Editorial

Tensions in the ever-changing nature of cities

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Over millennia, cities have evolved into new versions of themselves. This issue of *Nature Cities* explores pressing urban alterations in this moment of history, including conflicts wrought by gentrification and the unfolding iterations of climate change.

Cities are always changing. In many ways, our draw to cities is to their dynamism, which is indicative of their vitality. Constant change keeps cities interesting and produces fantastic variety. Populations constituting all kinds of people, different neighbourhoods, unexpected places, unforgettable times and new and exciting things to do, see and experience are all important aspects of what defines cities and makes each city its own.

Yet, the familiarity of cities is just as important as their changing nature. Knowing a place deeply over time is part of recognizing one's self and one's community. How meaningful it is to be able to stay somewhere comfortable and familiar. How delightful it can be to return to an urban nook. How difficult it may be to cultivate familiarity in a strange place. The intimacy of belonging is connected to the steadfastness of urban life.

Both metamorphosis and constancy distinguish urbanity.

It is important that cities are both transient and generational homes. Lifelong urban residents know their cities in a deep and abiding way. Some city dwellers are jet-setters, while many are refugees who choose or are forced to build relationships with and in an array of global cities. Other residents live, work and play in a more limited proximity and know their city, and their part of their city, in unparalleled ways. The mobility and consistency of tenure may or may not be within an urbanite's control.

An intensifying pressure is gentrification, where poorer residents are physically or culturally displaced to create upscale areas through urban redevelopment. In October, *Nature Cities* attended the conference 'Gentrification, what can we do about it? An international dialogue' at Boston University.

In this issue, a report on that meeting discusses recent advances in gentrification studies, including historical context and multi-level significance. A major trend is the interlinking of housing, ecosystems and financialization, as pressures of affordable housing and ecosystem stressors are tied to financial strategies for economic development that have grown since the 2008 global financial crisis.

Two vantage points from Detroit, a post-industrial US city, help triangulate these pressures. A Q&A with Peter Blackmer presents findings from an oral history project, 'Voices from the Grassroots,' which archives community reflections on Detroit's municipal bankruptcy in 2014. This Q&A offers methodological notes on the value of oral histories for urban research while also drawing specific insights from Detroit's experience of financial crisis. In her I and the City piece, Toyia Watts, a long-term Detroit resident, explains that bankruptcy opened the doors to the gentrification processes now straining her working-class Black community. Her words offer a first-person perspective on how it feels for gentrification to directly target one's neighbourhood and city.

Dynamics of inequality affect various opportunities for urban residents. For instance, where one goes for special occasions is quite significant. In this issue, Wang et al.'s Article, which is also discussed in a News & Views by Fan, demonstrates that infrequent and irregular activities tell us more about a person's class position than frequent ones, like where they go to work. They show that even 2% of the cumulative mobility patterns of infrequent activities in US cities can predict around 40–60% of variations in median household income and property values. Such atypical journeys define different strata of urban experience.

Changing opportunities in cities are also deeply tied to the escalating climate emergency. Adapting to warming cities is one necessity. Huang et al.'s Article examined retro-reflective building surfaces, which reflect incoming solar radiation, as a cooling strategy in cities across various latitudes, seasons, urban geometries, street orientations and wall directions. Flooding is another major climate risk. Flood risk exposure has traditionally focused on people's place of residence, but Zhewei Liu and coauthors' Article recognizes that most people do not spend all day in their homes. The authors depicted a more complex story of flood risk exposure according to place and time of day. Health and mortality risks are also heightened by climate stressors. China's port cities are important sites of emissions reductions, as considered in the Article by Huan Liu and coauthors. They found that, even though small-particulate pollution decreased recently, mortality associated with long-term exposure to it increased by 11% due to demographic and other changes. Thoughtful approaches to studying urban heat, flooding and air pollution will only become more important as climate impacts deepen.

No city has been immune to changes ushered in by the COVID-19 pandemic. O'Garra et al.'s Article, also discussed in a News & Views by Lindvall, analysed data from 793 cities to study how the pandemic affected their climate commitments and activities. The authors found that, even though cities continued climate action, funding for it has fallen and less than half of the cities responded to the pandemic by implementing green recovery initiatives. Nevertheless, cities that drew on interconnections between climate action, public health and sustainable business collaboration advanced climate policy outcomes, despite the enduring crisis.

Urban surroundings are fundamentally relevant to the effects of climate change within cities. Francini et al.'s Article addresses the importance of current and potential forests surrounding cities in "peri-urban" areas. They find great capacity for planting peri-urban forests to hold and absorb carbon. This emphasizes that change in and around cities can also be a physical transformation of different species.

Cities morph into different versions of themselves, in turn urban dwellers must refashion their own ways of life and connections to place. Who benefits and who struggles? New realities confronting one's city may make the familiar unrecognizable and engender a deeper recognition of the necessity for collectively shaping the winds of change.