

# Can public spaces bring societies together?

**Low levels of social cohesion is a major challenge for many countries across the world. This can be exacerbated by limited opportunities for interactions with individuals from outside one's own community. In Pakistan, Karachi's history as a city of migrants has led to the creation of ethnically homogeneous zones within an extremely heterogeneous city. Exclusion can be perpetuated by limited exposure to and interaction with outgroups, such as people with a different sex and/or ethnicity than one's self. While a growing body of evidence confirms the negative consequences of a lack of social cohesion, exclusion is not immutable.**

Public spaces are an important aspect of social life and can play a vital role in delivering better economic, health, social, and environmental value for its residents (CABE 2004). They are crucial sites for the interplay of social relations among different groups. In Karachi, some areas lack parks entirely and, in others, there is limited use—meaning Karachi's residents miss out on the possibility of cultivating social interactions between diverse groups in these spaces.

As public spaces can be pivotal in promoting social interaction, the World Bank's Social Sustainability and Inclusion Global Practice and the Mind, Behavior, and Development Unit (eMBeD) decided to investigate the relationships between the layout of public spaces on the willingness to use them, and of increasing exposure

to diverse groups on the willingness to trust, interact with, and positively perceive outgroups. This was assessed through a Virtual Reality (VR) experiment. This research was made possible thanks to funding from the Global Facility for Disaster Reduction and Recovery (GFDRR).

Results indicate that improving the layout of a public space increases how much people like those spaces and, in turn, their willingness to use them. However, findings related to increasing exposure to diverse groups are mixed, highlighting the need for thoughtful programming and policies that increase intergroup exposure and change negative perceptions against outgroups.

## The Project

The team conducted an experiment with over 2,000 youth between 18 and 30-years-old from diverse backgrounds. Participants were randomly assigned to one of four scenarios. Each scenario involved watching a 2:34 minutes-long VR experience, where the viewer experienced a scene from every direction.

The four scenarios included:

### **Control group:**

A scene featuring a Karachi park in its natural state, selected as it is well-known and lacks infrastructure.

### **Treatment 1:**

A scene featuring the park plus additional urban design elements in 3D, including streetlights, a tea kiosk, picnic area, play fixtures, and emergency buttons.

### **Treatment 2:**

A scene featuring the park where actors from diverse genders, ages, and ethnicities were shown using the park and interacting.

### **Treatment 3:**

A scene including urban design elements and diverse park users.

Immediately after watching the video, each participant was asked to take a computer-assisted survey with questions about the park, the people they saw in the VR experience, as well as some basic demographic information.



## The Results

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**Improving urban design elements increased a park's perceived attractiveness and participants' willingness to use it.** Exposure to changes in physical design increased the reported willingness of a participant to return by nine to 13 percentage points. This impact did not fade when participants were introduced to members of an outgroup, as long as the urban design elements remained intact.

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**Results vary by sub-group and vulnerable persons are less willing to use public spaces.** The interventions resulted in a lower willingness to use public spaces among those with lower education and income, and non-Urdu speakers. For example, participants with above-median education levels who saw the scene that included improved infrastructure and diverse park users (T3) were more likely to report a willingness to use public spaces, compared to those with below-median education levels.

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**Improved urban design does not increase social cohesion.** Exposure to diversity alone had mixed results. It did not increase the willingness to use public spaces, nor did it have a consistently positive or negative effect on social cohesion.

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**Exposure to social diversity was associated with greater connectedness towards one's own group.** Exposure to diversity increased participants' feelings of connectedness to shared ethnicity. This effect persisted when the physical design elements of a public space were paired with diversity. Here, individuals appeared to feel a heightened sense of identity rather than willingness to interact with outgroups.

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**Virtual reality can have a meaningful impact on attitudes and perceptions.** The fact that such a short (2:34-minute-long) intervention had a significant impact on self-reported outcomes is remarkable. VR presents an opportunity to understand behaviors in a faster and more cost-effective manner than traditional tools for diagnosing social phenomena.

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## Discussion

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This study has broad relevance for urban designers and those working on policies to promote social exposure and cohesion in diverse societies. The results demonstrate that young people react positively to better designed, multi-use, green public spaces, suggesting that improved urban design can help increase the use of public spaces and facilitate greater social exposure. However, those from vulnerable or underrepresented backgrounds were less willing to use public spaces. This may be because these groups did not identify with the changes made in urban design or found them insufficient to meet their needs. Policy makers will need to assess how to design spaces responsive to the intersectionality of social identities and signal that these spaces belong to everyone.

Even though the impacts on social cohesion were mixed, to our knowledge, this is the first study that systematically exposed people to diversity through VR and monitored

its effect on social cohesion measures, providing a foundation for future studies in this area. Negative effects of exposure for some groups indicates that

exposure to diversity might not be enough, and that future research needs to be conducted.

Finally, digital technology in general, and VR in particular, can be used as a tool for inclusion and stakeholder engagement in a fast and cost-effective manner. VR is a low-cost way to simulate close-

to-reality changes. Policymakers can develop, rapidly test, and iterate on a suite of options before making costly physical adjustments in an environment. VR can also be combined with complementary technologies for monitoring and evaluation, stakeholder engagement, and inclusive design. Still, the technical aspects of VR are complex, and results require consideration of context and generalizability.

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## About eMBeD

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The Mind, Behavior, and Development Unit (eMBeD), the World Bank's behavioral science team in the Poverty and Equity Global Practice, works closely with project teams, governments, and other partners to diagnose, design, and evaluate behaviorally informed interventions. By collaborating with a worldwide network of scientists and practitioners, the eMBeD team provides answers to important economic and social questions, and contributes to the global effort to eliminate poverty and enhance equity.

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