Journal of Law, Property, and Society

Volume 9 Article 1

February 2025

Volumetric Subdivision and the Architectures of Property

Douglas C. Harris

Recommended citation: Douglas C. Harris, *Volumetric Subdivision and the Architectures of Property*, 9 J. L. PROP. & SOC'Y 1 (2025), https://bit.ly/JLPS-Harris.

This article is published for free and open access by the Association for Law, Property and Society (https://alps-law.org). Other articles can be found on the Journal's website (https://alps-law.org/jlps).

Journal of Law, Property, and Society

ISSN 2373-5856

A Publication of the Association for Law, Property and Society

Editor-in-Chief

John Page
Professor of Law
Faculty of Law & Justice, University of New South Wales

Members of the Editorial Board

Reema Bali
Dean and Associate Professor of Law
School of Management, IILM University, India

Jill Dickinson
Reader in Law
Leeds Becket University

Hano Ernst
Professor of Law
Faculty of Law, University of Zagreb

Vicki Evans
Lecturer in Private Law
The Dickson Poon School of Law, Kings College London

Douglas C. Harris
Professor of Law and Nathan T. Nemetz Chair in Legal History
Peter A. Allard School of Law, University of British Columbia

Shelly Kreiczer-Levy
Professor of Law
College of Law and Business

Antonia Layard
Tutor and Fellow in Law, St. Anne's College, Oxford
Professor of Law, University of Oxford

Gustav Muller
Associate Professor of Private Law
University of Pretoria

Jessica Owley
Professor of Law
University of Miami

Rachael Walsh
Associate Professor of Law
Trinity College Dublin

Sue-Mari Viljoen
Professor of Law and Head of Department
Department of Private Law, University of the Western Cape

Lua Kamál Yuille
Professor of Law and Business
Northeastern University

Volumetric Subdivision and the Architectures of Property

Douglas C. Harris*

Henry Smith's influential architectural or modular theory of property places things, defined by the right to exclude, at its core. Property as "The Law of Things" relies on an exclusionary strategy, augmented with governance strategies that delineate particular rights of use, to define owned things and to enable their uses. This Article considers that claim and Smith's call for multi-dimensional theorizing that accounts for property in "the real world" and "in real life" through an analysis of the increasingly common practice of volumetric subdivision to produce three-dimensional property. Focussing on the statutory frameworks in the Canadian province of British Columbia, this Article describes the practice of subdividing land into air space parcels and then into condominium lots. The three-dimensional properties that emerge are embedded within condominium and, further, within air space parcel agreements that use easements and covenants to define legal relationships, including rights of access and support, obligations for repair, and provisions for cost-sharing and dispute resolution. This Article argues that the air space parcel and condominium frameworks are becoming the applied architecture of property and that Smith's modular theory, with its emphasis on the things of property and the right to exclude, does not provide a satisfactory account of the property that they produce. However, in dealing with the emerging and, in some instances, almost unintelligible complexity, the Article turns back to the work of Smith and others in concluding that interests which are

produced and represented as property should be placed within structures that conform with principles that animate the law of property.

I. Property beyond Flatland.....3

II. Air Space Parcel Subdivision.....9

III. Condominium Subdivision within Air Space Parcels.....20

IV. Air Space Parcel Agreements and Property 27

V. Applied and Theoretical Architectures of Property 34

VI. "Off-the-rack property" 42

* Professor and Nathan T. Nemetz Chair in Legal History, The University of British Columbia, Peter A. Allard School of Law. ORCiD: 0000-0003-0633-1567. I thank the Land Title & Survey Authority (LTSA) for access to air space and strata property plans, cartographer Eric Leinberger for assisting with the figures, Drew Yewchuk for research assistance, and many generous colleagues who commented on earlier drafts, including Faisal Alamy, Samuel Beswick, Sarah Blandy, Julian Dierkes, Megan Coyle, Jordan Hayward, Adam Hofri-Winogradow, Alexandra Flynn, Hoi Kong, Alina McKay, Guy Patterson, Graham Reynolds, Carol Rose, Cathy Sherry, and two anonymous reviewers. A version of this paper was presented at the "'Living Cheek by Jowl': Socio-Legal Explorations of the Challenges of Housing Intensification Workshop," Sergio Nasarre Aznar, Helen Carr, and Nicole Johnston, convenors, Oñati International Institute for the Sociology of Law, 30 June 2022, and as the keynote address at the Australasian Property Law Teachers Conference, Christchurch, New Zealand, Elizabeth Toomey, convenor, 3 July 2023.

I. Property beyond Flatland

Property scholar and theorist Henry Smith contends that "property needs architecture,"[1] that the concept of property should have a defining structure, and that theorists should stop "treating property as a heap of rules and property interests as a collection of rights, privileges, duties, and so on."[2] If the concept of property is to have explanatory power, he argues, then it requires an organizing frame, and his influential "architectural or modular theory" claims "property as the law of things" with the right of owners to exclude non-owners from those things at its core.[3] The right to exclude establishes the boundaries of owned things and protects their owner's use-rights. It does so simply and thus effectively, Smith suggests, without needing to specify particular uses. Exclusion is not the only means to establish use-rights; Smith recognizes that governance strategies, which delineate particular rights of use and limits on them, also play a role, particularly in prescribing uses of common property, but also in managing conflict between or making arrangements with

[1] Henry E. Smith, 'Property beyond Flatland' (2021) 10 Brigham-Kanner Prop Rts Conf J 9, 56.
[2] Henry E. Smith, 'Restating the Architecture of Property' in Ben McFarlane and Sinéad Agnew (eds), *Modern Studies in Property Law,* vol 10 (Hart Publishing 2019) 19, 20.
[3] Henry E. Smith, 'Property as the Law of Things' (2011) 125 Harvard L Rev 1691, 1700 (emphasis in original), 1705. See also Thomas W. Merrill and Henry E. Smith, 'The Architecture of Property' in Hanoch Dagan and Benjamin C. Zipursky (eds), *Research Handbook on Private Law Theory* (Edward Elgar 2020) 134, 141-42.

neighbours.[4] Smith includes the law of nuisance as a governance strategy that limits the uses of property that may interfere with a neighbour's use of their property. Similarly, public zoning as well as easements and covenants (through which owners contract to establish or to limit uses) are among the governance strategies that refine or modify use-rights, protected in the first instance by the right to exclude and the boundaries it creates around things.[5]

In a recent statement, Smith argues that property theory has become overly dichotomous and reductive.[6] His principal target remains the representation of property as a bundle of rights that, he suggests, provides a weakly descriptive account of property and offers no explanatory power. More generally, he is concerned that property theorizing is flat, two-dimensional, and does little to account for the complexity of the modern world and for the role of property law and property institutions in empowering individuals to manage that complexity.[7] Here he points to work with his frequent collaborator, Thomas Merrill, in drawing attention to the numerus clausus doctrine, which limits privately contracting parties and the courts in creating new forms of property.[8] The small and largely closed number of different property interests enables individuals to understand and work with the basic forms of ownership as they move through the

[4] Henry E. Smith, 'Exclusion versus Governance: Two Strategies for Delineating Property Rights' (2002) 31 JLS S453.
[5] Smith, 'Property beyond Flatland' (n 1) 36.
[6] ibid 9.
[7] Henry E. Smith, 'The Persistence of System in Property Law' (2015) 163 U Pa L Rev 2055, 2057-58.
[8] Thomas W. Merrill and Henry E. Smith, 'Optimal Standardization in the Law of Property: The *Numerus Clausus* Principle' (2000) 110 Yale LJ 1.

world. Smith reproaches property scholars for not "coming to grips with the real world,"[9] for paying insufficient attention to property institutions "as they are embedded in real life,"[10] for the estrangement of theory and practice,[11] and for the two-dimensional theories of property that result. "An engagement with practice in that world [of complexity] is the way out of Flatland."[12]

Coming to grips with property in the real world, in real life, as Smith intones, requires more than just a metaphorical call for theorizing in three dimensions. Indeed, when it comes to thinking about, conceptualizing, and explaining property in the world, one must confront the fact that the production of ownable parcels of land now occurs primarily through volumetric subdivision. Ownership of spaces delimited in three dimensions is rapidly becoming the dominant practice of property in land, so if, as Smith writes, "(t)he world is not flat and neither should be property theory,"[13] then theories of property must engage with three-dimensional or volumetric property.

Jesper Paasch and Jenny Paulsson define three-dimensional property as "real property that is legally delimited both vertically and horizontally."[14] The defining element "is not so much the

[9] Smith, 'Property beyond Flatland' (n 1) 56.
[10] ibid 10.
[11] ibid 12.
[12] ibid 13.
[13] ibid 56.
[14] Jesper Paasch and Jenny Paulsson, 'Terminological Aspects Concerning Three-Dimensional Real Property' (2011) 8 Nordic J Surveying and Real Estate Research 81, 91. See also Jenny Paulsson, '3D Property Rights: An Analysis of Key Factors Based on International Experience' (PhD dissertation, Royal Institute of Technology, Stockholm, Sweden 2007).

extension of the property, but the delimitation of it" in three dimensions.[15] Interests in land that are specified in two-dimensions, as in a standard survey, and which rely on general statements to describe the volume, such as "they who own the soil also own from the heavens to the centre of the earth,"[16] are not included. Paasch and Paulsson then divide separately titled and individually owned three-dimensional property into (1) independent property and (2) condominium property.[17] The subdivision of land into independent three-dimensional property occurs with the lines on a surveyor's plan, drawn in reference to geodetic coordinates; the resulting parcels, commonly labelled air space parcels, are produced without need for a building or other physical structure to delimit their volume. Furthermore, they may exist independently of any arrangement with surrounding parcels, although agreements relating to access, support, and the division of costs for shared infrastructure, if any, are common and, in many contexts, necessary. Conversely, condominium subdivision produces separately titled units or lots within a community of owners. The lots are defined in a condominium plan, declaration, or other constituting document and usually by legislation that sets boundaries in reference to physical structures (floors, walls, and ceilings) and that establishes an association of owners with governing authority.

---

[15] Paasch and Paulsson, 'Terminological Aspects' (n 14) 90.

[16] This is the common translation of the often-repeated, but no longer much-followed Latin maxim, *cuius es solum eius est usque coelum et ad inferos*. See Stuart Banner, *Who Owns the Sky? The Struggle to Control Airspace from the Wright Brothers On* (Harvard 2008), 69-101, on the changing interpretation of the maxim in the United States.

[17] Paasch and Paulsson, 'Terminological Aspects' (n 14) 89.

Moreover, the lots only exist within the association; dissolve the condominium and the individual privately owned three-dimensional parcels within it disappear.[18]

In some jurisdictions, these forms of three-dimensional property may be combined by subdividing land into independent air space parcels and then further subdividing one or more air space parcels into condominium lots. Indeed, this combination is an increasingly common feature of large-scale, mixed-use developments containing a variety of residential and commercial uses.[19] Developers employ air space parcels to establish a legally demarcated separateness between volumes devoted to different uses, and then condominium to produce individually titled lots within those volumes. This article uses the statutory frameworks for air space parcels and condominium in the Canadian province of British Columbia to consider this phenomenon of volumetric subdivision within volumetric subdivision. The article begins with the emergence of a statutory

[18] Douglas C. Harris, 'Embedded Property' in Randy K. Lippert and Stefan Treffers (eds), *Condominium Governance and Law in Global Urban Context* (Routledge 2021) 29, 37.

[19] In the Australian context see Gary Bugden, 'All about Strata and Building Management Statements and Building Management Committees' (November 2006); Cathy Sherry, 'Building Management Statements and Strata Management Statements: Unholy Mixing of Contract and Property' (2013) 87 Aust L J 393; and Michael Teys, 'The Evolution of the Anticommons: Exploring the Implications of Mixed-Use Developments on Urban Renewal by Collective Sales,' (MPhil thesis, University of New South Wales, Sydney, Australia 2024). See also C.G. Van Der Merwe, 'Comparative Survey of the Legal Challenges Faced by Mixed-Use Sectional Title (Condominium) Developments' (2018) 2018 J S Afr L 36; Morten Dalum Madsen and Jesper Mayntz Paasch, '3D real property in vertical mixed-use developments. A comparative analysis of common property and management aspects in selected jurisdictions – The case of British Columbia, Denmark and Sweden' (2023) 134 Land Use Policy 106905.

framework for air space parcels and then turns to their combination with condominium, known in British Columbia as strata property.[20] Next, the article considers the collection of easements and covenants, labelled "air space parcel agreements,"[21] that delineate the legal relationship between air space parcel owners. These agreements, which are registered against the titles of individual strata lots within air space parcels, operate, as Cathy Sherry has noted in the Australian context, "on the border of contract and property law."[22]

The Article then returns to Smith's call for multi-dimensional theories of property that attend to "the role complexity plays in property institutions"[23] and to insist that such theorizing must engage not only with metaphorical dimensions, but with the existence and increasingly widespread production of three-dimensional property embedded within condominium and, further, within relationships with neighbouring air space parcels defined by covenant and easement. Smith would describe these arrangements as one form of "entity property,"[24] but they do not otherwise feature in his architectural theory of property.

---

[20] *Strata Property Act*, SBC 1998, c 43.

[21] *Owners, Strata Plan LMS 3905 v Crystal Square Parking Corp*, 2020 SCC 29 [*Crystal Square*], para 3.

[22] Sherry, 'Building Management Statements' (n 19) 393.

[23] Smith, 'Property beyond Flatland' (n 1) 10.

[24] Merrill and Smith, 'The Architecture of Property' (n 3); Smith, 'Property beyond Flatland' (n 1) 38; Smith, 'Persistence of Systems' (n 7) 2074, fn 70. The references for "entity property" in these articles are to Smith's property law casebook with Merrill, now in its 4th edition with Maureen E. Brady, *Property: Principles and Policies*, 4th Ed (Foundation Press 2022). The casebook contains an introductory discussion of condominium as one form of common-interest community in the chapter on "Entity Property," which is devoted primarily to leases, but also includes trusts and business corporations.

However, this is the applied architecture of property in cities around the globe; intensive volumetric subdivision is producing "Property beyond Flatland" and doing so within legal structures that challenge Smith's insistence on the primacy of things, defined by the right to exclude, as the underlying architecture of property. The right to exclude and the use-rights in the things that it protects are important, but these modules are not the architecture of property. Instead, that architecture is to be found in the condominium form and in the contracts that govern relations between air space parcels. Indeed, these legal structures produce the things of property, in this instance, the separately titled and individually owned parcels of real property, which only continue to exist within them. As a result, a theory that insists on the primacy of things appears to be a normative claim about what property should be, and not a useful description or explanation of property "in the real world."

However, it may be that this vision of property provides guidance for managing the complexity of volumetric subdivision, and the Article concludes with a claim that the volumetric parcels, which are produced and represented as property, should be placed within legal structures that conform more closely than is the emerging practice with principles that animate the law of property.

II. Air Space Parcel Subdivision

The subdivision of land into air space parcels defined by volume is a function of intensifying land use in North American

cities in the early twentieth century and of construction techniques and building technologies, such as the elevator, that enabled vertical development.[25] The production of volumetric parcels began in the spaces above railyards and terminals in New York City to enable the development of those spaces while railway operations continued below.[26] Initially, the railway companies sold long-term leasehold interests that conferred exclusive possession of a volumetric parcel for defined periods of time. The practice spread to Chicago and other American cities, and in 1927, the state of Illinois created the first statutory framework in the United States to enable railway companies to subdivide an "air lot" from their railway lands and to transfer a freehold interest in that newly delimited space.[27] A contemporary of these innovations, Herbert Becker described the first use of the new statutory regime in the construction of the Merchandise Mart building in downtown Chicago, the largest building in the world when it was completed in 1930.[28] The air lot, depicted in Figure 1, occupied the full column above the

[25] Gail Fenske, 'A Brief History of the Twentieth-Century Skyscraper' in David Parker and Anthony Wood (eds), *The Tall Buildings Handbook* (Routledge 2013) 13-31.

[26] Theodore Schmidt, 'Public Utility Air Rights' (1930) 1:1 J Air L 52; Theodore Steinberg, *Slide Mountain or the Folly of Owning Nature* (University of California Press 1995) 135-65.

[27] Eugene J. Morris, 'Air Rights Are Fertile Soil' (1969) 1 Urban Lawyer 247, 256.

[28] Herbert Becker, 'Subdividing the Air – A New Method for Acquiring Air Rights' (1927) 6 Chi-Kent Rev 6. The article appeared again in (1931) 9 Chi-Kent Rev 40, but without the figures. See also the contemporary descriptions in Laird Bell, 'Air Rights' (1928-1929) 23 Ill L Rev 250, 261-64; and Stuart S. Ball, 'Division into Horizontal Strata of the Landscape above the Surface' (1930) 39 Yale L J 616, 652-55. The latter is an extension of Stuart S. Ball, 'The Jural Nature of Land' (1928-1929) 23 Ill L Rev 45, 62 in which he argues: "the jural concept of land can be described only by terms applicable to relative three-dimensional space."

footprint of the original lot beginning twenty-three feet above Chicago's surface grade and extending upwards to the limit of what might be owned, an indeterminate distance represented by the uneven lines around the top of the cube. The Chicago and North Western Railway retained the space below to operate its trains, but the air lot also extended downwards in columns, through the parcel retained by the Railway, to accommodate the supporting pillars (shown as rectangular pillars) and foundations (depicted as cylinders).

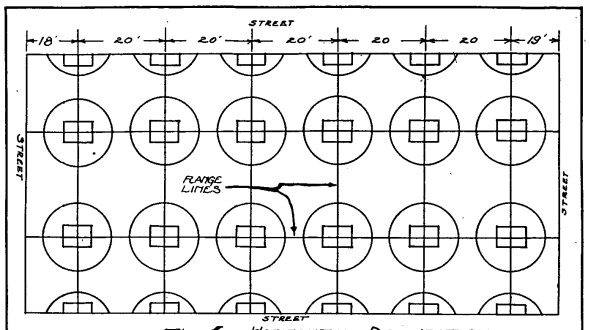

Fig. 1. HORIZONTAL DELINEATION.

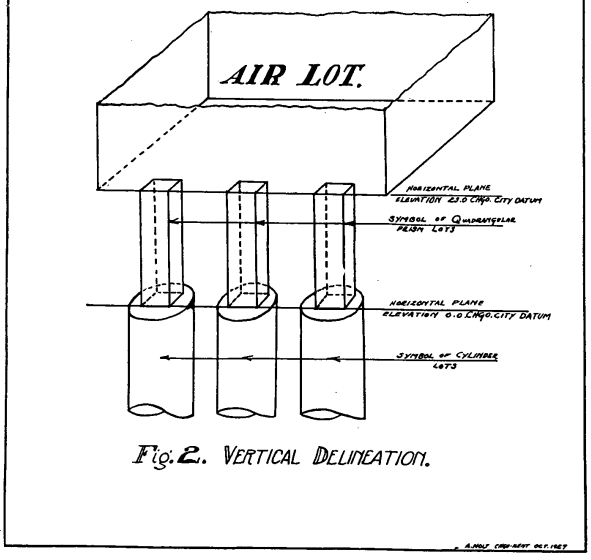

Fig. 2. VERTICAL DELINEATION.

Figure 1—Horizontal Delineation. Figure 2—Vertical Delineation.

Figure 1. Sketch of the "air lot" that the Chicago and North Western Railway subdivided from its land in downtown Chicago and sold to the developers of the Merchandise Mart building. The air lot included the full volume of the original parcel starting at 23' above ground level as well as the space for supporting pillars and columns. (Source: Becker, 'Subdividing the Air' (n 28) 9.)

This method of subdivision—described as the "fee support method"—was complicated to describe and to survey, but the advantage of the method lay in its self-sufficiency and certainty.[29] As Becker suggested, "(t)he purchaser knows exactly what he is paying for, and when he buys it he has absolute title forever. Nothing can deprive him of his right to keep his caissons in the ground, or his steel columns on the caissons, and his building in the air."[30]

There was another option—the "easement support method"—that produced an air lot without space for structural supports as part of the parcel.[31] Instead of delimited space for structural supports, the air lot had the benefit of easements that confirmed the right to supporting infrastructure in what remained of the original parcel. Another contemporary commentator suggested there was little "practical difference" between the two approaches "(w)hen it comes to actual operation," but that the easement support method was preferable for its "simplicity and flexibility."[32] Moreover, "conveyance of the air lot with a right to support is obviously better adaptable to the mysteries of the future" than a complicated and precise articulation of many

[29] Morris, 'Air Rights' (n 27) 263.
[30] Becker, 'Subdividing the Air' (n 28) 12.
[31] Morris, 'Air Rights' (n 27) 262.
[32] ibid.

columns running through a parcel to support a suprajacent air lot, something that would be difficult to change.[33]

In 1938, New Jersey introduced legislation that generalized the possibility of subdividing land into air space parcels beyond railway holdings.[34] It, and the legislation that followed in other jurisdictions, settled any lingering doubts about whether air space might be severed from the ownership of the surface and exist as an independently titled parcel.[35] By the late 1950s, there were a few examples in Canada of air space developments based on the conveyance of long-term leasehold interests,[36] and there were several air space parcels that the Canadian Pacific Railway (CPR) created in the late 1960s above its railway operations in the province of Alberta and transferred to its land development arm, Marathon Realty, in what appeared to be fee simple,[37] but this practice was rare.

---

[33] ibid 263. If the practical differences were negligible, the two methods required different professional expertise and relied, in Smith's terms, on different property strategies. The fee support method used the deft work of surveyors to demarcate space for supporting structures. In doing so, it relied on an exclusion strategy to place everything that was required, at least in terms of support, within the air lot. On the other hand, the easement support method turned to lawyers who drafted the easement agreements—in Smith's terms, a governance strategy that specified particular rights of use in relation to an adjacent parcel.

[34] 'Recent Statutes' (1938) 52(2) Har L Rev 333.

[35] Robert R. Wright, *The Law of Airspace* (Bobbs-Merril 1968) 241-49.

[36] Place Ville Marie and Place Bonaventure, two vast commercial developments begun in the late 1950s and built over the Canadian National Railway tracks in downtown Montreal, used leasehold interests of 99 years and 96.5 years respectively to convey air rights. See V. Setty Pendakur and Neil J. Griggs and Peter Tassie, *Multiple Use of Transportation Corridors in Canada, Part I: Conceptual and Legal Aspects* (School of Community and Regional Planning, University of British Columbia 1969) 13-15.

[37] ibid 17-18.

It was not possible to create air space parcels in British Columbia before 1971. The province's title registration system only permitted "the owner of the surface of land" to register the fee simple interest.[38] That year, the province passed the Air Space Titles Act (1971), becoming the first in Canada with general enabling legislation to permit the subdivision of land into air space parcels that were endowed with the same legal character as other parcels of land: "the air space parcel or parcels created thereby shall devolve and may be transferred, leased, mortgaged, or otherwise dealt with in the same manner and form as any

[38] *Land Registry Act*, RSBC 1960, c 208, s 145: "The owner of the surface of land is alone entitled to be or
remain registered as owner of the fee-simple. The owner of any part of land above or below its surface who is not also the owner of the surface is only entitled to register his estate or interest as a charge."

land."[39] British Columbia also amended its title registration system to allow the separate registration of air space parcels.[40]

The catalyst for these changes appears to have been a vast redevelopment proposal for the Vancouver waterfront known as Project 200.[41] The proponents, including Marathon Realty,

[39] *Air Space Titles Act*, SBC 1971, c 2, s 4. The current provisions are found in the *Land Title Act*, RSBC 1996, c 250, Part 9. Other Canadian provinces have adopted a variety of approaches to independent three-dimensional subdivision. New Brunswick used British Columbia's legislation as a template when it introduced an *Air Space Act*, SNB 1982, c A-7.01. See Franklin O. Leger, 'Air Rights and the Air Space Act' (1985) 34 UNBLJ 39. Manitoba inserted a provision in *The Real Property Act* in 1986 to allow the creation and registration of air space parcels: *An Act to amend The Real Property Act Air Rights*, SM 1986-87, c 2; currently, *The Real Property Act*, CCSM c R30, s 133. Yukon also inserted provisions in its title registration legislation when it rewrote the *Land Titles Act*, 2015, SY 2015, c 10, ss 79-82. However, most provinces have not created a statutory framework. In Ontario, surveying regulations under the *Registry Act*, RSO 1990, c R.20, provide for volumetric subdivision with a "strata plan" (Surveys, Plans and Descriptions of Land, O Reg 43/96, s 16), but the legal status of the "subdivision units" that it creates has been left to the courts. See *Toronto (City) v Craft Kingsmen Rail Corp*, 2023 ONSC 292 at para 51 that, for the purposes of municipal taxation under the *Assessment Act*, RSO 1990 c A.31, "air parcels" did not stop being land when severed from the original parcel and transferred. This decision overturned *Craft Kingsmen Rail Corp v Municipal Property Assessment Corporation*, 2022 ONSC 2222, in which Justice FL Myers asked "But is the air, land?" (para 6) and concluded that it was not, at least for the purposes of the *Assessment Act* (para 45).

[40] *Land Registry (Amendment) Act*, SBC 1971, c 30, s 18, amending *Land Registry Act*, RSBC 1960, c 208, s 145(1): "Except as provided in the *Strata Titles Act* and the *Air Space Titles Act*, the owner of the surface of land is alone entitled to be or remain as registered owner of the fee-simple."

[41] On Project 200 and an argument for the development of air rights over transportation corridors, funded in part by the Greater Vancouver Real Estate Board, see Pendakur and Griggs and Tassie (n 36) 2, 25, 41. See also Terrence William Johnston, 'Implications of Air Space Utilization in British Columbia' (MSc thesis, University of British Columbia 1968). When introducing the *Air Space Titles Act*, SBC 1971, c 2, the province's Attorney General explained that it was intended to have "particular significance… where a municipality may want to have someone else build a structure over a street, or over railways, and still retain the use and the ownership of the surface rights, that is, of the road or of the railway." Debates of the Legislative Assembly (Hansard), 2nd Session, 29th

planned a cluster of commercial and residential towers with a regional shopping centre connected to the larger metropolitan region with an expanded freeway project, much of which would be built over the existing CPR tracks. A promotional rendering of the project in Figure 2 reveals the anticipated scope and the extent to which it would occupy the space over the waterfront railyard. Only one tower was ever built (Project 200 foundered due to public opposition to the expanded freeway project and the loss of government funding[42]) and the legal arrangements for that tower—a combination of easements and leases that enabled the railway to continue its operations at grade—were put in place in 1970 before it was possible to subdivide land into separately titled air space parcels. That possibility was introduced in 1971, too late for Project 200, but the ability to subdivide land into air space parcels defined in three dimensions is an enduring legacy of the unrealized development.[43]

Parliament, Hon. L.R. Peterson, 8 March 1971, 624. In the ensuing discussion, another Member of the Assembly indicated an expectation that the proponents of Project 200 will speak to the proposed legislation at the committee stage (625).

[42] David Ley, *The New Middle Class and the Remaking of the Central City* (Oxford University Press 1996) 235-37.

[43] In his study of planned but unrealized industrial megaprojects, Jonathan Peyton, *Unbuilt Environments: Tracing Postwar Developments in Northwest British Columbia* (UBC Press 2017), adopts the concept of "unbuilt environment" to consider their social and environmental effects, notwithstanding their failure. Project 200 provides an urban example, the *Air Space Titles Act* perhaps its most significant legal effect.

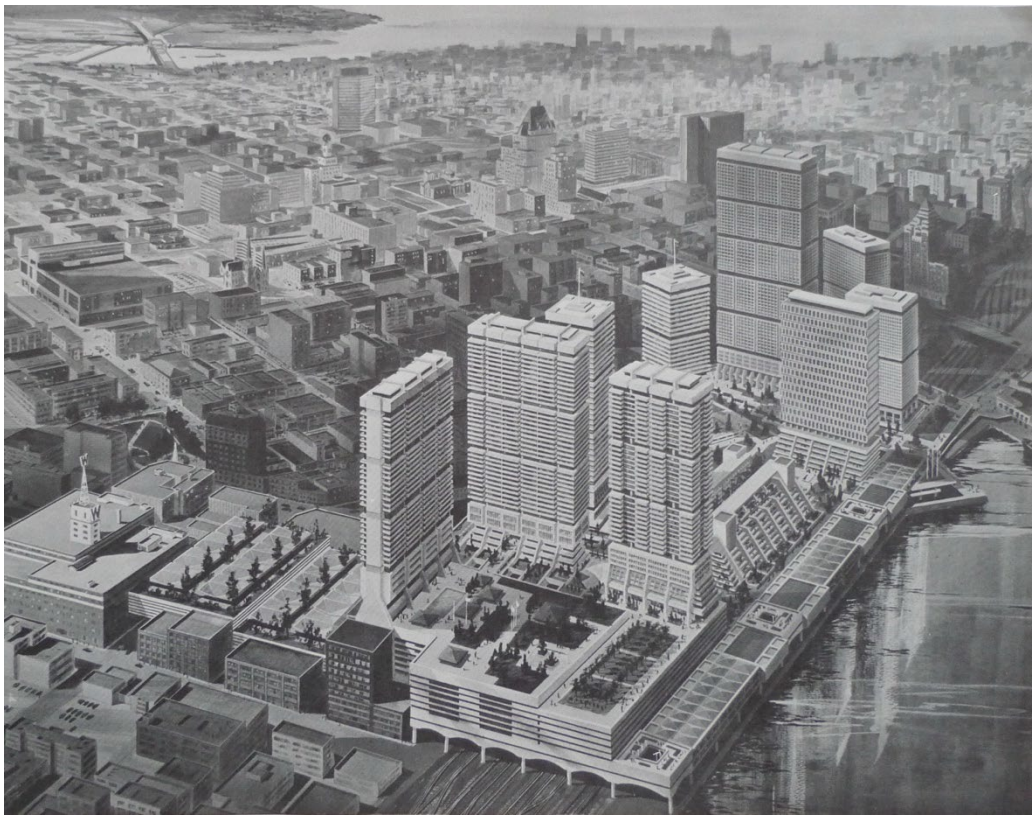

Figure 2. Promotional drawing of Project 200 in downtown Vancouver. Note the railway tracks entering at the bottom of the image and exiting at the top right. (Source: Vancouver Project 200 Waterfront Development 1968.)

Air space parcel subdivision does not require a built structure to define boundaries. Instead, an air space plan demarcates a volume, whether above or below ground, by reference to geodetic survey markers. Once created, air space parcels are registered independently as parcels of land in the title registration system.[44] That portion of the original parcel not included within the air space parcel—labelled the remainder parcel in British Columbia—continues as a separately titled parcel.

[44] *Land Title Act*, RSBC 1996, c 250, s 141(2).

Figure 3 depicts the isometric drawing of Air Space Parcel 1 (ASP 1) from the air space plan registered with the Land Title Office in 2004 as part of a 41-storey mixed-use residential-commercial development on Vancouver's waterfront known as Rogers Tower (formerly Shaw Tower). ASP 1 defines the residential space in the development that would subsequently be subdivided further into condominium apartments and common property (discussed in the following section).

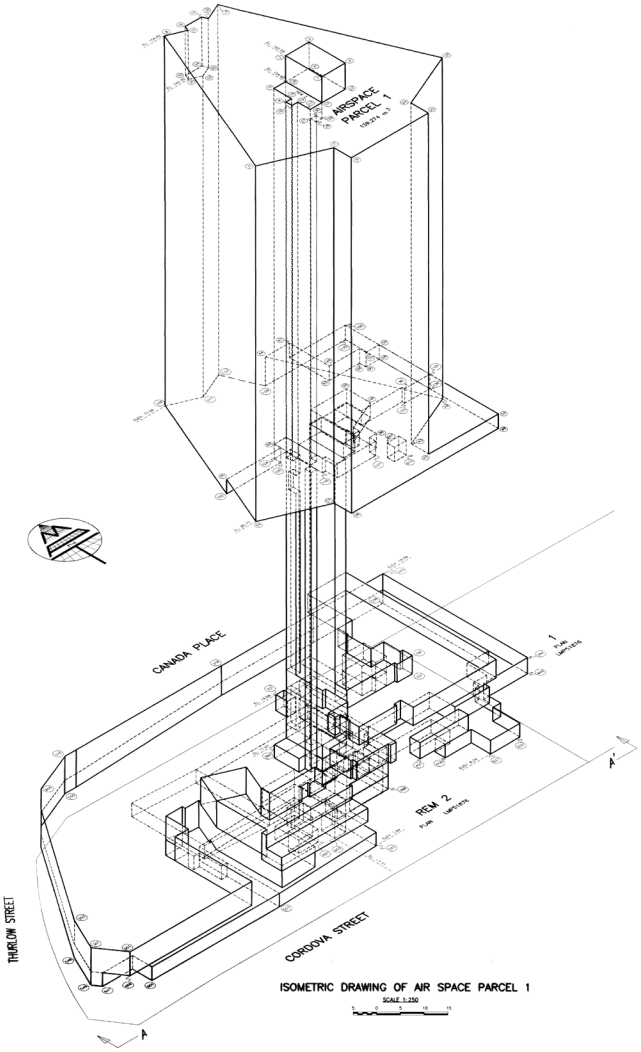

Figure 3. Isometric Drawing of Air Space Parcel 1, Air Space Plan 14488, Rogers Tower (Source: Land Title & Survey Authority.)

Figure 4 provides a two-dimensional cross section of ASP 1. The broad base includes several levels of parking and storage. The smaller two-storey podium above the parking levels delineates the entrance lobby at street level, and the extension to the right, part way up the vertical column, is space for a fitness centre and meeting rooms. An elevator shaft, along with a garbage chute and a column for mechanical services, extends up as vertical column through the remainder parcel (REM 2) to the upper block for condominium apartments.

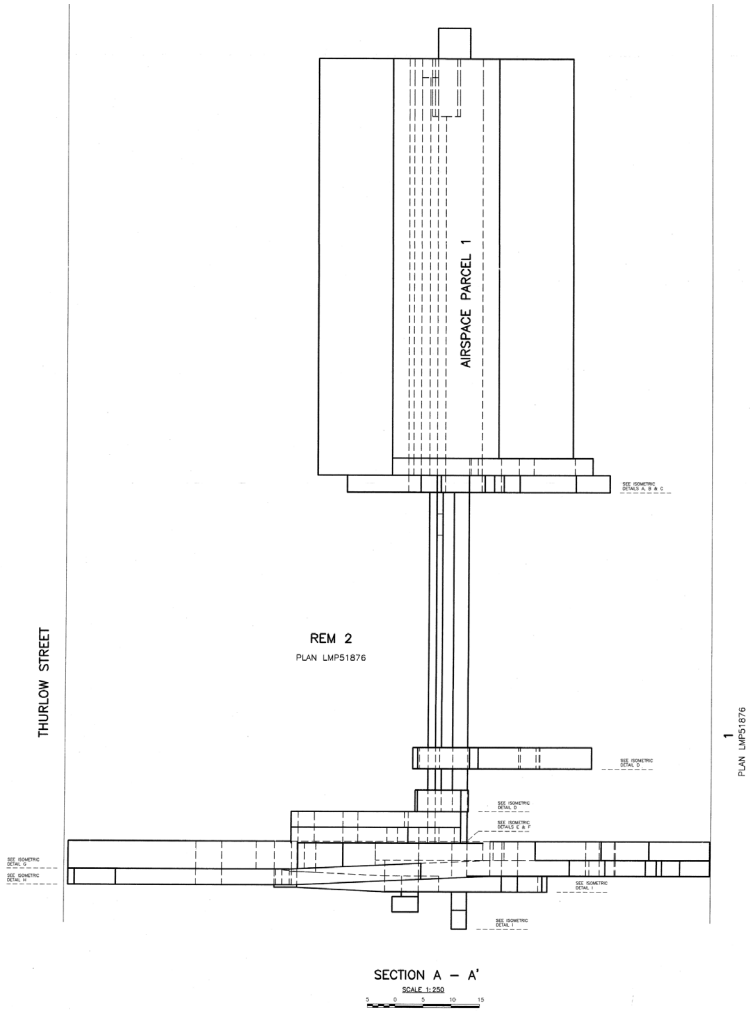

Figure 4. Cross-section of Air Space Parcel 1 within Rogers Tower, Air Space Plan 14488. (Source: Land Title & Survey Authority.)

The physical building itself does not resemble the popsicle-on-a-podium design depicted in the cross-section of ASP 1 (Figure 4). The residential portion of the tower sits on fourteen floors of commercial office space within the remainder parcel (REM 2) that the developer, Westbank Corp, retained and leases. The dividing line between residential and commercial uses is evident in the view of the exterior (Figure 5) with the emergence of the slender tower from the thicker base, and the larger windows and the balconies, which are features of the residential units. Initially, Westbank leased much of the office space in the remainder parcel to Shaw Communications (hence Shaw Tower). It also retained the rooftop as part of the remainder parcel and sold exclusive rights to install signage and telecommunications equipment. In addition, the remainder parcel includes several levels of parking for the commercial offices below the parking included in ASP 1.

Figure 5. Rogers Tower (formerly Shaw Tower) (Source: Wikipedia, s.v. "Rogers Tower," photograph by Klazu, 29 May 2015, published under CC BY-SA 4.0, accessed 3 June 2024, https://en.wikipedia.org/wiki/Rogers_Tower.)

Rogers Tower provides an example of the increasingly common practice in British Columbia and other jurisdictions to deploy air space parcels to separate uses in mixed-use developments.[45] The air space plan for Rogers Tower combines elements of what were described as the fee-support and easement-support methods of subdivision in the 1920s. The intricately surveyed boundaries of air space parcel are intended to contain the spaces used by the occupants of the residential apartments. However, the project is premised on a much greater degree of interdependence between air space parcel and remainder parcel than was contemplated in the early developments above railway lands. This interdependence is managed through an elaborate set of agreements that provide rights of support, access, cost sharing, decision-making, and dispute resolution (discussed in part IV). Rogers Tower and others like it combine the spatial complexity of intricately drawn air space parcels with the legal complexity of easements and covenants to manage a co-dependent relationship between parcels. The further subdivision of air space parcels with condominium property produces additional spatial and legal complexity.

III. Condominium Subdivision within Air Space Parcels

[45] See n 19.

In British Columbia, the statutory framework for condominium subdivision preceded that for air space parcels. In 1966, the province introduced the Strata Titles Act, creating the first statutory condominium regime in Canada, albeit under the label of strata title, now strata property.[46] Based on legislation from the Australian state of New South Wales,[47] the statute provided that, with the deposit of a strata plan in the land title office, an owner-developer could subdivide a parcel of land into strata lots. Each strata lot owner would also hold an undivided share of the common property in the development and would have voting rights in a strata corporation with governing authority over the private and common property. When the province introduced the Air Space Titles Act in 1971, five years after the Strata Titles Act, it intended that the subdivision of land into air space parcels might work in tandem with the existing capacity to subdivide land into strata lots.[48]

The cover page from the strata plan for Rogers Tower (Figure 6) provides an overhead view of ASP 1, the parcel that it subdivides into strata lots. ASP 1 extends over the area of the original lot (to encompass the expanse of underground parking),

---

[46] Douglas C. Harris, 'Condominium and the City: The Rise of Property in Vancouver' (2011) 36 L & Soc Inquiry 694.

[47] *Conveyancing (Strata Titles) Act* 1961 (NSW). See Cathy Sherry, *Strata Title Property Rights: Private Governance of Multi-Owned Properties* (Routledge 2016).

[48] The province made this explicit when it repealed the *Air Space Titles Act* and folded its provisions into the *Land Title Act*, RSBC 1978, c 25, s 138(3) [currently *Land Title Act*, RSBC 1996, c 250, s 141(3)]: "An air space parcel may be subdivided in accordance with the *Strata Titles Act*." There are equivalent provisions in Manitoba, *The Real Property Act*, CCSM c R30, s 133(4), and Yukon, *Land Titles Act*, 2015, SY 2015, c 10, s 79(3).

but for the cut-out in the bottom left corner and a shaft running through the middle (shown as within the remainder parcel REM 2). The blunted arrowhead shape in the middle (see also Figure 3) corresponds to the residential portion of tower beginning 80.10 metres above the surface grade and extending to 160.08 metres. This is the volume that the strata plan subdivides into strata lots.

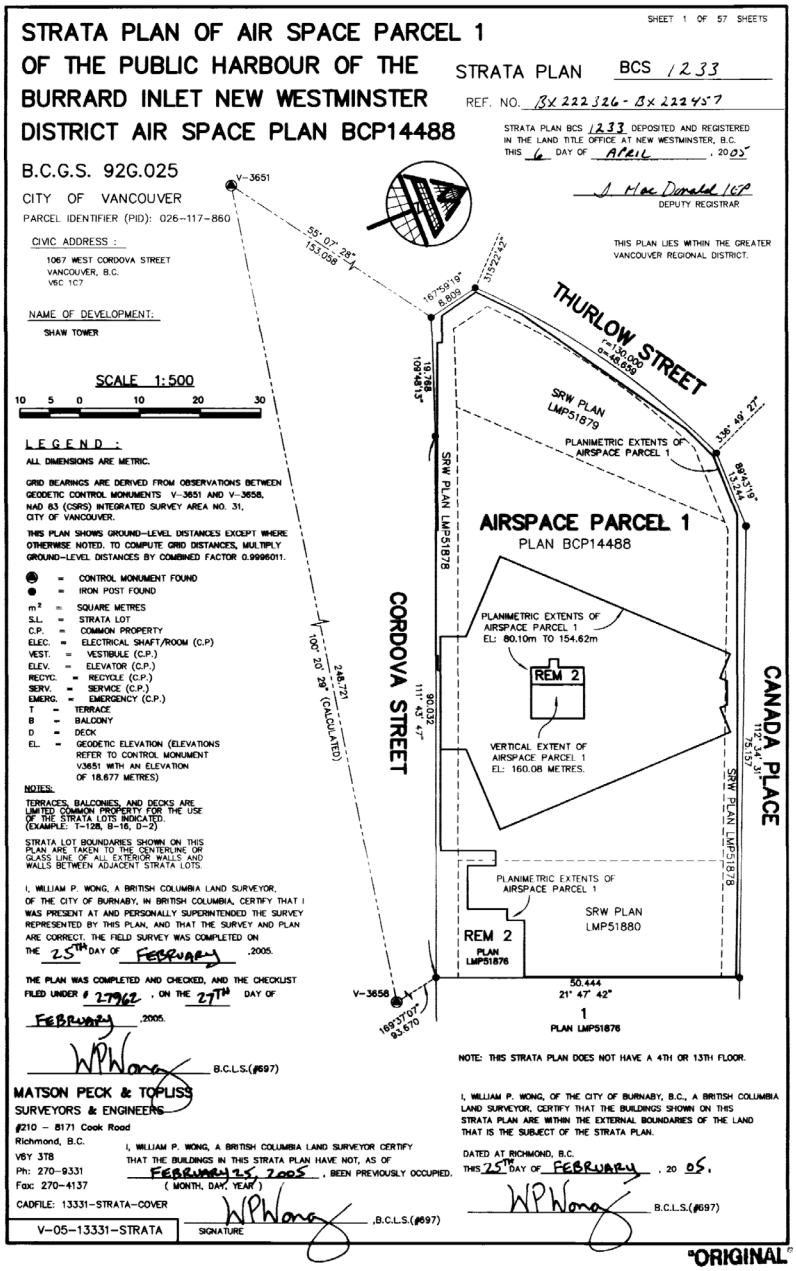

Figure 6. Strata Plan BCS1233 sheet 1 depicting an overhead view of the air space parcel (ASP 1) that the strata plan subdivides into strata lots and common property. The blunted arrowhead in the middle defines the space occupied by the residential tower. (Source: Land Title & Survey Authority.)

Figure 7 provides a cross-section view of that subdivision. The strata plan outlines the boundaries of the strata lots and marks

the elevator shaft, fitness centre and meeting rooms on level five, street-level entrance, and underground parking area as common property. There is a faint outline of the structure below the residential portion of tower, which is occupied by commercial offices, and of the lower parking levels, both marked as part of the remainder parcel (REM LOT 2).

The strata plan also shows balconies protruding from the strata lots and the ASP 1 boundary a further distance beyond them. Air space parcels are defined in the abstract by the lines on an air space plan; strata lots are defined in a strata plan by the floors, walls, and ceilings of physical structures. The space between the physical structure and the boundaries of the air space parcel is part of the common property within the strata property development.

A final image from the strata plan (Figure 8) depicts the floor plan of property interests from the first level of the tower devoted fully to strata lots. The plan shows the lengths of the strata lot boundary segments for strata lots 8-13. The balconies—triangular cut-outs in the four large strata lots—are marked as limited common property, i.e. common property for the exclusive use of the occupants of the adjacent strata lot. The common property of the strata corporation also extends beyond the building to the boundary of the air space parcel, which wraps around the tower. The area beyond the air space parcel is part of the remainder parcel, as is the cut-out in the middle (noted as REM LOT 2) that marks a shaft retained by the developer to provide a conduit to the roof top.

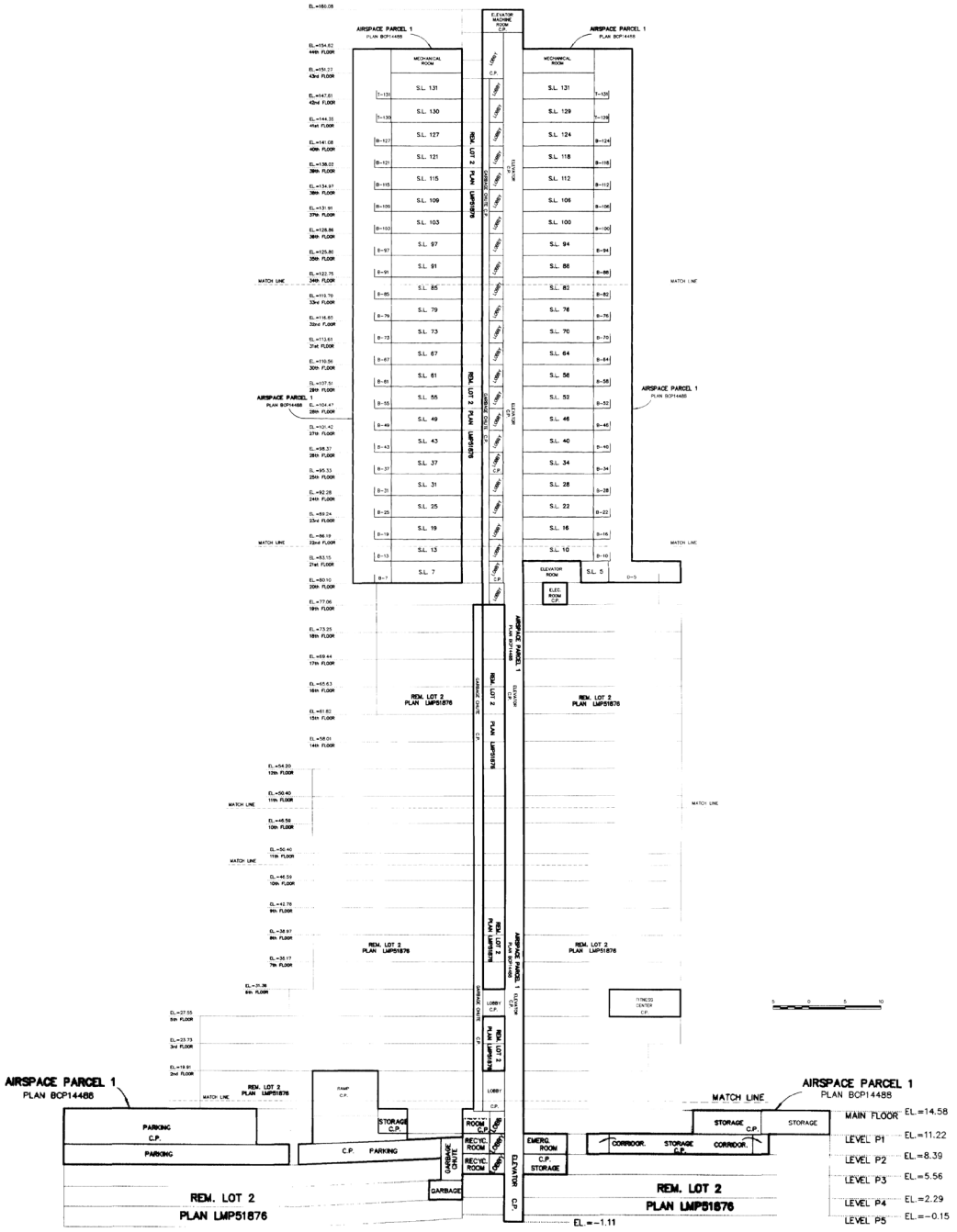

Figure 7. Compilation of sheets 53-57 from Strata Plan BCS1233 creating the strata lots (apartments in the upper tower) and common property (elevator shaft, fitness centre on level five, ground level lobby, and underground parking area) within Air Space Parcel 1 in Rogers Tower. (Source: Land Title & Survey Authority. Compilation by Eric Leinberger.)

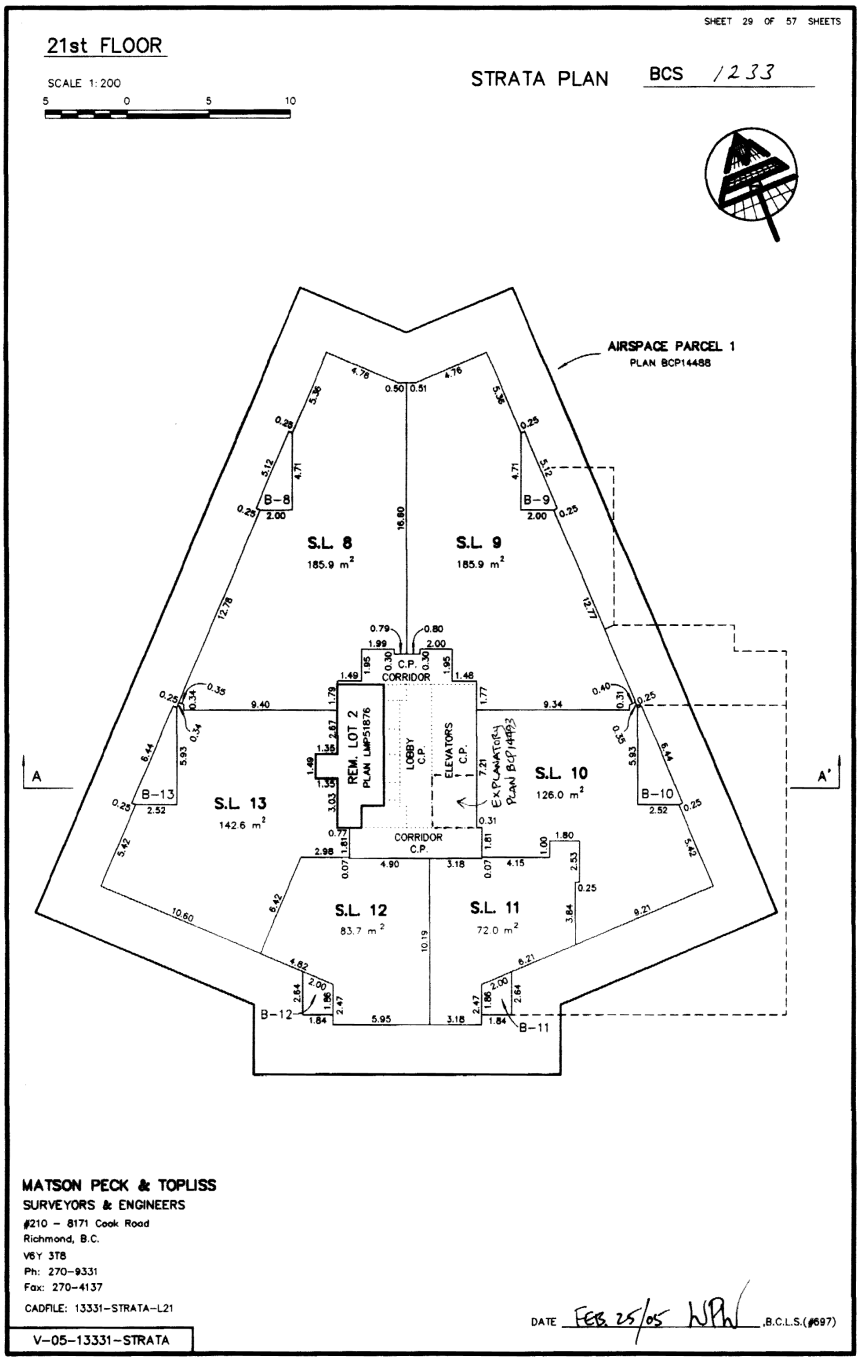

Figure 8. Sheet 29 Strata Plan BCS1233 defining the boundaries of strata lots 8-13 on the twenty-first floor. Note the gap between the APS 1 boundary and the strata lots. This space between building and air space parcel boundary is part of the common property owned collectively by the strata lot owners. (Source: Land Title & Survey Authority.)

This process of condominium subdivision within air space parcel subdivision produced 131 freehold strata lots in Rogers Tower that are owned in fee simple and registered independently in the province's title registration system. It also produced a structure of local government with regulatory authority over the individual lots and common areas. The Strata Property Act establishes the basic governing structure and provides a default set of bylaws, although owner-developers commonly modify that template with particular provisions relating to use. In the case of Rogers Tower, the bylaws include standard operational provisions relating to the formation, functioning, and jurisdiction of the strata council (the board or executive), and the conduct of strata corporation meetings, but also extensive provisions regarding the use of individual lots, the allocation and use of common property, and the types of business permitted under the live-work designation. As I have argued elsewhere, this combination—the massive increase in the density of owners and their embedding within a political community with governing authority and fiscal capacity—is changing the character of property and what it means to be an owner.[49] Pushing further into the lived experience of those within condominium, geographer Megan Nethercote uses the evocative "volumetric neighbouring" to mark the distinct character of social relations produced within the propertied, three-dimensional spaces of condominium high-rise housing.[50] The original enabling statute

[49] Harris, 'Embedded Property' (n 18).

[50] Megan Nethercote, *Inside High-Rise Housing: Securing Home in Vertical Cities* (Bristol University Press 2022) 23, 215-16. See also Randy K. Lippert, *Condo Conquest: Urban Governance, Law, and Condoization in New York City and Toronto*

insisted that the strata lots were to be understood as any other parcel of land,[51] but this assertion obscures fundamental changes to the rights and duties of owners, which are compounded when the property interests embedded within condominium are further embedded within the agreements that structure relations between air space parcels and their owners.

IV. Air Space Parcel Agreements and Property

Rogers Tower occupies most of an air space parcel and portions of the remainder parcel. The relationship between these two integrated and co-dependent parcels—it is not possible to make use of one without the other—and the rights and responsibilities of their owners and occupants are set out in a series of easements and covenants that Westbank, the developer, concluded with itself while owner of both parcels.[52] When it deposited the strata plan to subdivide the air space parcel into strata lots, Westbank, as the owner-developer of the strata lots and thus in control of the strata corporation, concluded a further agreement in which the strata corporation bound itself to the

(UBC Press 2019); Hazel Easthope, *The Politics and Practices of Apartment Living* (Edward Elgar 2019).

[51] *Strata Titles Act*, SBC 1966, c 46, s 3(1).

[52] These agreements were consolidated in an 'Easement Agreement and Section 219 Covenant', dated 5 November 2004, that Burrard Landing Lot 2 Holdings Ltd made with itself as owner of the remainder parcel and of the air space parcel. LTSA Document No. BW526774 ['Easement Agreement']. Section 219 covenants refer to provisions in the *Land Title Act*, RSBC 1996, c 250, that allow covenants in favour of the Crown or other listed public entities to be registered against title and enforced by the public entity even if the benefit of the covenant is not attached to land held by that entity.

original easements and covenants.[53] As a result, these easements and covenants, referred to collectively as the air space parcel agreement, are registered against the title of individual strata lots and are binding on their owners.[54]

The air space parcel agreement for Rogers Tower includes a series of reciprocal easements for support, access, and maintenance; for utility conduits and system equipment; for pedestrian and vehicle access; and for abiding by security provisions when accessing the other parcel. There are also reciprocal covenants of non-interference, as well as reciprocal obligations to rebuild and repair structures in the respective parcels, and to insure the parcels. Then there are provisions for cost-sharing, including a division of costs for shared services, and, in the case of disputes, for arbitration. In addition, there are instruments in which Westbank, while still owner of the air space parcel, granted to itself a number of benefits as owner of the remainder parcel, including an easement in favour of the remainder parcel for access of the occupants to the fitness centre and meeting rooms in the air space parcel,[55] and a restrictive covenant that limits the uses of the strata lots to "'live/work units' which are to be used for combined residential and general

---

[53] Agreement dated 30 November 2004 that Burrard Landing Lot 2 Holdings Ltd made with itself as owner of the remainder parcel and of the strata lots. LTSA Document No. BX229054.

[54] The members of a strata corporation do not enjoy limited liability as do shareholders of a business corporation. Under the *Strata Property Act*, SBC 1998, c 43, s 166(1): "A judgment against the strata corporation is a judgment against all the owners."

[55] Easement transferred from Burrard Landing Lot 2 Holdings Ltd (as owner of the air space parcel) to itself (as owner of the remainder parcel), registered 24 March 2005. LTSA Document No. BX219102.

office purposes."[56] The restrictive covenant includes a list of specifically prohibited uses (including this odd combination: "a booking agency or a facility providing liquor delivery or psychic/fortune teller services") and a list of prohibited activities, mostly related to the use of balconies (no bicycles, laundry, satellite dishes, enclosures, etc.), that might compromise the building's aesthetic.[57] These restrictions also appear in the strata corporation bylaws; placing them in a restrictive covenant ensures that the strata corporation is unable to amend them. Finally, Westbank transferred a 99-year lease of the parking facility within the air space parcel to a parking management company (related to the Westbank) for a nominal sum.[58] The lease anticipated that the parking facility would become common property within the strata corporation and it stipulated that the strata corporation would assume the role of lessor. Under the lease, the parking management company would make a partial assignment of one parking stall for each strata lot, but otherwise would "have the exclusive right to control, manage and administer the Parking Facility."[59]

The myriad provisions in the air space parcel agreement for Rogers Tower and other similar agreements do many things, but at a most basic level, they make possible the particular air space

[56] Restrictive Covenant transferred from Burrard Landing Lot 2 Holdings Ltd (as owner of the air space parcel) to itself (as owner of the remainder parcel), registered 24 March 2005. LTSA Document No. BX219103.
[57] ibid.
[58] Parking Lease Agreement between Burrard Landing Lot 2 Holdings Partnership (owner) and Burrard Landing Parking Management Ltd (tenant), draft version included in the 'Shaw Tower Disclosure Statement' (28 May 2002).
[59] ibid.

parcel subdivisions. This is apparent in the reciprocal easements for access, which not only enhance the functionality of spaces, but are essential for the safety of occupants. Building codes specify required escape routes in the case of emergencies. Given the physical design, escape routes commonly involve transiting through a neighbouring parcel. In these instances, air space parcel subdivision approval depends on the easements that secure access. Subdivision does not occur first, to be followed by air space agreements; subdivision only occurs with these agreements in place, something that the Rogers Tower air space parcel agreement makes clear: "The easements… are requirements of the Approving Officer for subdivision of the lands creating the Air Space Parcel and the Remainder."[60] The air space parcels do not exist without air space parcel agreements.

The two parcels within Rogers Tower mark it as a comparatively simple development. The United Nations Plaza development in New York City began with the creation of four air space parcels to accommodate a parking facility, an office building, and two residential towers.[61] Built in the 1950s, before the statutory condominium form was available in New York State, the residential towers were organized as cooperative associations, with the members holding shares in the associations that held title to the corresponding air space parcels. Lawyer Eugene Morris suggested that the complicated legal arrangements between parcels—more than 600 pages to construct the reciprocal rights and obligations—could have been

[60] Habbendum, 'Easement Agreement' (n 52).
[61] Morris, 'Air Rights' (n 27) 260.

simpler had statutory condominium existed and been used to subdivide the residential towers instead of the cooperative association,[62] although that would have substituted condominium corporations for cooperative associations as the governing bodies within the residential towers. It would not have simplified the arrangements between air space parcels.[63]

Two other mixed-use developments in Metro Vancouver, the subjects of prolonged litigation over the allocation of parking expenses, contain five and seven air space parcels respectively, plus the remainder parcels.[64] Each development includes a parcel devoted primarily to parking with rights of use and allocation of costs set out in the air space parcel agreements. The developers further subdivided several of the air space parcels into residential strata lots and commercial strata lots. In *Jameson House*, the strata lot owners in the residential tower sought to extract themselves from an obligation to pay for a sophisticated and expensive-to-maintain automated parking facility in the remainder parcel;[65] in *Crystal Square* the strata lot owners in the commercial building contended that they should not be bound to pay escalating parking fees to the owner of the air space parcel with the parking

[62] ibid.

[63] For an overview of the extensive documentation required for different types of mixed-use developments in the United States, see Margaret A. Rolando, 'Governing Documents for Mixed-Use Developments' (2006) 22 Prac Real Est Law 43.

[64] *The Owners, Strata Plan BCS 4006 v Jameson House Ventures Ltd*, 2019 BCCA 144 [*Jameson House*]; *Crystal Square* (n 21). The British Columbia Court of Appeal heard the cases together; *Crystal Square* proceeded alone to the Supreme Court of Canada.

[65] *Jameson House* (n 64) para 15.

facility.[66] The developers of both projects had imposed the air space parcel agreements when they created the air space parcels, and before they had further subdivided those parcels into strata lots.[67] As a result, the agreements preceded the formation of the respective strata corporations, which could not have been parties to the original agreements and which had not entered assumption agreements to bind themselves to those agreements, although that is what had been intended.[68]

The strata corporations argued that in Canada, at common law and in equity, obligations to make payments—positive covenants—do not run with the land and thus could not bind future owners; because they were not parties to the agreements and had not adhered to them, the strata corporations and their members were not bound by the positive covenants to pay for parking or the maintenance of parking systems as set out in the agreements. In *Crystal Square*, the Supreme Court of Canada confirmed that positive covenants do not run with the land,[69] and it declined to consider an exception to this rule that an entity accepting the benefit of a contract also bears the burden.[70] Instead, it ruled that the strata corporation, through its conduct, "objectively manifested an intention" to be bound by a post-incorporation contract—a contract that came into existence after the formation of the strata corporation—on the same terms as the original air space parcel agreement, to which it had not

[66] *Crystal Square* (n 21) para 3.
[67] *Jameson House* (n 64) para 10.
[68] *Crystal Square* (n 21) para 8.
[69] ibid paras 17-18.
[70] ibid para 57.

adhered.[71] In the result, the strata lot owners in Crystal Square (and, by extension, Jameson House) were bound to parking provisions in the air space parcel agreements on the Supreme Court's construction of a post-incorporation contract.

In her analysis of stratum subdivision in New South Wales, the Australian state's version of air space parcel subdivision, and the further subdivision of stratum parcels into strata title lots, Sherry notes that the rights and obligations of individual owners in these developments are defined through property and contract.[72] Michael Teys provides more detail of the legal structure that sustains and, in some cases, derails these developments in his account of the ill-fated Italian Forum in Sydney, a development built around five stratum parcels, one of which was further subdivided into residential strata lots, another into commercial strata lots.[73] In these developments, the agreements that define the legal relationship between stratum parcels are known as "strata management statements." They are put in place by developers at the outset, are required by statute, and are registered on the title of each parcel, including the individual strata lots. The effect, Sherry argues, is "to turn what began as a contract negotiated by the original parties involved in the development, into a statutory property right that will bind all subsequent owners."[74]

In *Crystal Square*, the Supreme Court of Canada made a similar move, using its construct of a post-incorporation contract to bind

[71] ibid para 50.
[72] Sherry, 'Building Management Statements' (n 19).
[73] Teys, 'The Evolution of the Anticommons' (n 19) 69-86.
[74] Sherry, 'Building Management Statements' (n 19) 394-95.

current and future owners of individual strata lots to the terms of the original air space parcel agreement. The Supreme Court denied that it was collapsing the distinction between contract and property and, by doing so, abandoning the rule that positive covenants do not run with the land,[75] but it did acknowledge that "enforcing a post-incorporation contract may appear, from the perspective of the members of the strata corporation, to operate very similarly to an exception to the general rule that positive covenants do not run with the land."[76] That is the effect. In acting as if there were an agreement by paying for and using parking, the strata corporation bound itself and its members to a replica of the contract that preceded its existence.[77] In so ruling, the Supreme Court made the "complex and interconnected scheme of benefits and burdens relating to the air space parcels"[78] an integral element of every individual parcel in the development, including each strata lot. The contracts are now part of the property.

V. Applied and Theoretical Architectures of Property

Versions of the air space parcel and condominium frameworks described above provide an increasingly common legal architecture for property and local government in many cities around the world. Owners of real property are ever-more likely to hold parcels delimited in three dimensions and to co-

[75] *Crystal Square* (n 21) para 19.
[76] ibid para 23.
[77] ibid para 50.
[78] ibid para 52.

exist with other owners, embedded within condominium and, further, within the terms of air space parcel agreements. Perhaps what is most notable about these arrangements is their spatial and legal complexity. The owned spaces are produced through abstract representations of air space parcels and then the subdivision of buildings into individually titled lots, and their uses are governed through a condominium corporation and an air space parcel agreement. This is not the theoretical architecture for property that Henry Smith insists is needed, but it is the applied architecture that is rapidly becoming the norm and for which theories of property must account.

At the core of Smith's "architectural or modular theory" are "LEGO-like" blocks of owned things defined in the first instance by the right to exclude.[79] The child's-toy imagery is compelling; standardized, durable, and able to stand alone or be snapped together in innumerable combinations, the blocks represent the owned things of property, the parcels of land. These discrete blocks—the things of property—form the foundation and provide the structure of Smith's theory of property, and the cross-section showing the condominium lots in Rogers Tower (Figure 7) lends the "property… as Legoland" imagery some intuitive appeal.[80] The lots are layered in a vertical column, not dissimilar to a stack of the standard, rectangular LEGO blocks. The floor plan (Figure 8) reveals a more complicated design with each lot configured to occupy a particular space, but it is still possible to think of the lots as the blocks of property. However, the LEGO-

[79] Smith, 'Property as the Law of Things' (n 3) 1708.
[80] Merrill and Smith, 'The Architecture of Property' (n 3) 145.

like simile works less well for the physical design of air space parcels. Instead of standardized pieces with an "interface with each other that allows the generation of complex structures out of a small set of simple parts,"[81] the air space plans reveal intricate, individualized air space parcels (see Figure 3) so thoroughly integrated with the surrounding parcels that they have no possibility of standing independently or of functioning as interchangeable parts. The surveyed boundaries are intended to fortify the legal distinctiveness and separateness of parcels, to establish their "thingness,"[82] but the physical spaces are so intertwined and interdependent that the boundaries do not perform the distinguishing work which the hard lines on an air space plan might suggest.

The combination of air space parcels delimited in reference to survey markers and then condominium lots in reference to the built structure (floors, walls, and ceilings) produces additional complexity in modelling the "things" of property in the mixed-use developments described above,[83] but this challenge only hints at more fundamental issues for Smith's modular theory. Statutory condominium frameworks construct condominium

[81] Smith, 'Property as the Law of Things' (n 3) 1708.

[82] Merrill and Smith, 'The Architecture of Property' (n 3) 141.

[83] Abbas Rajabifard and Behnam Atazadeh and Moshen Kalantari, 'A Critical Evaluation of 3D Spatial Information Models for Managing Legal Arrangements of Multi-owned Developments in Victoria, Australia' (2018) 32 Intl J Geographical Information Science 2098, reveal the particular challenges of constructing spatial models that define boundaries where some are located in reference to survey points (air space parcels) and others in reference to physical elements (condominium lots). See also Amnon Lehavi, 'The Future of Property Rights: Digital Technology in the Real World' in Amnon Lehavi and Revine Levine-Schnur (eds), *Disruptive Technology, Legal Innovation, and the Future of Real Estate* (Springer 2020) 59.

lots as parcels of land that are held in fee simple in common law systems and are to be treated as other parcels of land for purposes of assessment, taxation, and transfer.[84] However, this apparent standardization omits the union of individual and collective ownership within condominium. Owners of individual condominium lots also own an undivided share of the common property, and these private and common property interests are not severable. The individual private property interests within condominium do not exist without the common property, which itself only exists to be in the service of the private property.[85] The private and the common appear as distinct spaces in the condominium plan (Figures 7 and 8), but they are bound together as property interests. Condominium lots are not modules of LEGO-block simplicity.

Property within volumetric subdivisions also poses a challenge for the priority Smith places on the right to exclude. The "things" at the centre of his architecture for property are defined, and the use rights in them are protected, in the first instance, by the right to exclude. "Exclusion is at the core" and "a starting point,"[86] suggests Smith, but not sufficient in many cases to manage the challenges of conflicting uses. This is the domain of "governance strategies," such as the law of nuisance, covenants, zoning by laws, and regulations, which "take exclusion as the platform and modify its features when it is

[84] *Strata Property Act*, SBC 1998, c 43, ss 67 & 121(1)(c).
[85] Harris, 'Embedded Property' (n 18) 30.
[86] Smith, 'Exclusion versus Governance' (n 4) S486: "Once basic exclusion is in place, further precision in property rights can be achieved through governance rules or through going to a more fine grained level of resource definition."

important to do so."[87] This core/periphery relationship between exclusion and governance has been an enduring feature of Smith's writing on property. It is a poor fit when it comes to condominium and air space parcel subdivisions.

Condominium enables subdivision, but it also produces a structure of local government that confers owners with membership in a governing association, typically in the form of a condominium corporation, with the power to make and enforce rules respecting the use of the private and common property, and with fiscal capacity to maintain the common property and to provide services. The basic framework of condominium government is set out in statutory regimes. Details vary among jurisdictions, but at a minimum the statutes produce a governing association with processes to foster transparent decision-making and rules to avoid self-serving conflicts of interests. They also establish standard formula for the division of costs. This statutory template introduces important standardization and predictability. In this, the idea of the right to exclude defining the things of property, surrounded by a standardized framework to contain the ancillary governance strategies, goes some distance to explaining the intended work of statutory condominium regimes, but the power of the group of owners is more than ancillary. In most jurisdictions, the vote of a supermajority is sufficient to dissolve the condominium and thus to terminate individual property interests.[88] The motivation to dissolve is

[87] Smith, 'Property as the Law of Things' (n 3) 1710.

[88] Douglas C. Harris and Nicole Gilewicz, 'Dissolving Condominium, Private Takings, and the Nature of Property,' in B. Hoops, E.J. Marais, H. Mostert,

usually to effect a collective sale, with each former individual private property owner compensated for their share of what is, after dissolution, common property. A theory that posits the primacy of the right to exclude within a governing structure in which owners have the power to terminate individual property interests over the objections of a dissenting minority is an uneasy fit.

The locating of condominium lots within air space parcels and thus subject to the terms of air space parcel agreements only amplifies the divergence between Smith's theoretical architecture and the applied architectures of property. Most profoundly, governance strategies are not secondary to exclusion. In the case of Rogers Tower, the easements that define reciprocal rights of access between air space parcels are preconditions to their creation; the air space parcels only come into existence with the easements.[89] Indeed, where the object of ownership (the condominium lot) is the product of volumetric subdivision within volumetric subdivision, the contours of legal relationships in relation to that space are defined increasingly by the governing structures of condominium and those created in air space parcel agreements, and less by the shape and form of the blocks or modules. The modules are not unimportant, and property doctrine is not unimportant, but both are being reshaped by their embedding within condominium, and then bent, even distorted, as the courts address contradictions between established

J.A.M.A. Sluysmans, and L.C.A. Verstappen (eds), *Rethinking Expropriation Law II: Context, Criteria, and Consequences of Expropriation* (Eleven 2015) 263-297.

[89] See n 60 and accompanying text.

principles and the reality of complex mixed-use developments. In this context, it is hard to sustain the tertiary status assigned to governance strategies in Smith's modular theory of property, something that Carol Rose recognizes when she asks "how stable is the centre/periphery relationship between these management strategies?"[90] Even if the right to exclude serves to protect use-rights for owners of condominium lots and then for owners or groups of owners within air space parcels, these modules depend for their existence on governance strategies set out in condominium statutes and air space parcel agreements. Moreover, access to the modules to enjoy the use-rights protected by the right to exclude also depends on the governance strategies that make the modules possible. As a result, exclusion and governance strategies are deployed together to produce degrees of separateness and interdependence; it is descriptively inaccurate for a theory of property to place exclusion at the core and governance on the periphery.[91]

In response to critics of the architectural theory of property, Merrill and Smith insist that "[g]overnance has been at its heart all along."[92] They point to "entity property" as a principal exhibit: "entity property like condominiums and corporations place most of their emphasis on governance once different functions (e.g. management versus enjoyment) have been separated."[93] This statement appears to elide condominium and business

[90] Carol M. Rose, 'Modularity, Modernist Property, and the Modern Architecture of Property' (2021) 10 Brigham-Kanner Prop Rts Conf J 69, 78.
[91] Gregory Alexander, 'Governance Property' (2011) 160 U Penn L Rev 1853.
[92] Merrill and Smith, 'The Architecture of Property' (n 3) 144.
[93] ibid.

corporations and thereby to misunderstand that management and enjoyment (or governance and use) are not separated within condominium. Owners of condominium lots also govern as the members of the condominium corporation; there is no limited liability. Moreover, their claim that governance strategies play an important role in the modular theory sits awkwardly with earlier statements that cast non-possessory property interests, such as easements and covenants, as "fringe areas of property rights."[94] That statement is hard to reconcile with their subsequent insistence on the centrality of governance strategies. This sense is compounded by the fact that entity property, and three-dimensional property in particular, receives scant attention in their expansive articulation of an architecture for property. Smith inadvertently throws that absence into sharp relief in "Property beyond Flatland" by calling for multi-dimensional theories of property to engage with the complexity of property in the real world, but then by not engaging with the forms of three-dimensional property that have become the applied architecture for property in many cities around the world.

Condominium is the emerging norm for residential property in cities, not the exception, and it increasingly exists within large-scale, mixed-use developments in which developers have attempted to segregate uses with the boundaries of air space parcels and then to integrate those parcels with extensive air space parcel agreements. Even if the modules in the form of air space parcels and condominium lots are, in some sense, the end

[94] Merrill and Smith, 'Optimal Standardization' (n 8) 23. See Sherry, *Strata Title Property Rights* (n 47) 60.

goals and the marketable products in these developments, they are not prior to the easements, covenants, and condominium form that envelop them. In terms of property strategies, it is not a case of exclusion first, governance second. Moreover, the individual lots are not structural, and nor are they foundational. As distinct modules, they are defined by and inserted within the scaffolding of air space parcels and condominium. Remove the scaffolding structure and the modules vanish. A theory of property that fails to engage with three-dimensional property produced by volumetric subdivision is lingering in the early twentieth century, before the advent and proliferation of air space parcels and condominium; it is less useful than it might be in "coming to grips with the real world"[95] as it unfolds in the twenty-first century.

VI. "Off-the-rack property"

"Property as the law of things" does not provide a satisfactory account of the applied architecture of property in mixed use developments combining air space parcel and condominium subdivision, but Merrill and Smith do provide an account of "the property/contract interface" that helps to reveal why the complexity of these volumetric subdivisions is problematic.[96] The law of contracts enables contracting parties to create customized legal relationships, producing arrangements that "require a small

[95] Smith, 'Property beyond Flatland' (n 1) 12.
[96] Thomas W. Merrill and Henry E. Smith, 'The Property/Contract Interface' (2001) 101 Colum L Rev 773.

number of identified parties to assimilate a comparatively large amount of information about their respective rights and duties."[97] Conversely, the small set of property interests, which produce duties that apply "to the world,"[98] "require a large and indefinite number of persons to assimilate a comparatively small amount of information about their respective rights and duties."[99] The volumetric subdivisions described above produce property, and thus the expectation of its standardized forms, but attach an elaborate set of rights and duties in air space parcel agreements, which are registered against the individual titles and run with the land. The result is to endow contractual arrangements with the status of property, something that the Supreme Court of Canada has indicated it will condone in apparent contravention of well-established property rules and where the relatively straight-forward requirement of adhering to a contract has not been met.[100] The product is an untenable property/contract hybrid that produces units which are labelled and marketed as property, but that embeds these interests in an amalgam of long, detailed, and highly specific contracts. The promise is simplicity; the reality can be unintelligible complexity.

In describing "What Government Can Do for Property," Rose proposes "off-the-rack property entitlements" so that interests, which "have a life beyond the immediate parties" that produced them, are "packaged in such a way that subsequent purchasers

[97] ibid 852.
[98] Felix Cohen, 'Dialogue on Private Property' (1954) 9 Rutgers L Rev 357, 374.
[99] Merrill and Smith, 'The Property/Contract Interface' (n 96) 852.
[100] *Crystal Square* (n 21).

can understand."[101] This proposal is a variation on Merrill and Smith's arguments about the usefulness of the numerus clausus doctrine in limiting the proliferation of different property interests,[102] and the virtuous simplicity of the right to exclude in protecting use-rights. The functionality of property derives from its limited variations and its simple construction. Rose extends her examples of standardized entitlements beyond the small set of estates in land and non-possessory interests recognized at common law to include the "highly complex condominium packages for ownership within multiple-dwelling housing developments."[103] At their best, the standardized statutory condominium forms do important consumer protection work, creating knowable templates in which the basic elements, including the property interests, the processes for decision-making and dispute resolution, and the sharing of costs, are standard and stable. In some jurisdictions, individual titles to units in multi-unit developments can only be bought off-the-statutory-condominium-rack.[104]

When it comes to air space parcel subdivision and governance, there is much less statutory direction. Some jurisdictions provide no statutory framework, leaving the development and recognition of air space parcels to the courts.[105] Among those

[101] Carol M. Rose, 'What Government Can Do for Property (and Vice Versa)' in Nicholas Mecuro and Warren J. Samuels (eds), *The Fundamental Interrelationships between Government and Property* (JAI Press 1999) 217.
[102] Merrill and Smith, 'Optimal Standardization' (n 8).
[103] Rose, 'What Government Can Do' (n 101) 217.
[104] In British Columbia, *Land Title Act*, RSBC 1996, c 250, s 73(4), prohibits the use of various conditional interests to construct common-law variations of the condominium form.
[105] See the brief discussion of the limited statutory framework in Ontario, n 39.

jurisdictions that do have an enabling statute for air space parcel subdivision, some provide a basic legal framework for air space parcel governance,[106] but nothing approaching the detail of statutory condominium templates. British Columbia has created an option for developers to produce something similar to air space parcel subdivision within the condominium framework by enabling what are, in effect, separate condominium corporations for different uses (labelled sections) within mixed-use developments under the auspices of an umbrella condominium corporation.[107] The latter arrangement imports the standardization of the condominium form, including structure of government and allocation of costs, in the relations between the sub-condominium corporations. However, developers have shown clear preference for air space parcel subdivision over nested condominium corporations in order to avoid the constraints of the condominium form.[108] They subdivide land into air space parcels, subject to air space parcel agreements that are unconstrained by condominium statutes or, indeed, any

[106] Sherry, 'Building Management Statements' (n 19); Teys 'The Evolution of the Anticommons' (n 19) 60-68; Van Der Merwe, 'Comparative Survey' (n 19).
[107] British Columbia Law Institute, 'Report on Complex Stratas' BCLI Report no. 81, June 2017. See also C.G. Van Der Merwe and Graham Paddock, 'Two-Tier Governance for Mixed-Use and Large-Scale Sectional Title Schemes' (2008) 125 S African LJ 573.
[108] David C.S. Longcroft, 'Easements in the Creation of Air Space Parcels' in *Real Estate Development: Advanced Issues – 2014* (Continuing Legal Education Society of British Columbia 2014), 1.1.7; *The Owners, Strata Plan BCS 4006 v Jameson House Ventures Ltd.*, 2017 BCSC 1988, para 30; Madsen and Paasch, '3D real property' (n 19) 9.

statutory direction.[109] Developers must disclose rights and obligations relating to access, support, cost sharing, dispute resolution, and use, but, as Sherry notes, "it is important not to overstate the importance of notice,"[110] particularly where air space parcel agreements run to hundreds of pages and where it is not uncommon for the developer to retain an interest, either as a continuing owner of one or more air space parcels or as a contracted provider of services.[111] The danger is that units are produced and marketed as property, but that this obscures an underlying contractual complexity that prevents a reasonable understanding of terms and, in some circumstances, shrouds self-serving behaviour.

If governments are going to enable, and developers are going to produce and market volumetric parcels within volumetric parcels, including lengthy and complex governance documents that allocate costs, establish rights of access, and determine decision-making processes, and that run with the land as property interests, then governments should also standardize these frameworks. Courts need to be vigilant to potential unfairness in these arrangements and to be particularly cautious when complex contractual relationships assume property-status, but governments can provide the basic architecture for such

[109] The statutory framework includes the statement that the grant of an air space parcel does not include a grant of an easement or imply a restrictive covenant on use of the remainder parcel; *Land Title Act*, RSBC 1996, c 250, s 140(1).
[110] Sherry, 'Building Management Statements' (n 19) 400.
[111] See Randy K. Lippert and Stefan Treffers, 'Turnover or Roll Over? Property Developer Legal Avoidance and Influence on Condominium Governance in New York City and Toronto' in Lippert and Treffers (eds), *Condominium Governance and Law in Global Urban Context* (Routledge 2021) 62-81.

arrangements. In doing so, they would make units that are marketed and sold as property to be more like property. Perhaps this is where the work of Smith and Merrill is most useful. Their theoretical architecture of property may not provide a descriptively robust account of the applied architecture in volumetric subdivision, but the normative claim embedded within this theory about what property should be does help to reveal the inherent dangers in the complexity of these arrangements and to suggest a possible response. The things that are produced and represented as property should be placed within structures that conform with the principles which animate the law of property. This is what government could do for the property that results from volumetric subdivision within volumetric subdivision.