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A Comparative Analysis of Suburbs

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Introduction

Master Planned Estates (MPEs) are large-scale, comprehensively planned suburban estates on the outskirts of capital cities constructed by a private property developer alone or in partnership with the state. One of the distinguishing features of MPEs vis-à-vis other such estates is the active role played by the property developer in governing the estate for up to 15 years of its early establishment in an attempt to infuse the estate with a strong sense of community through symbolic and material practices of place-making and community development. While the estates are not formally gated, the symbolic boundaries between the estate and the surrounding area are such that MPEs are viewed as homogeneous enclaves for those with the resources to live alongside others who share their aspirations and standards of living. As a result they are much maligned in academic and public debates, alongside other forms of privatised or gated communities, for fostering a homogenous and exclusionary residential experience orchestrated by a private actor (Costley, 2006; Gleeson, 2003; Gwyther, 2005).

To date, such assertions about MPEs remain largely untested. The goal of this paper, therefore, is to examine these claims, which we do in two ways. First, we consider the extent to which MPEs can be properly understood as offering an incarcerated living experience, particularly in Australia where MPEs vary greatly in form and style. This diversity has often been overlooked in both the Australian and the international literature, with researchers frequently placing MPEs in the same category as gated and privatised communities and drawing similar conclusions about their role in enhancing urban inequality. In reviewing the literature, we seek to unpack the different forms of MPE and distinguish between the large-scale, comprehensively planned MPEs that are the focus of this paper, and smaller gated or privatised communities in which physical entry and/or access to facilities are closed off to outsiders. Having made this distinction, we argue that the larger MPEs being built on the outskirts of Australia's urban centres are – by design and default – somewhat limited in their ability to create the kind of incarcerated residential enclave that critical observers imagine or indeed that residents appear to desire.

Having de-coupled MPEs from the spatial enclaves of gated and other privatised estates, we turn to the second part of our analysis to consider how far MPEs deviate from more conventional forms of residential suburbs in terms of community social processes and outcomes, degree of homogeneity, and socio-economic characteristics. Existing research shows that aspirations of what Atkinson (2006) terms residential disaffiliation are not limited to residents of gated or privatised communities but are becoming increasingly prevalent among the middle classes more broadly. In this sense, MPEs may exhibit features that are not dissimilar to more established middle class suburbs. To date, an empirical comparison of this kind has not occurred, primarily due to the lack of comparative suburb-level data and a preference among researchers for in-depth single MPE case studies. The result is that existing work emphasises the *distinctive* features of MPEs – such as the aspirations of those who move there and the interventions of the property developer in manufacturing a sense of common identity and shared values among local residents – without attending to the broader question of what kinds of social outcomes are produced from this and whether (and in what ways)

they differ from those found in more conventional suburban formations.

Using data from a 2008 study of 147 suburbs across Brisbane, Australia (including two MPEs) we seek to progress an understanding of MPEs in three ways. First we assess whether the structural characteristics of the MPEs in our sample are distinct from those of comparable suburbs in terms of degree of homogeneity, residential mobility, household income, disadvantage and stage of family life-cycle. Next we explore whether residents of MPEs differ from those in other suburbs in their levels of social cohesion and trust and their attachment to place. Finally, as MPEs are positioned as disaffiliated places where property developers seek to create closer ties among residents on the basis of shared aspirations and values, we empirically test whether neighbourly interactions are higher in MPEs when compared to other suburbs.

Master planned estates: vehicles of privatisation corporatisation and exclusivity?

In many ways, MPEs are superior to earlier forms of unplanned development (Johnson, 2010) yet they attract considerable negative attention among academic and social policy commentators. Across the world, MPEs are viewed as part of a collective of privately governed residential enclaves (Luyes, 1997; McKenzie, 2005), which are separated from the urban matrix through the erection of physical barriers to entry, restricted use of common property such as streets, parks and other amenities, and the establishment of private governance structures that circumvent traditional governmental authority. Beginning in the US, researchers suggest we are witnessing a new form of (sub)urban segregation driven by a desire for social control and homogeneity, a fear of crime and the protection of property values. As Grant and Mittlestead (2004) note, the option of retreating to a residential enclave also appeals to those who have lost faith in the ability of public institutions and political processes to protect their homes and neighbourhoods. In this sense, enclave communities are considered both symptomatic of, and contributing to, a broader social malaise that confronts contemporary urban spaces involving new forms of social exclusion, the loss of generalised trust and reciprocity (Putnam, 2000) and a defensively localist collective ideology. In one of the earlier texts on this issue, Blakely (1994: 46, see also Blakely and Snyder, 1997) sees such 'forting up' as taking these trends to a new level:

They create physical barriers to access. And they privatize community space, not merely individual space. Many of these communities also privatize civic responsibilities such as police protection, and communal services such as schools, recreation and entertainment. When office and retail complexes are placed within the walls, the new developments create a private world that shares little with its neighbours or the larger political system. This fragmentation undermines the very concept of *civitas*: organized community life.

The growth in segregated enclaves is charted across the world, with gated communities sitting at the apex of these fortified privatopias (McKenzie, 2005 see Grant and Mittlestead 2004 for an overview of the geographic spread of gated communities). In the US, McKenzie (2005) estimates that privately governed residential enclaves are the dominant form of new housing in the US, providing home to some 50 million people, one quarter of whom live behind gates or walls. In the UK, Atkinson and Flint (2004) observe similar tendencies towards forting up in gated estates and argue this trend profoundly enhances the 'time-space trajectories of segregation' (2004: 877). For them, residential segregation not only facilitates the withdrawal of the affluent into spatially fixed enclaves, it creates a 'splintering urbanism' whereby such enclaves are attached to other segregated social spaces – such as leisure, schooling and social networks – via a series of paths that protect occupants from unwanted social contact with the wider citizenry. In Australia, Gleeson (2002: 229) has expressed similar concerns about the assumed insidious nature of new exclusionary residential developments, including MPEs:

The private forms of well-planned and well-managed neighbourhoods are the masterplanned showpieces of new urbanism that rejoice in their privileged homogeneity. Left behind are the deteriorating older suburbs with their increasing residualised and, in some cases, desperate populations (2002: 231).

It would seem, then, that MPEs facilitate a process of middle-class disaffiliation (Atkinson, 2006) that extends beyond the residential sphere to splinter the entire (sub)urban realm. The problem with such conclusions as they apply to the Australia context, however, are twofold. The first is that empirical evidence confirming such effects remains scant and still largely anecdotal (Gordon, 2004, Dowling, McGuirk and Atkinson, 2010). The second issue is that different researchers are studying very different phenomena with continual conceptual slippage between them. Encapsulated under this very loose category of enclave are residential forms of considerable diversity, all of which are perceived as having identical effects. This arises, in part, from the uncritical application of American literature and frameworks to understand Australian MPEs despite very different legislative frameworks in each country. But the problem of conflation can also be discerned in some of the early US literature which has subsequently been duplicated in later research (see Blakely and Snyder, 1997; Luymes, 1997; Gordon, 2004 as examples of research where conceptual slippage occurs).

In the US, researchers are essentially referring to two distinct, but overlapping phenomena. The first are gated estates which Grant and Mittlestead (2004: 913) define as 'a housing development on private roads closed to general traffic by a gate across the primary access'. The second are private neighbourhoods in which communal spaces, such as streets and parks, and local facilities such as leisure centres and swimming pools, are managed and regulated on behalf of residents by a self-governing homeowners' association (Glasze, 2005). Typically, core services traditionally provided by local government, such as street cleaning and refuse collection, are also managed by the association, prompting some commentators to see them as private governments (Gordon, 2004). Often called common interest developments (CIDs), these estates are based on a form of ownership in which residents purchase both an individual interest in their own property as well as a common interest in communal property. This includes mandatory membership to the homeowners association and compulsory fees for the ongoing maintenance of those communal areas (McKenzie, 2005).

Clearly, gated estates and CIDs are quite distinct phenomena although most gated estates in the US are run by private homeowners associations. Yet a great many CIDs – especially the larger new communities or new towns of over 100,000 people (Forsyth, 2002a; 2002b) – do not have formal gating in place. There is some debate in the US over the differential impacts of gating and CIDs to the enclave effect. Vesselinov et al (2007), for example, maintain that while gated communities fall into the category of CIDs, they also exist as a separate category of privatisation, commodification and seclusion of space, and display features that directly implicate them in the formation of urban inequality. Yet others, such as McKenzie (2006) and Purcell (1998), suggest that the privatised nature of CIDs is far more significant than the actual symbols of gating that are used to designate spaces as private. For McKenzie, the concern over CIDs arises from the fact that residential private governments 'are not restricted by conventional notions of civil liberties and due process of law, and their activities are supported by a powerful cadre of professionals' whose job is to serve the interests of members rather than broader society (2006a: 189).

CIDs and gated communities now exist in Australia although their numbers are still small in comparison to the US situation. Consequently, they have received far less attention in the academic literature. Exceptions to this are the work of Kenna (2010) and Rofe (2006) who focus explicitly on gated estates and Goodman and Douglas (2008; 2010) who consider the use of owners' corporations (or bodies corporate) in 'privatised communities' where shared property and assets are held under

community title legislation similar to American CIDs. The difference in Australia, however, is that the vast majority of estates held under community title are small in size, with Goodman and Douglas reporting seventy percent of all owners' corporations in Victoria are made up of five lots or fewer (Goodman and Douglas, 2008). A second distinction is that the estates are located in, and thus continue to fall under, the jurisdiction of local government (Kenna, 2010). For Goodman and Douglas (2008), one of the key dilemmas of these new privatised structures is that they render local residents responsible for managing a range of complex, and sometimes valuable assets, often without a clear understanding of their ongoing financial and legal obligations.

Our point, then, is that debates surrounding the formation of (sub)urban enclaves have developed in response to the emergence of two quite distinct residential formations – gated communities and privatised estates¹ – but that such debates are pervasively applied to a much broader assemblage of residential estates. Included in this disparate collection are the large outer-suburban MPEs examined in this paper which feature neither gates nor private governance structures. Further, although there is some evidence that the popularity of MPEs is partially driven by aspirations of disaffiliation among residents and a desire to live in a socially homogenous landscape (Gwyther, 2005; Kenna, 2007; Walters and Rosenblatt, 2008), the lack of legal structures in MPEs to support such aspirations often leaves new residents disappointed (Cheshire, Walters and Rosenblatt, 2010; Richards, 1990). This is not to suggest, however, that MPEs are not bound up in some way in the growing privatisation of residential life; simply that their distinct role in this process needs to be teased apart more carefully.

In an attempt to deal with these differences conceptually, Dowling and McGuirk (2010) draw upon Blakely and Snyder's typology of gated communities to devise a similar heuristic device for theorising MPEs. They find utility in the three major development types identified in Blakely and Snyder's original thesis – lifestyle communities, prestige communities and security zone communities – but add two new categories of their own: brownfield new towns and greenfield rural residential estates. What they have in common is that, to a greater or lesser extent, they have been subject to a process of master planning. Yet Dowling and McGuirk also suggest that the diversity in MPEs cannot be adequately captured by a schema which uses master planning as the fundamental dimension for classifying such a diverse group of residential formations. As a way of capturing the complexity of this broad set of assemblages, they introduce three additional dimensions of analysis to their classification. First, the nature of governance mechanisms involved in the production and ongoing management of MPEs; second the influence of housing market context in which MPEs are developed; and third the dynamic and lived nature of neighbourhood and community. Incorporating these elements in an analysis of any single MPE is certainly a useful exercise although formulating a workable classificatory schema on the basis of so many elements is challenging. Our proposal, then, is that one should exercise caution in devising a complex system of classification that is broad enough to capture every possible configuration of MPE especially when it does so at the expense of theoretical efficacy. Instead, we suggest that MPEs should be conceptually decoupled from gated and privatised estates and examined, on their own terms, to consider a) how and in what ways they operate as (sub)urban enclaves in their own right; and b) how they differ from more conventional, established suburbs of comparable demographic where middle class aspirations of disaffiliation are also thought to exist.

Comparing master planned estates and conventional suburbs: the orchestration of community

It is to this question of how, and in what ways, MPEs might be distinct from conventional suburbs

¹ In the absence of any Australian equivalent to the US common interest developments, we adopt the term 'privatised estates', as used by Goodman and Douglas (2008), to refer to those developments where communal property is held under community title.

that we turn in the second part of this paper. We begin by outlining the key features of MPEs that render them unique as planned developments and then subject them to comparative empirical analysis to examine, for the first time, how master planning influences community social processes. While there is a growing body of research on MPEs of this kind (see for example, Bosman, 2004; Cheshire et al, 2010; Gwyther, 2005; Kenna, 2007) most have utilised a case study methodology that focuses on one or two estates in detail. This research has highlighted the distinctiveness of MPEs vis-à-vis conventional suburbs and identified the following elements as significant.

The first is the extensive array of physical and social infrastructure, as well as housing, that is ready-provided as part of the master-plan. In an attempt to respond to earlier criticisms of outer-suburban developments as lacking essential infrastructure, property developers have worked closely with State and local governments to ensure that new estates are fully serviced with local schools, health centres, shopping and other commercial facilities, including (on occasions) tertiary education institutions. In larger MPEs, attempts may also be made to generate employment opportunities by offering financial incentives to private sector organisations willing to relocate in an endeavour to have residents 'live work and learn' in the area (Walters and Rosenblatt, 2008: 402).

The second is that the responsibility for planning and constructing MPEs has been shifted from the state to the corporate sector, although the continued involvement of state agencies alongside, or in partnership with, private actors has prompted McGuirk and Dowling (2009) to see MPEs as hybrid spaces that rearticulate the public-private divide rather than part of a coherent neoliberal privatisation project that displaces the state. While privatised governing structures internal to the estate – such as owners' corporations – are almost absent in large MPEs, the influence of corporate actors in constructing new suburban formations is indicative of a privatising governmentality which is likely to have wider social consequences. These include: the corporate branding of new suburbs by commercial companies and the commodification of community as something that can be packaged and sold, ready-made (Bartling, 2004; Walters and Rosenblatt, 2008); the dominance of private over public interests in determining how space is used and managed; the constitution of residents as consumers of a corporate product rather than citizens of a public realm; the inability of corporate actors to provide the range of human and welfare services that may be required in the outer-suburbs; and the socio-spatial inequalities that arise between a corporate-sponsored MPE and other less well-resourced suburbs nearby. Further attention to these issues is still required.

Third, is the superior aesthetic quality of the estate, featuring extensive landscaping and high standards of housing design and presentation. Well-maintained parklands, nature strips and what Johnson (2010) terms 'featurism', incorporating lakes, bandstands or pergolas are common to MPEs, both as a way of giving them an air of exclusivity (Duncan and Duncan, 2004) and to instill in residents a sense of attachment to, and ownership of, place.

A final distinguishing feature is the developer's attempts to infuse these new estates with a sense of community through symbolic and material practices of place-making and community development. Within the marketing literature, MPEs are often promoted as one of the few remaining spaces where people know and watch out for their neighbours, where civic engagement still occurs, and where residents feel a sense of belonging that combats the anonymity and strangeness of the outside world (Walters and Rosenblatt, 2008). Adopting the principles of new urbanism, developers have also sought to facilitate local interaction by mixing residential and commercial areas, creating walkable neighbourhoods, and making extensive use of recreational and open space so that opportunities for local encounters are increased. To this they have added symbolic markers of community such as distinctive entry signs to distinguish the MPE from surrounding areas as well as to affirm a sense of identity among residents. Upon moving in, residents are then subject to a series of community interventions provided by an on-site team of developer staff who facilitate the

establishment of local clubs, attend to the general needs of residents and generate community rituals and events – such as gardening competitions – that give the impression of a community established over time (Cheshire, 2011 forthcoming). These on-site interventions continue until all stages of the development are complete. When this occurs, the developer departs permanently and the estate is expected to function like any other suburb.

From this, it appears that MPEs offer a distinct living experience that certainly has broader ramifications for those who live there, and, potentially, for those who do not. Yet there is little research that empirically tests these claims. In what follows, we begin to address this omission, asking whether large scale MPEs can be distinguished from other suburbs in terms of their socio-demographic structure. Following this, we examine whether perceptions, interactions and intra community relationships are distinct in MPEs where place making and community building are not only marketed as a key feature of the suburb, but – importantly – instigated by a private actor.

Research Methodology

Our study employs census data from the 2006 Australian Bureau of Statistics and survey data from the 2nd wave of the Community Capacity Study (CCS): a longitudinal panel study of place funded by the Australian Research Council (Mazerolle et al., 2006; Wickes et al., 2010). The overarching goal of the CCS is to understand and analyse the temporal and spatial distribution of social capital and the key social processes associated with social organisation and community regulation across urban residential communities. The CCS was carried out in Brisbane, the Queensland state capital, which has a population of approximately 1.9 million people. This makes it the largest metropolitan area in Queensland and the third largest city in Australia. The CCS survey sample comprises 147 randomly-drawn suburbs with populations ranging from 245 to 20,999 residents (total suburbs in Brisbane = 429 with a population ranging from 15 to 21,001). The CCS suburbs are located in several statistical sub-divisions including the peri-urban areas experiencing large increases in population growth. For Wave Two, the total number of participants randomly selected from within these suburbs ranged from 12 to 54 people with a total sample size of 4,093 participants. Using Random Digit Dialing (RDD), the in-scope survey population comprised all people aged 18 years or over who were usually resident in private dwellings with telephones in the selected suburbs. The survey was administered through Computer Assisted Telephone Interviewing (CATI) by trained interviewers and lasted approximately 20 minutes. The overall consent rate was 47 percent and the survey was completed in May 2008 (for further information see Wickes et al., 2010).

Two MPEs fall into the CCS sample, both of which were built by one of the largest property developers in Australia, Delfin Lend Lease. The first is Forest Lake, one of the first large-scale MPEs in Queensland, which commenced development in the early 1990s. It is situated approximately 19 kilometres from Brisbane's CBD and comprises 1000 hectares divided into 15 smaller villages that provide a mix of housing options. Forest Lake currently has 7,800 homes and a population of 21,005 people (according to the 2006 ABS census). The population comprises 26 percent of children under the age of 14 and 13.8 percent of people aged 55 and over, with a median age of 32 years. Approximately 30 percent of the people in Forest Lake are born overseas, with English the main language spoken at home. Full time employment is the dominant employment status (67.2 percent) and the median weekly household income is \$1,230 (compared to Australia's average of \$1,027). The composition of Forest Lake is mainly families with children (51.2 percent) and the majority of residents live in separate houses (96.6 percent) despite the mixed housing choices on offer. Over 60 percent of the private dwellings are fully owned or being purchased. Forest Lake has extensive local services, including a 24-hour care and retirement village, several State and independent schools and colleges, a shopping village and a local craft markets held every Sunday. The estate also has a

community forum to coordinate various community programs and events and there are numerous community groups in operation. In 2006, the developer relinquished its responsibility for the maintenance of the land and infrastructure, and local affairs are now solely managed by the Brisbane City Council.

The second MPE, Springfield Lakes, was formally named in 2000 (Walters and Rosenblatt 2008) and is becoming one of the biggest master planned community projects in Australia with development continuing through to 2020 (Delfin Lease, 2011). It is located 25 kilometres to the south west of Brisbane, along the rapidly growing 'Ipswich Growth Corridor', and falls within the bounds of Ipswich City Council although the developer presently remains on-site to oversee the development of the estate. There are 4,852 people residing in Springfield Lakes, 29 percent of whom are under the age of 14 (ABS, 2006). The median age is 37 years and 27.5 percent of people in Springfield Lakes are born overseas. English is the most common language spoken at home (82 percent). Most residents work full time (72.2 percent) and the median weekly household income of \$1,305 is above the Brisbane average. The composition of Springfield Lake is mainly families with children (51.8 percent) and the majority of residents live in separate dwellings (93.4 percent). Approximately 60 percent of the private dwellings are fully owned or being purchased. Delfin's master planning schema is fairly consistent across sites so that the design of Springfield Lakes is similar to that of Forest Lakes, being divided into numerous villages with a central shopping complex and community centre. There is extensive parkland on the estate and three recreational lakes, along with sporting ovals, tennis courts and integrated playing fields. In 2006, the University of Southern Queensland opened a new campus at Springfield Lakes, which has since been accompanied by several new State and independent schools.

Data and Analytic Approach

In comparing MPEs with other residential suburbs, we progress our analysis in two stages, First, using 2006 census data, we employ a cluster analysis to identify community typologies based on theoretically informed socio-demographic characteristics and assess the variables primarily responsible for suburb classification (Baum, 2004). Univariate statistics for these census variables are noted in Appendix 1. In Australia, disadvantage, family and household composition, residential tenure, and race and ethnicity are characteristics that reliably discriminate clusters of community types in metropolitan areas (see Baum, 2004). For these analyses we include the following variables:

SEIFA Index of Relative Disadvantage: This is a general socio-economic index that summarises a range of social and economic resources of people and households in a given area (ABS, 2006). It comprises indicators that assess the degree of low income, low education, unemployment and unskilled occupations in a particular geographic area. A low score on this index indicates that there are many a) households with low incomes, b) people without educational qualifications; and/or c) people working in low skilled occupations (ABS, 2006).

Residential Mobility: To assess the degree to which suburb clusters can be differentiated from each other in terms of residential stability, we draw on a single variable from the ABS 2006 census data: the proportion of people living at a different address 5 years prior. Essentially, this measure captures the degree of out migration evident in a particular suburb between the 5 year census periods.

Household Composition: We use two census variables to represent household composition. The first is the median age of the population while the second is the proportion of families with dependent children. This measure adequately captures both youth dependency and single and couple households with children, both of which are important in discriminating clusters in Australian

metropolitan areas (Baum, 2004).

Population Density: The CCS sample includes densely populated inner city suburbs and those that are located some distance from the city centre that have lower population density. We therefore include a population density variable that measures total persons by square kilometre.

Ethnic Diversity: The final measure we employ in the cluster and discriminate analyses is the proportion of people from a non-English speaking background (NESB). Although ethnic diversity encompasses more than just language, in Australia many immigrants come from English speaking countries where the majority population is Anglo-Saxon (Price, 1999). Second, place of birth data or ancestry variables do not account for Australian-born residents who identify with the cultural practices and values of the country of their parents', or even grandparents', birth (Johnston, Forrest and Poulsen 2001).

The second stage of the analyses for this paper assesses whether MPEs differ from their cluster group and the other suburbs in terms of the perceived social cohesion and trust, attachment to place, the mean number of neighbours known and the mean contact with neighbours. Here we draw on survey data from the second wave of the CCS. To do this we employ single sample t-tests to test mean differences between MPEs and their cluster group and MPEs and the CCS suburb sample.

To assess the amount of variation attributable to suburb level differences for the two scales, we draw on the work of Raudenbush and others (1991) and use the following equation:

$$IC_{Suburb} = \frac{1}{n_{suburb}} \sum_{i=1}^{n_{suburb}} \rho_{suburb}$$

Where n_{suburb} denotes the number of suburbs sampled (147) and ρ_{suburb} is the intra-class correlation of the i th suburb. The latter is estimated by:

$$suburb_i = \frac{\sigma_{suburb}^2}{\sigma_{suburb}^2 + \left(\frac{\sigma_{IND}^2}{n_i} \right) + \left(\frac{\sigma_{\epsilon}^2}{n \times I} \right)},$$

where σ_{suburb}^2 is the between suburb variation, σ_{IND}^2 is the between individual (within suburb) variation and σ_{ϵ}^2 is the within individual, or error, variation, n_i is the number of individuals sampled in the i th suburb and I is the number of constituent items of the particular construct under consideration. We report the results of these analyses in the variable descriptions that follow.

Social Cohesion and Trust: The first variable is the social cohesion and trust scale. This scale comprises five items from the CCS survey (see Appendix 2 for a list of the CCS items employed and Appendix 1 for all univariate statistics). This scale is very reliable with a Cronbach's alpha of .75. The intra-class correlation for this measure reveals that approximately 11 percent of the variation in this scale is attributed to differences between suburbs.

Place Attachment: The CCS comprises four items measuring place attachment. This scale has sound reliability with a Cronbach's alpha of .79. The intra-class correlation for this measure indicates that just over 9 percent of the variation in this scale is attributable to differences between suburbs.

Density of Friends and Acquaintances: To capture density of friends/acquaintances, respondents were asked to report how many neighbours they know by name: no neighbours; a few of them;

most of them; or all of them. We used the mean for the suburb in our analyses.

Frequency of Neighbour Exchange: To measure frequency of neighbour exchange, residents were asked to report how many times they had contact with neighbours in the previous week. Respondents were asked to report if they had contact: not at all; once; twice; three times or more. We use the mean for the suburb in our analyses.

Results 1. The structural characteristics of MPEs: homogenous but not elite

The first analysis employed Ward's clustering method (Ward 1963): an agglomerative method of hierarchical cluster analysis, which begins with each observation in a separate cluster. At each successive step, clusters closest together in Euclidean distance are combined to form a new aggregate cluster until the final cluster solution is produced which contains all observations. This method produces clusters with minimum within-cluster variance. The best cluster solution was initially determined to be a six-group solution as indicated by the Calinski-Harabasz pseudo-F statistic (Calinski and Harabasz, 1974). However, in the case of identifying suburb typologies, as suggested by Hill et al. (1998) and Gittleman and Howell (1995), it is the face validity of the final cluster solution that is of most importance. After examining results for three to seven clusters, based on the face validity of the cluster solution and the interpretability of the groups, we selected a cut point of five clusters (Baum 2004; Gittleman and Howell 1995 and Hill et al. 1998) as the sixth group was a splinter of the Cluster 1 and not meaningfully distinguishable. The resulting five clusters were all large enough to ensure some stability to the statistical inferences and have distinctly identifiable socioeconomic profiles. The cluster groups and their standardised cluster means are in Table 1. Appendix 3 displays the list of suburbs by clusters.

The five clusters that emerge from this analysis represent qualitatively different suburb types. Cluster 1 is the average cluster group which is distinguished from Cluster 2 by its population density, median age and proportion of dependent children. Suburbs in Cluster 3 are populated by English speaking residents and represent the least densely populated suburbs with the lowest levels of mobility and disadvantage. Clusters 4 and 5 are similar in their levels of disadvantage but differ in terms of the proportion of people from NESB and age. Cluster 4 has the highest proportion of NESB while Cluster 5 has the highest median age. The two MPEs in the CCS sample fall into Cluster 1.

In the CCS suburb clusters, there are decidedly affluent suburb clusters (Cluster 2 and 3), yet neither MPE falls into these groups. Interestingly, both Forest Lake and Springfield Lakes fall into Cluster 1, the average cluster group. In looking at the standardised means for this group (see Table 1), the socio-economic ranking is average (the mean score the middle point when compared to the other cluster groups). This contradicts the literature which suggests MPEs are elite enclaves. However, there is some evidence to support the notion that MPE residents do tend to be a more homogenous group, largely represented by young families. The cluster in which MPEs fall tends to have slightly lower proportions of people from NESB and the highest mean score on the proportion of families with dependent children. That said, the cluster analysis provides sufficient evidence to suggest that at least structurally, MPEs are no different from more conventional, established suburbs.

Table 1. Cluster Descriptions and Standardised Group Means for the CCS Suburb Clusters

	Population density	% NESB	% different address 5 yrs ago	SEIFA	% families with dependent children	Median age
Cluster 1 Average, Young Families (n = 53, 36.05%)	-0.133	-0.263	0.432	-0.139	0.570	-0.657
Cluster 2 Young, Densely Populated (n = 24, 16.33%)	1.433	-0.128	0.250	0.568	-0.511	-0.181
Cluster 3 English Speaking, Advantaged, Low Density (n = 36, 24.48%)	-0.910	-0.470	-0.724	0.851	-0.009	0.592
Cluster 4 Disadvantaged and Ethnically Diverse (n = 22, 14.96%)	0.551	1.851	-0.209	-1.170	0.080	-0.431
Cluster 5 Older, English Speaking, Disadvantaged (n = 13, 8.84%)	-0.525	-0.542	0.169	-0.868	-1.449	2.053

We then employed a linear discriminant analysis to identify the linear combinations of census variables that best discriminate between clusters. Our findings indicate that over 90 percent of the observed variation in the clustering can be attributed to three principle factors (i.e. linear combinations of variables). The coefficients for these factors are in Table 2. All three factors load heavily on median age, signifying the importance of household composition for dictating group membership. The first factor loads most heavily on percentage of NESB residents indicating that ethnic composition contributes to cluster assignment. Similarly, heavy loading on SEIFA under the second factor, and population density in the third factor indicates that suburb economic status and population density are highly influential in determining the final cluster solution. These primary factor loadings inform the cluster descriptions listed in Table 1.

Table 2. Coefficients of linear discriminant functions for clusters

	Function 1	Function 2	Function 3	Function 4
Population density	0.196	-0.753	-1.355	0.220
% NESB	1.143	0.688	0.228	0.799
% different address 5 yrs ago	-0.237	0.326	-0.395	-0.733
SEIFA	-0.422	-0.993	0.234	0.797
% families with dependent children	0.133	0.113	0.244	0.029
Median age	-1.014	1.079	-0.804	0.408
Proportion of Variance Explained	0.4304	0.2769	0.1994	0.0933

Results 2: Assessing community in suburb clusters: MPEs high in sense of community but low in neighbourly interactions

In MPEs, the developer plays an active role in generating a sense of community, both in terms of place making and providing resources for community building. However, existing research on Australian MPEs indicates that while residents may feel connected to others, their sense of community is largely perceptual with limited interaction among residents the norm (Walters & Rosenblatt, 2008; Rosenblatt, Cheshire and Lawrence, 2009; Wickes 2010). As Rosenblatt et al, explain in their own study of Springfield Lakes :

... affective ties of belonging to place and to a perceived community are strong in Springfield Lakes, but this does not equate with a desire by all residents to be involved in collective activity. Rather, they appear happy to attend entertainment and other events provided by the developer, which creates a sense of 'imagined community' (Anderson 1983) but does not involve participation (2009: 138).

In our final analysis, we progress one sample t-tests to determine if this characteristic of MPEs is in any way unusual or whether it is a characteristic of other comparable suburbs. This involves comparing the two MPEs with other suburbs in the CCS sample and their specific cluster group (Cluster 1) on perceptions of social cohesion, trust, attachment to place, the density of neighbourly ties and the frequency of contact with neighbours. As noted in Table 3, there are some distinct differences between MPEs and other suburbs, but these patterns also differ for each of the two MPEs.

Looking first to Springfield Lakes, we can see that this MPE does not differ in its mean level of social cohesion and trust or place attachment when compared to suburbs in the CCS more broadly or in the suburbs that form Cluster 1 (the cluster in which they fall). Yet, interestingly Springfield Lakes scores significantly lower than the CCS sample and Cluster 1 in terms of knowing neighbours by name, although they score significantly higher in frequency of contact. This is likely due to two factors. First, is the 'newness' of the estate and the fact that residents are still arriving and thus in the process of getting to know their neighbours. Instead, they may feel a shared sense of purpose during the building and development phase and may wave or say hello to people in their area, without feeling the need to establish closer ties. The second explanation may relate to the efforts of the developer in creating public spaces that facilitate contact among residents as soon as they arrive – the shopping centre, the parks or the boardwalks around the lakes and the community events and activities – that allow for frequent public encounters without necessarily requiring prolonged engagement or interaction. Such findings are thus not unexpected for a newly developing suburb: resident are less likely to know their neighbours, have no greater levels of social cohesion or place attachment but encounter more regular contact with those living nearby than comparable conventional suburbs. The question of whether, and to what extent, these processes change over time as the estate matures can be addressed by taking a look at Forest Lake which has been established for much longer and now operates as a conventional suburb without developer involvement.

In contrast to Springfield Lakes, residents in Forest Lake report high levels of social cohesion and trust when compared to the CCS suburbs and Cluster 1. As it relates to their reported place attachment, when compared to the other suburbs in their cluster, residents of Forest Lake are significantly more attached to their suburb. As Forest Lake is a well established suburb, it is perhaps not surprising that a shared identity and a strong attachment to place here. However, residents in this MPE know significantly fewer neighbours when compared to the broader CCS sample. This

suggests, as indicated above, that what drives residents' accounts of cohesion and attachment is a *perceived* sense of identity rather than an identity developed out of interpersonal connections and frequency of exchange with neighbours.

Table 3 Comparison of means between MPEs, the CCS Sample and Cluster 1

	t	p value	Mean Suburb	Mean Cluster	Mean Sample
<i>Springfield Lakes compared to CCS Sample</i>					
Number of Neighbours Known	-3.25	0.003	2.31	2.64	2.77
Frequency of Contact with Neighbours	2.72	0.011	2.48	2.11	2.11
Perceived Social Cohesion and Trust	0.73	0.488	.88	.74	.80
Feelings of Place Attachment/Belonging	-0.19	0.854	1.04	1.01	1.07
<i>Forest Lake compared to CCS Sample</i>					
Number of Neighbours Known	-2.93	0.005	2.46	2.64	2.77
Frequency of Contact with Neighbours	-0.94	0.357	1.96	2.11	2.11
Perceived Social Cohesion and Trust	2.58	0.013	.98	.74	.80
Feelings of Place Attachment/Belonging	1.81	0.077	1.22	1.01	1.07
<i>Springfield Lakes compared to Cluster 1</i>					
Number of Neighbours Known	-2.33	0.027	2.31	2.64	2.77
Frequency of Contact with Neighbours	2.72	0.011	2.48	2.11	2.11
Perceived Social Cohesion and Trust	1.21	0.280	.88	.74	.80
Feelings of Place Attachment/Belonging	0.23	0.821	1.04	1.01	1.07
<i>Forest Lake compared to Cluster 1</i>					
Number of Neighbours Known	-1.69	0.097	2.46	2.64	2.77
Frequency of Contact with Neighbours	-0.94	0.351	1.96	2.11	2.11
Perceived Social Cohesion and Trust	3.29	0.002	.98	.74	.80
Feelings of Place Attachment/Belonging	2.54	0.014	1.22	1.01	1.07

Discussion and conclusion: orchestrating community in an MPE

The aims of paper have been twofold. First, to conceptually disentangle MPEs from privatised and gated communities on the basis that attempts to bring them together into a single framework fails to recognise their complexity. While the enrolment of the corporate sector into the practice of suburban development certainly raises questions about privatising tendencies in new communities, the absence of any legal structures to support and maintain this privatisation over time means that MPEs must be theoretically decoupled from other residential estates where private governance structures endure. Further, the withdrawal of the developer from the site on completion of the project indicates that MPEs are ultimately designed to function as conventional suburbs in the long term, with the active intervention of the property developer in the early years intended to facilitate this process. This is not to suggest, however, that the process of exit by the developer is entirely unproblematic as research shows that residents are often concerned about the future of their suburb and the potential for perceived high standards to lower once the developer withdraws (Cheshire et al, 2009). Nor is it to suggest that the community development processes of property developers are benign and intended only to serve the community's interest. Indeed, prior research into the governmental practices of private property developers on MPEs has uncovered the mechanisms through which property developer seek to harness residents' aspirations to live in a quality suburb with their own ambitions for protecting the value of their investment and corporate brand (Bartling, 2004; Cheshire et al, 2009; Gwyther, 2005). For Bartling (2004) in his analysis of the Disney town of 'Seaside' in Florida, it is the commodification of space for the pursuit of corporate

capital, rather than the privatisation of space that is at issue by virtue of the way that community, open space and harmony, become selling points or commodifiable objects for purchase. Such concerns have certainly been levelled at MPEs in Australia (Walters and Rosenblatt, 2008) although, once more, the absence of any legislative frameworks to protect developer interests in Australia renders this commodification process contingent on the ability of the developer to convince residents to voluntarily buy into the dream. The results of our survey relating to place attachment indicate that, on the whole, residents of MPEs do display a sense of living somewhere special although research has also highlighted considerable dissatisfaction among residents when the dream fails to materialise and their suburb is revealed to be no different from anywhere else (Cheshire et al, 2010; Richards, 1990).

These findings are further supported through our attempts to embed MPEs within a broader suburban context as a way of better understanding the socio-structural similarities and dissimilarities of MPEs with more established suburbs that are not master planned. Our findings demonstrate that MPEs have similar socio-structural characteristics with young, mobile, family oriented suburbs. Yet, while critics and, to some extent, developers and residents may purposively inculcate an image of Anglo-Saxon affluence and exclusivity, the two MPEs in our sample are relatively average in terms of their socio-economic status and have only a slightly lower proportion of NESB residents. To this end, there appears to be a disjuncture in the socio-structural image of MPEs as elite enclaves typically projected and their actual socio-demographic composition.

Finally, we sought to contrast MPEs with suburbs in their own cluster and those of the CCS more broadly, to examine their 'unique' character as it relates to social perceptions, interactions and engagement. To do this we chose theoretically informed indicators that assess community perceptions/attitudes, neighbourly interaction, and the density of local ties. Our findings indicate that the two MPEs differed from each other, and the CCS suburbs in the sample. When comparing the MPEs with other suburbs, we found two notable differences. First, in the newer MPE of Springfield Lakes, residents reported a high frequency of exchange with their neighbours. This we suggest is most likely due to the recent commencement of the development and the 'newness' of the estate which may facilitate social interaction as residents have a 'shared' experience in settling into their new environment. It may also be the outcome of the developer's attempts to foster local social interaction by bringing new residents together into a shared public space. What is interesting, however, is that 'more' contact does not translate into stronger interpersonal connections since residents in both MPEs report knowing significantly fewer neighbours by name. Again, Walters and Rosenblatt (2008), have alluded to this disjuncture between neighbourly exchange and social contact as follows:

... [residents] described their membership in terms of group spectacle, the sense of community generated through the developer's staging of various events such as fun runs, market days, children's entertainment and outdoor movie screenings. These were events where one could see, and become familiar with, the sight of other residents, but not necessarily in order to interact with them (2008: 405).

The second notable difference concerns the shared perceptions of cohesion and attachment. Residents in Forest Lake consider themselves to be living in a socially cohesive environment and report a strong attachment to place than comparable suburbs. Yet this sense of shared identity does not appear present in Springfield Lakes despite the high level of contact among neighbours. While it is possible to explain the lower level of social cohesion in Springfield Lakes through reference to its newness – that it takes time for these sentiments to develop as the suburb settles – what is more interesting is the high attachment to place and sense of shared identity in the more established MPE of Forest Lake. In other words, there is something distinct about an MPE vis-à-vis other suburbs

whereby a stronger sense of identity and belonging is fostered over time, even when the developer has left. This might suggest that the developer's attempts to create community on an MPE are relatively successful when it comes to promoting a heightened sense of community and that residents' experiences of living on an MPE are consistent with the idyll presented to them. If this is true, then we would expect to find similar processes occurring in Springfield Lakes over time. As a longitudinal project, the collection of data from subsequent waves of the CCS survey will enable us to test this proposition in due course.

In general, therefore, we can conclude that MPEs are not dissimilar to conventional suburbs of comparable type except for having lower levels of neighbourly interaction and a stronger sense of community as the estate matures. The lack of local civic engagement or neighbourly interactions appears to have little effect on residents' overall sense of shared identity with their neighbours, although it may ultimately work to undermine the civitas, or organised community life, that Blakely (1994) notes. For him, and others, the erosion of the public sphere is fostered by the retreat of the privileged into gated or privatised communities that formed part of a splintered urbanism (Atkinson and Flint, 2004) which cuts across various domains of social life. Where MPEs facilitate this process is not through the enclavement of the affluent, but perhaps in the commodification of the social whereby community life, social infrastructure and local activities are readily provided or facilitated by a corporate property developer as part of the master planned package without any additional input from residents. In other words, someone else is 'doing community' (Walters and Rosenblatt, 2008: 407). While we may expect this to change when the developer withdraws, the case of Forest Lake so far indicates that residents' sense of attachment to their suburb is enhanced rather undermined. Ongoing attention to the long-term implications of master planning for suburbs that were once MPEs but have since been normalised is therefore required.

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Appendix 1

Univariate Statistics 2006 ABS Census and CCS Survey

Variables	<i>N</i>	Mean	SD	Min	Max
<i>Community-Level 2006 ABS Census</i>					
SEIFA Disadvantage Score	147	1034.28	81.96	753.00	1154.00
% At Address 5 Years Ago	147	40.42	10.41	7.85	77.00
Population Density	147	8.93	8.26	0.10	33.82
Median Age	147	35.44	4.51	26.00	51.00
Proportion NESB	147	1.37	1.92	0.00	9.62
Proportion of families with dependent children	147	43.16	6.58	28.18	59.65
<i>Community-Level CCS Survey</i>					
Social Cohesion and Trust Scale	147	0.80	0.26	0.11	1.30
Place Attachment Scale	147	1.07	0.22	.45	1.48
Mean number of neighbours known by name (scale 1-4)	147	2.77	0.27	2.28	3.48
Mean frequency of contact with neighbours (scale 1-4)	147	2.11	0.28	1.42	2.74

Appendix 2

CCS Items

Social Cohesion and Trust
People around here are willing to help their neighbors? Would you say you strongly agree, agree disagree or strongly disagree?
This is a close-knit neighborhood? Would you say you strongly agree, agree disagree or strongly disagree?
People in this neighborhood can be trusted. Would you say you strongly agree, agree disagree or strongly disagree?
People in this neighborhood generally don't get along with each other. Would you say you strongly agree, agree disagree or strongly disagree?
People in this neighborhood do not share the same values. Would you say you strongly agree, agree disagree or strongly disagree?
Place Attachment
I feel that I belong to this local community Would you say you strongly agree, agree disagree or strongly disagree?
I would like to be living in this local community in three years time Would you say you strongly agree, agree disagree or strongly disagree?
I am proud to live in this local community Would you say you strongly agree, agree disagree or strongly disagree?
I feel a responsibility to make a contribution to the local community. I live in Would you say you strongly agree, agree disagree or strongly disagree?
Density of Friends and Acquaintances
How many of your neighbours would you say you know by name? None of your neighbours; a few of them; most of them; all of them.
Frequency of Neighbour Exchange
How many times have you had contact with a neighbour in the previous week? Have not had contact; once; twice; three times of more

Appendix 3

Suburb Clusters

Cluster Number	Suburbs
1	Strathpine , Bald Hills, Barellan Point, Tennyson, Daisy Hill, Capalaba, Yeerongpilly, Slacks Creek, Caboolture South, Lawnton, Bray Park, Belmont, Brendale, Burpengary, Rothwell, Alexandra Hills, Underwood, North Ipswich, Bellbird Park, Pine Mountain, Tanah Merah, Kallangur, Griffin, Loganholme, Camira, Petrie, Hillcrest, Upper Caboolture, Morayfield , Deception Bay, Loganlea, Waterford, Seventeen Mile Rocks, Redbank Plains, Collingwood Park, Dayboro, Boronia Heights, Regents Park, Meadowbrook, Forest Lake , Dakabin, Warner, Drewvale, Heritage Park, Mount Cotton, Parkinson, Narangba, Mango Hill, Springfield Lakes , Mackenzie, Eatons Hill, Springfield
2	Paddington, Kelvin Grove, Greenslopes, Red Hill, Annerley, Springwood, Jindalee, Corinda, Sherwood, Jamboree Heights, Newmarket, Chelmer, The Gap, Yeronga, Fairfield , Tarragindi, Shailer Park, Bardon, Cornubia, Ashgrove, Murrumba Downs, Graceville , Albany Creek, Sinnamon Park
3	Capalaba West, Whiteside, Mount Ommaney, Rochedale, Ellen Grove, Burbank, Sheldon, Clear Mountain, Kurwongbah, Forestdale, Camp Mountain, Mount Glorious, Chandler, Karalee, Kholo, Joyner, Ocean View, Thornlands, Draper, Wights Mountain, Cedar Creek, Samford Village, Upper Brookfield, Samford Valley, Mount Nebo, Samsonvale, Karana Downs, Mount Samson, Anstead, Mount Crosby, Bunya, Closeburn, Pullenvale, Highvale, Chuwar, Cashmere
4	Woolloongabba, Sunnybank Hills, Pallara, Salisbury, Gales, Moorooka , Oxley, Stretton, Durack, Dutton Park, Runcorn, Calamvale, Dinmore, Kuraby, Browns Plains, Logan Central, Woodridge, Riverview, Inala, Kingston, Goodna, Doolandella
5	Sandstone Point, Toorbul, Donnybrook, Cleveland, Redbank, Meldale, Beachmere, Godwin Beach, Kippa-Ring, Bethania, Ningi, Ormiston, Caboolture