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Processes of Peripheralisation: 
Toehold and Aspirational Urbanisation in the GCR

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Abstract: This article interrogates the term “periphery” by examining the forms of urbanisation unfolding in the Gauteng City-Region (GCR) of South Africa. Among the urbanisation processes identified, it focuses on two, situating them among debates on informality and defining new vocabularies of urbanisation. Aligned with discussions of peripherality as a social phenomenon, the article first depicts how some marginalised groups of people using transversal means carve out “toeholds” near urban centralities and opportunities. Second, it conveys how peripherality is also a geographical phenomenon, describing “aspirational” mass housing for the lower-middle class on urban peripheries that can generate unexpected forms of precarity. The article concludes that toehold urbanisation and aspirational urbanisation drive peripheralisation in the GCR, and considers the implications of these concepts for critical geography and urban studies.

Keywords: peripheralisation, urban peripheries, urban informality, mass housing urbanisation, urbanisation processes, Johannesburg, Gauteng City-Region

Introduction

This article discusses the concept of peripheralisation through the Gauteng City-Region (GCR) surrounding Johannesburg and Pretoria in South Africa. Although the terms “periphery” and “peripheral” are utilised frequently in the fields of geography and urban studies, how they relate to urbanisation is not clearly defined. One possibility of locating the periphery is portrayed in the discourse on peripheral urbanisation, construed primarily as a socio-spatial phenomenon, in which a periphery can occur anywhere people utilise “transversal” logics to produce space (Caldeira 2017; Denis and Zéra 2017; Mukhopadhyay et al. 2020; Roy 2011). Another way to depict the periphery is as a geographical phenomenon: part of the extended urban scale that creates a dynamic tension between centralities and peripheries. This follows the spatial production theories of Henri Lefebvre (Schmid 2008), and the various forms that contemporary processes of urbanisation inscribe into space, requiring a new vocabulary of urbanisation (Brenner and Schmid 2015).

Building on the shared logic of these theoretical perspectives, this article proposes defining “periphery” as a space that results from processes of peripheralisation: the specific ways in which urbanisation perpetuates or exacerbates structural
spatial inequality. The article describes this in terms of the urban fabric, or the “framework of daily activities and routines, the constraints and options people have in daily life, and the access to all sorts of material and social resources” (Schmid et al. 2018:29). Accordingly, processes of peripheralisation are dependent on, and also shape, the structure of space, as empirical research into the GCR reveals.

The article demonstrates how peripheralisation occurs by proposing the concepts of toehold urbanisation and aspirational urbanisation. Toehold urbanisation is the transformation of spaces primarily by people, exercising their own agency to build and finance dwellings, in order to access centralities and opportunities. Aspirational urbanisation is the commodification of geographically peripheral areas by private developers, who create large-scale, mortgage-backed housing settlements for people “aspiring” to secure their place in the middle class through the asset of their home. These terms are based on the analysis of material-spatial characteristics—the structure and elements of space and regulations that produce it—as well as social-relational characteristics of the urban fabric—how people live and experience space and time. Primary methods comprised: several hundred site visits including participant observation and ethnographic interviews; nearly 100 interviews with professional experts, like planners or government officials, as well as local experts like community leaders, taxis drivers, or families; several years of mobility studies tracking movements and modes of transportation; and literary and archival review. The empirical findings were synthesised through a novel mapping method developed to visualise processes of urbanisation (Diener et al. 2005; Streule et al. 2020:653). By investigating the entire region of the GCR for more than a decade, the specific processes of toehold and aspirational urbanisation emerged relationally and comparatively, alongside several other identified processes. As the article concludes, while these particular processes unfold in local ways to drive peripheralisation, the categories have broad implications for cases worldwide.

Many investigations into peripheries share a concern for the constitution of the “outside” and for the people residing there (Mbembe and Nuttall 2004; Meth et al. 2021; Parnell and Robinson 2012). This article is similarly grounded in postcolonial stance that any “ordinary” place is worthy of originating urban theory (Robinson 2006, 2016). It contributes to discussions on the concept of “ peripheral urbanisation” framed by Caldeira (2017), in regard to the kinds of production occurring outside the logics of planning. Yet while such production has been characterised as “informal” (Roy 2011), this very “being outside” ties peripheralisation to the logics of capital and the state, in housing the labour forces that power urban regions (de Oliveira 1972). Linking these concepts to a trans-scalar analytical framework unveils the distinctive mode of territorial production operating in the GCR, in which the regulated production of housing by an “agentful” state (Robinson et al. 2021) on the geographic peripheries and people constructing their own environments in precarious central locations both serve to further ingrain structural spatial inequality into the urban fabric.

The case of the GCR reveals that a “periphery” can indeed occur anywhere, but it is a product of the everyday interactions, routines, forms of mobility, and temporalities (Simone 2021) that connect spaces with a specific history to the greater
surrounding region. This echoes the notion of centrality as a dialectic between places of varying power, described by scholars like Gundogan (2021:49) as “the encounter, interaction, and assembly of differences coming together and creating something new” in the material spaces, regulatory frameworks, and lived experiences of the urban. Specifically, “logistical centrality”, or the density and direction of transportation and mobility networks in extended urban regions (Kretz and Küng 2016), compels people throughout the GCR, determining whether those in toeholds are able to successfully overcome peripheralisation and those in aspirations can overcome the form of marginalisation this article presents (Howe 2021b). These dynamics are a residual of apartheid and continue to ingrain intractable patterns of structural spatial inequality. This extended urban region clearly demonstrates the social-relational processes that peripheralise people, as well as the material-spatial processes reflected in the built environment, resulting in “periphery” (a place) and “peripheralisation” (a process).

**Locating the Periphery in Space and Time**

I began researching Johannesburg shortly after the 2010 World Cup had emended the city: the Gautrain ferried tourists from the airport to the CBD, the Maboneng district downtown was beginning to thrive, and the dominant mantra of development was creating a “world class African city”. Inherently a contentious statement—what was world class, and what would be distinctly “African” about it in Johannesburg?—initial fieldwork showed one of the major forces in the region was a national mandate to deliver “mega human settlements” on the urban edge, as a measure to redress apartheid (Ballard and Rubin 2017). This was intended to replace the shacks broadly referred to in the South African context as “informal settlements” (Huchzermeyer 2011; Huchzermeyer et al. 2014). In contrast, local government—specifically, the City of Johannesburg—favoured informal settlement upgrading (Weakley 2013), densification strategies for urban centralities (Interview, CP2, 2014), and capital expenditure for transport infrastructure (Harrison et al. 2019). Alone in this conflict between tiers of government, it became evident that there were multiple understandings of what it meant to be peripheral: some actors focused on the “social” aspects of deprivation like income and labour market inequality, while others highlighted the “material” aspects of the built environment, such as housing provision, transport, and infrastructure development.

The problem of multiple understandings and conflicting visions is also found in the terminologies of peripheralisation in urban studies. As this article asserts, in delineating the processes of toehold and aspirational urbanisation, there are distinctive material spaces, regulatory frameworks, and lived experiences (cf. Howe 2021a; Streule et al. 2020) that engender and differentiate the processes of urbanisation in the GCR. They are dependent on the origin stories of the individual areas, how areas connect to the overall region, and how people move between spaces conducting the routine activities of their everyday lives (Howe 2021b). Yet, essentially, the urbanisation processes shaping and transforming the GCR marginalise populations historically deprived of social and spatial resources under apartheid (Beall et al. 2002). In order to address the
intransigence of socio-spatial inequality, processes of peripheralisation must be described as specifically as possible. This article interrogates this in relation to current debates in geography and urban studies, specifically: (1) peripheral urbanisation (Caldeira 2017), which frames the kinds of production occurring outside the “formal” logics of planning and the state; and (2) urbanisation processes (Schmid et al. 2018), which map the interrelatedness of urban transformations across regional scales.

Building on the critiques of postcolonialism, the concept of peripheral urbanisation outlined by Caldeira (2017) has led to a fruitful theoretical discourse emerging from empirical research across the global South. Caldeira (2017:3) outlines how “transversal” processes of urbanisation driven by people contain three primary characteristics. First, they do not unfold the way planners and institutions expect (indicating different conceptualisations of what constitutes planning). Second, they are part of capitalist logics, but have “niche” results (indicating different material outcomes than expected to result from the conceptualisation of planning). Finally, they can lead people to become politically active (to assert the value of their different experiences of these conceived and perceived spaces). Caldeira (2017:4) emphasises that peripheral urbanisation creates heterogeneous and highly varied cities, and is a “way of producing space that can be anywhere”.

My engagement with the GCR has also revealed such characteristics, primarily aligned with the process of toehold urbanisation. But while a periphery can indeed be anywhere, I argue that in the GCR they occur as a direct result of a desire to access centrality and opportunity, or conscious choice to accept the periphery in pursuit of stability through homeownership. This kind of marginalised periphery, which unfolds in the remote parts of city regions, has seldom been discussed in the literature to date (Meth et al. 2021). Yet aspirational urbanisation means that, while people live in arguably less precarious circumstances, they still experience a distinct form of relegation, or consignment to areas of “advanced marginality” (Wacquant 2016). With “social and material alienation as vital mechanisms cleaving communities in ‘the background’ from the infrastructures supporting urban lives and livelihoods” (Addie 2021:1356), it is extremely challenging to overcome.

Conventional categories of analysis in urban studies have consistently failed to encapsulate these aspects of everyday life that are intertwined with space and time, which are essential to apprehending processes of peripheralisation. As Schmid et al. (2018:29) state, “‘urbanisation’ as a general and generic concept has to be specified by more narrowly defined concepts” and depicted as a relational whole, as a shifting landscape of centres and peripheries that constitutes the urban fabric. Schmid’s series of projects into urbanisation processes under extended and planetary urbanisation provides a key foundation for the analytical framework used to integrate the theoretical arguments outlined here, in both the material-spatial and the social-relational aspects of urbanisation (cf. Brenner and Schmid 2015; Karaman et al. 2020; Sawyer et al. 2021; Streule et al. 2020). However, they do not explicitly engage with the concepts of poverty and inequality that are so important to conceptualising the variegated forms of periphery that the GCR exhibits. The next section outlining my research methodology thus
purports a response to these theoretical considerations: explicitly thematising the trans-scalar processes of peripheralisation shaping the GCR.

**Conceptualising Urbanisation Processes from Empirical Research**

In the Gauteng City-Region, inequality is visible from satellite imagery. Based on these impressions and literature review, I compiled a list of areas to visit in 2011 that seemed representative of ongoing urbanisation processes (see Figure 1). I conducted mobile fieldwork and multi-sited ethnography: moving in a car and on foot, taking taxis and rideshares, while continuously conducting ethnographic interviews. Semi-structured expert interviews included informants embedded into areas, as well as professional experts from academia, government institutions, transport associations, planning and design offices, and NGOs. This approach—prioritising the voices and experiences of those living on the periphery—aligns with the methods utilised by Meth et al. (2021). One of the few other projects that has examined the geographical peripheries of the GCR, they note the way in which “logics can co-exist, hybridise and bleed into each other in different ways in specific places and at different temporal junctures” (Meth et al. 2021:987). My initial investigations also revealed that temporality and mobility were crucial components of everyday life in the GCR. Thus, a further research method introduced in 2014 recruited participants to collect volunteered geographic information (VGI) with a smartphone application, about their movements and modes of transportation. Quantitative VGI data was combined with coded interview information, synthesised through the process of triangulation (Flick 2011). All of these methods fed into the formulation of urbanisation processes that could then be mapped across the GCR.

**Mapping Urbanisation Processes**

Aligned with Caldeira’s (2017:5) calls for analytical models that can articulate general features while remaining open to transformation, and Robinson’s (2016) comparative tactics for “generative” concepts, the project “Patterns and Pathways of Planetary Urbanization” by Schmid et al. (2018) compares large urban regions around the globe. This work follows a transductive approach, investigating urban regions with qualitative research methods, and compiling empirical observations until links to theory emerge and can be visualised. Mapping urbanisation processes does not occur in terms of a historical form, spatial structure, or specific morphology; it aims to create a snapshot of a particular space and time, as set of multi-scalar human interactions rooted in both diachronic and synchronic analyses of the place being investigated.

The methodology designed in this comparative project was adapted for my research on the GCR, in particular, linking historical to ethnographic research, and visualising these findings by mapping urbanisation processes. I systematically examined the material-spatial and social-relational aspects of space in the GCR as the foundation of urbanisation processes. The former category includes analysing
the physical infrastructure of space, its architectural and urban elements—like buildings, streets, interlinkages constituting the notion of an urban fabric—as well as the history and regulatory frameworks that shape how it is allowed to evolve. The latter category involves how people move through and experience space—primarily observing patterns of movement with VGI and mobile interviews—to reveal the temporal elements of why people go where they do, and what happens along the way. Beginning from individual areas—working from the regional peripheries inwards towards centralities—I catalogued and compared them to one another until achieving a “thick description” (Geertz 1973) of relational urbanisation processes.

The intersections between materiality, the political conception of space, and tracking of movement were relatively concrete. Yet by juxtaposing spaces, a
significant “soft” factor emerged: how present or absent a place was in public discourse and institutional discussions on development and urban rights. This “level of rhetoric” (Howe 2017:87–92) was established through review of current news reports and policy documents, supplemented with expert interviews and site visits. While hardly a quantifiable category, an area’s level of rhetoric frequently corresponded to its ability to access resources, because the state cannot fully redress apartheid all at once, and must choose how to allocate funding. One way of contesting peripheralisation is therefore to become present in public consciousness, like the famous township of Soweto (Harrison and Harrison 2014)—or to become nefarious, like Diepsloot (Harber 2011).

**Representing the Urbanisation Processes of the GCR**

I identified and mapped five major transformations shaping the GCR today. Together, these urbanisation processes were driving the production of the region to perpetuate inequality: concentrating privilege where it existed and peripheralising the majority by complicating their access to centrality and opportunity (see Figure 2). The first process was the consolidation of centralities—primarily the City of Johannesburg and the City of Tshwane (Pretoria)—as well as the emergence of new sub-centralities for specific segments of the population, which shifted and reconsolidated from the 1970s forward (Mabin 2013, 2014). The second was industrialisation arising near mass housing, as specifically encouraged by the state during apartheid (Hart 2014). The third was land deliberately left “fallow”, or undeveloped, often brownfield sites of exhausted mines or defunct industries. Fourth, I identified several processes consolidating privilege—defined as access to centrality and opportunity—around the region, for example “elite islands” of gold and lifestyle estates for the city-region’s most affluent (Murray 2015). Fifth, I noted several processes of peripheralisation, from housing production on the remote peripheries, to attempts to subvert these constraints and dwell near opportunities.

I further differentiated these “processes of peripheralisation” by investigating areas through additional literary review, archival research, and interviews to determine the logic behind their origins (see Figure 3). I mapped their spatial location in comparison to (sub)centralities, as spaces of encounter and exchange, and more deeply studied their rhetoric. This comparative analysis yielded five distinct processes of peripheralisation. Frontier urbanisation involved satellite mining settlements, often far beyond the rest of the urban fabric of the GCR, at sites of mineral extraction. Toehold urbanisation was the typically small-scale occupation of land, constructed by and for people themselves to access resources and opportunities. Freehold urbanisation described what initially seemed similar in urban morphology to toeholds, but occurred according to significantly different logics: on pockets of land that were historically Black-owned, and where owner-tenant relationships prevailed to yield more stable forms of tenure. Mass housing urbanisation represented monofunctional, low-income neighbourhoods on the urban peripheries, usually funded through the national Reconstruction and Development Programme (RDP).
Aspirational urbanisation, too, at first appeared similar in morphology to mass housing; however, it was delivered by private developers, targeting higher-income groups that qualified for bank loans. In the following, I delineate the transversal logics and insurgent means of toehold urbanisation and the geographical isolation of aspirational urbanisation, including a general description of material-spatial aspects (morphology, origins, and overall spatial location) and social-relational aspects (social groups, movements, and rhetoric) from which the terminologies were derived.

**Figure 2:** Map of the predominant urbanisation processes shaping the GCR over the past decade; processes concentrate privilege in space, and peripheralise both places and social groups (source: author)

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Toehold urbanisation is about access: people simply “getting a foot in the door” to opportunities in the GCR. It is typically characterised by a dense morphology of structures, like shacks, erected by members of civil society; because it is implemented opportunistically, it also typically corresponds to precarious living conditions and land tenure. A “toehold” launches people into the urban fabric, utilising complex forms of reliance on transport and social capital. It is originated on small plots of government-owned as well as private land, but the overarching commonality is a lack of legal tenure beyond general eviction law.¹ It occurs near urban

Figure 3: Map of the predominant urbanisation processes of peripheralisation in the GCR, which reproduce structural spatial inequality (source: author)

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Centralities and areas of economic opportunity—from Johannesburg’s downtown, to former apartheid buffer zones like its mining belt and industrial parks, even golf courses—because these “valuable” spaces are accessible for people who primarily move on foot.

Historically, toehold urbanisation arose to serve the mining-industrial complex of Johannesburg, evident when tracing the origins of some of the areas reflecting this dense, self-organised shack morphology (Platzky and Walker 1985:335). Areas marked “SSS” for shacks were already inscribed along the edges of the 1950 apartheid diagram for Johannesburg (see Figure 4), reflecting their consistent status of operation beyond the “gaze of the state” (Kihato 2013), while simultaneously being sanctioned by it (Mears 2011). Kliptown, founded in 1903, was the earliest toehold resulting from this process that remains present today (Judin et al. 2014; Kornienko 2016). A proliferation of toeholds emerged once the infamous “pass laws” restricting residential locations for non-white populations were abolished in 1986: in the south, Orange Farm in 1989 and Finetown in the early 1990s (Leong 2009); in the north, Diepsloot in 1991 (Harber 2011) and Kya Sands likely in the early 1990s (Weakley 2013:115); in the east, Ramaphosa in 1994 (Dube 2010:7); and a proliferation of infill settlements along the industrial belt south of the Johannesburg CBD beginning in 1999 (Bennett and Toffa 2014). Most of these settlements were deliberately planned invasions of state and private land, including a subcategory of toeholds: appropriated high-rise residential towers in places like Hillbrow or houses in Yeoville (Bénit-Gbaffou 2014:252–268).

Until approximately 2008, “informal” settlement was one of the most significant forces restructuring the urban region (Huchzermeyer et al. 2014). Now, there is little urbanisation on greenfield sites; non-sanctioned land invasions are scarce. Toehold urbanisation instead arises on a small scale, corresponding to the development of new centralities, areas of concentrated mining and industry, or adjacent to other developments in logistically accessible parts of the urban region. Individuals can sometimes successfully overcome peripheralisation through access and interpersonal networks—a form of resilience operationalised at various scales as people rework their living conditions (Coe and Jordhus-Lier 2010). However, toeholds as areas often lack the resources to collectively overcome their marginalisation. Toehold urbanisation thus often provides “arrival zones” for people throughout the region, nation, and Southern Africa (Landau 2016), as discussed by juxtaposing the examples that follow.

Toehold Urbanisation in Denver and Diepsloot

The settlement of Denver is a paradigmatic result of toehold urbanisation. With an area of 1.81 km² and population of 7,500—with 72% male and 98% Black African—at the last census (Firth 2011), it is characterised by its central location near jobs within the industrial belt, but has an utter lack of supporting infrastructure and almost no land tenure (Matsela 2015). Denver is considered by its own residents to be an arrival point in the GCR, which most people try to leave as soon as they can afford to. Denver originated as migrant labour housing for Black
Figure 4: Schematic diagram of the apartheid model for Johannesburg, ca. 1950 (source: Simon [1992:43] “Figure 2.2: The Modernized Apartheid City Model”; reproduced by permission of Taylor and Francis Group)
African men along the industrial belt in the 1930s; although these industrial hostels were not strictly organised according to ethnicity, as mining compounds once were, strong cultural clusters and links to specific villages emerged (Beinart 2014). Directly preceding the official period of apartheid beginning in 1948, hostels were designated for men to temporarily provide cheap labour in the city, while their families were to remain behind in regional peripheries, like KwaZulu-Natal. In contrast, women’s gradual entries into urban life “were necessarily informal and required ducking under the state’s radar” (Delius and Phillips 2014:4). Women and families had already erected shacks adjacent to the hostel by the mid-1940s: a direct response to restrictive and racist policies, as well as an attempt to claim space through familial networks (Vosloo 2020).

An extension of this logic that remains today, the survival of people in the area is contingent on two factors: first, a reliance on larger networks beyond the toehold to support their existence; and second, moving from their homes to seek opportunities on foot. Over the course of three studies conducted in Denver, participants often noted that they walk because other forms of transit are too expensive; they can and must reach destinations by foot. “If it was up to ... [my wife] I would use taxis all the time, but ... we realised that the money was not enough and we would end up starving in the house. So, if it’s like that I will walk. I will get used to it; I am a human being”, reported one father (Interview, DE13, 2021). Another respondent framed walking as a constraint, but also an opportunity to cut costs (Interview, DE19, 2021). Money for transportation was instead reserved for what Cross et al. (1998) describe as “circuits” of migration between Denver and participants’ “homes” in KwaZulu-Natal. Remittances to family members thus drive both circular regional migration and everyday movements.

Related to these material conditions and spatial practices, the politics of the place are also deeply entwined with “traditional” Zulu power structures; these relations dominate both the way of life as well as who is allowed to connect into the area from the outside. The hostel land itself is owned the City of Johannesburg, but the surrounding area of the informal settlement is located on privately owned land. It is marginally present in rhetoric beyond the area, but receives a limited degree of attention for upgrading projects by the state or development initiatives from the private sector. Typical for small settlements embedded into the mining and industrial belt, its problems are not as urgently regarded as areas that are closer to more privileged parts of the GCR (Weakley 2013). The structures and practices, including extreme precariousness and poverty, tend to remain ingrained in the place itself.

In contrast, Diepsloot, on the City of Johannesburg’s northern edge, has a 12 km² area and population of 140,000 with 98% Black Africans and a relatively even gender split, according to census estimates (Firth 2011). It began with the incremental building of shacks, and its morphology could appear to be the same as Denver. However, toehold urbanisation is not the dominant process of urbanisation in Diepsloot; it has a different logic of origin, and evolution because of its spatial location and level of rhetoric, highlighting the importance of differentiating the specific causes and forms of peripheralisation. It began as a resettlement of people from Alexandra, among other areas deemed too dense and politically powerful in the early 1990s; this relocation was directly planned and sanctioned...
by the state (Bonner and Nieftagodien 2008; Harber 2011). The City of Johannesburg laid out a grid on farmland they acquired, according to the kind of “site and service scheme” utilised to plan apartheid townships (Simon 1992:56), and people were left to construct their dwellings. Several interview respondents noted how their families had come to the “arrivals” area of Diepsloot from other parts of South Africa at this time, typically renting a small shack, mediated through familial networks (Interview, DI15, 2015) or by contacting a “community leader” (Interview, DI12, 2015). As they saved enough money, they rented several shacks or larger accommodations; some were able to purchase a plot or received an RDP house after the fall of apartheid, even expanding their premises to include subletting and start their own businesses (Interview, DI22, 2015).

Unlike Denver, Diepsloot provides such opportunities for individuals to overcome their peripheralisation, and evolve collectively; it is thus no longer a toe-hold. Diepsloot has a high level of logistical centrality (Kretz and Küng 2016); it is approximately equidistant from the CBDs of Johannesburg and Pretoria and adjacent to some of the wealthiest residential neighbourhoods in the urban region. Several studies have shown that people earning between 3,200 and 6,000 ZAR (US$225–425) per month have some of the largest spatial footprints in the GCR: they have enough money to afford transit, and use it to seek work from their geographically more peripheral locations (Howe 2017, 2021a). Furthermore, as scholars like Harber (2011) have discussed, Diepsloot’s “infamy” has resulted in a comparatively high level of rhetoric, direct attention, and investment into the area. This specific spatial location gradually differentiated Diepsloot from toeholds like Denver, because of the range of opportunities in and around the settlement.

Moreover, as a result of this transformation, there is a wide range of social groups living in Diepsloot; many complex forms of land tenure; and a proliferation of businesses and cultural activities generating a “popular” form of centrality (Howe 2021b). However, it has therefore also been subject to the waves of commodification familiar from other contexts internationally, for example in the gecekondu areas of Istanbul (Gündogan 2021; Schmid et al. 2018:36). There are now three shopping malls, because national and even global corporations, such as Shoprite, realised that this settlement of officially over 400,000 people was one of the largest untapped consumer markets in South Africa (Interview, NG1, 2015). Although the “arrivals” area established in the 1990s remains today, to launch people into the rest of the settlement and city-region, most of Diepsloot is dominated by the incremental production of housing by the state and private sector, comparable to the “plotting urbanism” identified by Sawyer (2014) and Karaman et al. (2020). The kind of commodification shaping Diepsloot today is not occurring in Denver, reflecting an important difference in urbanisation processes: toehold urbanisation represents an intense precarity that cannot easily be overcome.

**Theorising Toehold Urbanisation**

Formulating toehold urbanisation was an inductive process, relying on the regressive-progressive analysis of urban areas (Schmid et al. 2018:31) like Denver, and comparing them to one another. While the built forms and spatial practices
of areas can be different, or have slightly varying forms of access to land, common to areas of toehold urbanisation is access. Both the logic of spatial production occurring outside “formal” constraints contained in the concept of peripheral urbanisation is valid here, as is the importance of specific geographical location and centre-periphery dialectics. Toehold urbanisation typically occurs near urban centralities, because these “valuable” spaces are accessible for people who primarily erect their own dwellings on land with no significant form of legal tenure, and move from their area on foot. It is related to established conceptualisations of “informality” in South Africa (Huchzermeyer 2003:592) but has specific and important characteristics that warrant its own terminology.

Toehold urbanisation is related to what is broadly referred to as informality in geography and urban studies. This process is similar to the “popular urbanisation” Streule et al. (2020:652) identified in the context of Istanbul, Lagos, and Mexico City as “primarily led by the people, while commodification and state agencies play minor roles”, in that planning, financing, and organisation of construction is executed by people, creating a range of places from very powerful to highly marginalised. In the South African context, there is a slightly stronger presence of the state and capital; people are operating within these systems in the “transversal” way construed by Caldeira (2017:7), “While residents are the main agents of the production of space, the state is present in numerous ways: it regulates, legislates, writes plans, provides infrastructure, polices, and upgrades spaces”. However, toehold urbanisation refers specifically to the process that underlies the most precarious form of settlement, one that applies only to tiny pockets of space with no land tenure—important to differentiate from owner-tenant relationships, where people can exercise more agency and therefore have more power (Coe and Jordhus-Lier 2010).

It is important to note that, in toeholds, conditions do not automatically improve, as Caldeira (2017:6) describes in the context of her case studies. While there are varying degrees of involvement by state in toehold urbanisation, the spaces that result from this process are often not perceived as legitimate (Huchzermeyer 2011). Places like Denver are so deeply marginalised that it is difficult to transform the environment. Many participants over the years stated that they live in fear of the hazardous and dangerous living conditions in Denver, and would leave their toehold for a more established and secure area as soon as they could afford to (Interviews, DE2 and DE8, 2020). In fact, two study participants did leave the area, relocating to Alexandra and Soweto, after securing better salaries and more regular employment (Interviews, DE1 and DE7, 2019). While some spaces that resulted from toehold urbanisation evolve individually or collectively, unstable tenure arrangements like in Denver preclude transformation and reproduce peripheralisation. It is extremely difficult to plan infrastructure—consisting of rigid physical objects—for “precarity” (Interview, CP12, 2021); the movement of people and things in and out of toeholds is fluid, opportunistic, and unpredictable.

**Aspirational Urbanisation**

Aspirational urbanisation is about assets. It typically occurs on the urban edge, adjacent to former apartheid townships, and is a distinct and powerful mutant of
what has been referred to as “mass housing urbanisation” (Kockelkorn et al. 2021). It involves the monofunctional production of single-family housing for the “Black (lower) middle class” that isolates people on the geographic peripheries of the GCR (see Figure 5). Logistics drives the process, because any opportunity must be accessed by public or private infrastructure. Although located similarly peripherally to government-financed mass housing projects, for example RDP housing, aspirational urbanisation is different because it is planned and financed through “bond” mortgages from the private sector. This can lead to high levels of precariousness, firstly through the strict terms of these loans, and secondly because the remote locations of the commuter settlements provide few opportunities locally, while requiring high transport costs to access resources.

Similar to what Caldeira (2017:12) notes in the case of Santiago in the 1970s, the South African national government began providing subsidies to families based on their ability to contribute towards the mortgage in the 1990s, in order to facilitate purchasing en-masse peripheral housing by private developers. It followed the same patterns and models of apartheid: neighbourhoods designed by engineers according to “site and service schemes” (Simon 1992:56), consisting of single-family, brick homes. Aspirational urbanisation began on land adjacent to former apartheid townships—like Soweto in the City of Johannesburg and Tembisa in Ekurhuleni—because of lower land values (Harrison and Harrison 2014) and people could be enticed to relocate from their nearby neighbourhood (Lemanski 2017; Mosselson 2018). Beverly Hills, established in the late 1980s in Soweto, was one of the first private developments to address the Black African consumer market, followed by Protea Glen on Soweto’s outer margins in the early 1990s (Butcher 2016). Similar development began in the newly established municipality of Ekurhuleni in Kingsway and Alra Park in the late 1980s (Seekings 1990). This form of housing provision vastly extended the scale of urbanisation that began during apartheid, while concentrations of urban activities in existing series of centralities throughout the GCR were retained.

Aspirational urbanisation is thus the term selected for the process of people accepting the geographic peripheries, in order to realise their aspirations for a secure, middle-class lifestyle (Cirolia 2016; Harrison and Harrison 2014:310). Today, it essentially functions as “a territorial fix for domestic capital vis-à-vis development imperatives” (Butcher 2020a:173)—both in the production of space as well as forms of social reproduction intertwined with the state, finance, and civil society (Ballard and Butcher 2020:273). Access to funding for the settlements resulting from aspirational urbanisation is dependent on job titles: nurse, teacher, public servant—another residual practice from apartheid (Platzky and Walker 1985). This “ladder” dictates not only the target market, but the terms of bank loans and relationship of the developer to the homeowner (Lemanski 2011). Lack of infrastructure and transportation means that these places are spatially isolated in the urban fabric of the overall region, embodying Simone’s (2021:1345) writings that “physical displacement now most usually entails operating from the far hinterlands, or in territories intentionally made marginal”.

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Aspirational Urbanisation in Windmill Park

Windmill Park, a neighbourhood east of the large apartheid township of Vosloorus, began construction in the early 2000s (Butcher 2016). In the transitional phase before abolition of the Group Areas Act in 1990, local government ceased declaring areas for specific racial groups when granting permission to construct new neighbourhoods. Thus, in 1989, four parcels of land in the Johannesburg municipal area were designated “free settlement areas”, including what

Figure 5: Specific and variegated forms of periphery in Marlboro South (top) and Soshanguve (bottom) (source: author)
would become Windmill Park in Boksburg, south of the Johannesburg city centre (Simon 1992:49). This was significant for two reasons: the City was technically acting illegally according to national policy; also, housing had previously been regulated by the central state, while these areas were permitted by local government and implemented by the private sector. Bond (2000:xv) illustrates how such shifts were representative of the “creeping neoliberalism” of the late apartheid regime, presenting Black Africans with both new opportunities and challenges.

The Windmill Park development—“suburban living, for less” according to the developer, Cosmopolitan Projects—soon became an elite destination for people previously restricted to the township of Vosloorus. It has an area of 8.35 km² and estimated population of 7,750, with 85% Black African residents (Firth 2011). Only a few minutes’ drive away, this move clearly inscribed the economic and political lines between “Black working class” and “Black middle class” into space (Lemon 1992). Two studies including participants in these areas showed how a deep connection to Vosloorus remained for many residents of Windmill Park. Able to afford a car, many returned back, often as much as several times a day: shopping at their previous supermarkets, visiting family members, attending church (Interviews, WP1 and WP2, 2015). A retired mechanic shop owner described his “peaceful” life in Windmill Park, and—a strongly religious man—how his passion became volunteering in the nearby informal settlement Waterfall, which he regularly passed travelling along the highway between his new and old homes (Interview, WP1, 2015). His rhythms and patterns of movement contrast starkly with the footprints of people living in Waterfall, a toehold stretching between the edge of Vosloorus and job opportunities at a large poultry farm. Highways and familiar networks sustain all of these places, as their residents move throughout the greater region to access opportunities.

Another younger study participant from Windmill Park fared worse than her cohort. After losing her husband—the head of household and primary source of income—her home came under threat, as she was unable to pay her mortgage for three consecutive months with her seamstress salary (Interview, WP2, 2015). She lent money from her children and found work in Pretoria during the course of the study, where a friend connected her with a job making curtains for a wealthy household. She travelled there by taxi; although she still had use of a car, she deemed the cost of petrol too expensive. “If I miss too many payments ... [the bank] will repossess my home. And these savings, all I have ... will be lost”, she stated matter-of-factly. There has been a high level of rhetoric surrounding mass housing and mega human settlements in the GCR (Ballard and Rubin 2017), but bond housing has seldom been researched beyond the work of Butcher (2016, 2020a, 2020b) and Ballard and Butcher (2020). Yet this participant’s story highlights the precariousness that arises from being beholden to bank loans as well as being located far away in the urban fabric from opportunities. She negotiates the interstice of social and geographical peripheralisation, as so many do around the urban edges of the GCR. Thus, the structure of space and how people move throughout it—where they live and where they aspire to live—matters greatly.
Theorising Aspirational Urbanisation

Aspirational urbanisation presents a suburban-esque appearance. While morphologically similar to the production of mass housing, it emerged from the apartheid government’s attempts to increase revenues and mitigate risk, through the creation of a larger consumer market, and having private interests assume a more significant role in housing production. This fed upon the “aspirations” of people to achieve their post-apartheid dream of security through home ownership. The predatory nature of how land is commodified makes it a distinct urbanisation process of its own, and one of the predominant forces shaping the GCR today.

This urbanisation process is related to suburbanisation, and the commuter zones primarily comprising residential development it produces (Keil 2013; Mabin et al. 2013). However, compared to the planning of large, monofunctional neighbourhoods on the geographic peripheries of other city-regions, in South Africa, this kind of building began with the spatial development policies of apartheid. Mass-scale, racialised relocation strategies required large tracts of inexpensive land, and were deeply linked to the socio-spatial separation and commuterisation as mechanisms of control. Aspirational urbanisation, as such, began as a deliberate strategy to create a “Black consumer class” in the mid-1980s, in order to subjugate the African population while simultaneously generating income for the failing apartheid state (Crankshaw 2008:1694; Khunou 2015). As Bond (2000:198) wryly notes, “Supplying a young black revolutionary with a housing bond through the disciplinarian private market ... is one way of tying her or him down to stable labor and community behavior”.

In this process, land is commodified according to entrenched conceptions of space and perceptions about the built environment: “capital knows how to make the lower-income mortgage market work in relation to its imaginaries of risk, return, race and space” (Butcher 2020a:193). Over the past several decades, developers have begun acting as loan guarantors to bridge the gap between more cautious banks and the consumer, creating predatory landlord-tenant relationships until at least 50% of the loan is paid off (Butcher 2016:159). These are troublesome developments because, as Ballard and Butcher (2020:269) note in their broad assessment of the developer landscape in Johannesburg, there is often “no clear division between the social interests of state actors and the economic interests of the private sector”. The concept thus aligns with the “speculative periphery” also developed in the context of the GCR by Meth et al. (2021:995–997). As the authors describe in their study of lived experiences on the geographical peripheries of the city-region, the purpose of development was profit generation; as a result, “the combination of distance from an urban core, extreme poverty, and very poor access to infrastructure and services worked to produce highly precarious lives” (Meth et al. 2021:999).

The urban fabric of the GCR resulting from aspirational urbanisation thus demonstrates the relevance of Henri Lefebvre’s (1991) work on how processes of extended and concentrated urbanisation can shape everyday life (Brenner and Schmid 2015): where underprivileged populations can afford housing, they must undergo long, costly, and often unsustainable commutes. In analysing the vast landscape of the north-west parts of the GCR, the interplay between centre and
periphery inherent to processes like aspirational urbanisation further ingrains structural spatial inequality into the urban fabric (Howe 2021b). This results in a dynamic of connection and disconnection, executed by private developers—in which the state is complicit because it approves land-use and building permissions (Coelho et al. 2020)—and sometimes even leads people to return to more centrally located toeholds, perpetuating peripheralisation.

**Concluding Remarks**

Building on current debates in geography and urban studies, this article defined the concepts of periphery (the space) and peripheralisation (the process) by drawing from extensive empirical research in the Gauteng City-Region (GCR) of South Africa. It brought the theoretical underpinnings of peripheral urbanisation, following Caldeira (2017), into conversation with the literature on urbanisation processes (Karaman et al. 2020; Sawyer et al. 2021; Schmid et al. 2018; Streule et al. 2020), asserting that peripheralisation can indeed occur at any place, but does so as the result of the specific material conditions of the built environment—the urban fabric—as well as the regulatory frameworks and everyday social practices shaping it. As the article delineates with toehold urbanisation in Denver and aspirational urbanisation in Windmill Park, this is dependent on varying degrees of access and assets. Opportunity is enabled or constrained by the structure of the urban fabric, as both material-spatial and social-relational aspects of life in the GCR can peripheralise certain social groups, and preclude them from overcoming multiple forms of marginalisation.

This investigation aimed to understand the GCR’s particularities and instructive specificity (Peck 2012:118). The introduced terms of toehold and aspirational urbanisation are derived from this context—a robust, variegated, and fascinating case study in and of itself—but have a broader relevance beyond the GCR. As the article shows, they are related to concepts like: (1) urban informality (Roy 2011); and (2) mass housing urbanisation (Schmid et al. 2018). If we simply applied these more general terms to the GCR, they would mask some of the specific factors driving urbanisation that this article describes; this is one reason why there has been such a widespread call for specificity in geography and urban studies (Schmid 2015). Moving in the opposite direction, however—from the specific to the general—shows how the two identified processes can serve as a useful enrichment for debates on these existing concepts, as elaborated below.

First, informality has been an important term and concept, because it established a category and ascribed value to the parts of cities where “differential spatial value” (Gilbert and de Jong 2015:519) can be expressed as a dialectical process of urbanisation (Roy 2011). However, it cannot adequately valorise the important differences that emerge by meticulously comparing the actual spaces of periphery in the GCR. An example is the difference that emerged between freehold urbanisation, where Black Africans could always own land, and toehold urbanisation, where there is almost no legal land tenure—or between toeholds like Denver and those that have evolved, like Diepsloot. Toehold urbanisation, essentially, means carving out access to the urban fabric. It is the kind of
“encroachment” (Bayat 2010) that densifies the territory, and under the right conditions it can lead to a “popular” form of centrality (Howe 2021b). It is thus closely related to “urbanisation by the people” (Streule et al. 2020), utilising their own agency to contest enduring socio-spatial and economic inequalities (Coe and Jordhus-Lier 2010). Otherwise, aspirational urbanisation could also be considered peripheral urbanisation, if not examined in both a material-spatial and social-relational sense. Toehold urbanisation unpacks essential dimensions—such as who owns the land, whether there are tenant relationships, and who is extracting profit—which matters greatly for conceiving innovative policies and built environment solutions to address poverty and inequality.

Centrality is paramount to toehold urbanisation and is thus a key aspect of its differentiation from other processes. Is a toehold close to an urban centrality? Can centrality be generated by people themselves? As the article discusses, in Diepsloot, the answer has been yes. In contrast, in Denver, the answer so far has been no. Even though it is very centrally located geographically, it is on a small segment of land isolated within Johannesburg’s industrial belt. It is also politically marginalised: it functions as an arrival zone for people primarily from KwaZulu-Natal, often allied with alternative politics like the Inkatha Freedom Party or Economic Freedom Fighters. People cycle in and out, and if they achieve any level of stability or success, they relocate to “better” areas. Denver is a moment of movement, and this very temporality is an essential part of toehold urbanisation (Simone 2020). This illustrates how the concept could be useful to understand specific aspects of urban informality, and what allows areas to either “upscale” or precludes them from change.

Comparison to other areas also yields preliminary insight into the potential implications of toehold urbanisation. The context of the Lagos Lagoon, for example, that has been portrayed by scholars like Sawyer (2014, 2016) as “popular urbanisation”, could also be conceived of as the opportunistic access that underlies toehold urbanisation. Diepsloot is an example of what happens when a toehold upscales, as analysed by Schmid et al. (2018) in the contexts of Mexico City, Istanbul, and the liminal spaces of railway lines in Calcutta or Delhi. A key difference to popular urbanisation is the scale of operations toehold urbanisation provides: in contexts like Mexico City or Istanbul, toeholds comprise the majority of the urban fabric, while in the GCR and Lagos, it is a descriptor for small pockets of access amongst other related processes of urbanisation by and for the people.

Second, mass housing urbanisation is the state-led production of “affordable” housing for private ownership or rental, which usually entails large-scale, monofunctional settlements for low-income groups on the urban periphery (Schmid et al. 2018:48). However, once again, this definition is too general to incorporate the differences in social groups, tenure, and everyday spatial practices that characterise the aspirational urbanisation identified in the GCR. Mass housing urbanisation in the GCR is, for all practical purposes, synonymous with RDP housing; the benefits of mass housing as an asset to overcome poverty has diverse results (Charlton and Meth 2017). Aspirational urbanisation, too, has mixed results, providing security while perpetuating the growth of the African middle class and economic expansion as a “spatial fix” (Mercer and Lemanski 2021), in the form of
new urban development on the geographic peripheries (Mercer 2020; Meth et al. 2021).

Thinking through comparison, this process could be related to the production of housing for the “working poor”, which takes the form of condominiums in places like Jakarta (Simone 2017). Although the urban morphology is different, what Simone (2017) describes resonates with the implications of peripheral development for people in the GCR: “It is not necessarily a precarious life. The situation is largely felt as being alright. But ... also constantly renders the limit of what these districts can be and turn into. The attainment of stability, just this side of precarity, becomes both security and trap”. This is echoed by Kockelkorn et al.’s (2021) research into the production of large-scale, monofunctional housing projects in the context of Paris’s banlieues, strongly tied to interests from both the state and the private sector, and in which the boundaries between interests are unclear. Finally, Shatkin (2011:77) has commented in his analysis of megaprojects in Asia, “As large-scale profit-oriented urban entities, [such] projects represent a vision for the transformation of the urban experience through the wholesale commodification of the urban fabric”. This has indeed been the outcome of the large post-apartheid housing projects resulting from aspirational urbanisation in the GCR. And in the GCR it is a particularly predatory form of expanding the territory by means of the “lower” and “lower-middle” classes. The spaces resulting from these processes of peripheralisation thus span many forms, from very central and precarious, because there is so little tenure, to very geographically remote and precarious, because these spaces are effectively a relegation of material and social dimensions (Wacquant 2016).

This article shows that what is occurring in Johannesburg is a distinctive mode of territorial production: large-scale developments like aspirational urbanisation are deliberately located and funded as part of a state-led strategy, and toehold urbanisation is often a response by those relegated from the system. This connects to what scholars are finding in large urban areas around the world: housing production is profitable, and the state often plays an “agentful” role in urban development through politics and regulation (Robinson et al. 2021; Shatkin 2017). In the GCR, the state becomes negotiable, porous, and even “informal” in order to pursue its political and economic agenda (Rubin 2018). This unfolds by mediating where interventions should occur and how involved to be: public resources are often focused on central and wealthy areas with higher levels of rhetoric, to address problems more present in the public imagination. Often, the peripheries of the urban fabric simply pose as a less pressing challenge. Understanding the trans-scalar way the territory of the GCR is conceived and regulated (Allen and Cochrane 2007) may shed further light into these processes of peripheralisation for other contexts.

Many urban areas around the world exhibit similar phenomena—pockets of poverty and affluence, the production of large housing settlements on geographic peripheries, a heavy reliance on transport—which can both exacerbate structural spatial inequality, and connect people to opportunities simultaneously. Because there can be a tendency in academia to “abstract categories while neglecting the places they inhabit” (Coe and Jordhus-Lier 2010:214), examining urbanisation processes in terms of material-spatial and social-relational aspects could be
expanded, and have a wide application for critical geography and urban studies. As Meth et al. (2021:985) conclude, “Indeed, if it is in the peripheries that 21st century urbanisation is ultimately taking shape, then despite some recent scholarly attention, the work of researching, analysing and conceptualising this has only just begun”. Further research into these spatial logics could continue to synthesise and refine the concepts proposed here, connecting to the issues of tenure and precariousness, transformations of everyday life, and the inherent contradictions of urbanisation processes and peripheralisation that shape urban life today.

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Endnote

1 This mention of eviction law refers to the Prevention of Illegal Eviction from and Unlawful Occupation of Land Act 19 of 1998, or PIE Act. No structure can be torn down without the provision of alternative accommodation once it has been standing for 24 hours.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request. The data are not publicly available due to their containing information that could compromise the privacy of research participants.

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