Connecting IRL:

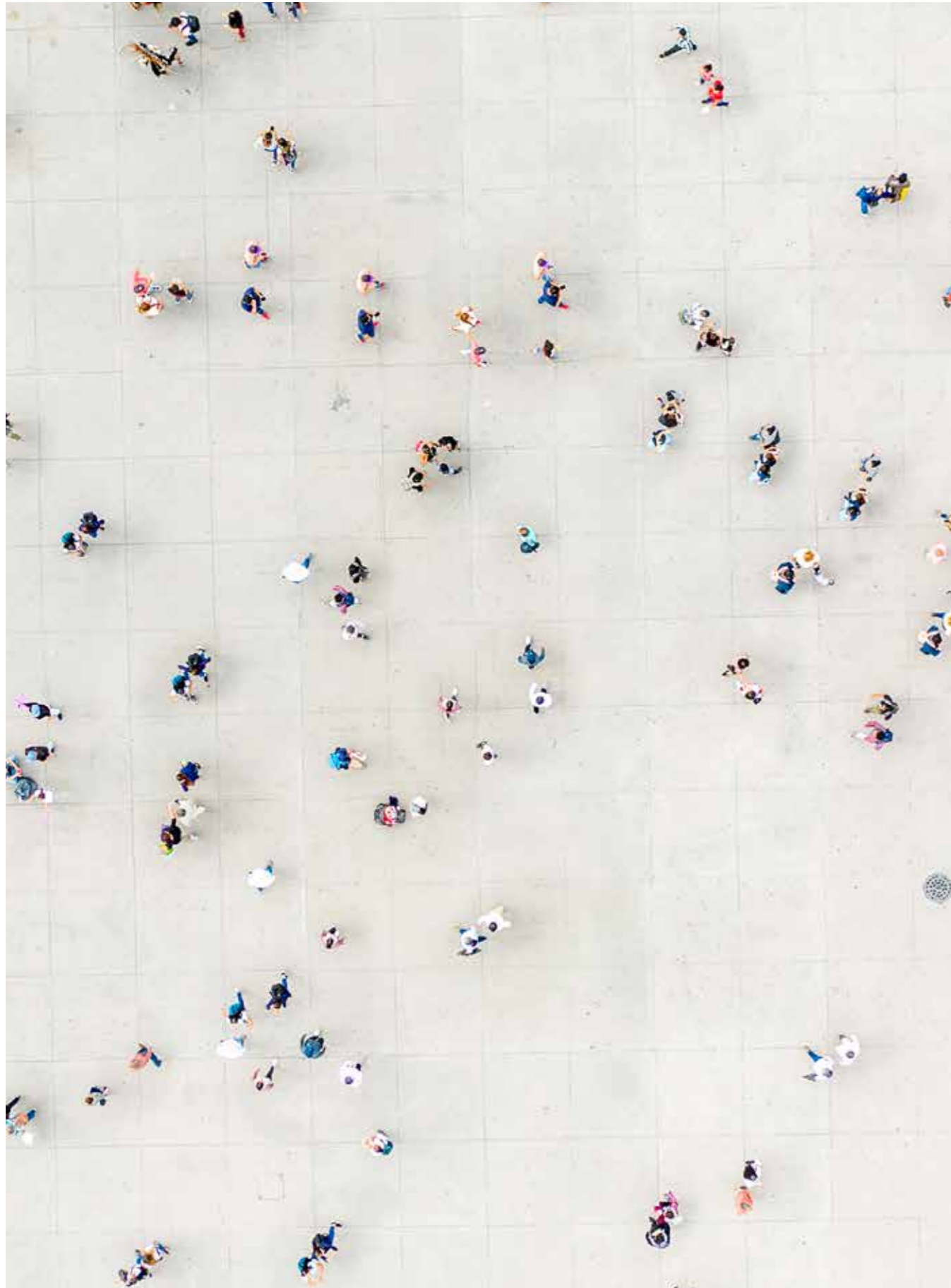## How the Built Environment Can Foster Social Health

HKS

Connecting IRL:

How the Built Environment Can Foster Social Health

Erin Peavey, AIA, NCARB, EDAC, LEED AP BD+C
Vice President, Architect & Design Researcher, HKS

ABSTRACT

You know about the deleterious effects of loneliness and social isolation, but have you ever wondered how physical spaces can make us feel connected and less lonely? This brief will share research-informed guidelines on how to use space to foster connection, social health, and well-being. The report also presents examples of spaces that work and what you can do as a citizen, designer, property owner, or policymaker to create better spaces.

As humans, we evolved in community. People gathered in small tribes to support one another, to provide protection, warmth, food, and care for children. Given our nature, being completely autonomous and independent is a threat to survival. Our basic need to be interdependent remains even though the backdrop of humanity has transformed over centuries.

A 2020 Cigna survey showed that more than three in five working American adults are lonely, and rising numbers report feeling left out, misunderstood or as though they lack companionship[1]. These findings contribute to the sense that we are facing a "loneliness epidemic," as described by former U.S. Surgeon General Vivek Murthy. Loneliness and social isolation have been linked to sleep loss, ill health, dementia, premature death, and even heartbreak—literally[2]. These effects on our health are as harmful to our life expectancy as a 15-cigarette-a-day smoking habit[3].

Although loneliness and social isolation are often used in the same breath, the two are distinctly different. *Loneliness* is essentially the perception of *social isolation*[4], whereas social isolation is the absence of regular human interaction in one's life. These phenomena are tied to belonging, trust, social cohesion (the strength of the bonds among members of a community) and social capital (the tangible and intangible benefits a person reaps from his or her social network) as components of our *social health,* defined as a critical aspect of overall health. Social health is defined as "that dimension of an individual's well-being that concerns how s/he gets along with other people, how other people react to her/him, and how s/he interacts with social institutions and social mores."[5] Strong social capital has been associated with finding employment[6], lower disability rates[7] and easier access to health services[8].

1. Cigna, 2020
2. Cacioppo & Cacioppo, 2018; Holt-Lunstad, 2017; Holt-Lunstad, Smith, & Layton, 2010
3. Holt-Lunstad et al., 2010
4. Cacioppo & Cacioppo, 2018
5. Russel, 1973
6. Lin & Dumin, 1986
7. King, Hine, Washburn, Montgomery, & Chaney, 2019
8. Lifszyc-Friedlander, Honovich, Stolerman, Madjar, & Barnoy, 2019

Built Environment as a Social Determinant of Health

Many people see health as the responsibility of clinicians, nutritionists, and other health care professionals. Yet it has become clear that although vitally important, clinical care makes up just 10% to 20% of overall health[1]. The physical environment is an important factor underlying our health ecosystem, influencing how we think, feel, and behave[2]. The United Nations[3] and the World Health Organization[4] have identified better housing and neighborhood conditions as critical to reducing health inequalities.

Physical environments designed to enhance social connections enrich people's lives on a daily basis but especially pay off in moments of crisis, such as in the aftermath of manmade or natural disasters, when people's reliance on neighbors and local friends is critical to their survival[5].

This report is not suggesting that the physical environment is the answer to every challenge, but it is an important and often overlooked part of our lives. The scientific community is just beginning to understand the extent to which

built environments of all scales affect our social health. Research shows that designers and urban planners can increase people's social capital in a place by creating spatial designs that facilitate social interaction among residents[6]. Early research indicated that built environments in neighborhoods, such as porches and tree-lined streets, can promote neighborly conversations and voter turnout[7]. Furthermore, a large-scale systematic review of the scientific literature showed that the design qualities of a place— walkability, sense of place, greenness, street design, architecture—have the potential to increase social interaction, the integration of diverse people, social support, civic pride, social resilience, and social and political involvement[8].

Many American communities have become car-dependent and less walkable through zoning ordinances that deemphasized public transit and essentially banned mixed-use zoning, and thus, pedestrian-oriented neighborhoods[9]. However, walkable neighborhoods have been linked to higher social capital, lower rates of depression, less reported alcohol abuse and more physical activity[10]. Researchers have tied certain characteristics of the environment such as house and street design[9], population density[11],

mixed land use[12], proximity to the city center[13], the amount of greenery[14] and communal space[14] to improvements in a range of social health markers, including social well-being, network size, trust, and perceived safety. Communities are feeling the pressure of urban sprawl, with commuting taking up more time that was once dedicated to leisure or family and friends[15]. In contrast, high-rises and rows of cookie-cutter condominiums have popped up throughout cities like Seattle, San Francisco, and Dallas, marketed as modern living, but it appears developers gave little thought to how these facilities connect with the rest of the urban fabric, featuring buildings that crowd out any shared space between neighbors and that fail to offer a sense of welcome or scale in the form of overhangs, trees, and benches at street level. This disregard for the surrounding environment may be partially to blame for an emerging body of research warning against adopting this development model[16]. In addition, the popularity of door-delivery services and virtual transactions is chipping away at the core of our humanity: the need for physical interactions with other people. We are losing the intervals in our everyday lives that get us to slow down and bond with those around us—the glue between the physical spaces that frame our existence.

Social Determinates of Social Health

CULTURE: Social norms around socialization, in-person connections, and stigmatization of loneliness

BUILT ENVIRONMENT: Design of homes, workplaces, schools, third-places, neighborhoods and cities

COMMUNITY: Local resources, events, collective social capital, trust and sense of belonging

ORGANIZATIONAL: Policies and norms around staff collaboration, socialization, and shared meaning

INTRAPERSONAL: Social interaction quality, frequency and duration

INTERPERSONAL: Genetic predisposition, individual choices and preferences for social connection

1. Hood, Gennuso, Swain, & Catlin, 2016; Sir et al., 2012
2. Cerin, 2019; Hood et al., 2016; Nanda et al., 2017; Peavey Hsieh & Taylor, 2016; Sallis et al., 2006; Wilkie, Townshend, Thompson, & Ling, 2018
3. United Nations, 2015b, 2015a
4. World Health Organization, 2018
5. Klinenberg, 2018
6. Alrasheed, 2019; Cabrera & Najarian, 2015; Carmona, 2019; Ellard, 2018; Klinenberg, 2018; Montgomery, 2018; Wilkie et al., 2018
7. LeVan, 2019
8. Carmona, 2019
9. Carmona, 2019; Chriqui, Nicholson, Thrun, Leider, & Slater, 2016; Leyden, 2003
10. Renalds, Smith, & Hale, 2010
11. Wen, Hawkley, & Cacioppo, 2006
12. Mouratidis, 2018
13. Mouratidis, 2018
14. Mouratidis, 2018
15. De Vries, van Dillen, Groenewegen, & Spreeuwenberg, 2013
16. Fu, 2018
17. Montgomery, 2018
18. Carmona, 2019; Montgomery, 2018

The Power of Third Places

The prehistoric Stonehenge monument and other archaeological sites offer ample evidence of human civilization's enduring need for communal gathering spaces, those places where people can come together for celebration, ritual, and the mundane[1]. These places are what sociologist Ray Oldenburg coined third places[2]—places unlike the private, informal home and the public, formal workplace, being both informal and public. These are places where people gather and socialize deliberately or casually[3]: meet friends, cheer for the home team with fellow fans, or just sit to people-watch. Third places are defined by their "ordinariness"[4] and allow people to meet, relax, play, and just be, with minimal cost to themselves[5]. Third places have been shown to strengthen social capital[6], foster social connection[7], and boost diversity[8] and well-being[9]. They also serve as "enabling places"[10] that promote recovery from mental illness by providing social and material resources[11]. The social interactions that occur in these spaces can provide opportunities for making and sustaining bonds, offer relief from daily stresses, support a sense of community, and facilitate tolerance between diverse people[12]. Research also shows that the social support (i.e., emotional support, companionship) that people get in third places may match their deficit of social support elsewhere[13]. In light of this evidence, as loneliness is on the rise[14], the need for third places is greater than ever.

Yet across the nation, third places are closing[15], fraying the ties that hold communities together. To create places that connect us, we need policymakers, entrepreneurs, developers, city planners, architects, and, most of all, citizens to advocate for the importance of cultivating these spaces, which provide a buffer from the physical and psychological stresses of modern day.

Although third places have traditionally been studied and understood as standalone brick-and-mortar spaces, this report makes the case that they also exist as small, semi-public spaces within larger buildings or areas—for example, the office kitchen, or the communal space in a long-term inpatient unit, or the shared interior courtyard of a large building. These places can be small- to large-scale: office watering coolers, local coffee shops, corner markets, daycares, community centers, city parks, and street blocks[16]. Some have argued that virtual worlds can serve as "fourth places" or a type of digital third place; however, there is little evidence that virtual places can fill the real-world physical needs for connection, community, leisure, and support that third places do.

This report, a semi-structured literature review, identifies universal guidelines to design spaces that combat loneliness and social isolation and foster social capital and community. The guidelines to design for social health presented here are accessibility, choice, human scale, nature, sense of place, and activation. Due to the dearth of research on the design of third places to foster social healt[17], the guidelines are based on peer-reviewed and published research across the spectrum of knowledge on the built environment and social health. Each section below explains these guidelines in detail, grounding the concepts in science and illustrating them with case studies. The section for each of the six guidelines lists principles for design of physical environment, programming, and policy to give you the tools to take concrete action in your community, whether you're a resident, business owner, or government authority.

Pacific Park Plaza, Dallas, Texas; Image courtesy of HKS

1.   Ellard, 2018
2.   Oldenburg, 1999
3.   Soja, 1996
4.   Hickman, 2013
5.   Cheang, 2002; Finlay, Esposito, Kim, Gomez-Lopez, & Clarke, 2019; Oldenburg, 1999; Thompson & Kent, 2014
6.   Lifszyc-Friedlander et al., 2019
7.   Klinenberg, 2018; Williams & Hipp, 2019
8.   Klinenberg, 2018; Williams & Hipp, 2019
9.   Cattell, Dines, Gesler, & Curtis, 2008
10.   Duff, 2012
11.   Carmona, 209; Finlay et al., 2019; Kelly et al., 2012; Mario Luis Small, 2006
12.   Cattell, Dines, Gesler, & Curtis, 2008
13.   Rosenbaum, Ward, Walker, & Ostrom, 2007
14.   Cigna, 2020; Dijulio, Hamel, Muñana, & Brodie, 2018
15.   Finlay et al., 2019
16.   Mario L. Small & Adler, 2019; Mario Luis Small, 2006
17.   Finlay et al., 2019

01

Accessibility:
Creating Places That are Safe, Inclusive, and Walkable

Urban Creek Partners Quarry Yards Concept, Atlanta, Georgia; Image courtesy of HKS

PHYSICAL ENVIRONMENT	PROGRAMMING	POLICY
+ Introduce a mix of land uses that allow residents and workers to create enough volume to support local dining and retail and grocery shopping within walking distance.	+ Provide a mix of practical and recreational activities that can fit into the daily lives of a range of demographics.	+ Revisit zoning codes that explicitly ban mixed land use and make auto travel all but mandatory.
+ Place stationary shared-seating options along major circulation routes (e.g., by a staircase) for people to rest or mingle. This also supports individuals who have physical limitations but still want to be active.	+ Include options for low- to no-cost activities that make use of the space affordable for community residents with fewer financial resources.	+ Promote zoning ordinances and districts that require wide sidewalks with shaded trees and benches that can improve perceptions of access to nearby resources and encourage walking.
+ Widen sidewalks to 5-7 feet for residential, 5-12 feet for low-rise main street, and 10-15 feet for downtown commercial district.	+ Start or attend walking groups, which get people outside and crossing paths with neighbors.	+ Advocate for mixed-use through your neighborhood association to support local business. Vocal and persistent support can draw the attention of policymakers and encourage this type of development.
+ Line the sidewalks with bricks and trees for visual appeal and shade. Ample sidewalks give a sense that the streets are for people and provide a buffer for pedestrians moving between traffic and other people outdoors, such as restaurant patrons dining al fresco.	+ Organize or attend supper clubs, neighborhood nights out, neighborhood associations, or PTAs that gather neighbors whose collective voice can impact public policy on land use.	
	+ Consider valet service for your customers to reduce car traffic if driving is inevitable for them.	

Perhaps the most foundational attribute of a good third place is that it is accessible to those who can use it. The best versions foster a sense of ownership and become regular parts of people's lives. This requires safe, convenient, affordable, and comfortable access to the place[1]. For children, this means they can gather, play, and explore with some independence from parents as developmentally appropriate. For senior adults or people with disabilities, this means that there are easy physical access options, benches to rest, and spaces to shelter them from the elements. For all ages, the ideal is a space that is within walking distance from home, work, or school. Humans evolved to navigate our worlds on our feet, and much research has shown the benefits of physical activity on the health of our minds and bodies[2], and the role of walkable streets, neighborhoods, and cities in fostering well-being.

Studies have demonstrated that people living in walkable, mixed-use neighborhoods have more social capital compared to residents of car-oriented suburbs. People in walkable neighborhoods report being more likely to trust others, participate politically, know their neighbors, and be socially engaged[4]. Car dependence limits opportunities for in-person interaction, and whenever possible, it is best to shift away from auto travel when we think about how people access a third place.

1.   Cattell et al., 2008; Cheang, 2002
2.   Renalds et al., 2010; Wood, wvFrank, & Giles-Corti, 2010
3.   Leyden, 2003
4.   Leyden, 2003
5.   Cabrera & Najarian, 2015

CASE STUDY

The University of California, San Diego (UCSD) North Torrey Pines Living and Learning Neighborhood was deliberately designed to improve the social health of its student residents. The dorms offer shared spaces for cooking, conversation and lingering on each floor that students naturally pass on their way to their rooms, beckoning them to socialize, cook, and be together, and offering a gradient of socialization and privacy on each floor. UCSD furthered this concept at the neighborhood level by making a main street that offers cafes, shared services (e.g., student services, grocery, post office), and dining spaces. Together, these spaces give students plenty of reasons to spend time on main street, with a variety of options to sit, engage, recharge, or play. The design and research team at HKS worked with the university to set specific student social health measures at the beginning of the project that will be tracked before and after it opens.

02

Activation:
Programing Place from Ordinary to Extraordinary

ProMedica Headquarters, Toledo, Ohio, USA. Image courtesy of HKS

PHYSICAL ENVIRONMENT	PROGRAMMING	POLICY
+ Consider a mix of land uses that meets basic needs but also offers amenities that make people linger to enjoy the environment and support local businesses. + Create or repurpose spaces to facilitate assembly. For instance, streets can become temporary plazas, or actual plazas can serve as gathering places for major events, celebrations, weddings, concerts, dancing, ice-skating, or child play. + Provide focal points (by installing art, for example) that can be conversation starters.	+ Schedule a mix of practical and recreational activities for daily living, suiting a range of demographics. + Attend or host exercise, wellness, or recreation classes that are open to the community. + Attend or host art exhibitions, plays, concerts, and classes for creative expression. + Attend or organize regular street-fairs, farmers markets, parades, and local holiday events. + Attend or host homeowners' association meetings.	+ Talk to your neighborhood association and your local government representatives about the role of mixed use in adding to the experiential value of the area. + Streamline the process to obtain permits for street fairs, farmer's markets, parades, and other community gatherings. The expense and level of difficulty to obtain these permits can determine whether people are willing to put in the additional effort.

Ideal third places bring together diverse people who seek recreation, amenities, or a break from monotony. Connections will happen naturally. The celebrated urban designer Jan Gehl put it this way: "Social activity is the fruit of the quality and length of the other types of activities because it occurs spontaneously when people meet in a particular place"[1]. For third places to be successful, they must intentionally serve people's fundamental needs, from quiet time to socializing.

At a coffee shop, this means spaces for meeting people, as well as spaces for focused work and patios for pets[2]. Library activation can happen through child reading circles, spaces for teens to study and socialize after school, fun meetups for older adults, and cubicles for those just needing to hammer out work[3]. For workspaces, activation means placing lunch tables and coffee machines next to the intersection of natural paths of travel but also providing places where the whole staff can gather for celebrations or town halls. At the neighborhood block, this means having places where people can eat with their families, pick up a gift for a party, or cheer for a sports team. Activation

can also include events on the street made possible by temporary road closures[4]. This array of options interspersed with housing and work provides for a mixed-use area that is vibrant day and night and provides natural safety through "eyes on the street"[5]. Often city or neighborhood parks fail, not because of the lack of green space or playscapes, but because there is little else to pull people to the park that supports the full spectrum of daily life[6].

Designing "purposeful inconveniences" that funnel everyday activities through a common point can lead people to slow down and connect with others[7]. This strategy has been used at Pixar with its famous single set of bathrooms at the center of its Emeryville, California office, and at Zappos' Las Vegas headquarters with its central plaza that is the single point of entry[8].

1. Project for Public Spaces, 2008
2. Finlay et al., 2019; Montgomery, 2018
3. Klinenberg, 2018
4. The Center for Active Design, 2018
5. Cabrera & Najarian, 2015; Jacobs, 1961
6. Jacobs, 1961
7. Pochepan, n.d.
8. Leher, 2012

CASE STUDY

Klyde Warren Park in Dallas, Texas, is a 5.2-acre park that offers a wide mix of activities in a range of smaller environments within its bounds. Civic and business leaders supported designing the park to bridge two parts of the city center that had been divided by an eight-lane freeway after Dallas bought into the auto-centric urban planning model in the 20th century. However, by the 2000s, Dallas recognized the negative effects of this division and sought to create a vibrant downtown that connected to the surrounding community. Klyde Warren Park was designed as a year-round draw across the region, bringing people for major concert series in the summer, adventure, and play areas for kids and a food truck scene that is packed for lunch. At the park's main stage, the city of Dallas hosts concerts of all genres, enticing people from all backgrounds to mingle and build a temporary shared identity and understanding that can carry over to life outside the park.

03

Choice:
Finding Joy in Variety, Flexibility, and Control
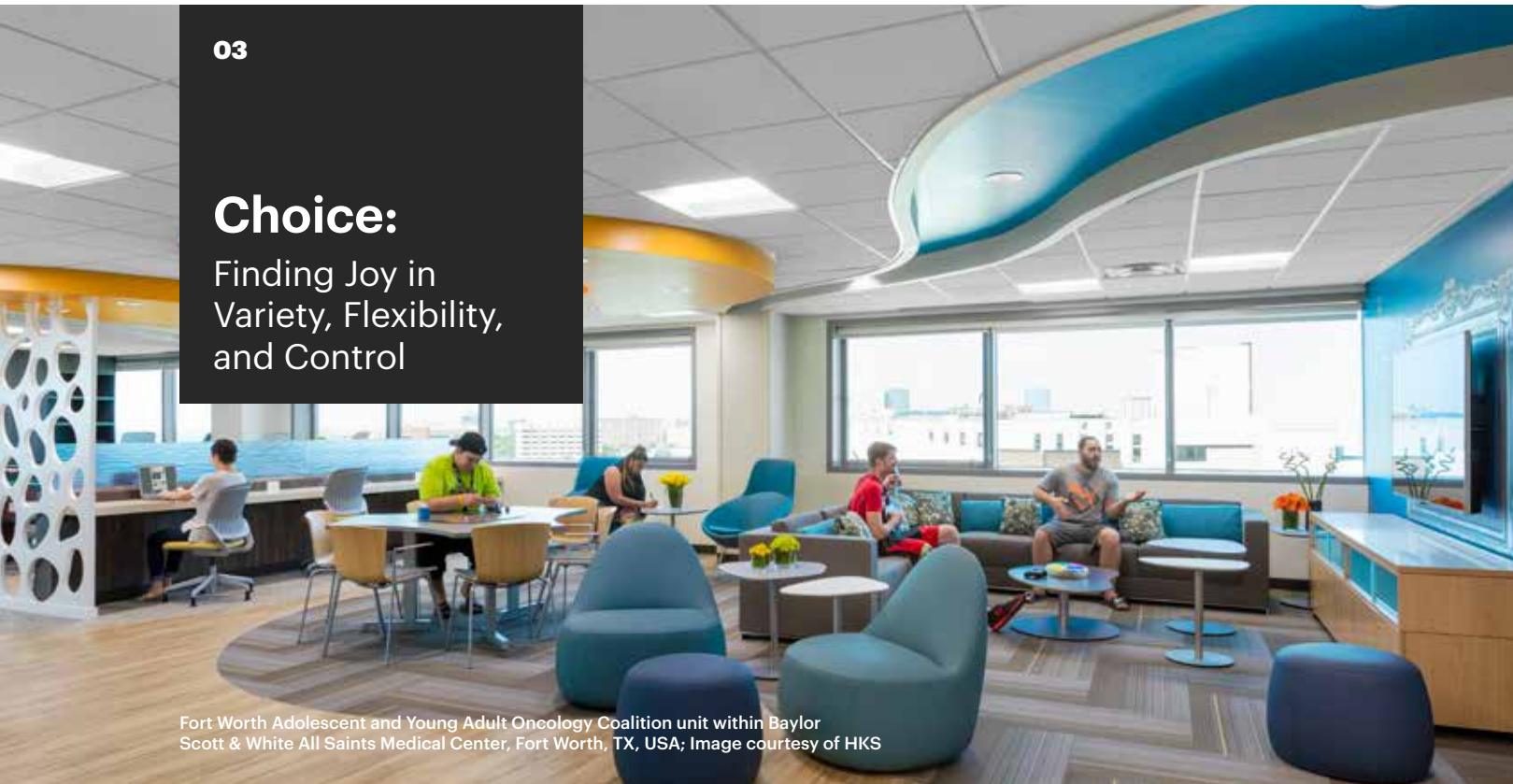
Fort Worth Adolescent and Young Adult Oncology Coalition unit within Baylor Scott & White All Saints Medical Center, Fort Worth, TX, USA; Image courtesy of HKS

PHYSICAL ENVIRONMENT	PROGRAMMING	POLICY
+ Provide movable seating that allows people to adapt to their preferred location and group size. + Afford options for being the center of attention or an observer on the periphery. + Provide options for different age-related preferences, abilities, and group sizes. + Offer points of shared seating (e.g., communal tables) that place people in proximity.	+ Provide programming for different ages, interests, and personalities, such as a senior Wii bowling league, kids' reading circle, trivia night or make-your-own-art stations + Facilitate activities that meet people where they are: both quiet and laid-back (e.g., chess, people-watching) and loud and energetic (e.g., dances, concerts).	+ Involve local stakeholders in design to understand their range of uses and needs. This feedback will make your spaces better fit the needs of the community and give locals a sense of ownership.

Places that provide variety, flexibility, and choices on how to use the space foster personal control and support habitual use for a wide range of activities that suit people's varying needs and moods. Providing people the freedom to choose how to engage (e.g., play, relax, focus) and where to locate themselves (e.g., booth seating, communal table) facilitates person-environment fit, or the ability for a person to choose or modify an environment to fit his or her needs and preferences[1], and creates a sense of comfort[2]. The dynamic and changing nature of comfortable spatial proximities to people we encounter (e.g., strangers, acquaintances, or friends) is the basis of proxemics, the study of personal space, and helps inform different types of seating options[3].

Third places should support a wide range of uses and options for gathering with people or finding privacy. There should also be flexibility to fit a

spectrum of needs and abilities (e.g., older adults, new mothers, children's groups)[4]. For children, this means creating a variety of ways to play (e.g., reading corner vs. jungle gym, playing in the fountain vs. on the grass) and the ability to control what activities to engage in[5]. In workplaces, this means balancing privacy and collaboration—a concept often called "we, me, us"—by allowing people to control where they sit and how they engage with others, based on the formality or informality of the circumstances.

1. Kahana, Lovegreen, Kahana, & Kahana, 2003
2. Matsui & Capezuti, 2008
3. Hall, 1966
4. Finlay et al., 2019
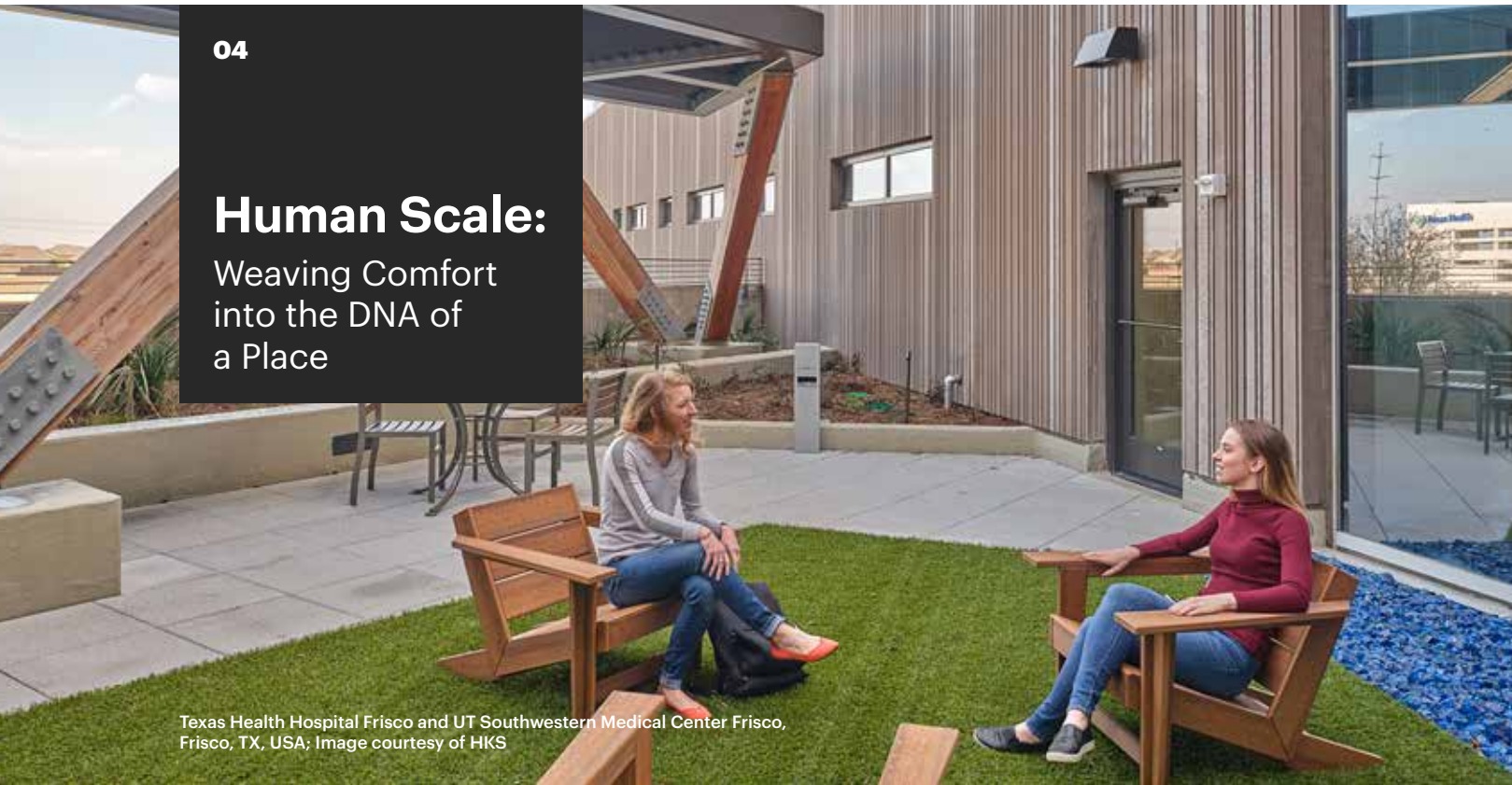5. Lambert, Coad, Hicks, & Glacken, 2014

Project Designed by Norman Foster; Image Courtesy of David Savage

CASE STUDY

Maggie's Centres are positioned across the United Kingdom to offer cancer patients and survivors a "second-home" (Glover & Parry, 2009) where they can find education, camaraderie, and a sense of belonging. These centers allow people to relax on the couch with a book, spontaneously socialize with friends and fellow cancer survivors, and attend formal support group meetings, among other things. The spaces provide comfort and warmth thanks to a combination of physical environment, programming, and policy decisions that have supported the location of these centers adjacent to large publicly funded hospitals. This initiative was spearheaded by architectural historian Charles Jencks, who wanted to create the supportive place his wife, Maggie, helped design while undergoing treatment for terminal cancer. Each center has been designed by a different internationally acclaimed architect.

04

Human Scale:
Weaving Comfort into the DNA of a Place

Texas Health Hospital Frisco and UT Southwestern Medical Center Frisco, Frisco, TX, USA; Image courtesy of HKS

PHYSICAL ENVIRONMENT	PROGRAMMING	POLICY
+ Use architectural detailing and variety at eye-level to add interest and a sense of scale. + Provide a sense of enclosure at the pedestrian level in the form of front patios, shading umbrellas, overhangs, and furnishings. + Encourage the creation and use of front porches, which offer impromptu ways to connect with neighbors and have been shown to increase bonding between neighbors.	+ Promote outdoor activities that connect people to street life: patio dining, community walking groups, fairs, farmer's markets, etc. + Provide activities that match the scale of the space, such as support groups that meet in warm, cozy rooms.	+ Support municipal policies that require or incentivize developers, building owners, and neighborhoods to dedicate a percentage of overall space to shared public assembly space. + Support municipal policies that encourage or mandate developers to incorporate foliage-dense greenspace as a percentage (10+%) of new builds and renovations.

Spaces designed at a human scale use architectural detailing and variety to create small and intimate environments that are comfortable for people to move through or occupy. These are spaces that meet our basic human needs for comfort, safety, and interest[1], and that feel good to be in for reasons that are often indescribable. City blocks designed at a human scale have been shown to promote more social interactions and lingering[2], whereas research reveals that blocks with large expanses of monotonous storefront elevate stress responses and speed walking[3]. This conclusion was tested at a Whole Foods in New York City, where a research team found that despite the store operator's desire for Whole Foods to feel like a local grocery store and blend with the existing neighborhood, the expansive glass storefront actually repelled passersby, who quickened their pace to get past it[4]. This finding echoes a growing body of research in both human and mouse models that show how spaces devoid of ornamentation and variety can elicit a strong stress response[5], believed to be linked to the painful boredom they provoke[6].

A well-established component of human-scale design is the quality of providing prospect and refuge[7], offered by buildings or spaces that create a sense of enclosure while giving people the ability to look out—for instance, being under a patio pergola or on a front porch and watching the street. If you have ever felt the pull of a cozy booth seat or rested at the base of a tree, you have experienced the natural comfort of a space that provided prospect and refuge. This quality promotes a dual sense of security and openness that allows us to deepen existing friendships and form new ones.

1. Montgomery, 2018
2. Ellard, 2018
3. Ellard, 2018; Montgomery, 2018
4. Ellard, 2018; Montgomery, 2018
5. Bayne, 2018; Salingaros, 2014
6. Ellard, 2018
7. Dosen & Ostwald, 2016

Image Courtesy of the City of Coral Gables

CASE STUDY

The Miracle Mile (and Giralda Avenue) in the city of Coral Gables near Miami transformed what was once a four-lane roadway into a plaza that is reminiscent of any of the best European piazzas, where each day scores of people pour out onto the sidewalk from local eateries. Under a canopy of trees, umbrellas, and strings of warm lights, they gather with friends and even share an occasional dance. Here, large palm trees and other foliage adorn the intricate brick-paved walkway that is a work of art. The project required vision and commitment from city leaders, who withstood complaints that the transformation would reduce parking and make the area inaccessible. A year after its completion, shop owners rave about how the revival has made the area more vibrant, and people choose to walk from nearby, lingering to window shop and talk along the way.

05

Nature:
Moving from
Gray to Green

Centro Medico ABC Observatorio Critical Care Tower,
Mexico City, Mexico; Image courtesy of HKS

PHYSICAL ENVIRONMENT	PROGRAMMING	POLICY
+ Incorporate nature at various scales both inside and outside a space. + Provide community gardens that can be shared by local residents and schools for food and education. + Bring natural light into the core of a space through windows and skylights that connect people to the outside and give the place warmth.	+ Provide opportunities for people to engage with the vegetation through educational programs, community gardening, or the option to become caretakers of the garden space. + Start or encourage partnerships between local gardens and restaurants to support enthusiasm for urban farming. + Propose or launch a science curriculum that gets kids to tend to a school garden to connect with nature and with their classmates.	+ Support community planning ordinances that require planting trees and creating green medians adjacent to sidewalks. + Advocate for housing and zoning policies that require greenspace as a percentage (10+%) of new builds.

As humans, we evolved to be comforted by nature, a phenomenon known as biophilia. The benefits of exposure to nature have been demonstrated across environments, from hospitals to workplaces, schools, and beyond. There is growing evidence that exposure to direct and indirect natural elements, such as large and small greenery, daylight, and outdoor spaces, is positively linked to mental health[1]. Urban green space has been tied to better physical and mental health, increased sociability, and decreased aggression and stress[2]. And researchers have associated higher quantity and quality of streetscape greenery, which includes dense, well-maintained foliage, trees, and plantings, with elevated social cohesion[3]. Furthermore, streetscape greenery has been identified as a factor that works with social cohesion to reduce acute health-related complaints and improve people's perceptions of their general health and mental health[4]. Greenery and natural elements can be especially important in places that are significant to well-being and restoration[5] because of their known salutogenic effects.

Third places that blend the indoors and outdoors and integrate greenery are more effective at creating environments where people feel comfortable and want to linger—all ingredients in creating opportunities for connection. We can design biophilic environments along three different dimensions: direct, indirect, and symbolic[6]. Direct biophilic features are natural elements that do not rely on humans to sustain (e.g., daylight, native plants, animals). Indirect biophilic feature require human intervention to preserve (e.g., potted plants). Symbolic biophilic features do not offer nature itself, but rather images or virtual experiences of nature.

1.   Tsai et al., 2018; Van den Berg et al., 2016
2.   Duff, 2012; Fan, Das, & Chen, 2011; Kuo, Sullivan, Coley, & Brunson, 1998
3.   De Vries et al., 2013
4.   De Vries et al., 2013
5.   Cattell et al., 2008
6.   Kellert, 2008; McGee, Park, Portillo, Bosch, & Swisher, 2019

CASE STUDY

With much of Manhattan's sparse in nature, the High Line offers an urban oasis of high grasses, trees, and sweeping views of the Hudson River over the city's rooftops. This infusion of nature is one of the reasons that this decrepit-railway-turned-park attracts 8 million visitors annually. The High Line offers community gardening, nature education, a vibrant arts program, dance, yoga, and community activities throughout the year. Although the High Line is widely considered a resounding success, it was slated for demolition two decades ago. But community members rallied into a nonprofit called Friends of the High Line, which stirred excitement about reusing the elevated rail line as a public space.

06

Sense of Place:
Crafting a Place as Unique as the People Who Use It

PHYSICAL ENVIRONMENT	PROGRAMMING	POLICY
+ Offer spaces to linger and socialize with staff or other patrons (e.g., kitchen or bar seating) + Incorporate unique art and décor that is of the place and people (e.g., team memorabilia at the local sports bar, rotating artwork from a local school at the community center, family photos used as decorations at the local office). + Allow smaller spaces within larger places such as offices or schools to be co-created by community members	+ Host or attend creative arts events (e.g., painting, mural making, pottery). + Host community meetups, couples' nights out, fundraisers, and PTA meetings that can connect people to their neighborhoods or schools. + Organize regularly occurring recreational events (e.g., live music, performances, trivia, sports events) that can get people to start their own traditions with friends and family. + Look for casual opportunities for store, restaurant, or bar staff and patrons to engage and form bonds.	+ Work with community members to co-create the design and programming of the place. + Advocate for tax incentives, zoning, and leasing practices that favor local and small businesses that make a community more vibrant. + Subsidize store- or community-based art programs that support local artists by providing local businesses with no-cost temporary pieces. + Promote temporary or semi-permanent gathering structures (e.g., turquoise picnic tables; movable chairs, tables and planters at a shared median).

A handful of architectural theorists mused that in the digital age, all spaces should be a blank canvas on which the digital world can imprint[1]. That probably feels wrong to most of us, and rightfully so. We value uniqueness, whether it is a character in a favorite TV show, a quirky friend, or a beloved local hang-out. Capturing the uniqueness of the people who use a space and the community around it is vital to creating a third place that feels authentic, and that sparks a sense of belonging. Since early studies of human geography, place has been understood as space, imbued with human relations, culture, meaning, values, and activities[2]. A third place may incorporate features or elements that are significant to its community through their meaning may not be immediately apparent to outsiders or their appearance aesthetically pleasing to the public[3]. For example, a Texas taco joint in Dallas' Lower Greenville neighborhood has 10-foot-tall dancing frogs that perhaps make some drivers cringe, but they are nostalgic remnants of an old tango club and have become neighborhood icons.

Especially effective third places can often provide types of social interactions that are lacking elsewhere in people's lives. For instance, these places can help connect new mothers, patients struggling with cancer[4], and women dealing with infertility with other people in their shoes[5], and those connections can ultimately turn into friendships. In co-working spaces, certain features can make the environment feel vibrant and creative and motivate membership[6]. People can symbolically honor this shared identity in many ways: by featuring rotating local artwork, having local community members create murals[7], pinning messages of encouragement in public areas, or displaying special pieces of décor to mirror the character of the place.

Having the local community participate in the design and creation of a space contributes to the sense that the space is not merely a vessel for the masses but a unique reflection of the people who live and work in the area. Involving local stakeholders helps ensure not only that the aesthetics feel true to the community but also that the place serves local needs with the activities and amenities it provides.

1.   Ellard, 2018
2.   Fu, 2018; Tuan, 1977
3.   Cattell et al., 2008
4.   Glover & Parry, 2009
5.   Glover & Parry, 2008
6.   Weijs-Perrée, van de Koevering, Appel-Meulenbroek, & Arentze, 2019
7.   Stuckey & Nobel, 2010

CASE STUDY

What is now Chicago's famous Millennium Park started out as a rail yard and parking lots, long considered a major eyesore in the heart of the city. With the backing of then-Mayor Richard Daley and the funding of private investors, Millennium Park opened over a parking garage in 2004 and is now billed as one of the world's largest rooftop gardens. The park features numerous unique works of monumental art, from the "Cloud Gate" sculpture (known as The Bean), to the pavilion designed by famed architect Frank Gehry that hosts free concert series, to a multi-story LED screen fountain that plays with the idea of gargoyles by depicting the faces of Chicagoans. These pieces, along with the events, activities, and exploration that they facilitate, make this iconic park feel uniquely of Chicago.

# Call to Action: Ways to Create Third Places in Your Community

It is up to you, and to each of us, to create connection in our own lives: to linger outside so we can spend time with our neighbors, to bring back block parties, to invite colleagues to join us for lunch. This kind of interplay is what transforms a space into a collective third place. Or better said: "Communal space becomes relevant to mental health when and only when it is humanized: urban residents invest communal space with meanings, emotions, and relations that lie at the heart of social life."[1] Whether it is turning a driveway into an afterwork neighborly tea spot[2], or gathering other new moms for a regular night out, or petitioning the city for a new playscape at an old neighborhood park, our actions can cumulatively transform communities. The six guidelines for design for social health can apply to small or large built environments, from the office coffee station to the city block.

In many ways, streets are among the most underutilized public spaces, offering so many opportunities to reclaim them from cars[3]. Experiments across the nation have staged temporary take-back-the-street days, with festivals, neighborhood association nights-out, and temporary beach days[4]. Throughout Vancouver, researchers turned their pavement into pop-up plazas and demonstrated remarkable improvement in visitors' perceptions of how well the space served as a place to meet friends, meet new

people, and feel welcomed[5]. There is research that shows that just smiling or acknowledging strangers you pass on the street can significantly improve their level of disconnection[6].

Ultimately it also up to us—from citizens to developers to policymakers—to shift zoning ordinances and incentives away from single-use, auto-dependent, inward-focused development so we can embrace the mess that is part of living a full life in communion with others. There is a saying that "all politics is local," and so, too, is social health. One of the most effective ways for us to improve social health is to look at our own communities, participate in their planning decisions, and demand better places. When decision-makers evaluate projects and investments or municipal policies that will shape neighborhoods, they must consider the impact of the built environment in social and overall health.

We all need to make more thoughtful decisions, guided by the understanding that collectively, our actions can alter communities for better or worse. May the strategies, examples, and research shared here provide a foundation for you to improve your corner of the world.
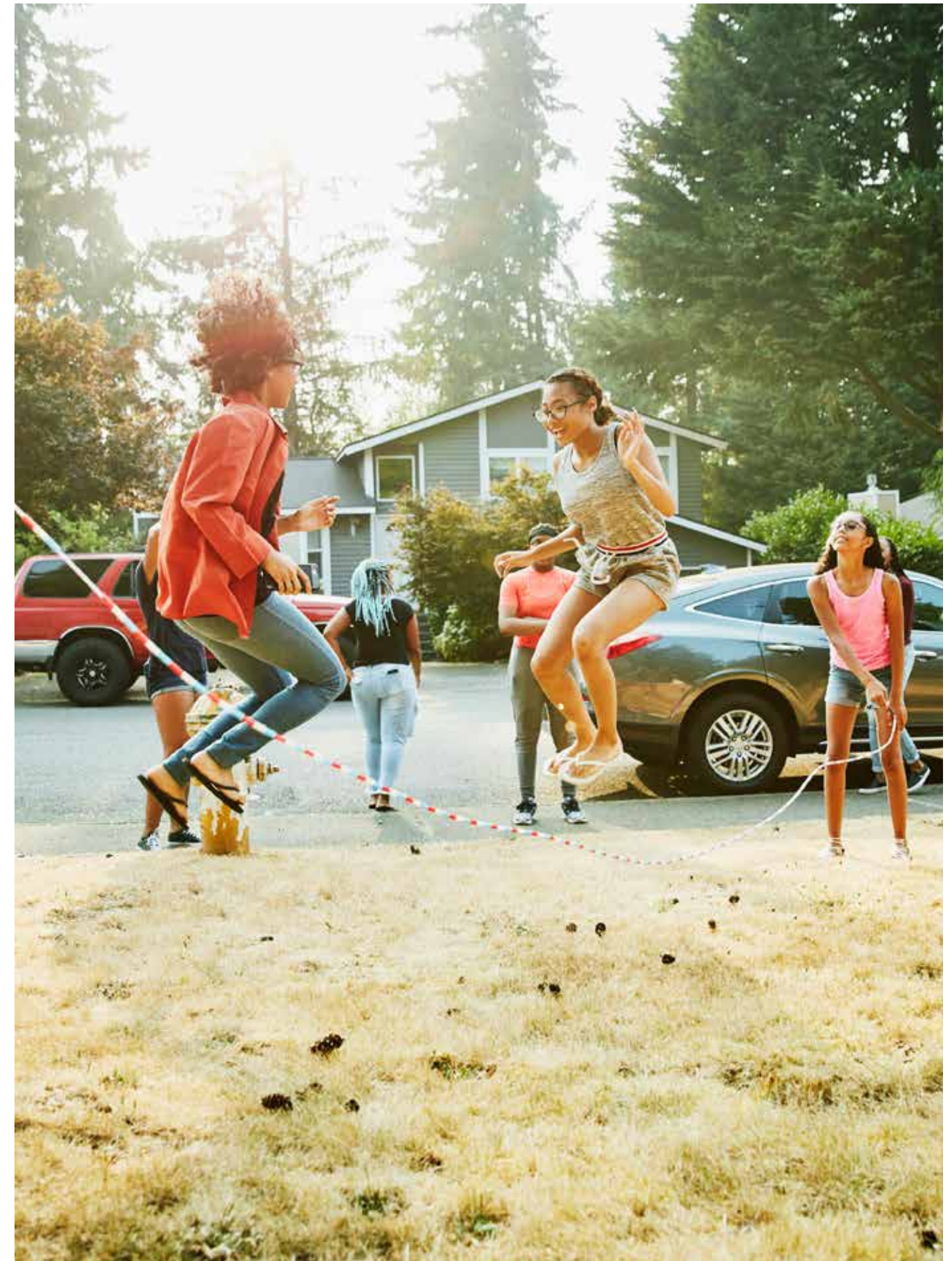
1.   Fu, 2018
2.   Cattell et al., 2008
3.   Jacobs, 1961; Kelly et al., 2012; Montgomery, 2018
4.   Montgomery, 2018
5.   Montgomery, 2018
6.   Wesselmann, Cardoso, Slater, & Williams, 2012

Six Design Guidelines for Creating Third Places that Support Social Health

GUIDELINE	PRINCIPLES		
	PHYSICAL ENVIRONMENT	PROGRAMMING	POLICY
Accessibility: Creating Places That are Safe, Inclusive and Walkable	+ Introduce a mix of land uses that allow residents and workers to create enough volume to support local dining and retail and grocery shopping within walking distance. + Place stationary shared-seating options along major circulation routes (e.g., by a staircase) for people to rest or mingle. This also supports individuals who have physical limitations but still want to be active. + Widen sidewalks to 5-7 feet for residential, 5-12 feet for low-rise main street, and 10-15 feet for downtown commercial district. + Line the sidewalks with bricks and trees for visual appeal and shade. Ample sidewalks give a sense that the streets are for people and provide a buffer for pedestrians moving between traffic and other people outdoors, such as restaurant patrons dining al fresco.	+ Provide a mix of practical and recreational activities that can fit into the daily lives of a range of demographics. + Include options for low- to no-cost activities that make use of the space affordable for community residents with fewer financial resources. + Start or attend walking groups, which get people outside and crossing paths with neighbors. + Organize or attend supper clubs, neighborhood nights out, neighborhood associations, or PTAs that gather neighbors whose collective voice can impact public policy on land use. + Consider valet service for your customers to reduce car traffic if driving is inevitable for them.	+ Revisit zoning codes that explicitly ban mixed land use and make auto travel all but mandatory. + Promote zoning ordinances and districts that require wide sidewalks with shaded trees and benches that can improve perceptions of access to nearby resources and encourage walking. + Advocate for mixed-use through your neighborhood association to support local business. Vocal and persistent support can draw the attention of policymakers and encourage this type of development.
Activation: Programing Places from Ordinary to Extraordinary	+ Consider a mix of land uses that meets basic needs but also offers amenities that make people linger to enjoy the environment and support local businesses. + Create or repurpose spaces to facilitate assembly. For instance, streets can become temporary plazas, or actual plazas can serve as gathering places for major events, celebrations, weddings, concerts, dancing, ice-skating, or child play. + Provide focal points (by installing art, for example) that can be conversation starters.	+ Schedule a mix of practical and recreational activities for daily living, suiting a range of demographics. + Attend or host exercise, wellness, or recreation classes that are open to the community. + Attend or host art exhibitions, plays, concerts, and classes for creative expression. + Attend or organize regular street-fairs, farmers markets, parades, and local holiday events. + Attend or host homeowners' association meetings.	+ Talk to your neighborhood association and your local government representatives about the role of mixed use in adding to the experiential value of the area. + Streamline the process to obtain permits for street fairs, farmer's markets, parades, and other community gatherings. The expense and level of difficulty to obtain these permits can determine whether people are willing to put in the additional effort.
Choice: Finding Joy in Variety, Flexibility and Control	+ Provide movable seating that allows people to adapt to their preferred location and group size. + Afford options for being the center of attention or an observer on the periphery. + Provide options for different age-related preferences, abilities, and group sizes. + Offer points of shared seating (e.g., communal tables) that place people in proximity.	+ Provide programming for different ages, interests, and personalities, such as a senior Wii bowling league, kids' reading circle, trivia night or make-your-own-art stations + Facilitate activities that meet people where they are: both quiet and laid-back (e.g., chess, people-watching) and loud and energetic (e.g., dances, concerts).	+ Involve local stakeholders in design to understand their range of uses and needs. This feedback will make your spaces better fit the needs of the community and give locals a sense of ownership.

GUIDELINE	PRINCIPLES		
	PHYSICAL ENVIRONMENT	PROGRAMMING	POLICY
Human Scale: Weaving Comfort into the DNA of a Place	+ Use architectural detailing and variety at eye-level to add interest and a sense of scale. + Provide a sense of enclosure at the pedestrian level in the form of front patios, shading umbrellas, overhangs, and furnishings. + Encourage the creation and use of front porches, which offer impromptu ways to connect with neighbors and have been shown to increase bonding between neighbors.	+ Promote outdoor activities that connect people to street life: patio dining, community walking groups, fairs, farmer's markets, etc. + Provide activities that match the scale of the space, such as support groups that meet in warm, cozy rooms.	+ Support municipal policies that require or incentivize developers, building owners, and neighborhoods to dedicate a percentage of overall space to shared public assembly space. + Support municipal policies that encourage or mandate developers to incorporate foliage-dense greenspace as a percentage (10+%) of new builds and renovations.
Nature: Moving from Gray to Green	+ Incorporate nature at various scales both inside and outside a space. + Provide community gardens that can be shared by local residents and schools for food and education. + Bring natural light into the core of a space through windows and skylights that connect people to the outside and give the place warmth.	+ Provide opportunities for people to engage with the vegetation through educational programs, community gardening, or the option to become caretakers of the garden space. + Start or encourage partnerships between local gardens and restaurants to support enthusiasm for urban farming. + Propose or launch a science curriculum that gets kids to tend to a school garden to connect with nature and with their classmates.	+ Support community planning ordinances that require planting trees and creating green medians adjacent to sidewalks. + Advocate for housing and zoning policies that require greenspace as a percentage (10+%) of new builds.
Sense of Place: Creating Crafting a Place as Unique as the People Who Use It	+ Offer spaces to linger and socialize with staff or other patrons (e.g., kitchen or bar seating) + Incorporate unique art and décor that is of the place and people (e.g., team memorabilia at the local sports bar, rotating artwork from a local school at the community center, family photos used as decorations at the local office). + Allow smaller spaces within larger places such as offices or schools to be co-created by community members	+ Host or attend creative arts events (e.g., painting, mural making, pottery). + Host community meetups, couples' nights out, fundraisers, and PTA meetings that can connect people to their neighborhoods or schools. + Organize regularly occurring recreational events (e.g., live music, performances, trivia, sports events) that can get people to start their own traditions with friends and family. + Look for casual opportunities for store, restaurant, or bar staff and patrons to engage and form bonds.	+ Work with community members to co-create the design and programming of the place. + Advocate for tax incentives, zoning, and leasing practices that favor local and small businesses that make a community more vibrant. + Subsidize store- or community-based art programs that support local artists by providing local businesses with no-cost temporary pieces. + Promote temporary or semi-permanent gathering structures (e.g., turquoise picnic tables; movable chairs, tables and planters at a shared median).

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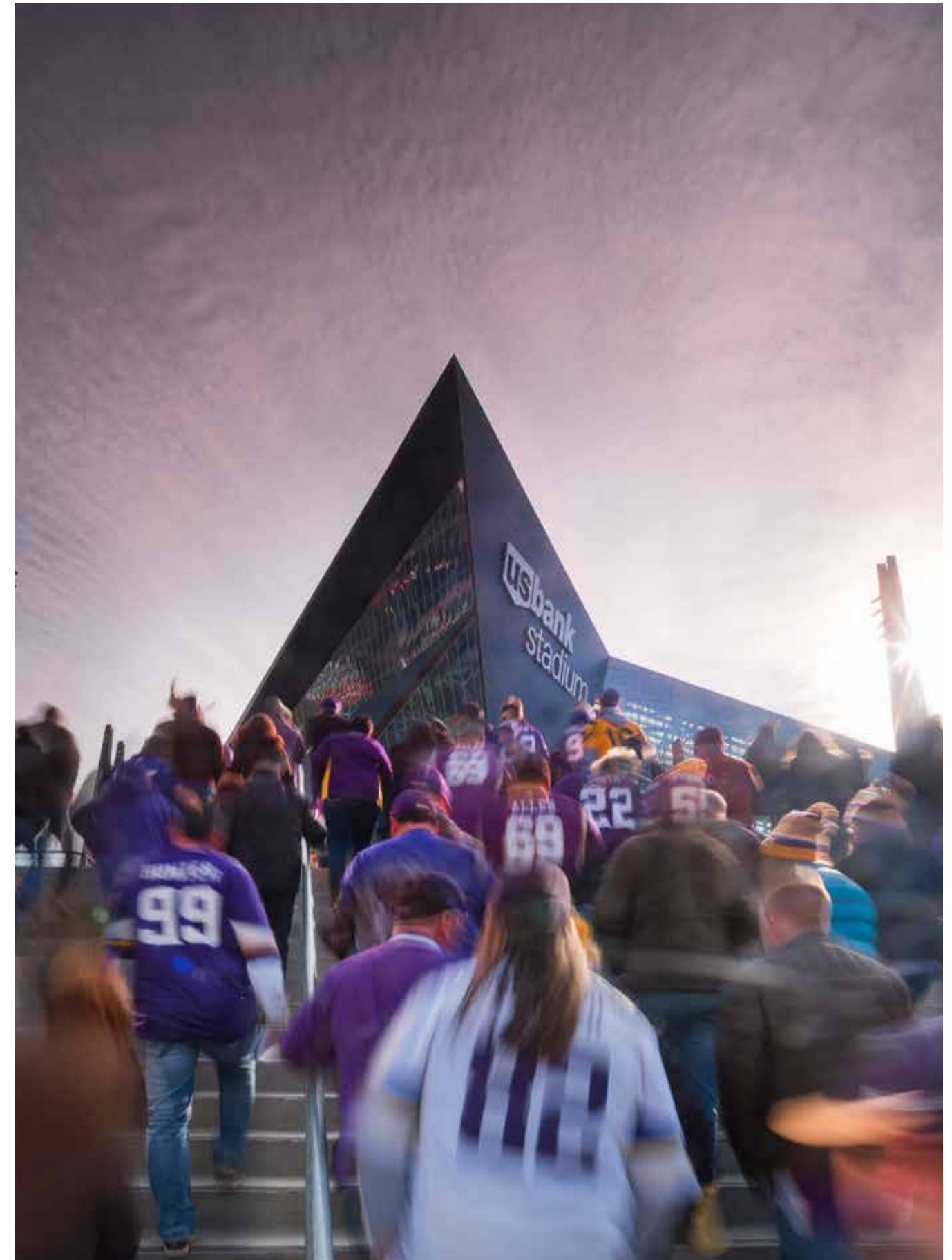
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