:1

Sandercock, Leonie, "Sydney: Development without improvement", *Property, Politics, and Urban Planning: A History of Australian City Planning, 1890-1990*, Second Edition, Transaction Publishers, 1990

Savage, Elizabeth, "Some effects of floor-space-ratio and bonus regulations on rates of return: A case study for Sydney CBD", *Environment and Planning B*, 1974, Volume 1

Scott, Peter, "The Australian CBD", *Economic Geography*, Volume 35, Issue 4 (1959)

Seidler, Harry, "We are clinging to the outmoded", *Sydney Morning Herald*, 22 June 1954

Simons, Peter L, *Sydney's wholesale District*, Research paper, Department of Geography, University of Sydney and the Geographical Society of New South Wales, 1966

"Skyscraper Move By Cabinet", *Sydney Morning Herald*, 12 September 1956

Spearritt, Peter and DeMarco, Christina, *Planning Sydney's Future*, Allen & Unwin, Sydney, 1988

Spearritt, Peter, *Sydney's Century: A History*, UNSW Press, Sydney, 2000

Stokes, Rob, "The CBD Is Dead. Long Live the Central Social District", *Sydney Morning Herald*, 29 December 2022

Stretton, Hugh, *Ideas for Australian Cities*, 3rd Edition, Transit Australia Publishing, Sydney, 1989

Sydney CBD Survey (1976), Land Use Survey, City of Sydney Council

Sydney Region: Outline Plan 1970-2000 AD, A Strategy for Development, A Report by the State Planning Authority of New South Wales, 1968

Taylor, Jennifer, *Tall Buildings, Australian Business Going Up: 1945-1970*, Craftsman House, 2001

TKD Architects, *Modern Movement Architecture in Central Sydney*, Heritage Study Review, March 2019

Turnbull, Lucy, *Sydney: Biography of a City*, Random House, New South Wales, 1999

Valuing 50 years of Australia's Icon, Deloitte Access Economics, 2023

Vernon, Raymond, *Metropolis 1985: An Interpretation of the Findings of the New York metropolitan Region Study*, Anchor Books, Doubleday & Co, New York, 1963

Webber, Peter, "The Nature of the City", in *The Design of Sydney: Three Decades of Change in the City Centre,* edited by Webber, Peter, The Law Book Company Ltd, Sydney, 1988

Weiss, Shirley F, *The Central Business District In Transition: methodological Approaches to CBF Analysis and Forecasting Future Space Requirements*, Research Paper No.1, City and Regional Planning Studies, Department of City and Regional Planning, University of North Carolina, Chapel Hill NC, 1965.

Whipple R T M, "Redevelopment and the Real Estate Market in Sydney's Central Area" in Urban Redevelopment in Australia: papers presented to a joint urban seminar held at Australian National University, October and December, 1966, published by Urban Research Unit, ANU, 1968

Whipple, R T M, "relationship between land values and uses in Sydney's central area*", Journal of property Finance*, Vol 6 No 4, 1995

Willis, Carol, *Form Follows Finance: Skyscrapers and Skylines in New York and Chicago*, Princeton Architectural Press, New York, 1995

Winston, Denis, *Sydney's Great Experiment: The Progress of the Cumberland County Plan*, Angus and Robertson, Sydney, 1957

Wolfers, Howard, "The big stores between the wars" in Roe, Jill (ed) *Twentieth Century Sydney: Studies in urban & social history*, Hale & Ironmonger in association with The Sydney History Group, Sydney, 1980