Social life and interpersonal relationships in Environment and Planning B

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Introduction

The study of social life and interpersonal relationships in city planning is broad and vaguely defined, but the topic is easy to envision: spending time with friends, family, co-workers, in restaurants, at home, at our jobs, and special events like parades or graduation picnics. Planners need to provide better spaces and opportunities to encourage people to spend time with and foster relationships with friends, family, co-workers, neighbors, their partners, and to form new relationships—but *how* to do that has been called a long-lasting dilemma (Ratti, 2004). Still, planners and urban data analysts have the tools and the training to study how the built environment supports relationships and how it could in the future. The question "how's your mother", when answered, can include where she is, what she has access to (mountains, supermarkets, friends, health care, the arts), her wellbeing, whom she spends time with, where she wants to go, and her topics of conversation that describe the world around her.

Accordingly, studying social life and interpersonal relationships in urban planning includes examining who spends time with whom, why, how, and where (and the features of the locations). Over the past 50 years, Environment and Planning B (EPB) has provided a unique collection of research designs, theories, data analyses, and models that have *laid the groundwork* for studying how space, amenities, and design affect relationships. EPB is a particularly well-suited home for hypothesis testing and evaluating how the built environment serves relationships because it addresses social life and relationships at different scales, which we examine here.

Let's start with relationships **at home**, as the layout and design of interiors can help or hinder our ability to connect, sit, and spend time with one another. In the 1980s and 1990s, schematics of home interiors were studied. We learned that Queen Anne Victorian homes in Pittsburgh had a "second public room" called the library which was used for "occasional naps taken by the father, board games played by the children, and informal family gatherings" (Flemming, 1987). In another study of Turkish households, we learned that the Turkish sofa acted as an important *connector* joining rooms suited for houseguests with the rest of the first floor providing a freer, less enclosed space for guests (Orhun et al., 1996).

Outside the home, well-known studies of **landscape** design components have stressed the importance of shade, benches, covered areas, and greenery for supporting congregation in public space. Building upon this set of findings, a study leveraged computer vision techniques to analyze

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nine hours of aerial video footage at Hong Kong's lively Belcher Bay Waterfront Park. It showed that flexible (movable, repositionable) outdoor furniture helped people engage and customize the space to suit their interaction preferences (Loo and Fan, 2023). These findings can be used to enhance and activate other public spaces. Other multi-site **streetscape** analyses, enabled by Google Street View and WalkScore, have communicated how safe and inviting a place may be for groups or pairs to visit, talk, and perform joint activities (Koschinsky et al., 2017; Li et al., 2022).

Both the home and the out-of-home site may be valued differently for interaction in different parts of the world. Some people may use their front porch as a hearth for socialization, others may have large potlucks inside their home during cold winters, others in dense cities may go to the shared meal areas in their apartment communities.

At the **neighborhood** level, the locations of our friends' homes and known neighbors shape our perception of the world around us. A study of mental maps from one thousand students (roughly aged 5–12) showed that they most often drew their own homes, their school, the local playground, shopping center, and the homes of their friends (labeled with their friends' names) (Halseth and Doddridge, 2000). These findings help us remember that we value other people and form our worlds not just around common amenities, but around the locations of our ties and whom we can access. Also at the neighborhood level, studies of gated communities show that neighborhood infrastructure and advertising for this infrastructure can curate social separation between otherwise-proximal homes (Townshend, 2002).

Commutes are often shaped by our smallest residents. A study of 40 parents in the Utrecht region of the Netherlands described the stresses and uncertainties of picking up children from school and daycare (Schwanen, 2008). At the intersection of mobility and relationship studies, this paper showed that parents relied on granparents and other parents (often mothers) for help, where the latter relationships grew out of *their children's social networks*, suggesting ties are facilitated when children are old enough to make friends. The reliance on others was also tied to **mode choice**: bicycle-commuter parents tended to be on time more often by avoiding the uncertainties of vehicle-oriented traffic, and thus relied on others less frequently.

The aforementioned examples let us enter the "worlds" of others. However, many studies of social relationships in EPB and in urban analytics more broadly tend to use statistical models and larger datasets to explain how distance and movement patterns affect peoples' abilities to interact.

At the **city level**, studies use classic city-wide administrative data on demographics (e.g., age, educational attainment) and locality (e.g., population density) to model the number of ties in a given area. Data from the *American Social Fabric Project (ASFP)* captured some California residents' likelihood of having kin and friends at different distances from the home (1 km to over 50 km) and showed that density implied more local ties (Boessen et al., 2018). From *Twitter* data, analyzed at 1 to 10 km distance bands, we learned that friends tend to be more local for those living in below-average income neighborhoods (Kovács et al., 2023). Data from Robert Putnam's 2000 *Social Capital Community Benchmark Survey* in 41 U.S. communities illustrated that density, not sprawl, contributed to the *loss* of social capital, but that more density was associated with more group interaction for Black populations, and increases in political participation (Nguyen, 2010).

EBP research also approaches social interaction through empirical data of **travel behavior** in cities using measurements that predict or derive the likelihood of **activity spaces** interacting or that travel may be associated with other individuals. A case study showed us, for example, that with a minute increase in travel time between friends, the friends are about 2% less likely to share activity spaces, and home locations drive interaction potential more than work locations (Farber et al., 2014). (See also Arentze and Timmermans, 2008; Carrasco et al., 2008; Miller, 2005). Axhausen (2008) also provided guidelines for one of the most helpful pivots toward relationship-oriented urban studies, suggesting that surveys and travel diary specifications should provide more specific options than "recreation," or "leisure time," by asking respondents to describe an activity's *social purpose* and the activity's *beneficiaries*. Using data extracted from better-

specified survey instruments may help us develop better guidelines for minimizing the cost of travel and maximizing the benefits of time with others.

Avoiding the "understanding" and "pattern" traps of big data

Studying interpersonal relationships and developing friendly spaces will require more than big data analysis. In urban analytics, our collective studies can be data-opportunistic but can also be narrative-poor. We may often procure a large dataset and subsequently try to find "patterns," so we can "understand" it. This approach would impoverish future studies on interpersonal ties because it does not allow for hypothesis testing for anything that is outside of the dataset. It may also prevent the researcher from producing theories or knowledge about a domain because it is a problem they have not studied. In addition, the researcher may not have examined this problem from the perspective of the individual who is represented in the dataset. Other crucial planning problems may go unanswered and unresearched due to a lack of (easily-accessible) large datasets on the topic.

To evaluate and build social environments, although we are often accustomed to ***thinking with data***, we also need to ***think without data***. We cannot let the dataset lead the research questions. For the study of social life and interpersonal relationships, we may not even have the opportunity to do so, since there are so few (spatial) datasets that include specific ties such as family, new friends, aging spouses, college friends, et cetera. EBP's articles over the past 50 years reflect both thinking with and thinking without data.

Looking to the future

In the future, research on relationships in EPB should be guided by questions whose answers can be used to affect people's daily life and social health and steer planners toward socially beneficial designs. To reach busy practitioners and guide policy, we must create a bridge between their locale's problems and our findings and engage with how these findings can be used. We can not expect practitioners and planners to be delighted by our results and use them the next day.

A guiding example of focusing urban analytics on relationships is the use of a **smart city digital twin model** to focus on personal ties of seniors. Yossef Ravid and Aharon-Gutman (2023) wrote that digital twins "ignored the city's social fabric" and developed a digital twin focused on networks of isolated seniors, elder daycare facilities, and widowed householders. Because it narrowed in on a certain sector of the population, it was clearer how the model could be used to reflect on how the city is serving the elderly, and how designers and planners could be more responsible for seniors' quality of life. Digital twins seemed to be at their best when they could show as much activity as possible. But sometimes, to focus on a problem, tell a story, and learn from a digital twin, doing a deep dive into a theme can yield clear implications for the population.

Several Environment and Planning B articles collectively offer a variety of mixed methods research designs and narratives that provide recommendations not just results. The power of big data and generalizability may be lauded in other journals, but alongside the data, EPB still recognizes the power of detailed case studies and working with practitioners to improve people's lives, and is well-positioned to do so over the next 50 years. I look forward to engaging with this journal far into the future, and trust it will continue to support analyses at different scales, as doing something "little" can produce "big" results.

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