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Interconnected communities: urban development policy for a changing society

Younger cohorts want changes in the environments they live in. They want to live in interconnected environments that provide fluidity between work, home and recreational spaces. Interconnected environments are conducive to young people building connections and social networks, creating interconnected communities. These interconnected communities provide flexibility in work–life balance, improve accessibility to amenities, build latent support networks and social capital, and provide environmental benefits that are congruent with compact living.

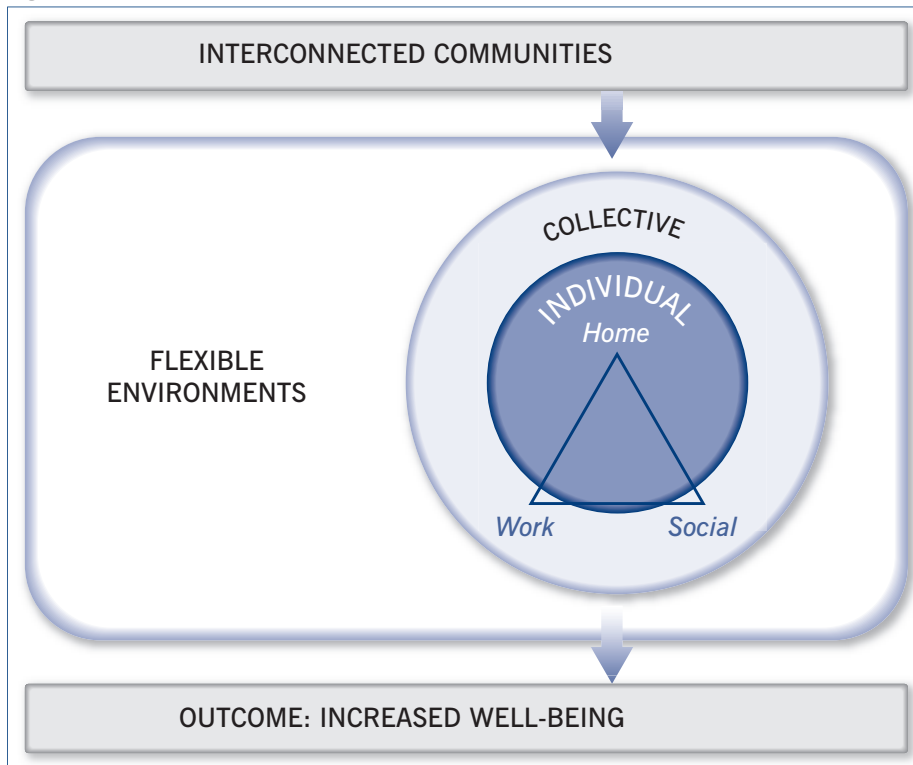
The need for integrated communities

Current mechanisms in society that foster interconnectedness in communities are not adequate for young people. Societies are not structured in a way that is conducive to making social connections for young people (Bauman, 2013). Places that were previously hubs of connection, such as local shopping and community centres, are not fulfilling the same function. The central role of schools in fostering connections through sibling and family

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Figure 1: Framework for Interconnected communities



networks has diminished as family size reduces. Gossip exchange has shifted from pubs and churches to online, reducing the need to go out into the community. Thus, young people are not meeting up in person and developing connections through the same mechanisms previously used for creating community connectivity.

Integrated communities address this growing social isolation by creating networks for individuals, through the redesign of the collective environment, to include mechanisms to assist with young people's community and civic engagement. Integrated communities are inherently intergenerational, which is key to minimising burdens on older generations by ensuring that all needs are met.

Ultimately, wellbeing, the quality of living and overall societal health are improved.

Framework

The framework shown in Figure 1 characterises the individual's civic (work, social, home) life as being embedded within the 'collective'. The collective consists of wider environments and communities that the individual lives within. The individual and the collective have a mutualistic relationship: the individual provides value to the collective and the individual receives value in return.

A local community hall characterises this. The collective is the group of users (practising judo, dancing, etc.); individuals are the members of the groups. Individuals can associate with multiple groups. Groups can constantly change, and the hall can adapt for the different needs of the groups. Multiple groups can use the hall at the same time.

Individual

The future of work

Integrated communities are necessary to accommodate the changing nature of work and the new approach to work-life balance young people have. Growing automation of industries alongside New Zealand's already predominantly service-based economy means that the number of manufacturing and primary industry jobs is diminishing. Service jobs inherently allow for more flexible working arrangements in terms of both location and time worked. This is compounded with changing societal expectations of what 'work' looks like and when we engage in it.

Young people will have numerous career changes in their working lives. Young people want flexibility and variability in the type of work they do and when and where it is done. There will be an inevitable blurring of home and work life and the

spaces they have in our communities. Therefore, communities we build need to cater for the different ways that young people will be integrating their work and home lives.

Our communities will need to be built with multi-purpose spaces that can be utilised for different types of work environments. What we envisage is spaces where the nature of work individuals perform is different, the composition of people can change daily, and the same individuals can be doing different types of work on the same days. They must be versatile.

They also need to cater for the fact that many of the jobs young people will be doing in the future do not currently exist. Further, we envisage these versatile workspaces to be in close proximity to residential and commercial zones, so mobility is not reliant on transport. This would ideally reimagine the traditional 'town centre' into a more integrated space that can act as a hub for smaller 'CBD'-like areas, removing strain from one central location in an urban centre.

In ensuring equitable intergenerational wellbeing, the adverse effects of the change of work need to be accounted for. This includes the involuntary changes imposed on the nature of work for low-wage workers, which remove certainty of employment and income. While solutions to these issues lie in targeted employment and income policy, the way we design integrated communities must consider the uncertainty faced by high-risk groups to allow them to participate in society (see Andersen and Svarer, 2006 for more information on the Danish flexicurity model).

Shaping environments to increase social connectivity

Physical spaces that champion social interaction can improve health outcomes. Individuals who experience social isolation, in addition to reporting lower levels of life satisfaction are susceptible to a range of health complications, ranging from depression to increased mortality (Statistics New Zealand, 2010). Social isolation is an objective measure which characterises a lack of social contact. There is the physical dimension of loneliness, exacerbated by perceived or experienced

loneliness (Bauman, 2013). Interconnected communities can help to ensure that physical environments foster individuals' access to social contact, while enabling individuals to maintain autonomy over the extent and form of this contact.

This could, in part, be achieved by shaping physical environments in a way that fosters 'micro-interactions'. Even brief contact with individuals (a chat in the stairwell, sitting next to someone while waiting for the bus) can enhance one's perception and feeling of social contact and connection with their community (Kawachi and Berkman, 2001).

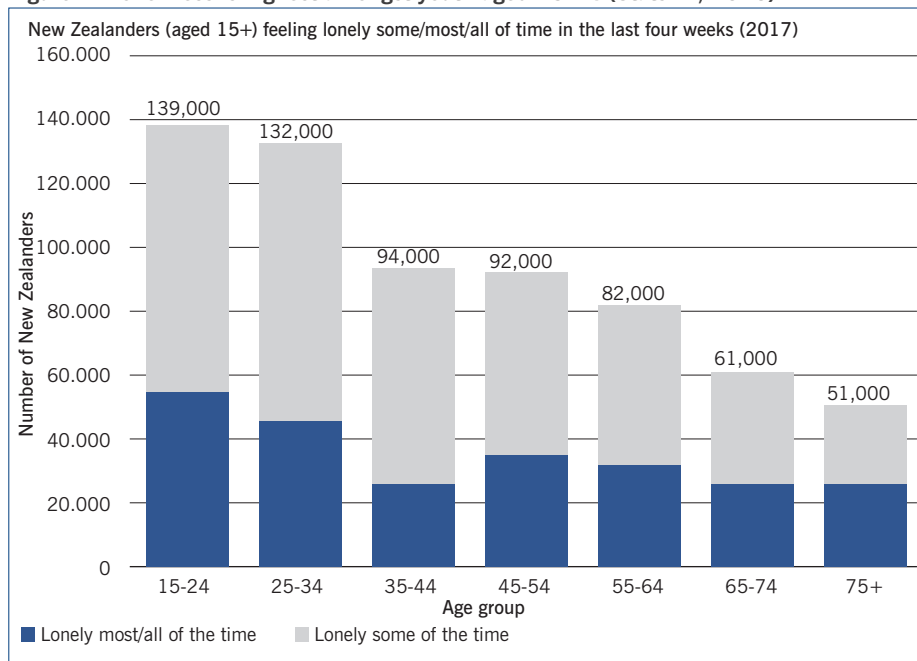
Intergenerational connection

Loneliness is of specific concern for younger cohorts. Statistics New Zealand reported in 2010 that 18% of 15–29-year-olds feel lonely all, most or some of the time. This contrasts with just 11% for retirees (see Figure 2 for more updated statistics). To be truly valuable, our communities must provide social bridges between generations (in addition to social and economic strata). Intergenerational connectedness may reduce levels of perceived loneliness and facilitate the transmission of intergenerational knowledge.

In 2018, *He Ara Oranga*, the Government Inquiry into Mental Health and Addiction report, identified that isolation, loneliness and a loss of community are eroding New Zealanders' wellbeing, especially young people's (see Government Inquiry into Mental Health and Addiction, 2018). The inquiry's findings indicated that many people feel isolated from their neighbourhoods and communities. It also emphasised that, in order to mitigate this, urban development policies that favour 'community and connections' are needed.

Loneliness can be reduced through building latent support networks – feeling able to reach out if needed. These include micro-interactions within the community that build trust. For older generations, this worked. They got to know their small neighbourhoods and communities. But now, in a rapidly changing society where lives are becoming increasingly busy, traditional mechanisms are not as effective. Hence, physical environments need to be conducive to making social connections through mechanisms young people engage with.

Figure 2: Loneliness is highest amongst youth aged 15-24 (StatsNZ, 2016).



Source: Statistics New Zealand, 2016

Collective

Social capital

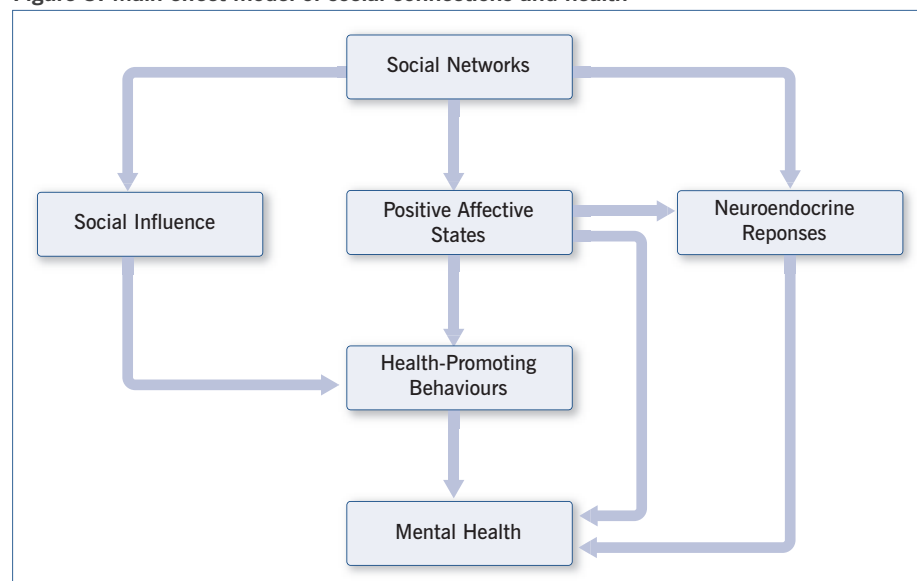
The main effects model of Cohen and Wills (1985) (see Figure 3) shows that social networks and social integration can have beneficial effects for individuals regardless of the stress they may be under. Connectedness can create a sense of purpose and belonging as well as recognition of self-worth, producing positive psychological states (Kawachi and Berkman, 2001).

Participation in community enhances the likelihood of mobilising social support and accessing latent support networks which can protect against negative health

outcomes. The collective represents a connectedness within the wider community and resonates with the concept of social capital. As per social capital theory, an individual's ability to create meaningful connections is contingent on structural characteristics (ibid.). Thus, how we design our communities has significant consequences.

Creating interconnected inter-generational communities facilitates the structural aspects of social relationships at critical points during life stages, such as early childhood and for the elderly. As socio-economic status affects social networks too, inclusive communities are crucial.

Figure 3: Main effect model of social connections and health



Source: Kawachi and Berkman, 2001, adapted from Cohen and Wills, 1985

Designing collective spaces

The design of the environment is critical for facilitating and creating social connections. Co-designing with different groups enables the creation of spaces that ensure inequalities are addressed. Inherently, these new spaces would be built for people who previously had been excluded and disadvantaged (O'Dell et al., 2019). Partnering with and focusing on the people who are most disenfranchised will ensure the communities are genuinely inclusive.

The design of communities must be diverse to overcome the homophily that neighbourhoods often experience. Spatial concentration of social networks has significant effects for the geography of attitudes and behaviours as well (Johnston and Pattie, 2011). Diverse communities can increase diversity of thought and encourage debate, while also teaching inclusion, creating harmonious societies.

Design of neighbourhoods is crucial to foster the inclusion of elderly and other social groups, as well as key to the development of children (Bronfenbrenner, 1979). Intergenerational design accounts for an individual's changing needs over time, and the anticipation of this will ensure people have amenities when they need them. There must be accessible recreational spaces that fulfil the needs of multiple generations because they interact with the same physical spaces. Encouraging mixing of age cohorts expands social networks, enables knowledge sharing and creates support systems. This is vital as networks of social connections often shrink with age (Cacioppo, Fowler and Christakis, 2009).

Our framework characterises individuals as being embedded within the collectives of which they are members. More specifically, collectives defined by physical proximity are important to an individual's wellbeing. As social interaction among youth inevitably moves towards more digital spaces (OECD, 2018), leveraging the value of physically defined collectives, such as one's neighbourhood or local cafe, becomes increasingly important.

Mechanisms for change

Roles of the private sector and government

To enable the creation of integrated communities, central government

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would signal the necessary changes by amending legislation, such as the Resource Management Act 1991, and issuing national policy statements. Additionally, it will provide data infrastructure enabling private entities to develop innovative solutions which leverage community-specific information. Bolstered by government incentives, the private sector will invest capital and implement these signalled changes. It will also develop innovative, community-centred solutions that leverage government-provided data infrastructure.

Legislative change

In managing a broader reform programme, one of the government's critical roles is to signal a change in New Zealand's approach to urban development. Changing the communities that we live in requires reforming how we approach resource management and planning. Government at central and local levels has the task of creating the framework that can accommodate the initiatives needed to create an integrated community. Coordination between central government and local government will be required to signal the overarching goals of these communities and the frameworks that will support them.

Consistency is important to ensure that inequalities do not emerge and that all people have the opportunity to live in integrated communities that are designed to reflect optimum outcomes. This means that the performance standards that new, integrated communities must meet are set at a central level. For example, a central

directive would state that all new planning regulations must allow for residential, commercial and recreational spaces within a specific range of distance or within a specific size of geographical area.

Conversely, we also recognise the importance of allowing for flexibility in the framework so that different communities' needs are accommodated at a local level. It is therefore critical for local communities to engage with the design standards for their amenities. The nature and configuration of different local areas can then better reflect the needs of the specific demographics residing in different communities.

Big data

Young people want engagement without active participation. Despite being underrepresented in democratic decision-making processes (Statistics New Zealand, 2014), young people want their voices heard. A myriad of social and economic factors influence an individual's capacity for active civic participation; thus, whole sections of society may be excluded from these processes. Creating integrated communities requires developing mechanisms which enable preferences of these groups to be represented, regardless of their capacity to participate. Policy interventions leveraging big data can facilitate this.

Passive participation

'Big data' offers governments the opportunity to enable 'invisible' citizens to engage with democratic processes without actively participating. Analytical techniques such as regression analysis, when combined with access to large sets of intimate and novel data offer governments the ability to understand what its citizens want. This understanding occurs through the observation of their revealed preferences, rather than stated preferences. This creates an 'indirect democracy' and engages individuals in the decision-making processes that determine how their communities are built (O'Dell et al., 2019).

Solving disengagement to ensure communities are represented

This data-driven approach solves two issues. Primarily, it resolves the lack of

engagement in the democratic process. Data can be used to reveal individual preferences, anonymise preferences in groups, and be manipulated to demonstrate the preferences of a certain segment of society (ibid.). This allows community building to take account of what people want, without their active engagement. It enables decision making to be better informed and reflect the preferences of society at large, rather than of the most vocal members and those who have the capacity to engage. This approach allows individuals' preferences to be represented even when they do not have the capacity to express them through active engagement with traditional democratic processes.

Second, collecting (and using) data from community-specific groups ensures that a larger set of preferences are accommodated. This enables community building to focus on those who have traditionally been marginalised and whose preferences have been ignored, thus allowing the creation of truly integrated communities where all views are incorporated in decision making, enhancing insights and findings from traditional face-to-face engagement.

Big data has an aspect of self-monitoring and self-evaluation. Since data is aggregated and analysed in real time, it reflects current preferences, and decision making can be adapted to reflect these. Depending on the nature of the policies and decisions, a real-time feedback loop can be created (ibid.).

Observing these current preferences, however, does not tell us what changes a community wants. Analysing patterns can indicate possible trends or needs, but these assumptions must be tested against what communities tell decision makers. Passive participation is additional to, not a replacement for, direct engagement. In some instances, initiatives inspired by data-provided predictions could be tested in community focus groups where feedback can be collected before they are rolled out.

Consider the example of an entranceway to an apartment building. Sensors installed in the entranceway collect data about what time people generally enter the building. Analysis has revealed that a significant number of people use it early in the evening. As winter is approaching, it will be getting darker earlier. Analysis can anticipate whether people might continue to come home at the same time, indicating a need to install additional lighting or safety measures. This could be tested by asking people who generally enter at certain times whether they will continue to do so. A decision can then be made based on both revealed and stated preferences.

Management of data

The collection and use of data – by both private and public institutions – must be regulated within an adequate framework for the 21st century. Both sectors have a role in designing and creating integrated communities. Public bodies have large quantities of data that, when provided to the market, can be used in innovative and novel ways.

Currently, data is governed through a consent framework that is not practical. The quantity and nature of data that is currently collected is so large that individual control and consent is an inadequate mechanism. Individuals do not have the time or information to know what they are consenting to and how their data is being used (Solove, 2013). A regulatory framework that fits the public goals of data collection and use, while at the same time protecting the individual from harm, is desired. This would lead to the best use of data in designing solutions for integrated communities.

Implementation Engaging younger cohorts

Younger cohorts need to have a vested interest (such as home ownership) in their community to adequately engage with it. As house prices rise (REINZ,

2020), one barrier to achieving this is a lack of adequate capital. One solution is a mechanism similar to the KiwiSaver scheme. Individuals could borrow against their future contributions in a 'rent-to-buy' fashion. Instead of paying rent, individuals can build equity in the scheme. They would have the ability to leave a given community, with their funds going back into the scheme while maintaining their equity share.

In effect, this pool of properties would act as a club good which enables flexible living arrangements, while still providing a level of stability and a sense of community. Providing this fluidity allows individuals the ability to divest from one housing unit and move to another with ease. This gives them the flexibility and community they desire while maintaining the engagement that stems from their equity in these communities.

The scheme in practice

Private entities would be able to borrow equity in this scheme, using it to invest in the development of further communities. The performance standard directive dictated by the government enables entities to invest this capital in ways they believe will best fulfil the vision of the scheme.

The value of the performance standard approach is that there are many perspectives developers might take to realise the principles of the national policy statements. One example is the Urban Habitat Collective, which is a co-housing development in Wellington. Its vision is to develop co-housing apartments around communal spaces that support 'community and good living' (Urban Habitat Collective, 2020). While this collective is funded through traditional financing mechanisms, it does indicate what the communities might ultimately look like in practice.

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