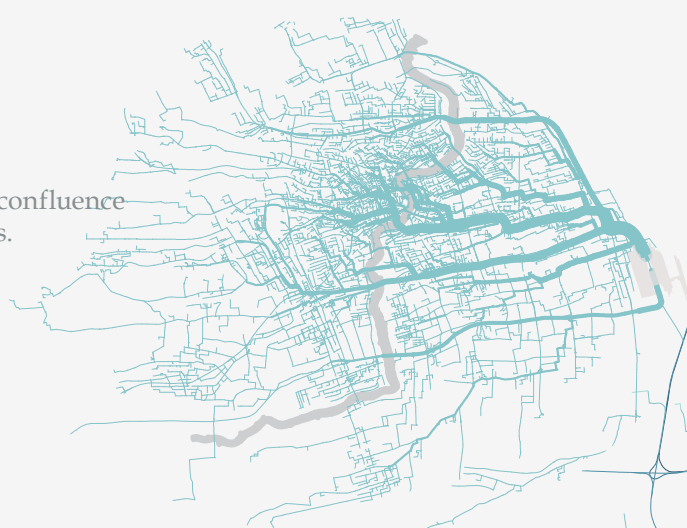


A Visual Comparison of Route Choices to Shortest Paths

How Much Do The Used Paths Deviate from The Shortest Paths?

Shortest Path Flow

The traffic flow would continue to confluence if everyone takes the shortest paths.



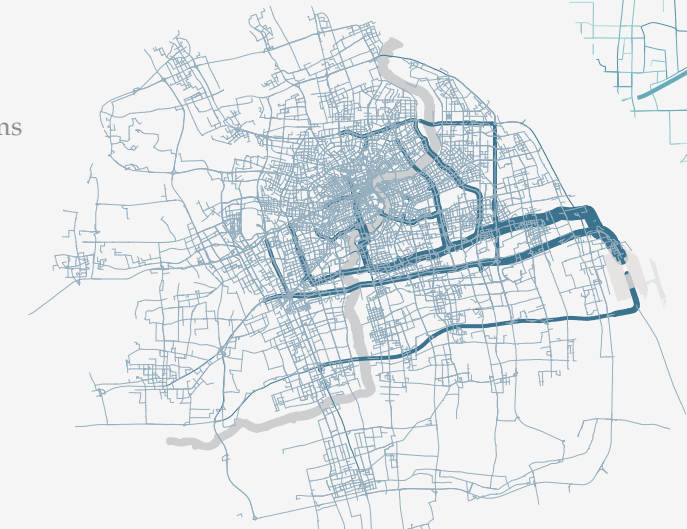
Multiple Route Choices

However, people may choose different routes even from the same origin.



Used Path Flow

The real-world traffic flow conforms to the road network structure.



Preference for Rings

Despite increased deviations, ring-like roads are attractive for higher speed.

Direct Radial Spokes

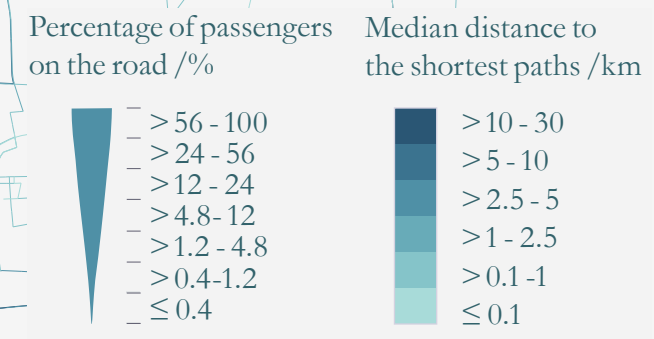
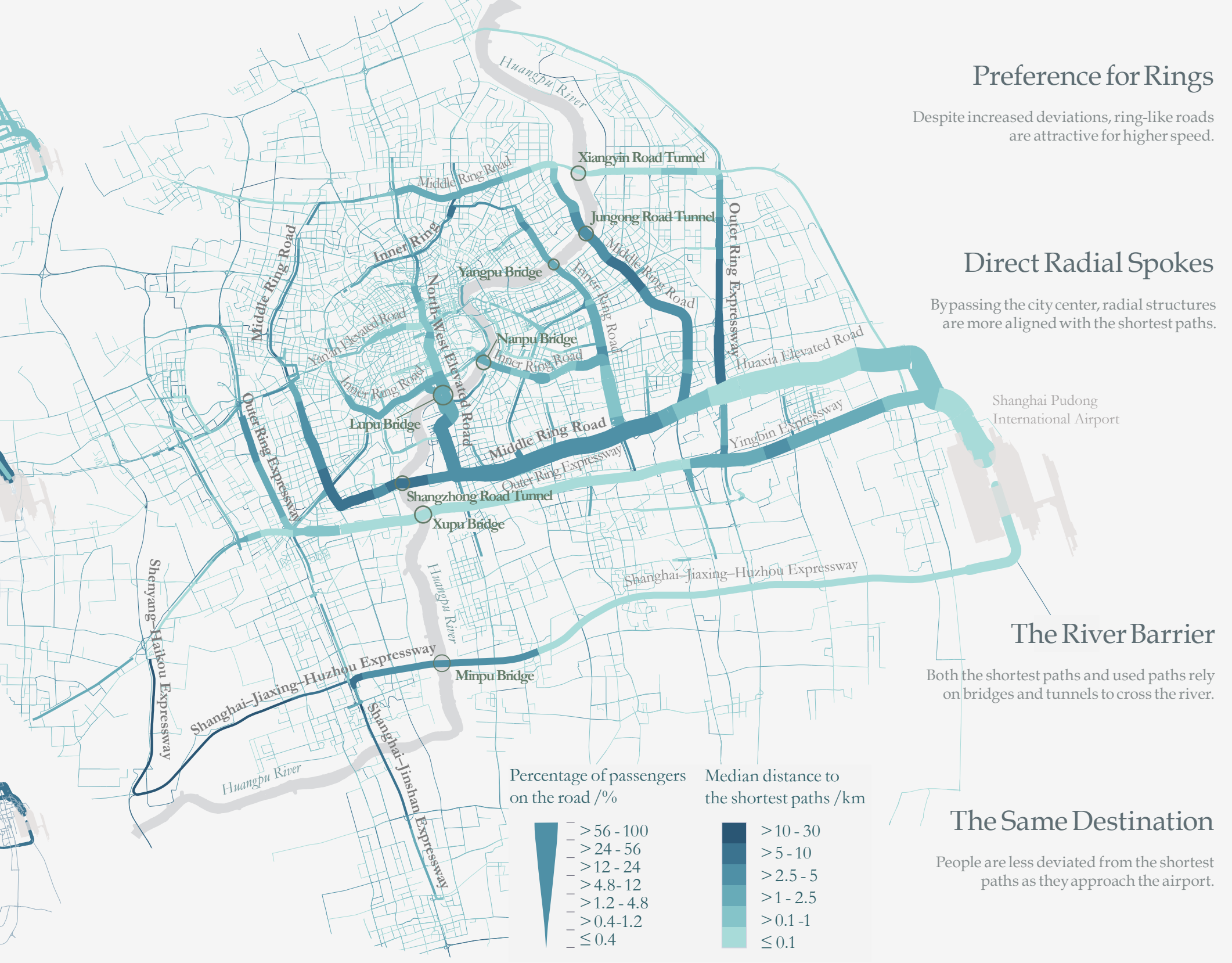
Bypassing the city center, radial structures are more aligned with the shortest paths.

The River Barrier

Both the shortest paths and used paths rely on bridges and tunnels to cross the river.

The Same Destination

People are less deviated from the shortest paths as they approach the airport.



Projection: Azimuthal Equidistant
Standard Point: 121.8083°E, 31.1443°N
10 Kilometers

Scale: Central Map: 1: 250,000
Shortest Paths Inset: 1: 900,000
Route Choice Inset: 1: 500,000
Used Paths Inset: 1: 900,000

Data Source: OpenStreetMap
Taxi Company
Cartographer: Yuhan Ji
Data: Dec/13/2021