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Elements of Open-World Games

What basic elements should we use to talk about space and design in open-world games?

Landmarks? Encounters? Barriers? NPCs?

How do players conceptualize game spaces?

The Image of the City¹

Lynch (1964): How do the inhabitants of a city understand it? Five key elements:

- Landmarks • Districts
- Paths • Edges • Nodes

Lynch interviewed residents about routine travel.

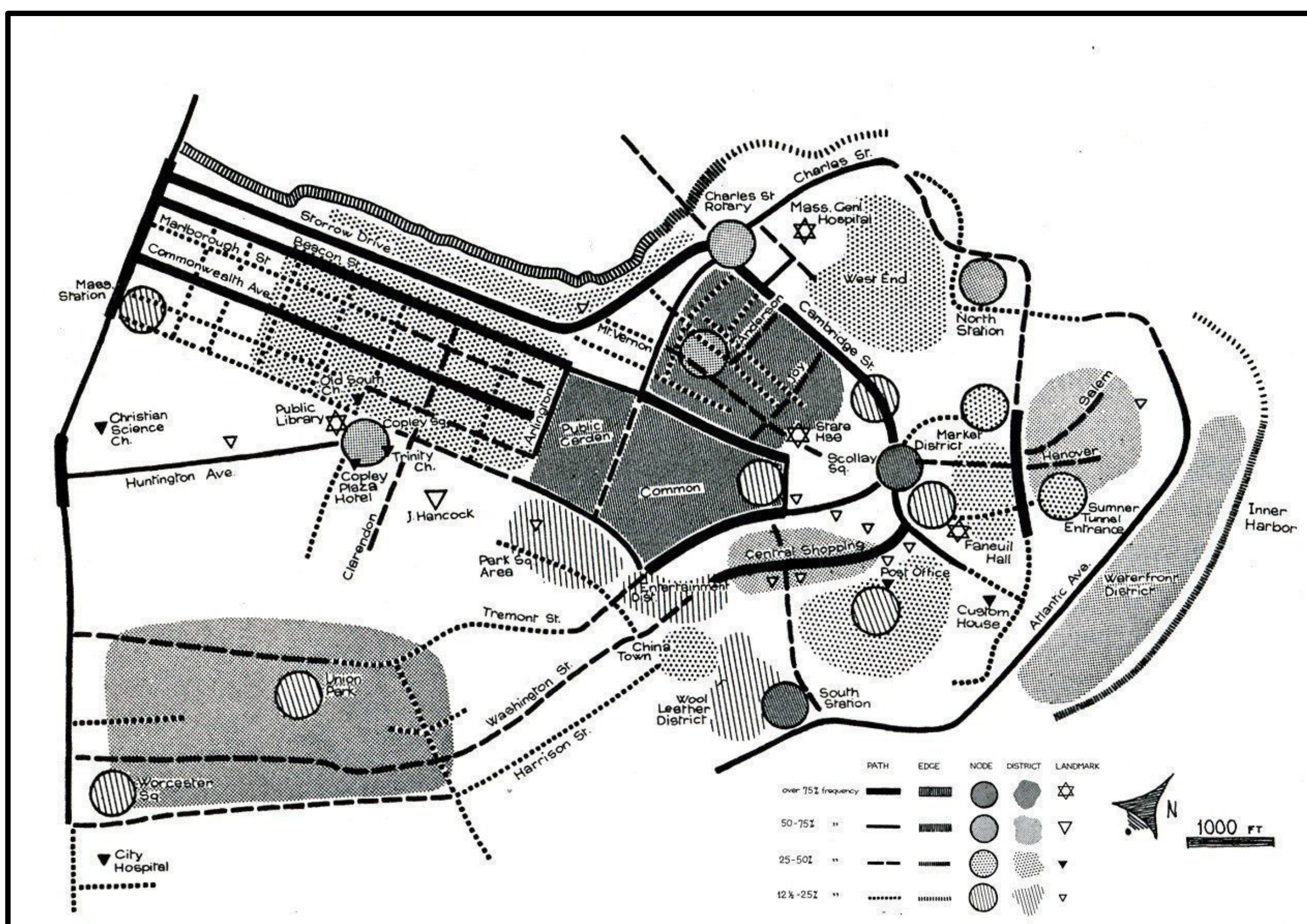


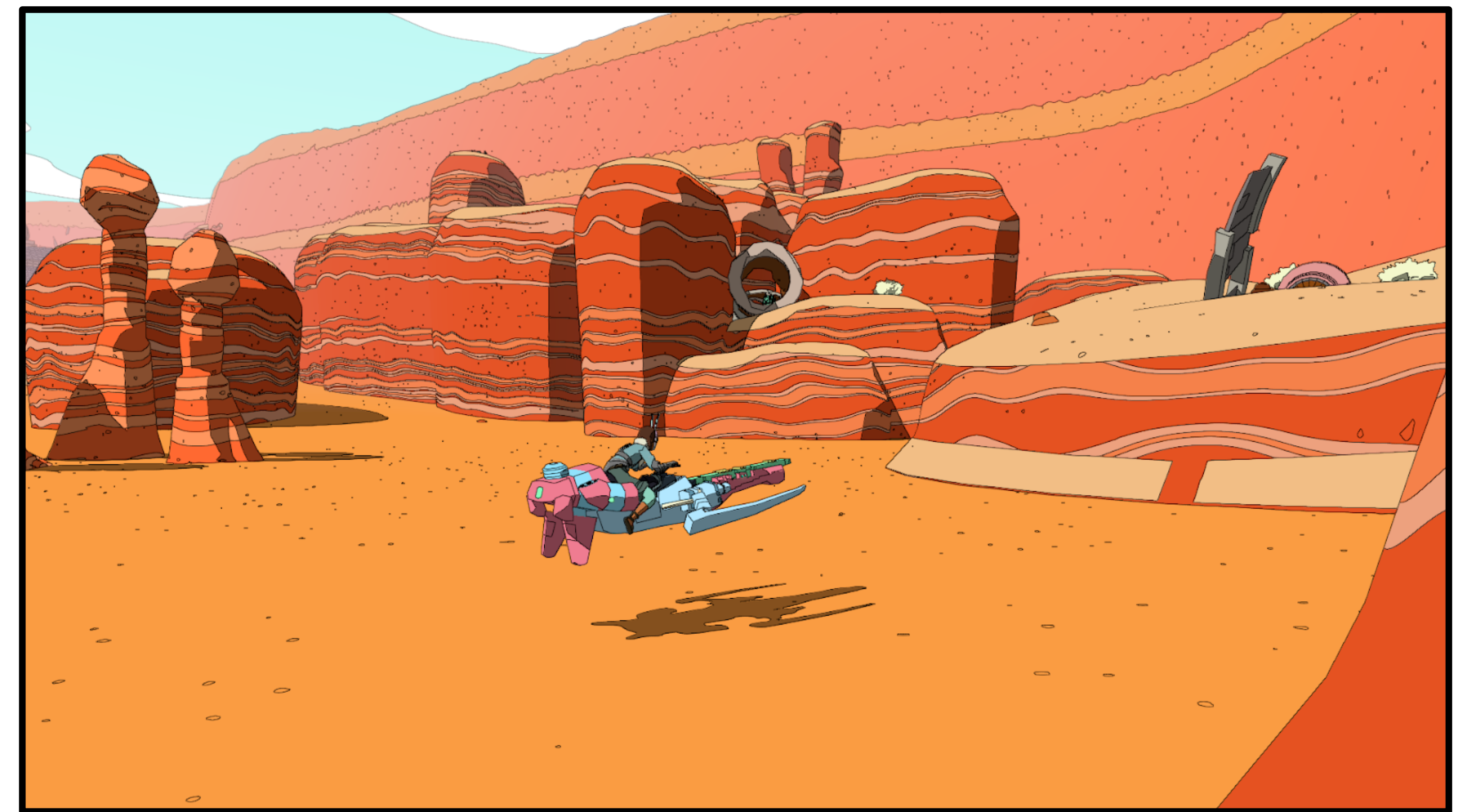
Figure from *The Image of the City* showing downtown Boston with paths, edges, nodes, districts, and landmarks labeled.

Study Design

Do Lynch's elements apply to open-world games too? What other elements might be important?

We recruited participants to play *Sable*² or *A Short Hike*³ for 1.5 hours, then asked them to describe how to get to specific landmarks. We used **deductive thematic analysis** to categorize their responses: **what kinds of game elements** did they refer to? Drawbacks:

- Only 3 participants with full data, so **our results aren't conclusive**.
- Not enough time to leave *Sable* starting area.
- Elements used for directions aren't everything.



Screenshot from *Sable* showing red-orange desert cliffs and sand, broken machine parts, and the protagonist riding a hover-bike. A round opening in the cliffs ahead implies access to an area beyond.

Results

Found 9 consistent themes among responses, including **cardinal directions**, 2 UI elements (**compass**; **other tools**), 2 of Lynch's elements (**landmarks** and **edges**), and 4 other game world elements (**interactive elements**, **visual clues**, **vantage points**, and **NPCs**). Only 2 of Lynch's 5 elements confirmed despite deductive approach. Lots to inform next steps.



Screenshot from *A Short Hike* showing the bird-person protagonist standing near the base of a lighthouse, looking down a tall cliff towards the beach and ocean below.

Takeaways

- Lynch's categories are probably a useful starting point (need more data).
- New categories like NPCs apply in games.
- Study design should probe mental models better.
- Game worlds do differ from cities (e.g., no street names, so paths aren't as useful in directions).

¹Kevin Lynch. 1964. *The Image of the City*. MIT press. ²Shedworks. 2021. *Sable*. Raw Fury. PC. ³Adam Robinson-Yu. 2019. *A Short Hike*. Independently Published. PC.