

Standardisation, Diversification and New Ways of Living

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Abstract

This paper asks what the role and responsibility of the architect are in the future of housing in Australia. Three decades of neo-liberal and fragmented policies have resulted in a housing crisis in terms of affordability and suitability. By looking back to the Bauhaus we trace a history of the architects' vision of a future of housing and its often hostile political and public reception. Measures proposed by Gropius and Meyer around 'new ways of living', namely the potential of prefabrication, standardisation and industrial reform in particular were received with great criticism. In the Australian context, a century on, the role of the architect in the discourse on the future of housing is astoundingly undervalued and contested. With an ecology of factors contributing to the current capitalist housing free-market – driven by developers, the financial sector, spatial regulation and the market itself (passively accepting a one-fit housing product tailored to the 'nuclear family'), the architects' skill in spatial innovation to solve the aforementioned crisis is seemingly bound.

This paper is based on a research project recently undertaken for the New South Wales Government's Housing Agency, Landcom. Specifically, the research considered how Sydney's housing crisis in affordability (which is most visible) is coupled to a crisis in diversity (which is interrelated but less visible in the public discourse). With the housing industry in Sydney delivering a single product; a standard apartment differentiated only by the presence of one, two, or three bedrooms - the market finds itself unable to accommodate the expanding set of 'family types' now prevalent in contemporary society. Our research addresses this demographic 'diversity gap', identifying those stranded between formal social housing (which they cannot qualify for) and the market itself (which they cannot afford), and simultaneously unpacks how spatial knowledge, while central, is but one

contributor in addressing current market constraints from an architectural perspective.

Key Words: Housing, Diversity, Gap

Cause and effect

What is the role and responsibility for the Architect in the future of housing for Australia? For Sydney, as with many “global cities”, the matter is urgent. Population growth is on a rapid incline intersecting with a crisis in housing affordability due to three decades of a neoliberal free market. The global flight of capital, coupled with the increasing stratification of society, is limiting access to the market for those who are not currently home-owners, nor able to access it through intergenerational transfer of wealth. As Piketty notes, this intergenerational transfer of wealth is perhaps the final piece in a neoliberal puzzle which has concentrated capital in ways not seen since the 19th century and earlier¹. Further, whilst it is generally assumed that the market failure is bound to economic drivers there is an adjacent question around how the market works at a granular level, pertaining to the supply and demand disequilibrium between the housing ‘types’ being produced and an increasingly diverse set of households beyond the ‘nuclear family’, for whom the market was originally designed.

There is a deep history now in the articulation of the apartment plan and its impact upon social structures, the culture of domesticity and labour in the home since the evolution of the ‘middle class’ in the industrial era. From Henry Roberts’s Model House of 1851, and the single dweller ‘boarding house’ alternative, Australia has not seen a substantial deviation from these compartmentalised types since their inception. The failure to address diversity in household structures results in a failure to create a diverse and dynamic city, which in turn compromises its future productivity. In Sydney,

¹ Piketty, Thomas, *Capital In the 21st Century*, trans. Arthur Goldhammer (The Belknap Press of Harvard University Press, 2014)

with competitions such as ‘The Missing Middle’² and the ‘Alternative Housing Ideas Challenge’³, Architects are being called upon to address ‘new ways of living’⁴ – a term that still holds currency a century on from its inception of the Bauhaus. Yet the value of this currency is severely limited in Australia at present, as what is required is not only a systemic shift in the imaginary, in which the apparatus of development operates, but a state intervention in the form of building and banking regulations to force it to adapt.

There is a long line of thinking around the tangible, if not utopian, solutions and the way architects can be central in forming and shaping how we should be forming our cities and living together. Reflecting on ideologies of the Bauhaus, from its inception in 1919, debates raged around the role of architecture in the curriculum and how a reframing of the discipline through new methods of production could inform ‘new ways of living’. It was Gropius’s preoccupation with mass production that underpinned the pedagogical framework for the School, with standardisation, manufacturing, and the role of prefabrication in housing more specifically, being key to the discourse of this ‘new architecture’. Set against this interest was the utilisation of systemised elements and the technological advancements of mass-manufactured ‘domestic devices’. Regina Bittner discusses Gropius’ shift in the household from ‘production units to consumption units’⁵, and that the radicalisation of the home of the future was demonstrated by the widely circulated image of Gropius in the Director’s House as ‘a model for new housing culture’ reforming the daily way of living, and hence labour operations within the home⁶. Whilst Gropius was radicalising and liberating

² ‘Missing Middle Design Competition’ NSW Government Architects Office, accessed September 2019, <https://www.governmentarchitect.nsw.gov.au/projects/missing-middle-design-competition>

³ ‘Alternative Housing, Ideas Challenge’, City of Sydney, accessed September 2019 <https://www.cityofsydney.nsw.gov.au/vision/planning-for-2050/alternative-housing>

⁴ Gropius ‘New ways of living’ – Gropius, Walter, *The New Architecture and the Bauhaus*, trans. P. Morton Shand, intro Frank Pick, (MIT Press, 1965)

⁵ Bittner, Regina, Demonstrations of the Household; A formative pleasure in ‘*In Reserve: The Household! Historic Models and Contemporary Positions from the Bauhaus*’, ed. Regina Bittner, Elke Krasny (Spector Books, 2016) p55

⁶ Bittner, Regina, Demonstrations of the Household; A formative pleasure in ‘*In Reserve: The Household! Historic Models and Contemporary Positions from the Bauhaus*’, ed. Regina Bittner, Elke Krasny (Spector Books, 2016) p55

the informal governance structure of the home, these ideologies, as played out in the staged images, were scrutinised as baring too great a luxury in the post WWI context.

It was perhaps inevitable then that Hannes Meyer, the subsequent director of the Bauhaus, would address criticisms of Gropius' ideologies with his proposition of the Co-op Zimmer – eradicating the function of the single-family home, promoting a collective construct. As Aureli states, Meyer '[placed] households into an economic system'⁷. where the occupant becomes a nomadic dweller, a bedroom with minimum amenities (cupboard, foldable chair and bed) the only autonomous moment within the home – all else communal. The 'Volkswohnung' (People's flat) was to become the major project for the School interrogating this speculative shift. Such radical notions were once again shunned however, linked too closely to Marxist ideologies, and lead to Meyers dismissal without notice, after a two-year reign.

In the Australian context, a century on, the role of the architect in the discourse on the future of housing is astoundingly undervalued and the means architects see available to them to enter this discourse – imaginaries of new future housing types – has proved limited and lacking agency when pitted against a well-evolved set of market logics. With an ecology of factors contributing to the current market failure – an inclination among developers to repeat previous models, a financial sector that lends on the basis of these existing models, spatial regulations that intertwine with the other two limitations and, in Sydney specifically, a tradition of home ownership which creates significant cultural barriers in regard to alternate tenure models, the capacity of the architect to solve the aforementioned crisis through spatial innovation alone is seemingly bound.

⁷ Aureli, Pier Vittorio, A room Against Ownership, in 'Real Estates: Life without Debt' ed. Fulcrum (Bedford Press; First edition 2014), pp42-44

Rewriting the Brief

With the city population set to increase from five to eight million people between now and 2050⁸, Sydney is commencing a scale of housing deployment that could not have been conceived in the 1920s when Gropius was operating at the Bauhaus. With much of this additional housing stock to be apartments or other forms of dwelling other than the single-family house, we are, like Gropius, interested in what impact one can make when housing the population at scale, and transforming with it the city.

In contrast to Gropius's visions of standardisation for mass production, in Sydney at present apartment developments occur via a paradoxical process where the method of design and construction is highly *bespoke* while current regulation and design guide prescriptions⁹ have produced *homogeneity* in the housing stock. While architectural experimentation can of course contribute to unlocking this paradox, the delivery of housing diversity in Sydney is intrinsically linked with the systemic failure of the market as a whole. With standard apartment arrangements differentiated only by studio, one, two or three bedrooms, with the one and two-bedroom type being dominant, alternative domestic arrangements are severely challenged by this extreme housing standardisation. This obsession with specific functions for each room, sized relative to proprietary furniture arrangements for a specified interior, has led to a dead end in innovative spatial organisation of the home - while in other markets, more generic spaces and a visit to IKEA seem capable of addressing more complex realities.

⁸ Joye, Christopher. "Why Australia needs to get real on population growth" in Australian Financial Review, Nov 30, 2013. In the article, Joye quotes Australian Bureau of Statistics estimates from that period. Accessing the ABS website <https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3222.0> on October 28, 2019, noted this figure revised as to 6.4 million by 2026.

⁹ 'State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development', NSW Government State Legislation, 2019 <https://www.legislation.nsw.gov.au/#/view/EPI/2002/530/full>
'Apartment Design Guide' NSW Department of Planning, 2019 <https://www.planning.nsw.gov.au/apartmentdesignguide>

Therefore, in order to provide for the city on the whole we need to make visible the true nature of the contemporary demographic who need to be housed. *The nuclear family brief requires a re-writing.* But who should the new housing brief be written for? There are multiple dimensions in answering this question. For example, Australia is witnessing an increase in people living alone as part of a rise in single person households, which raises the issue of isolation and loneliness, while we also have an aging population where the need for addressing ‘aging in place’ is becoming necessary. Larger, extended and multi-generational and blended families are also more prevalent, which can also involve a temporal flux of children moving between households through the span of a week or fortnight and/or during longer holiday periods.

We suggest that this diverse set of requirements can be brought together via a conceptual move – identifying them all as part of the ‘Housing Diversity Gap’¹⁰. The ‘Housing Diversity Gap’ is a sector of the population in Sydney identified as stranded between those eligible to access affordable or social housing and yet their particular income level makes participation in the conventional housing market extremely difficult, or impossible. While this may at first appear to be an expressly economic analysis, it is the diversification of housing supply to meet the specific needs within this cohort that suggests a relation between the two issues – income and product, and as such, that the limited housing models produced here exacerbated affordability issues.

A ‘family’ with none, one, two or three children can now be reframed and understood in multiple ways, identified through data analysis¹¹:

¹⁰ The Housing Diversity Gap is a term used in the project between the Creating the City We Want research team and Landcom. Coincident with the project, the Landcom team developed this idea to mean those stranded between social and affordable housing and those who can enter the housing market on a 3x salary multiplier.

¹¹ As part of the Creating the City We Want research, Neil Perry from the University of Western Sydney worked with the authors and other researchers on a number of data analysis tasks to refine these definitions.

- Young and Mobile: while not at the lower end of the affordability spectrum, this group is an essential part of a growing knowledge-intensive economy and are easily enticed by interstate or overseas opportunities. In Sydney, where their high disposable income services a mobile lifestyle, the idea of ownership is becoming less desirable;
- Stuck at home: unable to save the required value of a deposit for a home in a context that is suited to their lifestyle or their needs to find ways of sharing ongoing costs of the home, and equally unable to afford rental prices close to their work, this group are literally :”stuck at home” without any transitional form of housing type and/or ownership structure that would allow them to commence a path towards building independence and equity;
- Priced-out commuters: dominated by young families where both parents work, single parent families and key workers for service industries such as health, police, education and so on, this group suffers from additional strains on family life given their huge daily commutes to and from work and school or childcare;
- Large + Multi-generational families: our diverse and multicultural population brings with it many families whose preference is to live in extended and multi-generational households, requiring both autonomous and communal spaces within or across families. Spatial and tenure models to enable this form of habitation are severely limited;
- Solo Seniors: a growing number of retirees are spending much of their later life alone, with lower disposable income and little to no opportunity to grow wealth further. The need for housing that allows them to remain in their local community in different forms of housing, with universal design for aging in place, is limited.

The identification of this diversity gap and its division into separate cohorts is in itself a power tool that can reveal to industry who their clientele actually are. Powerful as this might be in terms of making a case for multiple constituencies not catered for in our limited housing market – with the current boom in dense housing development to deal with population growth the

needs of the population, as outlined, are simply not being catered for. In order to substantiate why not, we need to uncover what the barriers are, and what role might architects have in addressing this situation.

What do we need?

Now we understand the cohorts, the question arises as to how architects might be able to design new housing types that respond to the aforementioned 'diverse' groups and convince the market that they are ready. We argue that the rush to design as the sole means of remediation is an error, as knowledge already exists in our discipline as to how this might be done. For example, spatial models have already been put into practice overseas that accommodate new family types and lifestyle requirements, such as new approaches to the ratio of communal to autonomous space, the proposition of the kitchen-less home¹² and the move towards the efficient 'micro living'. It has already been proven. The question is, why are we not developing these models in Sydney and why are Architect's not paving the way?

To sharpen the exploration, we analysed a large cross section of international exemplars in diverse housing specifically. After studying the plans of almost 200 projects across multiple eras and cultures, we were able to categorise them according to 8 types: Monotype, flexible floor plate, adaptable, offset, cluster, cluster-communal, live/work infill, and backyard (see figure 5, 6, 7). We found not only a diversity of apartment types, sometimes in a single project, but a radical difference between the spatial arrangements and our limited market. In matching these against our Diversity Gap cohorts, we found, at the level of plan arrangement, potential alignment between a number of the exemplar precedents and spatial opportunities that could more affectively accommodate them. (see figure 8)

This analytical work was then deployed across a series of case studies that looked to bridge the current homogeneous housing patterns and provide

¹² 'Kitchenless City' Anna Puigjaner, MAIO Architects, accessed September 2019, <https://www.maio-architects.com/project/kitchenless-city/>

alternate housing models that could specifically address the Diversity Gap. Through demographic data analysis we were able to pinpoint Local Government Areas within Sydney where significant supply and demand shortfalls in housing exist, identify the Diversity Gap cohorts most prevalent there and *engineer a more nuanced brief* directed at them.

Looking specifically at a speculative case study for Parramatta - we identified the cohorts, matched these against the matrix of associated exemplar precedent typologies, and developed a new set of apartment types that could be assembled around a service core “widget”.

Challenging our limited market offering and its prescriptive layouts which allocate every function on a room-by room basis, this process of allocation and assemblage, based around hard demographic data, allowed us to hone in on a measure of spatial innovation deployed through apartment flexibility – paying homage once again to the century old “Bauhausian logic” where generic room types are made habitable by the introduction of spatial instruments that enable specific functions, or multiple functions, to occur. Maximum standardisation and genericism of rooms, lends itself to maximum flexibility or ‘characterisation’¹³ of inhabitable modes – left up to the specificity of each occupant.

The assembly of a set of generic components affords a logic whereby, at the scale of a room, functional devices can transform the mode of inhabitation throughout a day¹⁴ simultaneously the operation of a single room and its adjacencies can alter the function of the whole apartment to suit the changing needs of a family throughout a lifetime. Taking this concept further to the scale of the block, the apartment mix for a building can be reconfigured to suit a change in demographic requirements for a neighbourhood over time – futureproofing the suburb to some extent as its resident demographics continue to evolve.

¹³ Gropius ‘New ways of living’ – Gropius, Walter, ‘*The New Architecture and the Bauhaus*’, trans. P. Morton Shand, intro Frank Pick, (MIT Press, 1965)

¹⁴ ‘ROGNAN Robotic for furniture for small space living’ IKEA, accessed September 2019, <https://ikea.today/rognan-robotic-furniture-for-small-space-living/>

Revealing the Barriers

At this point, the outcomes were tested against current market logics, revealing, as if invisible ink was washed through the drawings, the true barriers to housing diversity in NSW. By identifying those missing out and assembling a range of spatial types from acknowledged international exemplars in response to this data, we can test it against key elements of the housing industry. Government regulation is of course a profound influencer, and in NSW, we find not only the national building code (NCC) must apply but also local legislation such as SEPP 65 and its supplementary 'Apartment Design Guide' developed to ensure amenity at the level of the individual apartment. Yet when these codes are tested against diverse housing types, they fail. That is, some of the best housing in the world would be illegal in NSW.

A key dilemma is that SEPP 65, written 20 years ago, was conceived in a world where housing diversity was less understood, and unintentionally locked Sydney in to both a singular housing type and an outdated one at that, just as society started to understand it needed something more.

Another unforeseen effect of the regulation is its use on a non-discretionary basis (nearly always used as a mandatory requirement in the design and planning process to give market certainty) which has limited the opportunity for developers, and their architects, to innovate.

Secondly is the finance industry, where a series of constraints currently limit market access for those not in it already and specifically affect those that might occupy "diverse housing" models. General barriers across the market include land tax (which affect non-standard "owner-occupier" ownership arrangements), loan to value (LVR) ratios which are currently at 80% and thus require a 20% deposit and crude loan serviceability metrics which struggle to be met by an increasingly casual workforce. While some or all of these are relevant to the diverse housing cohorts, an additional barrier are liquidity criteria to enable banks to offload properties in economic downturns.

A perception among Australian banks, not mirrored in Europe, is that non-conventional apartment types and any apartment smaller than 45sq.m. are excessive risks and can be difficult to obtain loans for.

Finally, in terms of tenure, we found the opposite as with finance and regulations where the barrier is not the availability or structure of tenure models themselves – in fact, all new diverse housing proposals we made could have been accommodated by current tenure models. The two primary impediments were lack of familiarity among lenders, as noted above, and land cost. The matter of land cost concludes our argument exactly where we started. A neoliberal housing market that resists state intervention in models that might ensure all members of society are adequately housed inevitably results in large parts of society missing out in a distorted and uneven market.

With barriers to housing diversity revealed through the use of spatial thinking to expose specific constraints in the market, we were able to draft an advocacy paper that clearly identifies for agencies within Government, what the barriers are and how to address them.

With all this in mind, a new role for the architect is revealed, as an advocate to and/or within Government, armed with demographic and spatial arguments that insist upon regulatory reform if the Government's own policies are to be achieved.¹⁵

Conclusion

In examining the market failure of housing in NSW, we found multiple issues that overlap and interrelate. Apartments and medium density housing are bought and sold under one primary tenure model (strata), lending is based upon

¹⁵ Landcom has a Housing Diversity Policy, the Landcom Housing Affordability and Diversity Policy (12 September, 2017) which defines housing diversity, notes the desire to test models in new pilot projects and lists a series of commitments. However, to implement this policy in full, changes to the regulatory and other frameworks will be required, as outlined in this paper.

specific limits regarding apartment type and size within this model. These financial models then insist on a single type of housing, a condition compounded by the regulatory environment. The after-effect of these conditions is a homogenised housing offer and a stalemate in the market.

Productivity of the city sits in reciprocity with capturing diversity. The housing problem becomes therefore becomes an economic problem, if, put simply, the city can't house the people it needs to operate effectively. If the vision for Sydney is a city that continues to present opportunities for a diverse population, comprised of multiple cultures, family structures, incomes, ages and approaches to life, then the opportunities to shape such a city cannot be limited by the processes and models by which it is currently developed. These issues are now resonating beyond the specifics of diversity and affordability for the individual or family unit to impacts on *the potential of the city as a whole*.

However, as demonstrated, we can now identify exactly who is stranded in the Housing Diversity Gap, and where they are located. This information can then inform design solutions specific to the diverse needs of existing, new and emerging households, rather than an assumptive market of the past reliant heavily on the one and two-bedroom model. So, what is holding Architects back from designing for this measure of diversity?

The diverse housing spatial models we have proposed are currently illegal (in regulatory terms), unfinanceable (by the banking sector) and still unaffordable (given our limited engagement with alternate forms of tenure to deal with extortionate land costs). New spatial solutions are not in a naïve attempt to “solve the housing crisis” on their own, but to provide speculative models that can be tested against current regulatory, financial and tenure practices.

In the spirit of the Bauhaus, experimentation and speculation on ‘new ways’ of living can reveal new measures of housing that might create a city in which we want to live. Beyond that, the role of the Architect must extend to

designing the means through which reform might occur, as until they do, any number of possible future housing solutions will remain paper dreams. And Sydney will continue to be less and less habitable for those in the Housing Diversity Gap.

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