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Density and precarious housing: overcrowding, sensorial urbanism, and intervention in Hong Kong

Hung-Ying Chen[a] and Colin McFarlane[b]

[a]International College of Innovation, National Chengchi University, Taipei, Taiwan; [b]Department of Geography, Durham University, Durham, United Kingdom

ABSTRACT

This paper offers an approach to understanding high-density living in precarious housing. Developing a conception of housing density based on 'density expressions' and 'density modalities', we argue for a focus on how domestic density is experienced and intervened in by residents and other groups. This approach builds in existing work in Housing Studies and Urban Studies on domestic overcrowding by demonstrating the value of attending to its sensorial experiences, and practices that seek to alleviate those experiences. Drawing on fieldwork in Hong Kong, one of the densest and more unequal housing markets in the world, we identify 'infiltration' as a key form of density expression. We go on explore two density modalities through which residents and other groups, including civil society organisations and the state, practice modest forms of intervention in the struggles of precarious housing: 'improvisation' and 'transition'. We conclude by considering the implications both on housing in Hong Kong and for future research on precarious housing.

Introduction

In this paper, we conceptualise the challenges of high-density living in precarious housing. We develop two inter-related concepts: *density expressions* and *density modalities*. These concepts offer a framework for scholars in Housing Studies and Urban Studies to better understand the experience of densities in precarious housing. While density is typically understood as numbers of people living in a given area, we argue for a focus on how density in the home and building is experienced over time.

There is a large body of interdisciplinary research on urban density. This includes efforts to measure it, from people or buildings per hectare to those that represent population changes over time, to debates on how best to optimise density, including regulations on building height and floorspace (Cohen and Gutman, 2007; Dovey

and Pafka, 2014). There is, too, a critical research agenda on how urban density is discursively constructed by powerful actors as either a 'problem' (e.g. the 'slum' or 'ghetto') or a 'solution' (e.g. to sprawl, climate change, or economic innovation), for example in the promotion of 'compact cities' or '15-minute' walkable cities (Tonkiss, 2013a; McFarlane, 2016). In Housing Studies, density features in particular in research on overcrowding, poverty, and housing conditions (Choldin, 1978; Chu, 2012; Forrest and Xian, 2018; Tang, 2021; Skrede and Andersen, 2022; Shaw, 2019; Jaffe *et al.*, 2020). However, there is little work on how residents in precarious housing experience urban density.

In aiming to address this gap, we develop a new two-step approach to studying high-density living in precarious housing. First, we focus on how density is *expressed*. In particular, we examine the ways in which density is experienced through the bodily senses. By the 'senses' we are referring both to the classic five senses - sight, hearing, taste, smell, and touch – and to bodily sensations more generally, including heat, cold, thirst, hunger, pain, pleasure, even bodily balance. These are the immediate experiences of high-density precarious housing, mediated through leaking water, unpleasant smells, humid heat, noisy neighbours, itching bugs, biting rodents, and the bodily challenges of performing multiple tasks in tiny spaces. Density expressions are the ways in which high-density precarious housing infiltrates the senses.

Second, we examine how densities are addressed through modalities of improvisation and transition. These *density modalities* are longer-term relations through which residents cope with and improve precarious housing conditions, often in collaboration with civil society groups, social movements, or the state. They operate in relation to density expressions, for example as forms of intervention to alleviate conditions. Taken together, *density expressions* and *density modalities* yield insight into how residents experience and cope with high-density precarious housing (Hayes-Conroy and Hayes-Conroy, 2015).

By 'precarity', we are referencing life circumstances that lack security and stability (Abbas, 1997; Berlant, 2011; Tsing, 2015; Wilkinson and Ortega-Alcázar, 2019; Taylor, 2021). Precarity is both a product of political and economic changes following the decline of welfare support, and an experience of 'being-in-the-world insecurely' (Philo, Parr and Söderström, 2019; Harris and Nowicki, 2020). Housing precarity is felt most deeply by those on the economic margins, and is often accompanied by poor living conditions, the threat of displacement, cultural and political prejudice, and a lack of affordable housing (Ferreri, Dawson and Vasudevan, 2017; Joronen, 2017; Vasudevan, 2017; Mould, 2018; Muñoz, 2018; Bates *et al.*, 2019). We draw on fieldwork in Hong Kong, one of the world's densest cities.

The next section introduces the research context and explains the methodology. The following sections examine density expressions and density modalities respectively, and explain how we build on research in Housing Studies, Urban Studies. We conclude with implications for future research.

Inequality and housing in Hong Kong: context and method

Hong Kong has some of the highest densities in the world (Shelton *et al*, 2014). Land is publicly-owned and the market operates through a leasehold ownership

model with origins in British colonialism (Manzini, 2003; Tang *et al.*, 2019). Rent from landed property and real estate firms has constituted both a major source of public finance and a cross-fertilizing political, economic and spatial structure (Yip, 2022). In this 'property state' (Haila, 2000), in which approaching 60% of residents own their own home, powerful private developers and government-led corporations, such as the controversial Urban Renewal Authority (URA), redevelop urban land by prioritising profit and 'higher-end' use (Lai *et al*, 2018). In 2018, housing wealth was estimated to account for 75% of the total net wealth of the city's multimillionaires (Piketty and Yang, 2021).

The city's major infrastructure-based corporations, such as the Mass Transit Railway Corporation (MTRC) and the Link Real Estate Investment Trust (REIT), have built their business models upon propelling land value appreciation (Al, 2016; Aveline-Dubach 2016; Aveline-Dubach and Blandeau, 2019; Mathews and Lui, 2001; Karsten, 2015). The government argues that land scarcity and high population densities justify further reclamation plans such as Tomorrow Lantau, supposedly for public housing construction.

Historically, Hong Kong has been known for running one of the largest public housing programs in the world, housing one third of the city's population (Chu, 2022; Smart, 2006; Chen and Barber, 2020; Chu, 2022). However, the government's approach to public housing has shifted over time from a welfare-based to a profit-based model, increasing housing insecurity (Ho *et al.*, 2008). While the waiting list for public housing is growing, from two to three years in the 1990s to seven to eight years today, the deregulation of rental control has further exacerbated the city's housing costs (Olson, 2015; Huang, 2015). Rents far outpace wages.

While the government has pledged to continue building public housing, distribution has increasingly favoured subsidized sale flats to support middle-income families to 'get on, and move up, the housing ladder' (Hong Kong Housing Authority, 2019: 17). However, these flats are often unaffordable for the working classes. Social movements have played a role in pressuring for social housing in the past (e.g. the reconstruction at Shek Kip Mei following a massive fire in the 1970s), but housing precarity is a growing concern in the city (Castells *et al.*, 1991; Chan, Tang and Wong, 2002; Chen, 2023).

In this context, residents often find themselves waiting for better housing on the public housing list. This can be an experience of frustration, alienation, anxiety, and uncertainty that typically leaves residents feeling passive (Jeffrey, 2008; Hage, 2015; Lipatova, 2022). One of our respondents, for example, Ms. Chan, complained that she was placed 8,000[th] on the list in her urban district. Then, when her son got a job their household income exceeded the state ceiling for public housing of HK$19,430. To maintain their place on the public housing list, she was forced to quit her cleaning position to keep their earnings below the threshold. However, there wasn't enough money coming in, so like other informants, she turned to informal labour and began working with a friend in a nearby street market. Wating becomes an uncertain and sometimes tortuous calculation of housing and livelihood, made worse by the fact that many of the city's poorest residents lack secure tenure, and punctuated by periods of anxiety, grieving, care, and hope (Baxstrom,

2008; Nieftagodien, 2017; Rooney, 2003; Forrest and Xian, 2018; Tang *et al.*, 2019; Skrede and Andersen, 2022).

Our focus is on subdivided housing (SDUs), bedspaces, and rooftop housing. These informal rental housing 'solutions' emerge across the interstices of the city. One activist said he had even seen them "in pig pens, cattle pens, toilets, back alleys, back staircases, shopping malls, and dungeons." Our research included three housing forms.

First, the most precarious housing form in terms of tenancy security and living quality are the so-called 'cage', 'cubicle' and 'coffin' homes (床位). These dwelling spaces are typically separated by beds with sliding doors or metal cages. Each of the apartments in which they are based costs between HK$1,800 and HK$2,400 per month and may have 12 or more bedspaces, with individual-based rental agreements. Tenants' private space is often just two metres long and one metre wide (Raybaud, 2018). A total of 5,000 people are estimated to be living in such bedspaces in the city (LCQ10, 2021).

Second, partitioned rooms and SDUs (板間房 and 劏房). Both forms are generated through partitioning existing flats into smaller home units. The difference between these two is whether they have an individual toilet inside the room (SDUs) or not (partitioned rooms). Today, at least 92,656 home units, with approximately 209,000 people, are SDUs, and most inhabitants are younger adults and children. The numbers grow at 3-4% per year. Rent for SDUs typically accounts for 30-60% of a residents' income, and water and electricity costs are often charged above the general rates (Cheng *et al.*, 2018; Shum, 2021). Finally, third, rooftop housing (天臺屋). These so-called 'penthouse slums' are usually built upon the rooftop of old Tong Laus tenements, and number around 3000 households (see Table 1).

While we interviewed residents in all three forms, most respondents lived in SDUs. The fieldwork took place between April and July 2019 and comprised 47 interviews, an additional 11 walking interviews, 15 spells of participant observation, including joining voluntary work in precarious housing, attending protest events, and one focus group with activists involved in housing and redevelopment issues. Participants included residents, street hawkers, campaign organizers, activists, volunteers, staff at nongovernmental organizations (NGOs), engineers, urban researchers, and government planners. We use pseudonyms for all respondents.

Table 1. Major patterns of informal housing in Hong Kong.

Type of Dwelling	Rent	Household Size	Social Status (incl. Citizenship)	Biological Gender
'Cage', 'cubicle' and 'coffin' homes	Approx. HK$1,800 ~HK$2,400 (cost varies with/out locks)	Individuals	Migrant workers; refugees; bachelors in all ages	Male only
Partitioned rooms and SDUs (板間房 and 劏房)	Approx. HK$ 3,000-7,500 (cost varies with/out toilets)	1-4 people per room (40% were singles; 15% were a house of four)	Median income has rose from HK$9,250 in 2016 to HK$14,000 in 2021. Residents with higher education degrees increased from 12.7% in 2016 to 21.0% in 2021.	All gender
Rooftop housing (天臺屋)*	Approx. HK$ 3,000-7,500	1-4 people per housing unit	Locals & immigrants	All gender

*This category can include either cubicles or subdivided flats.

Our focus was on how residents experience and perceive high-densities in the city, including at home, work, and as they move around. We interviewed residents in the insecure rental sector who live in Mong Kok, Sham Shui Po, and Cheung Sha Wan, three geographically connected areas of the densest part of Kowloon Island, and with a high proportion of poor housing (Census and Statistics Department, 2018). Most of the focus was on housing conditions in Sham Shui Po, one of the densest areas in Hong Kong and where half of the urban poor are immigrants from mainland China or elsewhere in Asia, working in often precarious temporary jobs (Tang, 2020). One-third of our informants were migrant workers, predominantly from mainland China.

Initial access to residents was facilitated by three civil society groups working on housing issues. First, an experienced social worker from Society for Community Organization (SoCO) helped us locate inhabitants in different types of precarious homes. Second, one of us had contacts through previous voluntary work with people close to a community maintenance and repair initiative, named the 'Good Home Project.' Third, we asked Community Reciprocity Development Action (COREDA) to arrange a walking tour, which introduced us to additional potential respondents.

Interviews snowballed from there, but recruiting informants was challenging because of the sensitivities respondents often felt in discussing housing conditions (Yip *et al,* 2020; Fong and Kimberley Clare, 2021). Most interviews with residents were accompanied by a social or community worker known to the resident, and a local research assistant, and sometimes involved long conversations about what residents might feel comfortable discussing. It is possible that the presence of external people might have influenced responses, particularly in relation to the support received from social or community organisations. We mitigated this by speaking to a high number of residents, focussing our questions on their experiences of housing conditions, and where possible conducting repeat interviews.

The lived densities of small spaces

There is a long history of research connecting density, housing, inequality, and poverty. In the mid-nineteenth century, Friedrich Engels' (1844) account of overcrowded housing and dense neighbourhoods in industrial Manchester had a powerful influence, particularly in linking density, disease, and poverty. His account was in part a sensorial one, concerned with stagnant pools of waste and heaps of refuse in narrow alleyways around 'cattle-shed' homes. This concern with the sensed hardships of inadequate housing and its connections to inequality is a feature of contemporary housing research, including work on small, cramped homes suffering from damp, humidity, smell, noise, and overcrowding that presses into the body over time.

For example, research has shown that increasing the number of occupants in a small home can lead to higher heat and moisture levels, particularly if ventilation is poor (Mjörnell *et al*, 2019). Residents in small, low-income homes struggle to keep cool due to environmental factors such as dust, noise and odour, or non-human irritations caused by everything from fleas, bedbugs and mosquitoes to monkeys, rats, or lizards (Malik *et al*, 2020). Noise irritation from neighbours is closely

associated with mental and physical health, particularly amongst women, as well as sleeping problems and fatigue (Rasmussen and Ekholm, 2019). There are close links between mould, respiratory health and allergies that manifest both sensorially and as health concerns (Coulburn and Miller, 2022).

In recent decades, there has been a growing focus in housing research on temporary migrant workers and housing conditions that draws out the sensorial experience of overcrowded, substandard accommodation (Gilbert, 2014; Quandt *et al.*, 2015). In her study of low-wage migrants in Dubai, for example, Lisa Reber (2021) explores the cramped and crowded spaces of the shared room. Here, migrant workers struggle to sleep in bunk beds with people coming and going, making noise, eating, getting ready, or sleeping. In their research on migrant workers and mental health in Shanghai, Amin and Richaud's (2020: 864-5) respondents described how well-being waxed and waned over time, including "'stress' (*yali*)" caused by the "uncertainties of work, housing, and income" (Lancione, 2019; Keim-Malpass *et al.*, 2015). In his work on the labour of young migrants in South Africa, James Williams (2017: 425) examines how homes are sites where their lives "coalesce, hub, rest, and renew" in an often unwelcoming urban context.

The concept of 'density expression' advances this tradition of research. Paying attention to how high-density housing conditions are 'sensed' by residents is a useful route to understanding the lived experience of precarious housing (Vasudevan, 2017; Lancione and Simone, 2021). The senses constitute a kind of 'intelligence in the body' (Dawkins and Loftus, 2013; Simone, 2019; Jaffe *et al.*, 2020; Trnka *et al*, 2013; Stoller, 1989). They have long featured in research on cities, from Georg Simmel's 1903 *The Metropolitan and Mental Life* to more recent research on the co-constructive relationship between unequal material conditions, bodies, and feeling (Winz and Söderström, 2021). This senses are intensely entangled, blurring the divides not only between one another but between self and environment, past and present, and become shaped by a range of biographical, social, cultural, economic, and contextual factors (Vannini *et al*, 2011; Rodaway, 2002; Paterson, 2009; Urry, 2011; Trnka, Dureau and Park, 2013).

When developing the concept of density expression, we connect the senses primarily to bodily affect through the immediate response to stimuli such as smell, noise, or temperature. Bodily affects – "a substrate of potential bodily responses, in excess of consciousness" (Wetherell 2012: 2) – mediate between density and urban space. However, in practice the senses are always already spilling beyond affect into related phenomena like emotion or perception, to the point that separating out felt bodily responses of affect in relation to, for example, increases in temperature or humidity, and emotional responses of frustration, anger, disgust, contentment, or happiness, becomes difficult in practice (Shilon and Eizenberg, 2021; Massumi, 2002). Density expressions are, then, expansive in form, connecting affective responses, emotion (e.g. despair, hopelessness, anger), perception (of housing and life conditions), and larger urban processes (e.g. inequality, the role of the state or developers).

In high-density insecure rental spaces, density expressions primarily surface in daily patterns of intense use of tiny homes. For example, one resident, Tintin, described how the bed often becomes the only free space, used for all kinds of activities, including "homework, reading…[children] playing their cellphones, eating

each meal" (Interview 5/3/19). There was a recurring theme across the interviews of domestic life and activities continually overlapping and 'spilling over' into one another, both within and between homes, with challenging consequences. We characterise this form of density expression as a geography of *infiltration* that plays out in the senses. Infiltration includes all kinds of everyday activities alongside human and non-human agencies, such as radiating noise, smell, heat, damp, light (including dark or dim conditions), and densities of both people and non-human life.

Geographies of infiltration

Across the forms of insecure rental housing we have described, the air is often musty, with smells of food and bodies and little or no natural light. Tenants will often hear televisions or radios between the thin walls of plywood or metal, or an argument amongst neighbours, or a friendly or humorous negotiation around accessing the communal shower (Haas, 2017). In SDUs, the toilet is usually built into or next to the cooking area. Ms Li lives in an SDU and complained that the toilet "stinks whenever you flush" and the smell fills her tiny room. There are often, she continued, no windows, and air-conditioning systems are usually noisy, dripping with water, and dysfunctional.

These conditions arise from the congested and compressed use of high-density occupation in homes and buildings that are composed of inadequate materials. They make it near impossible to 'bound' noise or smell into different spaces, given that activities have to occur in one spatial envelope and that the boundaries between homes are often insubstantial and porous.

Ms Chan, for example, described the kinds of infiltrations that recurred across the interviews. In her early 50s, she lives with her 22-year-old son in a subdivided flat in Sham Shui Po. They migrated from the Guangdong Province in mainland China to Hong Kong in 2012. Their SDU is located on the fourth floor of a tenement building, where one flat is split into four. There are three other households in the same apartment. We entered her tiny flat, a roughly twenty square foot *en suite* room. Packed with suitcases, it consists of a desk on which there is a TV and a few medication packs. The desk sits next to the air conditioner. A toilet is positioned beside the kitchen area, the bunk bed doubles as an open wardrobe, and with no space for laundry she either hand-washes or uses a nearby laundrette.

The narrow corridor leading to her room is crowded with paints, solvents, shovels, and other construction tools belonging to the real estate agent. The agent, she said, stores paints for use whenever a tenant moves out. The smell from the paint constantly infuses the room, and she was convinced it was deteriorating her eyesight. She has asked the agent to remove the paints but was told that no one else had raised a complaint and so no action was taken, and there seems to be no way of directly accessing the landlord.

While we cannot be sure that Ms Chan's concerns about formaldehyde-infused air was impacting her physically, for her the association was real enough, and the options available to her were highly limited. Moving home would mean the fourth house move in seven years, and house moving is an expensive affair. Companies

calculate the fee according to the size of each item and the stairs they have to climb (Interviews 5/3/19; 6/18/19). It is the experience of the previous moves that led her and her son to keep suitcases as their main furniture. "At each place, we could stay no longer than two years. The rent increases every year" (Interview 5/6/19).

In this account, smell and sight overlap through perceived exposure to hazards that precarious homes cannot insulate a resident from, and from which residents feel they have no way out. High-density living here is expressed in how the number of people and activities squeezed into tiny homes combines with a particular form of infiltration, a version of what Michael Shapiro (2015) elsewhere calls 'domestic chemospheres.' High-density precarious housing is both transcorporeal and porous, and manifests in specific ways for, as Peter Sloterdijk (2009, 99) has put it, the "differently-enveloped" (Litvintseva, 2019; Jackson, 2011; Choy and Zee, 2015; Tripathy and McFarlane, 2022). At the same time, the everyday affective responses Ms Chan and others describe sediment into emotions of anger and hopelessness, and reinforce a perception of lives and housing conditions that are simply not cared for, and which at any time could end in eviction.

Infiltration also includes densities of non-human life. No matter how hard people work to keep their homes clean, complained one respondent, "rats and cock-roaches still sneak in to chew up their food, and their family members are often bitten by insects and ants" (Interview 5/31/19). Mr On, for example, is a former dweller of a coffin home who reflected on some of the sensorial non-human densities that accompany life in poorly maintained overcrowded housing. Like many other respondents, he recalled living with six other men in a hot, odorous room plagued with bedbugs and rats.

"One guy always occupied the toilet for ages", he complained. "He always brought his radio into the toilet and enjoyed his program loud…[and] there was another old dude who always collected piles of dismantled carton boxes to the flat. We all disliked him because he was the source who brought fleas and bedbugs to our entire flat" (Interview 4/25/19). The everyday tensions and discomfort that resulted were difficult to negotiate, particularly given that withdrawal from others is rarely possible amidst in a confined and crowded domestic space (Pow, 2017; Jaffe *et al.*, 2020). Rather than a space for rest, the home is often a space of discomfort and irritation, forming density expressions that continually bleed into perceptions of others.

Jay Ren, formerly a housing activist at Concerning Grassroots' Housing Rights Alliance (CGHRA), described the range of infiltrations at work, from more mundane examples such as cooking smells drift between homes, or insects and rodent, to more serious intrusions. The latter, he added, are often gendered. For female SDU dwellers, he continued, there is the ever-present risk of harassment or worse from encounters with male residents, from shared living spaces to shared corridors, toilets, or kitchens ('coffin homes' are usually male accommodation, but SDUs and rooftop housing is often populated by women and girls).

Shortly before we began our research, CGHRA surveyed 105 women living in SDUs, a third of whom described direct experience of verbal or physical sexual harassment (Ren and Hui-Fan, 2018; Interviews 5/7/19; 5/31/19). Here, the density expressions feature as relations of discomfort, fear, apprehension, and pain, with the

ever-present sense that risk lies around the corner. These examples are reminders that separating out the senses as bodily affects from emotional life and perceptions of space, people and situations, often does not hold in practice: the senses here are always already 'affect plus'.

The density expressions that emerged, then, are the infiltration of multiple and overlapping hazards, both human and non-human. These hazards emerge not just within the home and building, but from the city beyond, including through differential exposure to the city's growing problem with air pollution. Residents of precarious housing are not only often located near areas with intensified air contaminants – near, for example, busy roads, industrial zones, or garbage grounds – the home itself offers little protection from the air (Tripathy and McFarlane, 2022).

The Clean Air Network, a collection of civil society groups in Hong Kong, has conducted research in the city showing that people living in SDUs, with their flimsy walls and poor ventilation, disproportionately suffer from hazardous air pollutants exceeding safe limits (Siu, 2015). When we interviewed one of their members, he connected the sensorial experience of air in SDUs to health, poverty, density, and housing policy, and to how polluted air shows up in the body by exacerbating asthma or Chronic Obstructive Pulmary Disease (COPD). The concentration of crowded homes, dense neighbourhoods, and congested traffic produces microclimates that are sensed through heat, noise, and even metabolised in the lungs.

Infiltration is far more, then, than everyday annoyances or nuisances. In the context of precarious housing, it is a series of overlapping and ongoing density expressions that can create intense physical and mental health impacts. Mr Cheng, for example, described his struggles of living in a tiny dilapidated room in a rooftop partitioned flat. He is a security guard working hard to meet rents and to pay for his daughter's studies in mainland China. When we visited his room, the odour - a combination of dust, sweat, stale wallpaper, asbestos ceilings, rats, rodent-proof mesh, and the dingy, humid air pumped from the old AC – filled the tiny space.

He told us that his wife and daughter refused to visit his place, and that he could barely spend two to three hours there, so oppressive was the smell, noise, and heat. Several times, he continued, the situation got so bad that he contemplated suicide, but then added that he wasn't "brave" enough, and that he knew of people who had thrown themselves from high floors but hadn't died (Interview 11/6/19). The burden of paying to live in overcrowded insecure and inadequate housing poses significant mental stresses, including feelings of shame, hopelessness, and despair that are shaped and exacerbated by sensorial experiences (Concerning Grassroots' Housing Rights Alliance, 2016).

There is, finally, another kind of infiltration we wish to highlight: that of domestic activities beyond the home and into the neighbourhood. Despite the intense densification of domestic activities, not all functions can be contained within the home (Rooney, 2003). Children, for instance, often stay at the nearest community library until late at night due to the lack of space for studying at home. Local launderettes are often bustling with activity during evenings and weekends because homes are too small for a washing machine. Residents may take a chair and a book to the street. Domestic geographies 'writ large' create space to ease, even if only in a temporary and partial way, the sensorial pressures of overcrowded and inadequate

housing, while at the same time disclosing other sensorial conditions in cooler air, brighter light, or quieter environments.

Urban density is not just a numerical measurement of the distribution of physical mass, but a dynamic assemblage of experiences and challenges that register on the senses, physical and mental health, and social relations. During the pandemic, for instance, COVID-19 prevention measures such as home confinement exacerbated residents' physical and sensorial challenges, from the circulation of air (e.g. inadequate ventilation, shared and limited facilities, staying at home during particularly hot and humid periods) to increased risk of infection, malnutrition, bodily discomfort, and mental distress (Sun 2022; Chen *et al*, forthcoming; Joiner *et al*, 2022; McFarlane, 2023). This view demands a shift from viewing housing density as an abstract calculation to one expressed as a lived sensorial process. Density is not the *cause* of challenging living conditions, but it does nonetheless play an active role in difficult living conditions and it is important that housing scholars understand that role.

Density modalities and urban alleviation

'Density modalities' are not sensorial conditions but practices that intervene in density expressions. They are shaped by and inform density expressions in impoverished urban living spaces. While there is a growing body of research on the 'small' and 'compact' homes as solutions to the housing crisis, particularly in hyper-expensive housing contexts like Hong Kong (Harris and Nowicki, 2020), our emphasis is distinct. We do not seek to romanticise small compact housing as more socially, economically and environmentally efficient, but instead focus on collaborative practices led by residents, often in partnership with civil society groups, social movements, research teams, and occasionally government bodies, aimed at alleviating challenging living conditions. We identify two key forms from our research: *improvisation* and *transition*.

Improvisation

By improvisation, we have in mind a range of practices including mending, parching, and tinkering with homes (Hall and Smith, 2015; Martínez, 2017). As housing conditions for the poor deteriorate in Hong Kong, community-based projects have become increasingly important for many of the residents we spoke to in providing basic repair and renovation. While these practices have a long history in the city, they emerged in earnest after the 2014 Umbrella Movement, which shone a stronger light on poverty and housing (Lee and Sing, 2019).

During the fieldwork, one of us [Hung-Ying] joined the weekly repair visits of a community-based voluntary repair team called the Good Home Project, a Hong Kong Jockey Club funded project run by Concerning Grassroots' Livelihood Alliance. The Good Home Project began its voluntary repairing service in Mong Kok and Sham Shui Po in 2018. They organize volunteers from professional interior designers, architects, planners, construction workers, and residents to provide cost-free

household repair. This includes electronic appliances, plumbing services, and engaging in collaborative discussions on spatial improvisation. The latter includes, for example, developing bespoke items like foldable furniture, such as multi-purposed tables for children to study and play, or vertical bunk beds with built-in furniture.

Ng, one of the organizers, talked about how these interventions work at the level of bodily comfort, bringing a degree of ease and control to domestic space. Summer, another community organizer, described how these initiatives promote different forms of collective learning: "A local resident who once received the service came to teach people how to make dry flowers and handcraft decorations…volunteer technicians have proposed the idea to hold DIY workshops to teach people" (Interview 5/3/19). The team runs an online platform for the pooling and exchange of second-hand furniture and skills, operates pest removal services, and facilitates free house moving services for SDU residents.

Improvisation here is not the same phenomena as the growing push towards 'micro-living' in major cities across the globe as a way of making housing more affordable. In the cases we point to here, improvisation is a set of limited reactions set against expanding housing precarity generated through state-supported exclusive real estate markets, and which often include quick-built profit-oriented production of tiny homes. While micro-living discourses sometimes co-opt narratives of the 'innovative' and 'improvising' poor in discourses of celebratory creative adaptation, and while developments such as 'nano-apartments' are being presented in cities like Hong Kong as an "aspirational lifestyle choice" that is affordable in the context of very high densities and limited land availability, the improvisations we encountered operate as emergency relief and basic support (Harris and Nowicki, 2020, 594). For the activists and residents involved, they are not to be celebrated but instead understood as modest and targeted alleviation of compressed, overcrowded and substandard housing conditions.

Transition

Transition represents a different form of intervention and stems from the state. The policy of 'Transitional Housing' (TH) converts premises into temporary housing while residents wait for public housing, usually managed by NGOs. The spatiotemporal logic of temporary, interim, and transitory housing pathways has a long history in Hong Kong (Castells *et al.*, 1991), and acts as a way of managing pressure and slow progress on public housing waiting lists. The specific TH policy, developed by the Hong Kong Council of Social Services (HKCSS) and endorsed by the government, occurs through two practices.

One is contracted housing units within existing buildings, and the other is the use of buildings that are either new-build or converted from other purposes. For instance, the HKCSS adopted the Dutch experience that uses modular or container-converted houses to construct transitional housing quickly. Charles Ho, the project director of the Community Housing Movement in HKCSS, described the modular housing as having the advantages of low construction costs, small spatial imprints (75 square feet), built to better standards than SDUs, and rents capped at no higher than 25% of a person's income (Interview 6/28/19).

Unused space such as abandoned schools, vacated tenement buildings up for redevelopment, or vacant public land are identified as potential TH sites. Priority is given to those residents who have been waiting for public housing for three years or more, or who can make a case for being in urgent need, for example, on health grounds. TH practices can change density expressions, easing sensorial conditions. For example, one elderly retired resident we spoke to lives in a two-bedroom TH flat in an old tenement housing block. Reflecting on his housing experiences over time, he explained that the TH home is cooler, and that in his previous SDU, the heat was unbearable in the afternoons. Now he could spend the hot afternoons indoors. The drawback, he added, was that the occupant next door often has the TV on loudly until 3 am. He hoped to move to public housing soon. Like improvisation, transition is a modality of alleviating sensorial conditions, providing spaces of respite in better conditioned housing that is less crowded. But as with improvisation it offers only a short-term solution and the sensorial challenges, while eased, do not go away.

Being 'temporary' was a recurring theme in the interviews. Respondents were aware too that their temporariness was subject to the larger temporary condition of speculative urban development in the city. Several residents talked about how public housing *might* materialise, and perhaps – through TH – was coming closer, expressed concerns too that the city was increasingly dominated by developer agreements and big money. One TH resident we spoke talked about how the building is slated for redevelopment and is scheduled to be demolished in two to three years, and his uncertainty about whether public housing would materialise before that point. The place is run by the NGO, SoCO, which agreed with a developer to run the TH scheme until the developer repurposes the site. As in other major cities, temporary projects, as Fran Tonkiss (2013, 318) writes, often serve to "keep vacant sites warm while development capital is cool" (Habermehl and McFarlane, 2023).

These kinds of transitional arrangements are often precarious, a condition that occurs with difference across the economic margins of the urban world, as research on a variety of precarious housing has shown, from work on informal neighbourhoods and transit housing settlements, to squats and refugee camps (Thieme, 2018). Amongst the residents we spoke to, these were grounds for some hope but hardly optimism, or if there is optimism it is in the sense that Berlant (2011, 14) describes it: a "negotiated sustenance that makes life bearable as it presents itself ambivalently, unevenly, incoherently."

Hong Kong's civil society groups and grassroots struggles have long advocated long-term policy solutions, especially the restoration of rent control and the expansion of public housing projects (Lau, 2020). If these calls have had little meaningful traction with authorities, more recently – partly in response to the 2019-2020 anti-extradition protests and as part of the closer alignment of Hong Kong with Beijing - the Director of Chinese State Council's Hong Kong and Macau Affairs Office, Xia Baolong, suggested a possible change in direction (Lo, 2021). Xia has spoken of "bidding farewell to substandard homes in 2049," and linked this goal to Hong Kong's future under the Chinese Communist Party government. One measure has been the amendment of the 2021 Landlord and Tenant (Consolidation) Ordinance. Inaugurated in January 2022, the new Ordinance sets up procedural restrictions on

rent increases and overcharging by utilities, alongside the production of standard tenancy agreements.

Time will tell how effective these measures will be. Given the general lack of political will over decades, and amidst an ever-increasing uncertainty in relations between Beijing and Hong Kong, we do not see quick fix solutions for the present housing predicament. The density modalities we describe here, which connect waiting and temporariness to small-scale targeted support and intervention, offer modest forms of sensorial alleviation that make at least some difference to housing precarities.

Conclusion

The urban sensorium in the insecure rental sector in Hong Kong is not randomly generated but a historical consequence of state planning, policy, and prevailing trends in speculative urban housing markets in which rent inflation and the densification of 'higher-end' residential and commercial space squeeze the possibilities for affordable and adequate living. Density expressions are the product of collective conditions of unequal cities as much as they are markers of individual experience and perception, while density modalities are a means of modest intervention and alleviation.

A focus on density expressions and modalities provides an entry point to understanding precarious housing and its place in the wider city, in both Housing and Urban Studies. Rather than viewing the diverse forms of urban density as a static and statistical distribution, paying attention to density expressions can help us to understand how density reflects collective inequalities, the role of the senses and the body in place, and the ways in which residents and others locate the lived challenges and opportunities of dense urban living. Density modalities shed light on the different spatial approaches employed in working with small homes and their place in the wider city. Doing so enables an appreciation of nuanced and pluralizing substandard housing ecologies in cities.

Together, the concepts of density expression and density modality are useful in connecting immediate, short-term affectual experiences, longer-term practices of housing intervention, and processes of urban change both in relation to housing and other urban spheres (e.g. infrastructure, transport, or public space).

Our approach points to a larger impetus to decentre our understanding density and its relation to housing. Density is not just a measure of population, it is an urban phenomenon that is populated by everyday experience. At the same time, these experiences are inextricably part of the larger political economy and cultures within which residents are housed. In focussing on both expressions and modalities, our approach places density in a relational context where it is both a product of larger inequalities and an experience, both a variegated felt sense and a field of urban practice. From this position, there is potential for a larger research agenda that rethinks the relation between density and housing precarity.

Our focus on how density becomes expressed, rather than on number alone, reveals perceptions and narratives that generate a wider archive of knowledge about dense living and the city. Residents in precarious housing understand better than

most the impact of overcrowding, but what matters most is how that experiences impacts daily activities and bodily experience. Density is at once social and material, abstract and embodied, calculated and lived. Exploring these relations further, and in different cities, would widen our understanding of what density means to people.

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Notes on contributors

Hung-Ying Chen is an Assistant Professor in the International College of Innovation at National Chengchi University where she specialises in research on urban governance, housing politics, and sustainable development.

Colin McFarlane is a Professor in the Department of Geography at Durham University, where he explores how cities are known, lived, and politicized. He focuses on how urban politics intertwines with density.

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ORCID

Hung-Ying Chen http://orcid.org/0000-0003-4938-6277
Colin McFarlane http://orcid.org/0000-0001-9209-4494

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