

# By yourself, yet not alone: Making space for loneliness

Luzia Cassis Heu 

Utrecht University, The Netherlands

Tom Brennecke

University of Milan-Bicocca, Italy

Urban Studies

2023, Vol. 60(16) 3187–3197

© Urban Studies Journal Limited 2023



Article reuse guidelines:

[sagepub.com/journals-permissions](https://sagepub.com/journals-permissions)

DOI: 10.1177/00420980231169669

[journals.sagepub.com/home/usj](https://journals.sagepub.com/home/usj)

 Sage

## Abstract

Urban designers often aim to reduce the subjective feeling of loneliness through more opportunities for social interaction in (semi-)public space. These approaches may benefit people who feel lonely because they are socially isolated, but they neglect a wide range of other loneliness experiences. Indeed, there are various reasons for feeling lonely, which can often not (quickly) be erased by more social contact. Strikingly, many lonely people have even been found to prefer, and sometimes benefit from, spending time by themselves. This does, however, not imply that they necessarily prefer to remain in private space. Trying to ‘plan away’ aloneness and negative feelings – as visual representation of loneliness – from public space may then exacerbate loneliness: it signals that lonely people are alone with their experiences and can exclude them from the community of people using the same space. We therefore propose a ‘paradoxical loneliness intervention’, where more space for loneliness eases its painfulness. More specifically, we offer ideas for spaces that cater to the diverse needs of lonely people by (1) de-stigmatising loneliness, (2) providing opportunities to reflect on loneliness, (3) allowing the development of a sense of belonging and (4) allowing a mental escape of loneliness.

## Keywords

loneliness, loneliness stigma, public space, sense of belonging, urban design

---

### Corresponding author:

Luzia Cassis Heu, Interdisciplinary Social Sciences, Utrecht University, Padualaan 14, Utrecht 3584 CH, The Netherlands.

Email: [l.c.heu@uu.nl](mailto:l.c.heu@uu.nl)

## 摘要

城市设计师通常通过在公共空间或半公共空间中，提供更多的社交互动机会来减少主观上的孤独感。这些方法可能会使那些因社会隔离而感到孤独的人受益，但它们忽略了其他广泛的孤独体验。事实上，感到孤独的原因有很多，这些原因往往不能通过更多的社会接触来（很快）消除。令人震惊的是，我们甚至发现许多孤独的人更喜欢，有时甚至受益于自己的独处。然而，这并不意味着他们一定喜欢呆在私人空间里。试图将独处和负面情绪--作为孤独的视觉表现--从公共空间中“规划掉”可能会加剧孤独感：它表明那些经历是孤独的人独有的，并可能将他们排除在使用同一空间的人们的社区之外。因此，我们提出了一个“矛盾的孤独干预”方法，为孤独提供更多的空间，以缓解其痛苦。更具体地说，我们提出了一些关于空间的想法，以满足孤独者不同的需求：（1）去掉孤独的耻辱感，（2）提供反思孤独的机会，（3）允许发展归属感以及（4）允许在精神上逃避孤独。

## 关键词

孤独感、孤独的耻辱感、公共空间、归属感、城市设计

Received October 2022; accepted March 2023

Loneliness can be described as the unpleasant feeling that results from perceiving that one's relationships cannot offer what one expects or desires from them (based on Perlman and Peplau, 1981). Relatedly, it has been defined as a feeling of being cut off or separated from others (Hays and DiMatteo, 1987) or as perceived social isolation (VanderWeele et al., 2012). As such, loneliness is a subjective experience, which is different from objective states of being alone (i.e. solitude) or socially isolated (i.e. having few social relationships). It is experienced by most people at some point of their lives and shared by humans across cultures (van Staden and Coetzee, 2010). Therefore, loneliness can be argued to be as inherent to the human experience as anger or sadness. Indeed, some scholars view it as an evolutionarily developed signal to reconnect with others, just like thirst or pain (e.g. Cacioppo et al., 2013). At the same time, loneliness tends to be uncomfortable and can entail multiple health risks, including depression, anxiety, obesity and a weakened immune system (Cacioppo et al., 2015).

Consequently, many interventions attempt to reduce, if not entirely erase,

loneliness (as reflected in a 'zero loneliness' vision by some British cities; Key Cities, 2022). To that aim, many of these interventions intend to increase social contact (e.g. through telephone helplines, buddy systems, shared activities or apps to meet new people; the Dutch initiative Een tegen eenzaamheid, n.d.; Jopling, 2015). Relatedly, spaces that encourage social interaction are key in urban design interventions against loneliness (Ector, 2020; Shafique, 2018; Wray, 2022). This is unsurprising given that loneliness and social isolation are often confused in everyday language, while people in many societies live increasingly solitary lives (e.g. Klinenberg, 2016; Putnam, 2000; Snell, 2017). However, although social contact may be the antithesis to social isolation, it is not necessarily the antithesis to the subjective experience of loneliness.

Indeed, loneliness can have numerous different causes (Heu et al., 2021a; Rokach, 1989).<sup>1</sup> For instance, people can feel lonely because they feel unsupported or misunderstood in their social relationships, because they are faced with problems or decisions, are socially sensitive, do not know what their needs, aims or interests are or because

they perceive themselves as not fitting in with others in their social surroundings (Heu et al., 2021a; Rokach, 1989). Additional to such individual risks, higher loneliness has been found in groups of lower socioeconomic status (Solmi et al., 2020) or stigmatised groups (Pedersen et al., 2012; Rokach, 2014). As loneliness is hence often unrelated to social contact or isolation, interventions targeting these two loneliness causes can be ineffective.

Moreover, studies suggest that many lonely people *seek*, rather than suffer from, social withdrawal (Ernst and Cacioppo, 1999). Paradoxically, they may also benefit from it (Moustakas, 1972; Rokach, 1990). For instance, participants in different qualitative interviews we conducted reported having spent more time in solitary activity to reflect on their loneliness and its causes, to protect themselves from others' expectations or negative feedback when in a vulnerable state or to create a better relationship with themselves (Brennecke, 2022; Heu et al., 2021a). Social withdrawal was also frequently perceived as a remedy for loneliness in cultures where people typically spend a lot of time with others (e.g. among Indian and Egyptian participants in qualitative interviews, Heu et al., 2021a). This tendency to withdraw is often viewed as maladaptive, particularly if loneliness is interpreted as an evolutionary signal to seek connection (Cacioppo et al., 2013). In our participants' experience, however, social withdrawal could ease and sometimes fully erase loneliness: whereas for some, these strategies were ways of dealing with acute loneliness before socially connecting again (Brennecke, 2022; in line with Qualter et al., 2015; Rokach, 1990), others presented them as an ultimate solution for their loneliness (Heu et al., 2021a).

Importantly, however, a (temporary) preference not to engage in conversation or shared activities does not necessarily imply

wanting to entirely withdraw into private space. Accordingly, it has been suggested that social infrastructures (i.e. urban spaces to gather; Latham and Layton, 2022) ideally imply options to both connect *and* to 'live comfortably alone and alongside one another' (Latham and Layton, 2022: 659). Park benches, for example, have been discussed as sites of both self-care and conviviality (Rishbeth and Rogaly, 2017). They allow one to sit and observe public space without active interaction with others. However, in practice, there appears to be little space in communal life for being by oneself (i.e. coming 'single' rather than 'with', in the terminology of Goffman, 1971): with a few exceptions such as public transport or libraries, 'public' and 'solitude' tend to be perceived as opposites in architecture (Komac, 2016). (Semi-)public space in cities is arguably widely conceptualised and built as meeting space rather than as space to spend time by oneself.

This is unsurprising given that undesirable states or characteristics are typically excluded from public space (e.g. homelessness, Hodgetts et al., 2007; mental illness, McGrath and Reavey, 2019), while solitude and loneliness are stigmatised (Barreto et al., 2022; Ren and Evans, 2021). This holds more strongly for some groups than for others. For instance, women who enter public space alone seem to experience stigma more strongly than men (Lahad and May, 2017). Indeed, the private sphere of the home has traditionally been assigned to women, whereas the public sphere has traditionally been viewed as the sphere of men (Chasteen, 1994).

An in-depth discussion of *why* being alone or feeling lonely are stigmatised would go beyond the scope of this commentary. Nevertheless, we note that being separated from a group has been a threat to survival throughout human history. This may have given rise not only to individual mechanisms

preventing seclusion (i.e. loneliness; Cacioppo et al., 2013) but possibly also to similar *social* mechanisms. Accordingly, in many societies, people seem to be socially expected to be part of a family ('familism'), while people whose relationship status is 'single' are often negatively perceived or discriminated against ('singlism'; DePaulo and Morris, 2005). However, the stigma of being alone seems to go beyond singlism or familism. After all, being in public with friends is usually as accepted as being with a partner or family.<sup>2</sup>

Taken together, there seems to be a mismatch between what many people who feel lonely need and what urban design offers and communicates.<sup>3</sup> Indeed, spaces reflect social norms (e.g. Morling and Lamoreaux, 2008; Rapoport, 2005), which influence individual thought, emotion and behaviour. For instance, the absence of tables for individuals at a restaurant suggests that being alone is uncommon and/or undesirable in this setting. In turn, people who want to have dinner alone can feel uncomfortable and will thus be less likely to come and stay. That is, urban design can suggest that solitude and loneliness in public space do not fit with *social norms* (i.e. unwritten rules about what most people in a society do or ought to do, Cialdini et al., 1990). This is relevant because people who are perceived to deviate from social norms can feel alone with their experiences, and judged or rejected for them (Heu et al., 2021b; Watson and Nesdale, 2012), which increases the risk for loneliness (Heu et al., 2021a; Pedersen et al., 2012; Rokach, 2014; Watson and Nesdale, 2012).<sup>4</sup> More specifically, the invisibility of aloneness can not only make lonely people feel alone with their need to be by themselves. Even though loneliness and aloneness are clearly different experiences, aloneness can also visually represent loneliness. Relatedly, there is usually little space for people to feel bad in public, while loneliness tends to be an unpleasant

feeling (e.g. Heu et al., 2021a; Perlman and Peplau, 1981). In architectural renderings, people are not only often portrayed in groups, they are also typically smiling and chatting with one another. The feeling of not fitting in with social norms can then also make lonely people less likely to linger in public space, depriving them of opportunities to develop belongingness to a place or community. A lack of belonging is another known risk factor for loneliness (Franklin and Tranter, 2021; Lim et al., 2021).

In sum, little space for being alone in public (1) fails to meet the needs of lonely urban citizens, (2) can make them feel 'different' and alone with their situation and (3) can deprive them of the opportunity to develop a sense of belonging to a place or community. On the flip side, this also means that urban design can shape social norms in a way that includes lonely people, even if they prefer not to actively engage in social contact. To offer some ideas for how to do so, we introduce a 'paradoxical loneliness intervention'. Specifically, we propose making more space for loneliness through urban design that signals acceptance of loneliness, that allows lonely people to participate in communal life and that supports lonely people in dealing with loneliness – for instance, through distraction or opportunities to reflect.

This is not to say that urban design that aims to stimulate social connection is not useful when counteracting loneliness. After all, people who temporarily prefer to be by themselves may sometimes benefit from brief, non-committal chats with others: interactions with strangers were, for example, found to have a positive impact on well-being (Epley and Schroeder, 2014). Also, certain groups of lonely people *do* feel lonely because of social isolation or little social contact. For instance, elderly people have repeatedly been found to be particularly at risk for loneliness (Luhmann and Hawkey, 2016), and they are often more socially

isolated and/or spend more time alone than other age groups (Larson, 1990; Marcum, 2013). Nevertheless, adolescents and young adults are, on average, less socially isolated and also often report relatively strong loneliness (Luhmann and Hawkey, 2016; Solmi et al., 2020). Consequently, spatial interventions against loneliness need to acknowledge the diversity and complexity of loneliness experiences more, moving beyond fostering active social contact.

### Making space for loneliness

This critical commentary can be situated in a broader academic debate about whether cities should be designed to cater to the needs of individuals (e.g. Klinenberg, 2016) or rather should stimulate sociability (e.g. Imrie, 2017) in the face of increasing numbers of single-person households (Klinenberg, 2016; Snell, 2017) and withdrawal from collectives (Putnam, 2000). Generally, changes we suggest are small scale. They are based on what we have learned from qualitative interviews about loneliness in different research projects (Brennecke, 2022; Heu et al., 2021a), from previous theorising and empirical research about loneliness and from contributions to the ‘Eliminating Loneliness by Design’ competition (Bubble Futures Platform, 2019). The aim of this competition was to envision spaces that combat loneliness, and the variety of submissions reflects the complexity of loneliness experiences: among others, they include spaces to be alone, spaces to observe others and various small-scale additions to urban space that allow users to interactively engage with their socio-spatial environment.

In this commentary, the city is understood as a platform for emotional self-regulation (Korpela, 1992; Korpela et al., 2018), while we consider *atmospheres* when thinking through various spatial scenarios. Griffero (2016: 143) states:

At the centre of atmospherology – we repeat – there is the conviction that atmosphere, at least the prototypical one, lies not so much in the eye of the perceiver, but it is rather a relatively objective (intersubjective) feeling we encounter in the external space.

For instance, a space to mentally escape loneliness will only be perceived and used as such by individuals who also seek distraction. For others, it may be perceived and used as a space for reflection:

[...] a person who lives an atmospheric feeling knows immediately how to behave: ‘he who is content can jump around; he who is sad can moan and sit dull or as if he was shattered; he who is ashamed can lower his head, shrug his shoulders’. (Schmitz, 1990: 305; cited in Griffero, 2016: 18)

Therefore, we offer a variety of different spatial solutions for each theme discussed.

Notably, a prerequisite for all our suggestions to be effective is that these spaces feel safe. Some of our suggestions refer to making public spaces *socially* safer in the sense of not being negatively evaluated or rejected for being alone. At the same time, safety clearly also implies the absence of threats to physical integrity, which are more likely when alone than when in company. Not only are physically unsafe spaces likely to deter individual visitors, but little perceived safety has also been found to relate to more loneliness (for a review, see Bower et al., 2023). This seems to be particularly relevant for women. For instance, in qualitative interviews in Milan, women in particular stressed the safety aspects related to spending time in public space. Among other things, they reported being wary of footsteps behind them and had been recommended not to go to night clubs alone (Brennecke, 2022). Additionally, our suggestions for reductions of social stigma (i.e. social safety) can also be viewed as particularly relevant for women,

as they tend to be stigmatised more for being by themselves in public than men are (Lahad and May, 2017).

### *Spaces reducing social stigma*

Little visibility of aloneness can signal that feeling lonely or wanting to be alone are uncommon or unaccepted, which can increase loneliness. The design of (semi-)public space should hence invite people to come alone. For instance, furniture in (semi-)public space that is intended or suited for individuals may visually normalise being alone. While park benches can emphasise aloneness and the non-normativeness of sitting alone, park *chairs* do not signal the absence of others. Similarly, furniture in the public courtyards at the Museumsquartier in Vienna does not define how many occupants it is designed for (MuseumsQuartier Wien, n.d.). As much as entire groups can sit on them, individuals can also lie down on them, like on a sofa in public space. Accordingly, Starbucks, for example, offers round tables (Blumenthal, 2007), as rectangular tables more clearly define how many people should sit on each side.

Urban design can also invite people to come alone by more strongly considering the needs of individual visitors. For instance, interviewees in qualitative research reported frequently feeling overly visible or exposed in public space (Brennecke, 2022). Indeed, loneliness is often coupled with shyness or social anxiety (Anderson and Harvey, 2011). Uncomfortable exposure may be prevented by plants or shelves, or different types of vegetation in parks. For example, Kadriorg Park in Tallinn, Amstelpark in Amsterdam and Central Park in New York share that their different sections allow visitors to choose whether they want to be exposed or hidden. Sections with denser vegetation and serpentine paths that allow one to avoid visibility contrast with open spaces that allow one to observe other park visitors (watch the

‘big telly’, Rishbeth and Rogaly, 2017) and be part of them.

### *Spaces to reflect*

(Semi-)public space can also help people better understand or deal with their loneliness by providing opportunities to reflect (e.g. in the ‘Tokyo Treehole Plan’ by Gandong and Mingjie Cai or ‘Loneliness/Solitude’ by Naomi Au; Bubble Futures Platform, 2019) – for example, on the origins of their loneliness (Heu et al., 2021a). To help prevent thoughts competing with external stimuli, such spaces should be made safe and calm, for instance through acoustic walls or water to cancel out traffic noise. Pedestrian promenades or quick routes out of cities can allow engagement in undisturbed walks. Through traffic lights on the floor, people could cross streets without having to look up and thereby be dragged out of their thoughts. Such traffic lights have already been realised in Bodegraven in the Netherlands, albeit thus far with the aim of protecting pedestrians who engage with their phones (e.g. Price, 2017).

Reflection is not only endogenous but may also be stimulated by what one observes or perceives in others. Observing another individual who seems to be content having dinner alone may, for instance, help one to understand that it is not the absence of a partner that makes one feel lonely. Witnessing a particularly (in)sensitive interaction between a parent and child may help one understand that one’s loneliness is rooted in an unsafe environment as a child, or a dissatisfying relationship with one’s parents or own children. As such, opportunities to safely observe others in public space – such as on park benches (Rishbeth and Rogaly, 2017) – may allow one to be moved, be inspired or gain insight into one’s own feelings.

Although loneliness usually feels unpleasant, participants in qualitative interviews reported experiencing relief when they were

reminded of the relative irrelevance of their problems (Brennecke, 2022). References to nature or the universe can help put troubles or worries into perspective – for instance, through urban greenery, trees or monuments that direct views up to the sky. Indeed, the availability of green space in cities has repeatedly been found to be associated with less loneliness (Astell-Burt et al., 2022; Bower et al., 2023). Although the precise mechanisms underlying this effect are unclear, participants in our qualitative interviews reported that spending time in nature helped them deal with their loneliness by clearing their thoughts (Brennecke, 2021; Heu et al., 2021a). Greenery and trees may also attract birds and other animals, which offer yet another possibility for connection to the non-human. Finally, a spatial connection to the transcendental can be created through play with light and shapes in church architecture, such as by Peter Zumthor (<https://zumthor.org/project/bruderklaus/>) and Tadao Ando (<https://architectuul.com/architecture/church-of-the-light>).

### *Spaces fostering belongingness*

Loneliness is strongly intertwined with, or even characterised by, the feeling that one does not belong (Franklin and Tranter, 2021; Lim et al., 2021). On the flip side, a sense of belonging may be derived from active interaction not only with other people but also with places (Franklin and Tranter, 2021; Pipitone and Jović, 2021).<sup>5</sup> This is often discussed as *place attachment*, describing an emotional bond between people and physical surroundings (Manzo and Devine-Wright, 2013). A sense of belonging can also be derived from an abstract community of people who use the same space (i.e. a *sense of community*; McMillan and Chavis, 1986; for the relation with loneliness, see Prezza et al., 2001). Belonging to a place or an abstract community may, for instance, be

found in community gardens (Alaimo et al., 2016).

Additionally, allowing people to shape and oversee public space such as in certain conceptions of placemaking (Thomas, 2016) could foster their sense of community or belonging (e.g. Nolan, 2021; Project for Public Spaces, 2022). Indeed, limited opportunities to personalise space were perceived to increase loneliness among elderly people living in state-subsidised housing (Kalina, 2021). By contrast, the furniture in the public courtyards of the Viennese Museumsquartier, for example, offers people the opportunity to use their own parasols, and the furniture's colour is determined through online voting (MuseumsQuartier Wien, n.d.). Similarly, in a Stockholm art project, the colour of a building's facade changed with reported emotions in a public poll (Moderna Museet, n.d.). Through such art projects, individuals can gain control over public space beyond, for example, pushing the button of a traffic light. They can additionally express their feelings, experience that there is space for how they feel in public and, through sound or colour, create spatial atmospheres tailored to their needs. A sense of belonging may also be fostered by opportunities to exchange messages with others using the same space (e.g. through graffiti, posters): participants in walking interviews often reported relating such messages to their own lives, almost as if they were secret messages left for them (Brennecke, 2022).

### *Spaces that allow one to mentally escape*

Some causes for loneliness may be simple to tackle, while others require time – such as the loneliness after the death of a close other or the loneliness after a separation from a partner. Indeed, one of the most common perceived remedies for loneliness in qualitative interviews was time (Heu et al., 2021a).

Furthermore, some causes of loneliness cannot be entirely erased. For instance, existential loneliness describes the loneliness resulting from the awareness of being fundamentally separated from others as a human being (Moustakas, 1961). This that one will never know for sure whether one's experiences are shared by others. As loneliness typically feels uncomfortable, it may then afford distraction rather than resolution. An environment that is out of the ordinary may provide the possibility to be drawn out of one's inner world – for instance, through visual, auditory or physical sensations.

Such sensations can, for instance, be provided by walkways on roofs (e.g. Lettrist International, 1955, as cited in Knabb, 2006), levelled walkways like Newcastle's Skywalks (e.g. Whitney, 2017), a freestanding staircase like the Vessel in New York, slides instead of staircases like in the Google headquarters (Lynley, 2012) or the High Line in New York – a train track converted to a park. Spaces may also distract by offering opportunities for physical movement or changing views and scenery: in Melbourne, for example, a free tram circulates the city centre. Events such as public film screenings, concerts, light shows or ice rinks can offer additional distraction.

## Conclusion

In this commentary, we have highlighted the relevance of moving beyond encouraging social connection when addressing loneliness through urban design. More specifically, we suggest making space for loneliness, for instance through the interactive, playful and multisensory urban spaces we envision. Such spaces may not only help to prevent people from feeling alone or excluded when feeling lonely; they can also support lonely people in dealing with their experiences. Importantly, our ideas are not exhaustive: due to the wide range of different loneliness experiences, it is important to develop

various interventions to properly cater to lonely people's different needs. As such, our suggestions for a paradoxical loneliness intervention also do not contradict attempts to reduce loneliness through more social contact. Nevertheless, we hope that our ideas inspire planners to move towards a more diverse and nuanced understanding of loneliness when planning against, but also for and with, loneliness in the future.


## Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## ORCID iD

Luzia Cassis Heu  <https://orcid.org/0000-0003-3353-1054>

## Notes

1. Accordingly, loneliness experiences also differ in duration (Beck and Young, 1978) and intensity.
2. One may also argue that, in current capitalist societies, those who are alone may be viewed as less desirable customers in semi-public space than people in dyads or groups.
3. We focus on easing the subjective experience of loneliness in this article, but the negative repercussions of little space for being alone in public space can clearly be felt by all those who, by preference or circumstance, spend time by themselves. As such, our suggestions for changes could generally cater to the needs of more urban citizens than public space that is only designed for dyads and groups.
4. Ironically, this can then also increase the need to withdraw (e.g. Watson and Nesdale, 2012), potentially eliciting a negative downward spiral into long-lasting or even chronic loneliness.



5. Most of the suggestions above may, as such, help people experience belongingness.

## References

- Alaimo K, Beavers AW, Crawford C, et al. (2016). Amplifying health through community gardens: A framework for advancing multi-component, behaviorally based neighborhood interventions. *Current Environmental Health Reports* 3(3): 302–312.
- Anderson C and Harvey A (2011) Brief report: Discriminating between problems in living: An examination of measures of depression, loneliness, shyness, and social anxiety. *Journal of Social and Clinical Psychology* 6(3–4): 482–491.
- Astell-Burt T, Hartig T, Putra IG, et al. (2022) Green space and loneliness: A systematic review with theoretical and methodological guidance for future research. *Science of the Total Environment* 847: 157521.
- Barreto M, van Breen J, Victor C, et al. (2022) Exploring the nature and variation of the stigma associated with loneliness. *Journal of Social and Personal Relationships* 39(9): 2658–2679.
- Beck AT and Young JE (1978) College blues. *Psychology Today* 12(4): 80–95.
- Blumenthal K (2007) *Grande Expectations: A Year in the Life of Starbucks' Stock*. New York, NY: Crown Business.
- Bower M, Kent J, Patulny R, et al. (2023) The impact of the built environment on loneliness: A systematic review and narrative synthesis. *Health & Place* 79: 102962.
- Brennecke T (2022) *Locating loneliness in urban spaces: A qualitative study of how public and semi-public spaces in Milan and Manchester shape the coping behaviour of young adults*. PhD Thesis, University of Milano-Bicocca, Italy.
- Bubble Futures Platform (2019) Eliminate loneliness through design. Available at: <https://bubblefutures.com/eliminate-loneliness/> (accessed 14 October 2022).
- Cacioppo JT, Cacioppo S and Boomsma DI (2013) Evolutionary mechanisms for loneliness. *Cognition and Emotion* 28(1): 3–21.
- Cacioppo S, Grippo AJ, London S, et al. (2015) Loneliness: Clinical import and interventions. *Perspectives on Psychological Science* 10(2): 238–249.
- Chasteen AL (1994) “The world around me”: The environment and single women. *Sex Roles* 31(5): 309–328.
- Cialdini RB, Reno RR and Kallgren CA (1990) A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology* 58(6): 1015–1026.
- DePaulo BM and Morris WL (2005). Singles in society and in science. *Psychological Inquiry* 16(2–3): 57–83.
- Ector J (2020) Ontwerpen tegen de eenzaamheid [Designing against loneliness]. Available at: <https://architectenweb.nl/nieuws/artikel.aspx?ID=48243> (accessed 13 October 2022).
- Een tegen eenzaamheid (n.d.) Initiatieven. Available at: <https://www.eentegeneenzaamheid.nl/initiatieven/> (accessed 13 October 2022).
- Epley N and Schroeder J (2014) Mistakenly seeking solitude. *Journal of Experimental Psychology: General* 143(5): 1980–1999.
- Ernst JM and Cacioppo JT (1999) Lonely hearts: Psychological perspectives on loneliness. *Applied and Preventive Psychology* 8(1): 1–22.
- Franklin A and Tranter B (2021) Loneliness and the cultural, spatial, temporal and generational bases of belonging. *Australian Journal of Psychology* 73(1): 57–69.
- Goffman E (1971) *Relations in Public: Microstudies of the Public Order*. New York, NY: Basic Books.
- Griffero T (2016) *Atmospheres: Aesthetics of Emotional Spaces*. London: Routledge.
- Hays RD and DiMatteo MR (1987) A short-form measure of loneliness. *Journal of Personality Assessment* 51(1): 69–81.
- Heu LC, Hansen N, Van Zomeren M, et al. (2021a) Loneliness across cultures with different levels of social embeddedness: A qualitative study. *Personal Relationships* 28(2): 379–405.
- Heu LC, van Zomeren M and Hansen N (2021b) Does loneliness thrive in relational freedom or restriction? The culture-loneliness framework. *Review of General Psychology* 25(1): 60–72.
- Hodgetts D, Radley A, Chamberlain K, et al. (2007) Health inequalities and homelessness:

- Material, spatial and relational dimensions. *Journal of Health Psychology* 12: 709–725.
- Imrie R (2017) The lonely city: Urban infrastructure and the problem of loneliness. In: Sagan O and Miller ED (eds) *Narratives of Loneliness: Multidisciplinary Perspectives from the 21st Century*. Abingdon: Routledge, pp. 140–152.
- Jopling K (2015) Promising approaches to reducing loneliness and isolation in later life. AGE UK and Campaign to End Loneliness. Available at: <https://www.campaigntoendloneliness.org/promising-approaches/> (accessed 13 October 2022).
- Kalina M (2021) “A neighbourhood of necessity”: Creating home and neighbourhood within subsidised aged housing in Durban, South Africa. *Journal of Housing and the Built Environment* 36(4): 1671–1697.
- Key Cities (2022) The healthy city: A futuristic reimagining of the urban economy and built environment. Available at: <https://keycities.uk/2022/04/11/the-healthy-city/> (accessed 13 October 2022).
- Klinenberg E (2016) Social isolation, loneliness, and living alone: Identifying the risks for public health. *American Journal of Public Health* 106(5): 781–787.
- Knabb K (2006) *Situationist International Anthology*. Seattle, WA: Bureau of Public Secrets.
- Komac U (2016) Public space as a public good: Some reflections on public space to enjoy solitude. *Athens Journal of Architecture* 3(2): 137–150.
- Korpela K (1992) Adolescents’ favourite places and environmental self-regulation. *Journal of Environmental Psychology* 12(3): 249–258.
- Korpela KM, Pasanen T, Repo V, et al. (2018) Environmental strategies of affect regulation and their associations with subjective well-being. *Frontiers in Psychology* 9: 562.
- Lahad K and May V (2017) Just one? Solo dining, gender and temporal belonging in public spaces. *Sociological Research Online* 22(2): 176–186.
- Larson RW (1990) The solitary side of life: An examination of the time people spend alone from childhood to old age. *Developmental Review* 10(2): 155–183.
- Latham A and Layton J (2022) Social infrastructure: Why it matters and how urban geographers might study it. *Urban Geography* 43(5): 659–668.
- Lim MH, Allen KA, Furlong MJ, et al. (2021) Introducing a dual continuum model of belonging and loneliness. *Australian Journal of Psychology* 73(1): 81–86.
- Luhmann M and Hawkey LC (2016) Age differences in loneliness from late adolescence to oldest old age. *Developmental Psychology* 52(6): 943–959.
- Lynley M (2012) Ranked: The best slides and worst slides in Google’s offices. *Business Insider*. Available at: <https://www.businessinsider.com/googles-office-slides-2012-5> (accessed 14 October 2022).
- McGrath L and Reavey P (2019) *The Handbook of Mental Health and Space: Community and Clinical Applications*. London: Routledge.
- McMillan DW and Chavis DM (1986) Sense of community: A definition and theory. *Journal of Community Psychology* 14(1): 6–23.
- Manzo L and Devine-Wright P (2013) *Place Attachment: Advances in Theory, Methods and Applications*. London: Routledge.
- Marcum CS (2013) Age differences in daily social activities. *Research on Aging* 35(5): 612–640.
- Moderna Museet (n.d.) The 1st at Moderna: Erik Krikortz. Emotional Cities. Available at: <https://www.modernamuseet.se/stockholm/en/exhibitions/the-1st-at-moderna-erik-krikortz/> (accessed 13 October 2022).
- Morling B and Lamoreaux M (2008) Measuring culture outside the head: A meta-analysis of individualism—collectivism in cultural products. *Personality and Social Psychology Review* 12(3): 199–221.
- Moustakas CE (1961) *Loneliness*. Englewood Cliffs, NJ: Prentice Hall.
- Moustakas CE (1972) *Loneliness and Love*. Englewood Cliffs, NJ: Prentice Hall.
- MuseumsQuartier Wien (n.d.) MQ outdoor furniture. Available at: <https://www.mqw.at/en/infoticketsshop/mq-point/mq-furniture> (accessed 5 October 2022).
- Nolan M (2021) Developing indifference: Youth, place-making and belonging in a transforming urban China. *HAU: Journal of Ethnographic Theory* 11(3): 1029–1044.
- Pedersen PV, Andersen PT and Curtis T (2012) Social relations and experiences of social

- isolation among socially marginalized people. *Journal of Social and Personal Relationships* 29(6): 839–858.
- Perlman D and Peplau LA (1981) Toward a social psychology of loneliness. In: Duck R and Gilmour R (eds) *Personal Relationships in Disorder*. London: Academic Press, pp. 31–56.
- Pipitone JM and Jović S (2021) Urban green equity and COVID-19: Effects on park use and sense of belonging in New York City. *Urban Forestry & Urban Greening* 65: 127338.
- Prezza M, Amici M, Roberti T, et al. (2001). Sense of community referred to the whole town: Its relations with neighboring, loneliness, life satisfaction, and area of residence. *Journal of Community Psychology* 29(1): 29–52.
- Price R (2017) This Dutch town has traffic lights on the ground because people are staring at their phones. *World Economic Forum*. Available at: <https://www.weforum.org/agenda/2017/02/this-dutch-town-has-traffic-lights-on-the-floor-because-people-are-staring-their-phones> (accessed 26 October 2022).
- Project for Public Spaces (2022) Placemaking: What if we built our cities around places? Available at: <https://www.pps.org/article/what-is-placemaking> (accessed 27 October 2022).
- Putnam RD (2000) *Bowling Alone: The Collapse and Revival of American Community*. New York, NY: Simon and Schuster.
- Qualter P, Vanhalst J, Harris R, et al. (2015) Loneliness across the life span. *Perspectives on Psychological Science* 10(2): 250–264.
- Rapoport A (2005) *Culture, Architecture, and Design*. Chicago, IL: Locke Science Publishing Company.
- Ren D and Evans AM (2021) Leaving the loners alone: Dispositional preference for solitude evokes ostracism. *Personality and Social Psychology Bulletin* 47(8): 1294–1308.
- Rishbeth C and Rogaly B (2017) Sitting outside: Conviviality, self-care and the design of benches in urban public space. *Transactions of the Institute of British Geographers* 43(2): 284–298.
- Rokach A (1989) Antecedents of loneliness: A factorial analysis. *The Journal of Psychology* 123(4): 369–384.
- Rokach A (1990) Surviving and coping with loneliness. *The Journal of Psychology* 124(1): 39–54.
- Rokach A (2014) Loneliness of the marginalized. *Open Journal of Depression* 3(4): 147–153.
- Schmitz H (1990) *Der unerschöpfliche Gegenstand*. Bonn: Bouvier.
- Shafique T (2018) Designing cities to counter loneliness? Let's explore the possibilities. *The Conversation*. Available at: <https://theconversation.com/designing-cities-to-counter-loneliness-lets-explore-the-possibilities-104853> (accessed 13 October 2022).
- Snell KDM (2017) The rise of living alone and loneliness in history. *Social History* 42(1): 2–28.
- Solmi M, Veronese N, Galvano D, et al. (2020) Factors associated with loneliness: An umbrella review of observational studies. *Journal of Affective Disorders* 271: 131–138.
- Thomas D (2016) *Placemaking: An Urban Design Methodology*. New York, NY: Routledge.
- van Staden WC and Coetzee K (2010) Conceptual relations between loneliness and culture. *Current Opinion in Psychiatry* 23(6): 524–529.
- VanderWeele TJ, Hawkey LC and Cacioppo JT (2012) On the reciprocal association between loneliness and subjective well-being. *American Journal of Epidemiology* 176(9): 777–784.
- Watson J and Nesdale D (2012). Rejection sensitivity, social withdrawal, and loneliness in young adults. *Journal of Applied Social Psychology* 42(8): 1984–2005.
- Whitney K (2017) 'A brave new world': What happened to Newcastle's dream for a vertical city? *The Guardian*, 7 February. Available at: <https://www.theguardian.com/cities/2017/feb/07/brave-new-world-newcastle-dream-for-vertical-city> (accessed 20 March 2023).
- Wray S (2022) The city where no one is lonely. Available at: <https://cities-today.com/the-city-where-no-one-is-lonely/> (accessed 13 October 2022).