



Proceedings of the Society of Architectural Historians, Australia and New Zealand 30, Open

Papers presented to the 30th Annual Conference of the Society of Architectural Historians, Australia and New Zealand held on the Gold Coast, Queensland, Australia, July 2-5, 2013.

<http://www.griffith.edu.au/conference/sahanz-2013/>

Philip Goad, “Open Field, Open Street, Open Choice: John Andrews and the South Residences, University of Guelph (1965-68)” in *Proceedings of the Society of Architectural Historians, Australia and New Zealand: 30, Open*, edited by Alexandra Brown and Andrew Leach (Gold Coast, Qld: SAHANZ, 2013), vol. 2, p639-650.

ISBN-10: 0-9876055-0-X

ISBN-13: 978-0-9876055-0-4

Open Field, Open Street, Open Choice

John Andrews and the South Residences,
University of Guelph (1965-68)

Philip Goad

University of Melbourne

In the early 1960s, the question of what constituted an ideal model for university student accommodation was an open one. A corollary of the post-World War Two baby boom that gave rise to unprecedented demand for housing and schools in the 1950s, was the expansion of existing universities and the planning and construction of new universities. The design of these new institutions came at a time when architecture culture was redefining its urban mission. The demise of CIAM, the emergence of Team 10 and a new generation of urban thinkers saw increased focus on concepts of community, the street and the scale of the individual. The university and by extension the university college came to be considered potential utopian communities, where applied research into questions of human movement and behaviour, neighborhood, concepts of dwelling, propinquity and scale might be matched with the constructive capacities of modern day building technologies, all in service of the “new campus.”

This paper examines the South Residences at the University of Guelph in Guelph, Canada designed by Australian-born Toronto-based architect John Andrews as a case study of this redefinition of the student college as a microcosm of broader issues about re-thinking the city, housing and community. Key to this commission for housing 1660 students, the largest project of its kind in Canada at the time, was the involvement of Evan Walker, another Australian architect then resident in Toronto, whose earlier research into student housing and briefing document for Guelph set the groundwork for Andrews to redefine what a contemporary college might be. Also key were Andrews’s concepts of the internal public “street” and “meeting place,” concepts earlier explored at Scarborough College for the University of Toronto, and fundamental design ideas that would find echo in Andrews’s university buildings and residences for the next twenty years.



In *Zodiac* 18 (1968), a special issue devoted to recent British architecture, Joseph Rykwert, new Professor of Art at the new University of Essex described “universities as institutional archetypes of our age.”¹ Drawing comparison with cathedral building of the Middle Ages, Rykwert highlighted the unprecedented design and construction of new universities. What made the British situation remarkable was the creation of fifteen universities and their conception, as Rykwert put it, “in a changed urban situation”: open sites, often pastoral landscapes, invariably close to a provincial town and with the aim to realize a new, if not radically new, urban character. Rykwert believed architects and urban planners had failed throughout the twentieth century to give coherence and structure to the city. Instead there was now the possibility “for finding the paradigm for the city in the university.”² Just over thirty years later, historian Stefan Muthesius would re-emphasize the importance of these British experiments, giving special attention to the Seven New Universities of Sussex, York, Essex, East Anglia, Lancaster, Kent and Warwick, much vaunted by the international architectural press at the time.³ Yet it was not only in Great Britain that such developments were taking place. New universities in the United States, Australia, New Zealand and across Europe were also being realized,⁴ but both Rykwert and Muthesius made special note of Canada. Muthesius and Peter Dormer noted, “It seems that it was only Canada which produced a New University movement akin to England’s.”⁵ Canada was indeed comparable. Between 1957 and 1967, no less than eleven new universities and colleges were established, including Carlton (1957), York (1959, main campus 1964-), Laurentian (1960), Simon Fraser (1963), Trent (1964), Guelph (1964), Brock (1964), Calgary (1966), Lethbridge (1967), and Scarborough (1963) and Erindale Colleges (1965) (both satellites of the University of Toronto), all with major building programs and invariably architects of note. Professor Thomas Howarth, Director of the School of Architecture at the University of Toronto, reported from the 1964 Banff Session devoted to “Campus Architecture” that:

almost overnight the Canadian university has become a major patron of the architectural profession ... It is doubtful whether any field of architectural endeavour in Canada has had or will have such a profound effect upon our profession.⁶

The design of these new institutions came at a time when avant-garde architecture culture was redefining its urban mission. The

1. Joseph Rykwert, “Universities as Institutional Archetypes of Our Age,” *Zodiac* 18 (1968): 61-3.

2. Rykwert, “Universities as Institutional Archetypes of Our Age,” 63.

3. Stefan Muthesius, *The Postwar University: Utopianist Campus and College* (New Haven and London: Paul Mellon Centre for Studies in British Art, Yale University Press, 2000), 94-186.

4. See Paul Venable Turner, *Campus: An American Planning Tradition* (Cambridge, Mass.: MIT Press, 1984); Philip Goad, “Universities,” in *The Encyclopaedia of Australian Architecture*, ed. Philip Goad and Julie Willis (Melbourne: Cambridge University Press, 2012), 723-4; Julia Gatley, ed., *Long Live the Modern: New Zealand’s New Architecture 1904-1984* (Auckland: Auckland University Press, 2008), 169, 177-9, 194, 200, 213.

5. Peter Dormer and Stefan Muthesius, *Concrete and Open Skies: Architecture at the University of East Anglia, 1962-2000* (London: Unicorn Press, 2000), 126-7.

6. Thomas Howarth, “Comments: Banff Session 64,” *RAIC/LIRAC* (July 1964): 48. The Banff Session is a bi-annual conference held by the Alberta Association of Architects held in the Rocky Mountains, Banff, in Alberta, Canada. Like the Aspen Design Conference, held in the United States, the Banff Session historically has been attended by architects, interior designers, academics and students from Canada and the United States.

7. CIAM's end is documented in Jos Bosman, "Team 10 out of CIAM," in *Team 10 1953-81: In Search of a Utopia of the Present*, ed. Max Risselada and Dirk van den Heuvel (Rotterdam: NAI Publishers, 2005), 246-51. See also Eric Mumford, *The CIAM Discourse on Urbanism, 1928-1960* (Cambridge, Mass.: MIT Press, 2000), 258-65, 267-74.

8. Arthur Erickson, "The University: a new visual environment," *Canadian Architect* (January 1968): 35-7.

9. See the theoretical framing of the idea of the postwar university and historical sections on US, Canadian and European universities in Muthesius, *The Postwar University*.

10. Michael Brawne, "Student Living: Approaches to Residential Planning," *Architectural Review* 134, no. 800 (October 1963): 290.

11. Robert Furneaux-Jordan, "Denys Lasdun: England," *Canadian Architect* (September 1962): 55-64.

formal demise of CIAM in 1959, the emergence of Team 10 and a new generation of urban thinkers saw increased focus on concepts of community, the street, and the scale of the human body.⁷ The university and by extension the university residential college came to be considered potential utopian communities, where applied research into questions of human movement and behaviour, neighborhood, concepts of dwelling, propinquity and scale might be matched with the constructive capacities of modern day building technologies, all in service of the "new campus." Echoing Rykwert, Canadian architect Arthur Erickson (himself a key player in Canada's university building enterprise as lead architect for the new Simon Fraser University in Vancouver) went so far as to say that "education is an urban process involving everyone in a total mix as in the city ... more and more the needs of the university and the solutions to those needs are the solutions common to any urban situation."⁸ Residential colleges by architects like Eero Saarinen, Louis Kahn and Giancarlo de Carlo were designed as microcosms of an idealized urban and community setting, a form of redemptive residential component of the city, part monastic, part secular, part utopian community and different from the necessary urgency of re-housing Europe's war-torn cities or the slum reclamation projects typical of most postwar urban centres.⁹ In 1963, Michael Brawne highlighted the significance of student living to university planning, suggesting the immediate relevance of the vocabulary of clusters, stem development and route development documented as the Team 10 Primer in *Architectural Design* (December 1962):

Within the total university plan the consideration of student living space is thus crucial both as a planning idea and as an architectural form. Both aspects will be considerably affected by the social organization thought appropriate.¹⁰

Writing in *The Canadian Architect* in 1962, Robert Furneaux-Jordan used the term 'social form' to describe the combination of architectural form and social purpose in the university work of English architect Denys Lasdun.¹¹ In the myriad of examples produced in the postwar decades, many residential colleges could also be described as expressing "social form." Amongst these, the South Residences (1965) at the University of Guelph designed by Australian-born Toronto-based architect John Andrews (1933-) present a significant case study of this redefinition of the student college as a microcosm of broader issues about re-thinking the city, housing and community. Key to this commission was not



just its extraordinary scale—housing 1660 students, the largest project of its kind at the time in Canada and North America—but also that the formal outcomes embrace a mode of conception strongly related to Andrews’s educational lineage through Harvard University’s Graduate School of Design (GSD) and an emergent personal practice of design solution derived from programmatic research and critique, and innovative construction practices determined by local circumstance. Central to Andrews’s developing design approach was Evan Walker (1935-), another Australian architect then resident in Toronto whose graduate research into student housing and briefing document for Guelph set the groundwork for Andrews to redefine what a contemporary residential college might be. In completing Guelph, Andrews had, by focusing on community and the individual, confirmed an increasing commitment to a design approach based on repetitive systems, the expression of circulation, structure and space increasingly strained of heroic modernist formalism, and instead committed to non-hierarchical, flexibly planned and flexibly inhabited spaces that would find be explored in his later buildings for universities, offices, student housing, and convention centres.¹²

The University of Guelph and Evan Walker

The University of Guelph, fifty-eight miles south of Toronto on the edge of the city of Guelph in southern Ontario and established in July 1964, was formed from three previous colleges; one of them, the Ontario Agricultural College, originally on site since 1874. In 1964, a Long Range Development Plan of the rural campus was undertaken by Project Planning Associates, led by Macklin L. Hancock, and Richard P. Dober, campus planning expert from Cambridge, Massachusetts, with Sert Jackson Associates as Design Review Consultants.¹³ Hancock was a GSD graduate, having studied under Josep Luis Sert and it was Sert’s firm (with Hancock, Little & Calvert Associates) that completed the new campus’s first major buildings: the MacKinnon Building (1967) and McLaughlin Library (1968).¹⁴ The master plan proposed inserting new buildings around a scattering of existing buildings to increase density and create courtyards with four groups of student housing at the cardinal points of the campus perimeter. In 1965, the University commissioned young University of Toronto M.Arch graduate Evan Walker to complete a housing study within the same year.

12. For example: Cameron Offices, Belconnen, Canberra (1968-77), Gund Hall, Harvard University, Cambridge Massachusetts (1968), Art Building, Kent State University, Kent, Ohio (1970-2), Toad Hall, Australian National University, Canberra (1970), King George Tower, Sydney (1970-6), Student Housing, Canberra College of Advanced Education, Canberra (1973) and convention centres in Melbourne (1985), Sydney (1988) and Adelaide (1989).

13. Project Planning Associates Limited and Richard P. Dober, University of Guelph Long Range Development Plan 1964 (1964). Dober’s books include *Campus Planning* (New York: Reinhold, 1963) and *The New Campus in Britain: Ideas of Consequence for the United States* (New York: Educational Facilities Laboratories, 1965).

14. Michael McClelland and Graeme Stewart, eds., *Concrete Toronto: A Guidebook to Concrete Architecture from the Fifties to the Seventies* (Toronto: Coach House Books and ERA Architects, 2007), 280-81.

Son of Australian progressive educator Charles Walker (1899-1971), and a BArch graduate from the University of Melbourne (1959), Walker had won a Commonwealth Scholarship to study in Canada ostensibly with the intent of making a study of student housing.¹⁵ On arrival at the University of Manitoba in Winnipeg, Walker realized it wasn't the place for him. He rang Tom Howarth, the new Professor of Architecture at the University of Toronto and within days, Walker had enrolled as the School of Architecture's first ever Master of Architecture by research student.¹⁶ Supervised by Howarth, Walker's thesis submitted in April 1962 was a major work, a comprehensive survey of contemporary approaches to the design of student residences in Canada, Great Britain and the United States.¹⁷ The thesis was based on extensive field research and partly on Walker's positive experience of living in a single room in Wycliffe College at the University of Toronto while studying. When he was commissioned to undertake the study for Guelph, Walker was living and working as a Don in the recently completed New College (1959-62) at the University of Toronto designed by John Andrews's GSD classmate Macy DuBois.

In his Guelph study, Walker concluded that the neighboring city of Guelph would only be able to provide 3,000 beds whereas the University would need 12,000 housing units by 1980. Walker confirmed the 1964 master plan location of four undergraduate residence areas, each with 2,300 beds and with the remainder devoted to married housing. Unlike the American tradition of shared college bedrooms, Walker recommended that, like most contemporary British colleges, the majority of students have single rooms and that each student should have moveable furniture so that students could change their furniture to suit different uses and also to express individuality.¹⁸ Walker's diagrammatic analysis was then extended in scale to suggest an ideal group of thirteen to sixteen students to share a common sitting room and kitchen and washroom. Three groups would then form what Walker termed a "house" which would also contain a Don's apartment with forty-five students being the maximum number a Don could be expected to know and entertain. Then five houses of forty-five students formed a "residence" (another Walker term) of 225 students with an attached three-bedroom house for a residence head, hence ten "residences" would reach the required number for a 2,300 bed undergraduate complex. In a progressive move Walker recommended an equal number of male and female

15. Interview, Evan Walker, October 17 2012. Charles Fitzroy Walker was the progressive thinking principal of Box Hill Grammar School, in Melbourne, Victoria, Australia from 1929 until 1963. See Richard Cotter, "CF Walker and Box Hill Grammar, 1929-1963: an unconventional headmaster and his school," MA diss., University of Melbourne, 1985, and also by Cotter, *Farmers, Ringmasters and Builders: A History of Kingswood College* (Box Hill, Vic.: Kingswood College, Box Hill, 1985).

16. Thomas Howarth (1914-2000) emigrated from the United Kingdom to Canada in 1958, to take up a professorship in architecture at the University of Toronto, where he remained until his retirement as Dean in 1974. His PhD undertaken at the University of Glasgow was later published as the award-winning book, *Charles Rennie Mackintosh and the Modern Movement* (London: Routledge and Kegan Paul, 1952).

17. Evan H. Walker, "University Halls of Residence: A Study Relating to Conditions in Canadian Universities," MArch diss., University of Toronto, 1962.

18. Evan Walker, "University of Guelph: Student Housing Study" (Toronto, 1965), 50-2. See also John A Eccles, *The Boarding House: The History of Residences at the University of Guelph* (Guelph: University of Guelph Dept. of Residences, 1983), 34-35.



students. Five dining halls were recommended per two residences with a special sixth dining room for formal events and off-campus students. The communal areas in each complex of 2,300 would also have an infirmary, barber shop, drug store, beauty salon, tuck shop, coffee shop, recreation and music rooms.

The University approved the study and Walker was given the task of finding an architect for site B, the South Residences. On the basis of his masters thesis and ongoing consulting in the area of student housing, Walker had set up an office at 47 Colborne Street, Toronto, trading under the name of “Evan H Walker: Architects and University Housing Consultants.” In the same building were the architects John Andrews (on the first floor) and Ron Thom (second floor). Walker intended to approach Thom with the commission as Thom’s diminutive and precisely detailed Massey College (1963), recently completed for the University of Toronto, was highly regarded.¹⁹ Walking upstairs he ran into Andrews, who, strangely, he’d never met. Walker never got upstairs to approach Thom. Swept away by Andrews’s charisma, Walker was convinced by him that he should take on the job.²⁰ In hindsight it was a meeting of like minds, the beginning of a lifelong friendship, and a career connection that continued well after Walker finally returned to Australia in 1969 and entered into partnership with Melbourne architect and university colleague Daryl Jackson.²¹

19. Evan Walker, interview, October 17, 2012; Denis Sweetnam, interview, October 5, 2012.

20. Evan Walker, interview, October 17, 2012.

21. Evan Walker initially joined Daryl Jackson in partnership in 1963 in Melbourne Australia but returned to Canada in 1965 where, based in Toronto, he specialized in university consulting and master planning projects. See Julie Willis, “Evan Walker,” in *The Encyclopaedia of Australian Architecture*, ed. Goad and Willis, 743-44.

John Andrews and the South Residences

For Andrews, the commission came at an opportune time. Though the robust concrete stepped and sloping forms and wandering spine of Scarborough College (1962-3) had brought national and international fame almost overnight, there was no other major commission in the office apart from the small but innovative Bellmere School (1965) in nearby Scarborough. There Andrews had been exploring open and indeterminate planning, a strategy similar to the “labyrinthine clarity” of Aldo Van Eyck’s Amsterdam orphanage of 1958-60.²² At Bellmere, the informal addition and repetition of classrooms were combined with the fixed communal centre of a multi-purpose hall.²³ While student housing had been projected at Scarborough, nothing had come of it. Walker and Andrews threw themselves into determining a final form for the Guelph project given site and budget constraints. Andrews refined Walker’s diagrams. He appreciated and agreed

22. The concept of open and indeterminate planning is described by Aldo Van Eyck in “Labyrinthine Clarity,” in *World Architecture 3*, ed. John Donat (London: Studio Vista, 1966): 120-9. See also Aldo Van Eyck, “Beyond Visibility. About Place and Occasion. The In-Between Realm. Labyrinthine Clarity,” *Situationist Times 4* (October 1963): 79-85.

23. “Bellmere Public School, Scarborough, Ontario,” *Canadian Architect* (August 1966): 54-56.

with Walker's desire for flexibility in furniture arrangement. Though never having visited Morse and Stiles College at Yale, he was critical of Eero Saarinen's hundreds of different room shapes, arguing that once a room was chosen at Morse, there was no flexibility at all, everything was fixed.²⁴ Instead, the Andrews office devised

24. John Andrews, interview, July 2, 2012.

a room in which all four walls were left free. The corners of the walls were chopped off and the doors and windows placed there. The window was a glass door leading to a tiny personal balcony. The furnishings and fixtures were then designed in proportion to the dimensions of the walls and of each other. This allowed the student at least 14 different major furniture-fixture combinations.²⁵

25. John Andrews, in John Andrews and Jennifer Taylor, *Architecture: A Performing Art* (Guildford, Surrey: Lutterworth Press, 1982), 60.

Using the construction expertise of Jim Sykes, who John Andrews employed as a model and cabinet-maker, a one-to-one model of the polygonal room was built on the top floor at Colborne Street, photographed with a fish-eye lens from above and tested with various combinations of occupants, moveable furniture and diverse activities, anything from private study to a student party.²⁶ It was evidence-based design, a form of sociological and formal study all at the same time. After further discussions with Walker, Andrews halved the nominally ideal number of twelve students as a neighborhood to six based on the idea of six people sharing a washroom and a stair landing, thus forming a smaller social unit, much like the intimacy of an average family. As with the residential college system of Oxford and Cambridge Universities, the staircase was the crucial linking communal element. Two of these floors (thus making a group of twelve), with the rooms facing the sun and laid out like petals fanning around the stair landing, shared a lounge and kitchenette, half a level above and half a level below each group of six. The lounge itself was an expansion of the stair landing and there was a sink, refrigerator and hotplate. This shared space was thus an integral part of the vertical "street" of the staircase: interaction and chance meetings were inevitable. For Andrews, this was a key advance:

26. Series of photographs (Envelope 66189/Box 276), Panda Photography Associates Collection, Canadian Architectural Archives, University of Calgary.

Implicit in this concept is the theme of choice; the creation of a built form which enhanced rather than discouraged choice. Although our thinking was naïve, at the time it represented a substantial advance on the interminable lines of double rooms marching along double loaded corridors to community washrooms ...²⁷

27. Andrews in *Architecture: A Performing Art*, 63.



Six floors of study-bedrooms built around a staircase with additional accommodation for a don comprised, what Andrews would describe (using Walker's terminology) as a "house." Connecting each "house" was an internal pedestrian "street" (Andrews's term), elevated at second floor level. This meant that students could enter their "house" from the "street" and either go up or down to their rooms. To accommodate this diagram, the "streets" were laid out on a diagonal grid and where they intersected were public spaces, "meeting places" (another Andrews term) that contained a porter's office, mailboxes, food and drink machines and fixed lounge seating. Each of these intersections therefore represented entry to one of the six residences (each made up of a V-shaped plan of six "houses"). Given the extended scale of the complex, the elevated street was considered necessary to avoid the university ring road which cut-through the site. Thus these streets became bridges (also containing communal laundries) to three discrete dining halls (each serving two residences), with recreation rooms attached for table tennis, meetings and television. The three dining halls also had major "meeting places" on entry, each with a generously scaled staircase leading up to the elevated street. The choice to internalize all public spaces made logical sense in terms of Andrews's sophisticated diagram of functional arrangement. It also made sense given Ontario's long winter months of snow and rain, hence an inevitable restriction and focus on indoor space and a self-contained, almost subsistent complex. The negative aspect formally was, given the building's vast scale, the creation of a fortress-like appearance, almost if it was a bulwark against the embrace of outdoor space.

John Andrews and the city

Andrews's analogic kit of street, meeting place, staircase, landing and the private space of the individual room planned at will were paralleled throughout the *Team 10 Primer* (1962). Taking just one example from Jaap Bakema describing a project by the architectural team of Josic-Candilis-Woods, it could easily be Guelph:

The individual flats are here disposed like the leaves of a tree: the trunk (the staircase) enveloped by the leaves (the flats). The individual and the collective, like entities in relation to each other, explain the phenomenon of the total life.²⁸

28. Jaap Bakema, excerpt from "Carre Bleu," 1961, reprinted in "Team 10 Primer 1953-62," *Architectural Design*, 32, no. 12 (December 1962): 565. The project to which is referring is the series of apartments at Clos d'Orville, Nîmes, France (1961) by Candilis Josic Woods.

29. John Andrews, interview, July 2012.

30. In Fall 1957, Andrews undertook the Harvard GSD design studio “The Residential Sector,” examining the town of Billerica and the Cambridgeport section of Cambridge between Harvard and MIT. The students were taught by Sert, Huson Jackson, Colombian architect Alvaro Ortega, and Blanche Lemco van Ginkel. Part of the studio’s work (though not including the group involving Andrews) was published in “Density by Design,” *Architectural Forum*, 110 (March 1959): 130-35. See Eric Mumford, *Defining Urban Design: CIAM Architects and the Formation of a Discipline, 1937-1969* (New Haven, Conn.: Yale University Press, 2009), 135-37, 240 n. 96.

31. Mumford, *Defining Urban Design*, 239 n. 91.

32. Sigfried Giedion, “City Hall and Centre,” *Canadian Architect* (April 1959): 52.

33. See interview, John Andrews, July 2, 2012; Andrews, *Architecture: A Performing Art*, 45-6; Paolo Scrivano, “Scarborough College’s Brutalist Dreams,” in *Concrete Toronto*, 334-9; and Mary Lou Lobsinger and Paolo Scrivano, “Experimental Architecture and Progressive Pedagogy: Scarborough College,” *Architecture + Ideas* (Winter 2009): 4-19.

34. Spatial/sociometric diagrams, Slide Collection (Folder AND/5042-5245), John Andrews Collection, Canadian Architectural Archives, University of Calgary.

35. John Andrews, interview, July 2012.

36. John Andrews, interview, January 7, 2013; Andrews, *Architecture*, 58.

At the same time however, in an interview, Andrews freely admitted that the circulation themes explored at Guelph derive instead from his exploration of similar spatial/architectural themes of street, spine, staircase and meeting place at Scarborough College, which in themselves relate back to ideas about urbanism, especially the pedestrian street, promoted by Sert and his colleagues at Harvard.²⁹ As part of his GSD M.Arch (Fall 1957-Spring 1958), Andrews took a studio with Sert on housing and density³⁰ as well as the seminar “The Human Scale” with Sigfried Giedion and Eduard Sekler in spring 1958.³¹ In 1959, Giedion, in writing about the premiated competition entries for Toronto City Hall, made specific reference to the Harvard-based John Andrews’ team’s design and its vast covered atrium, emphasizing the future role of what Giedion described as the “inner court,” “destined to play a large part in the next phase of architectural development.”³² At Scarborough College and at Guelph, these “inner courts” are labelled as “meeting places” by Andrews. But there is also what Andrews brings increasingly and distinctively to each project himself: taking advantage of direct empirical data and creative responses to immediate construction practice circumstances. At Scarborough it was the presence of a climatologist’s report, William (Bill) Beckel’s enthusiasm for teaching with closed circuit TV, and the offset concrete formwork system that contributed to the building’s aesthetically bold sculptural forms, as well as the need to build as quickly as possible within Canada’s demanding seasonal restrictions on construction that combined with Andrews’s cranked “street” spine and “meeting place” planning.³³ At Guelph it was the same. Walker’s 1965 report provided cutting edge programmatic data, to which Andrews could respond, work with and critique, and then adjust his spatial/sociometric diagrams³⁴ as budgets and local construction conditions dictated. For Andrews, Walker’s research emphasized the importance of detailed client-needs analysis and the potential to use such research as a form of critical invention.³⁵ At Guelph, Walker’s research enabled Andrews to subvert the traditional college cloister model and the formalities and hierarchy of the traditional college “high table.” At Guelph, there was the challenge of a local building industry incapable of managing a commission of this scale with a single trade. Thus to meet completion deadlines, in-situ concrete was used for the exterior structure and circulation system, terra cotta blocks for the “houses” and pre-cast concrete plates for the bedroom floors.³⁶ The result in visual terms reinforced the appearance and hence the idea of a pedestrian “spine” or “stem” with attached “clusters” of rooms.



The materials palette at Guelph (as at Scarborough) followed that of his Harvard master, Sert (especially in Sert, Jackson & Gourley's Holyoke Center, Harvard University (1958-66): off-form concrete coffered ceilings in the meeting places; terracotta quarry tiles on floors; and walls of raw concrete, though due to budget constraints without Sert's artistically patterned juxtapositions of boarded off-form panels. Instead Andrews added at Guelph the warmth of timber-battened ceilings and for the "houses," internally and externally, walls of rich brown terra cotta blocks.

Conclusion

The Guelph Residences were significant across many aspects. In Canada and the United States there was no real comparison. Despite the apparent grandeur of its three-square part, Louis Kahn's Erdman Hall at Bryn Mawr College, Pennsylvania (1960-5) was dainty in size with accommodation for only 130 female students. It also lacked Guelph's intimacy of social arrangement with rooms arranged simply around linear corridors overlooking the much-feted communal spaces. If there was an international comparison architecturally and socially, it was the ziggurat forms of Denys Lasdun's residences (1962-6) for 684 students at the University of East Anglia. There Lasdun had grouped twelve single bedrooms on either side of a shared kitchen in an L-shape and then stepped back the overall form across ten residences to form ten architectural "hills." The staircase, as in Andrews's design was a key linking element but at East Anglia there was no connection to a generously scaled 'internal street', nor any sense of greater "meeting place" as at Guelph. Additionally, Lasdun's room designs were in themselves inflexible with albeit smart but completely built-in bed, washbasin and desk.³⁷ There was synergy though in same interest in concrete construction shared by Lasdun at East Anglia and also Stirling & Gowan's Andrew Melville Hall at St Andrew's University, Scotland (1967), which were more experimental, but again by comparison, the scale, speed of construction, and urban ambition of the Canadian example was significant.

Andrews did not know Lasdun's work, despite its international profile.³⁸ He hadn't travelled to England and he was not an avid reader, only later coming to knowledge of the work of Team 10's Aldo van Eyck through fellow University of Toronto teaching colleague Peter Prangnell's introduction of contempo-

37. Dormer and Muthesius, *Concrete and Open Skies*, 87.

38. John Andrews, interview, January 7, 2013.

39. Peter Prangnell, "Reflections: the U of T years," (2010), http://peterprangnell.com/reflection%3A_the_U_of_T_years_2.html. Aldo van Eyck, through Prangnell, was a guest at the University of Toronto in 1968. Prangnell had previously brought van Eyck to Columbia University, New York in 1965, had met up with him in Paris, 1966 and continued an association with him through to the late 1970s. Prangnell had been a visitor to the University of Toronto in early 1963. See T. J. Howarth Papers, Archives and Special Collections, University of Toronto.

40. John Andrews, quoted in John Witzig, "AA Interview: John Andrews," *Architecture in Australia* 64, no. 3 (June 1975): 61

41. John Andrews, interview, January 17, 2013.

42. See Sarah Williams Goldhagen and Rejean Legault, eds., *Anxious Modernisms: Experimentation in Post-war Architectural Culture* (Montreal: Canadian Centre for Architecture; Cambridge, Mass., MIT Press, 2000); on Yona Friedman, see Maria Ines Rodriguez, ed., *Arquitectura con la gente, por la gente, para la gente* (Architecture with the people, by the people, for the people) (Barcelona and New York: Actar, 2011); Tom Avermaete, *Another Modern: The Post-war Architecture and Urbanism of Candilis-Josic-Woods* (Rotterdam: NAI Publishers, 2005).

43. Mumford, *Defining Urban Design*.

rary Dutch ideas from 1967.³⁹ By 1975 Andrews would claim that he preferred the work of the "Van Eycks or the Hertzbergers" rather than "that bloke in Philadelphia with the eyebrows [Robert Venturi]."⁴⁰ In reality these attributions of influence or affinity pale beside Andrews's passionate interests in the practical design and construction necessities of each project at hand.⁴¹ For Andrews, change in his personal design philosophy was incremental. With each commission came new challenges and it is clear that further research on Andrews may prove emerging affinities between his work and the Dutch structuralist architects of the 1960s and 1970s. Guelph was promptly followed by student residences for Brock University, southern Ontario (1967) and then, on Andrews's move to Australia, Toad Hall (1970) at the Australian National University (ANU), Canberra and student housing (1973) at the Canberra College of Advanced Education (later to become the University of Canberra). In each case, Walker's fundamental social groupings were put to work, subtly modified according to client, site and local construction practice.

Recent architectural histories of the post-war decades like the catholic compilation of Goldhagen and Legault and monographs by Rodriguez and Avermaete favour the eloquent polemics of architects like the Smithsons, Yona Friedman, and Josic-Candilis & Woods.⁴² These works, however scholarly, underplay the complexity of what Bosman describes as the "theoretical mosaic" at the end of the 1950s and early 1960s. They perpetuate an artificial division between CIAM and Team 10. They also accentuate a Eurocentric focus to considering connections between architecture and urbanism. Looking at the Canadian work of John Andrews, and in particular, the South Residences at the University of Guelph, one can see another history at play that refutes such a division. The South Residences and the subsequent transnational practice of John Andrews demonstrate the need to acknowledge a parallel trajectory of postwar experiment in architecture and the city in the United States, Canada and Australia, one that acknowledges the emergence of urban design based on Sert, Giedion and others' influence on a generation of Harvard graduates as argued by Eric Mumford.⁴³ Such a history is also one characterized by a special point in time—the late 1950s and early 1960s—when the global focus on the university, on campus design, buildings for learning, and the residential college, and hence, by implication, the utopian aims of the university community realizable at the scale of the city, revealed common goals and common themes in actual buildings and ambitious projects completed with aston-



ishing rapidly, especially in Canada. The South Residences are a pivotal moment when John Andrews, through collaboration with Evan Walker, brought together social purpose and architectural form, to internalize dwelling, community, street and public space all within a single building—it was the city as megastructure.

Acknowledgments

Research for this paper was supported under the Australian Research Council's Discovery Projects funding scheme (Project Number DP120100341). Special thanks are due to John Andrews, Rosemary Andrews, Evan Walker, Judy Walker, Leanne Piper (Maritime Hall, University of Guelph), Canadian Architectural Archives, University of Calgary, Special Collections, University of Guelph, and Archives and Special Collections, University of Toronto.