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Länder, z. B. der europäischen Staaten und der USA — verhältnismäßig stark vernachlässigt wurde.

Populäre Veröffentlichungen über australische Städte sind recht häufig. Daneben gibt es eine wachsende Zahl von Untersuchungen zur Stadtgeschichte und über individuelle Züge städtischen Lebens. Detaillierte Berichte städtischer Planungs-Körperschaften werden neuerdings ebenfalls zahlreicher. Aber der Umfang der stadtgeographischen Literatur im eigentlichen Sinne ist noch sehr gering.

Die stadtgeographischen Arbeiten über australische Städte lassen sich in 2 Gruppen einteilen: 1. beschreibende Arbeiten zur Stadtentwicklung, Stadtmorphologie und der städtischen Funktionen, 2. analytische Untersuchungen, die sich grundsätzlich mit den Problemen der standörtlichen Gegebenheiten und der funktionalen Aufgaben der Hauptstädte (der Bundesstaaten) besonders auch Sidneys auseinandersetzen.

Das Fehlen einer umfangreichen stadtgeographischen Literatur scheint auf 2 Ursachen zu beruhen: 1. die wenigen wissenschaftlich tätigen Geographen sehen sich der großen Aufgabe gegenüber, das Gesamtgebiet der Geographie eines ganzen Kontinents zu bewältigen, 2. die Beschaffenheit des Kontinents selbst hat die geographische Forschung mehr auf physische und wirtschaftliche als Sozialprobleme hingelenkt.

Though there is a large and growing body of general literature relating to the towns and cities of Australia, urban geographical research in the continent has been much neglected compared with what has been done in Britain, Europe and the United States of America.

Popular works of book length on towns vary from collections of excellent camera studies with many photographs of special interest and value to the geographer¹⁾, to descriptive²⁾, anecdotal³⁾, and antiquarian historical⁴⁾ writings; in a more serious vein many books relate specifically to topics like the history of individual centres⁵⁾ and particular facets

¹⁾ Such as Frank Hurley's studies of Sydney, Melbourne and Brisbane, for example, Sydney and its Resorts, Sydney, 1948.

²⁾ Cf., W. S. Jevons, 'A Social Survey of Australian Cities 1858', MS. in Mitchell Library, Sydney. W. Denning, Capital City (Canberra), Sydney, 1938.

³⁾ Cf., C. H. Bertie, Stories of Old Sydney, Sydney, n. d. J. Gale, Canberra, History and Legends, Queanbeyan, 1927.

⁴⁾ Cf., W. A. Bayley, Lilac City, The Story of Goulburn, Goulburn, 1954.

W. A. Bayley, Border City — City of Albury, Albury, 1954.

⁵⁾ T. Worsnop, The City of Adelaide, Its Origin and Progress, Adelaide, 1878.

H. V. Nunn, Maryborough (Victoria) 1854—1954, The Story of a Century, Melbourne, 1954.

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A. R. Macleod, The Transformation of Manillae (Manilla, N. S. W.), Manilla, 1949.

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THE SCOPE AND NATURE OF URBAN RESEARCH IN AUSTRALIA

Herbert W. King

Wesen und Grenzen der stadtgeographischen Forschung in Australien.

Zusammenfassung: Der folgende Aufsatz berichtet von dem verschiedenartigen Schrifttum über australische Städte und versucht zu erklären, warum die stadtgeographische Forschung in diesem Kontinent — gemessen an der anderer

of town and city life⁶⁾, and of course the detailed reports of several town planning bodies have also been published⁷⁾.

Incidental reference to some towns and cities is made in some geographical texts on Australia or its parts, and specifically urban geographical studies of Sydney, Adelaide, Canberra and Urundangi have been fitted by *Griffith Taylor* into the framework of his general survey⁸⁾, but only about a score of articles relating wholly to Australian urban geography have appeared in geographical periodicals. In a few instances also, urban matters have been discussed by economists and historians in their respective professional journals: thus, *Colin Clark* has concerned himself with some broad economic and statistical aspects of urbanism in the continent⁹⁾, and local historians have written up the history of individual towns¹⁰⁾.

Of these, we consider only the geographical writings, and *Clark's* theoretical approach to the question of urban location in Queensland: many are purely descriptive and need only a side-glance because they do not contribute more than a few facts, but the minority with a more generally analytical approach have a more satisfying leavening of geographical ideas.

The descriptive studies relate principally to the evolution of individual towns or cities and to their urban morphology and function: thus, among the latter we have *Zierer's* studies of Brisbane, Newcastle, Melbourne, Sydney, Broken Hill¹¹⁾ and *Rowe's*

examination of the form and function of the rural town of Murwillumbah¹²⁾; in the former, the origins of Canberra as a capital, and the evolution of mining centres (Byng, Broken Hill) and ports (Port Kembla, Whyalla, Brisbane) are traced by various writers¹³⁾. Some of them besides being brief give only a thin treatment of their chosen topics, and others like *Zierer's* (written after a lightning-like reconnaissance) very obviously indicate that the centres have not been studied in detail, at least in the field.

The analytical studies are concerned specifically with the question of the location of urban settlements, and with considerations of the functional layout of Sydney.

*Andrews*¹⁴⁾, in his analysis of the settlement net and regional factor in New South Wales, set out to establish the reality and significance of the *settlement structure* or 'net' as a complementary concept to that of a *settlement series*, established by *Ahlmann* in his study of settlements in Calabria¹⁵⁾. Unlike *Ahlmann*, who studied settlements in terms of their evolution, *Andrews* was more concerned with the morphological characteristics of settlement, and by means of some brief comparative studies of the groupings and the internal structure of settlements in New South Wales (Lower Hunter Valley, Lachlan Valley, Monaro, Tweed Valley), he came to conclude that:

1. various types of agglomeration in the rural population can be related to regional characteristics of population, and
2. the nature of continual adjustments of the settlement net to regional activities, is highly significant and worthy of close study.

Andrews suggested the use of form and function as suitable criteria for distinguishing different kinds of agglomerations in Australia, and to illustrate this he demonstrated the hubbed agglomeration of a town (Cowra), and four kinds of suburban agglomerations which are either cored or nucleated, regular or irregular in pattern, and either markedly residential or non-residential.

Clark, in his evidence presented to the Royal Commission on Pastoral Lands in Queensland (1925), theorised on the sizes and distribution of townships

⁶⁾ For example, studies of public and domestic urban architecture like *Robin Boyd*, *Australia's Home — Its Origins Builders and Occupiers*, Melbourne, 1952; *M. Herman*, *The Early Australian Architects and Their Work*, Sydney, 1954; *Maie Casey* (ed.), *Early Melbourne Architecture, 1840—88*, Melbourne, 1953, and sociological enquiries such as *A. J. & J. J. McIntyre*, *The Country Towns of Victoria*, Melbourne, 1944; *A. J. McIntyre*, *Sunraysia, A Social Survey of a Dried Fruits Area*, Melbourne 1948; *A. J. Walker*, *Coaltown, A Survey of Cessnock*, Melbourne, 1945.

⁷⁾ Such as those of Cumberland County Council for Sydney, The Metropolitan Board of Works for Melbourne and the Metropolitan Planning Committee for Hobart.

⁸⁾ *Griffith Taylor*, *Urban Geography*, Methuen, London, 1949.

⁹⁾ *Colin Clark*, 'The Economic Functions of a City in Relation to its Size', *Econometrica* (Chicago), Vol. 13, No. 2, 1945, pp. 97—113; 'Land Settlement in Queensland', *Econ. News* (Bulletin of Queensland Bureau of Industry), Vol. 19, Nos. 7—8, 1950, pp. 1—8; 'The Urban Population Capacity of Australia', Paper read to Section G, ANZAAS (Brisbane Meeting) May, 1951.

¹⁰⁾ As by *J. T. Jervis*, *B. T. Dowd*, *W. L. Havard* et alia in various volumes of *J. & Procs. roy. Aust. Hist. Soc.*, and by others in the journals and magazines of the Victorian, Queensland, and other State historical societies.

¹¹⁾ *C. M. Zierer*, 'Brisbane — River Metropolis of Queensland', *Econ. Geogr.*, Vol. 17, 1941, pp. 327—45.

— 'Industrial Area of Newcastle, Australia', *Econ. Geogr.*, Vol. 17, 1941, pp. 31—49.

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— 'Broken Hill, Australia's Greatest Mining Camp', *Ann. Ass. Amer. Geogr.*, Vol. 30, 1940, pp. 83—108.

¹²⁾ *J. B. Rowe*, 'The Form and Function of the Rural Township', *Aust. Geogr.*, Vol. 4, No. 8, 1944, pp. 217—25.

¹³⁾ *Griffith Taylor*, 'The Evolution of a Capital (Canberra)', *Geogr. J.* Vol. 43, 1914, pp. 378—395 and pp. 536—554; *Una R. Emanuel*, 'The Rise and Decline of the Mining Village of Byng', *Aust. Geogr.*, Vol. 1, Part 2, 1929, pp. 79—81; *Megan C. Allen*, 'Broken Hill, N. S. W.', *Geogr.*, Vol. 39, 1954, pp. 13—20; *E. A. Crago & A. G. Lowndes*, 'Port Kembla and its Harbour', *Aust. Geogr.*, Vol. 1, Part 3, 1931, pp. 50—8; *J. B. Rowe*, 'Whyalla, A Study of Geography in the Making', *Aust. Geogr.*, Vol. 5, No. 7, 1948, pp. 176—82; *L. J. Jay*, 'The Origins and Early Growth of Brisbane', *Geography*, Vol. 37, 1952, pp. 166—78.

¹⁴⁾ *J. Andrews*, 'The Settlement Net and the Regional Factor', *Aust. Geogr.*, Vol. 2, No. 4, 1934, pp. 33—48.

¹⁵⁾ *H. W. Ahlmann*, 'The Geographical Study of Settlements', *Geogr. Rev.*, Vol. 18, 1928, pp. 93—128.

necessary for the effective distribution of population in rural areas¹⁶). He argued that townships must play an important part in attracting the right type of permanent settlers to rural areas by providing facilities for the bringing up of families, and as a corollary, that holdings must be sufficiently small and compact so that each family can live in or be reasonably close to a township of sufficient size to give facilities for shopping, education or social life.

On assumptions, based on a study of the ratio of industrial workers in Queensland shires related to the size of the principal town in each shire, he deduced that for each community some 100 to 120 farms, each employing on the average three men, will be in equilibrium with a township of 1500 population. In his view the sizes of farms and the average distance between townships would naturally have to be equated to the quality of the land, thus:

	Average size of farm for three men (acres)	Average distance between townships (miles)
good agricultural land	500	9
areas with poor soils	1,000	13
areas with summer grazing only	1,500	16
areas containing grazing properties with incidental crop growing	5,000	29

Wills examined the character of the rural-urban fringe of Sydney and observed changes which had taken place in its agricultural usage¹⁷). From his evidence of changes in land use since 1910, he concluded that Sydney in common with other metropolitan cities provides excellent examples of a rapidly changing urban fringe, one which is being pushed out unevenly into the surrounding countryside. He claimed that the rural-urban fringe passes through a life cycle — one which has reached its penultimate phase in the industrial invasion of the Botany-Mascot district, which till recently was a flourishing centre of small market gardens.

In a paper on Sydney (1932)¹⁸), *Holmes* described the regional spread of activities in the metropolis, and drew attention to the harbour and the local environment generally as important factors affecting the life of the city and its development as a centralised outlet for the State. Later (1947)¹⁹), he studied the geographical distribution of factories in Sydney and its suburbs by mapping the distribution of twelve classes of factories in order to show how their composite pattern compares with the built-up areas and the shopping areas of the metropolis, also by examining the factors which have contributed to the existing factory distribution in the area. He concluded that though there is a grave need for the re-distribution of the factories in Sydney and its suburbs any such re-distribution should be the task of a metropolitan co-ordinating council, capable of relegating many functional details to component suburban councils.

Other aspects of the geography of Sydney have been studied in two papers by *Robinson*: one traces

the relations between the city and its region in the early phases of its development²⁰), and the other compares the functional layout of the city proper in 1820 and 1950²¹).

In the latter, he advanced empirically the thesis that though Sydney had unconventional beginnings it has evolved into a purely conventional city, also that by 1820 when this process had hardly begun the town already possessed the ingredients for its transformation into a metropolis.

In a paper relating primarily to some geographical considerations of local government in New South Wales *King*²²) has drawn attention to the confusions arising from the existing use of urban nomenclature in Australia and has discussed some legal aspects of towns which are significant for the urban geographer as well as the processes by means of which towns may be established in this State. Elsewhere²³), he described the evolution, morphology and function of Canberra and Queanbeyan, and examined the unique kind of urban mutualism which has been developed between them.

More recently, *Scott*²⁴) has studied Hobart in order to demonstrate that it is an urban centre in a phase of transition from a town to a city, claimed earlier by *Dickinson*²⁵) as being characteristic of centres between the population range of about 50,000 and 100,000. After tracing the evolution of Hobart's functions and functional topography, *Scott* surveyed the present

¹⁶) *Colin Clark*, 'Land Settlement in Queensland', *Econ. News* (Queensland Bureau of Industry) Vol. 19, Nos. 7—8, 1950, pp. 1—8.

¹⁷) *N. R. Wills*, 'The Rural-Urban Fringe — Some Agricultural Characteristics', *Aust. Geogr.*, Vol. 5, No. 1, 1945, pp. 29—35.

¹⁸) *J. M. Holmes*, 'Geographic Factors in the Economy of Sydney', *Handbook for New South Wales, ANZAAS* (Sydney Meeting), 1932, pp. 39—56.

¹⁹) *J. M. Holmes*, 'Factory Orientation in Metropolitan Sydney', *Aust. Geogr.*, Vol. 5, No. 5, 1947, pp. 96—113.

²⁰) *K. W. Robinson*, 'Population and Land Use in the Sydney District: 1788—1820', *N. Z. Geogr.*, Vol. 9, 1953, pp. 144—160.

²¹) *K. W. Robinson*, 'Sydney, 1820: 1950 — A Comparison of Developments in the Heart of the City', *Aust. Geogr.*, Vol. 6, No. 1, 1952, pp. 6—12.

²²) *H. W. H. King*, 'County, Shire and Town in New South Wales', *Aust. Geogr.* Vol. 6, No. 3, 1954, pp. 14—25.

²³) *H. W. H. King*, 'The Canberra-Queanbeyan Symbiosis: A Study of Urban Mutualism', *Geogr. Rev.*, Vol. 44, 1954, pp. 101—18.

²⁴) *P. Scott*, 'Hobart: An Emergent City', *Aust. Geogr.*, Vol. 6, No. 4, 1955, pp. 19—31.

²⁵) *R. E. Dickinson*, *The West European City*, London, 1951, pp. 252—3.

patterns and the degree of segregation in the city's core by mapping the distribution of its functional buildings (retail shops, offices, public buildings, residences, transport buildings, warehouses and industrial buildings), both horizontally and vertically. Though he found evidence of increasing functional segregation in both directions, he concluded that Central Hobart has not yet reached the degree of functional articulation consistent with that of a metropolis, and he opined that its transition from a town to a metropolis is likely to be protracted.

From all this, it may be seen that the geographical literature on the Australian town is not extensive, and in only a comparatively few instances is based on really close and detailed investigation of urban centres. Moreover, the neglect of this important branch of the continent's social geography is demonstrated further by the fact that in more than 80 articles on Australian geography in the 41 issues of *The Australian Geographer*, from 1929 to date, 41 have had an economic geographical bias (relating mainly to agriculture, less often to industry), 31 relate to some aspect, or aspects, of physical geography, but only 12 (some of which are short articles not much more than notes) deal directly with towns. Furthermore, in the few urban studies which have been made, geographers have limited their field of enquiry principally to the State capitals: though several papers have been published on Canberra²⁶⁾ and on a couple of ports and mining centres, the geography of the rural town has been largely ignored.

Reasons for the Neglect of Urban Geographical Research

Two factors dominate all others in accounting for the impoverished state of the knowledge of Australian urban geography: first, the paucity of practising geographers (about 30 in all) confronted with the task of studying all aspects of the geography of the whole continent, an area of about three million square miles²⁷⁾; secondly, the particular nature of the Australian environment which has had the effect of channelling geographical research primarily into its physical and economic rather than social spheres.

In the natural order of things it was logical for geographers to begin their research on Australia by examining and describing its physical character, if only because the earth itself is the primary and fun-

damental fact in their discipline. After this, it was equally logical for them too consider the effects of that geographical environment on the Australian people and their way of life, namely by exploring the continent's economic and social geography and other branches of human geography.

On the whole it may be said that geographical enquiry in Australia has evolved along these lines, but in the second phase the study of social geography has not been developed to the extent that might reasonably have been expected, largely because the subject as a whole has progressed only slowly owing to its claims as an important discipline having been tardily recognised in the continent. In addition, however, some acute and serious problems of economic development caused by the Australian environment resulted naturally in geographers giving greater emphasis to their study of economic rather than social geography. Moreover, relative to its comparatively few enquirers the field of Australian geography is vast and almost unsurveyed with the result that many geographers still feel that the solution of national problems demands priority of study being given to the physical and economic aspects of Australia's geography.

Though the teaching emphasis in Australian Universities still is on physical, regional and economic geography, and though the workers in social geography are still few, nevertheless studies of towns and of other aspects of this latter field are becoming more numerous. These, and a growing number of papers on historical geography, suggest that the large research opportunities along these lines are about to be tapped to a far greater extent than has been the case in the past.

DAS HANDBUCH DER NATURRÄUMLICHEN GLIEDERUNG DEUTSCHLANDS

Ernst Winkler

Das seit längerem geplante „Handbuch der naturräumlichen Gliederung Deutschlands“¹⁾ wurde auch von den Geographen des Auslandes mit Spannung erwartet. Obwohl es bewußt nicht ins Zentrum der Geographie vorzustößen, keine *Landchaftsgliederung*, sondern ausschließlich Ordnung von *Naturräumen* zu geben sich vornahm, weckte allein schon dieses beschränktere Thema allgemeines Interesse. Die vor einiger Zeit erschienene erste Lieferung befriedigt es in der Tat in hohem Maße; ihr Inhalt bedeutet zweifellos einen entschiedenen Schritt auf dem Wege der Klärung einer ganzen Reihe von Fragen zum Objekt der Geographie.

Das Buch will, wie angedeutet, „weder eine Landeskunde noch eine Landschaftskunde sein. Das klar begrenzte Anliegen ist, Deutschland nach den Unter-

²⁶⁾ Specially in *H. L. White* (ed.) 'Canberra, A Nation's Capital', (ANZAAS, Canberra), Sydney, 1954. In addition to the books and geographical papers mentioned, many parliamentary reports and papers also relate to it, and many aspects of its history and its plan have been discussed widely in historical and town planning journals.

²⁷⁾ This number is made up largely of academic geographers in the Australian universities though it also includes a few other professional geographers in State government departments and the Commonwealth Scientific and Industrial Research Organisation. By contrast, as recently as 1946 there were only 17 academic geographers in Australia (one professor, 2 senior lecturers, 2 lecturers, 2 teaching fellows, 2 assistants, 2 demonstrators and 6 part-time lecturers).

¹⁾ Herausgegeben im Auftrage der Bundesanstalt für Landeskunde und des Zentrallausschusses für deutsche Landeskunde von *E. Meynen* und *J. Schmithüsen*. 1. Lieferung, 136 S., 8 K. Remagen 1953. Verlag der Bundesanstalt für Landeskunde.