

Elevators, Hard Drives, and Teleportation

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The ability of computer code to arbitrarily link discrete self-contained spaces together within a virtual world can be interpreted as a continuation of the historical legacy of the development of physically isolated floors within buildings connected by elevators. Both modern touch-screen-enabled elevators and those using earlier push-buttons create conditions where their passengers navigate physical space through an electronic interface. As they place users at destinations designated by previously-established code, they exist in a comparable state of disrupted processional continuity to that of virtual worlds designed to make use of the computer's ability to process space through randomly-assigned indexes. An elevator passenger navigates via the inherently abstract act of pushing a button. The elevator control panel provides its users with a list of options for floors to travel to, labeled with specific whole numbers; as a quantized and finite set of information, that list might be conceptually understood to be specifically digital in its composition. It also doesn't necessarily correspond with the physical reality of the spaces it traverses; in Western culture that list commonly skips the thirteenth floor, or in many East Asian cultures the fourth floor.

That panel's ability to equalize the effort required to travel to different floors throughout a building renders the building's floors as though they were randomly accessible. The destination an elevator passenger reaches is also arbitrarily self-contained in relation to its surroundings, as exemplified by Rem Koolhaas's description of each floor in a multi-story building being capable of operating "as if the others did not exist" (Koolhaas 1997, 85).

Within virtual worlds, spatial access and continuity are modulated in some potentially comparable ways, as a result of the ability of digital information to connect virtual spaces via random addressing. A description exploring the capabilities of how information can mediate spatial connections within a virtual world can be found within Michael Nitsche's game design text *Video Game Spaces: Image, Play, and Structure in 3D Worlds*, in the author's description of the *Common Tales* project commissioned by Sony Computer Entertainment to "experiment with cinematic storytelling techniques in a game prototype" for which he served as a designer (Nitsche 2008, 85). The game's *Cube Club* level was constructed such that, in his words:

"... two opposing doors from one virtual room lead to similarly opposing doors in a different room. When an avatar leaves the first room through the northern door, he or she will enter the seemingly adjacent second room, also through the northern door—the same way the southern doors are connected. Both rooms occupy the same logical space—a physical impossibility." (Ibid.).

The character of that space is generated from its origins in loaded computer files, or in other words, the affordances of the computer to connect arbitrary and disparate pieces of information together. That condition means that locations within a game level can be "... arranged in a mathematically conditional way", with "no spatial connection" between their data files. That attribute consequently "... allows a designer to interlink them in any way." (Nitsche 2008, 119.)

Although the physically impossible travel path of the player in *Cube Club* exhibits obvious limits to its translatability to real-world spaces, the level illustrates one conceptual property of virtual worlds - their ability to achieve connections between spaces by means of what might be considered a form of teleportation - which parallels experiences observable along an elevator ride. One experiential attribute shared by both elevators and such game mechanisms might be the cinematic condition of montage, which Nitsche references in his analysis (Nitsche 2008, 117-118.).

Elevators have been criticized for introducing disruptive experiential conditions of potentially comparable similarity. In Philip Johnson's critique of the impacts of elevators in his 1965 *Perspecta* article "Whence & Whither: The Processional Element in Architecture," the architect placed their circulation method in opposition to design principles following conventional aesthetically-appealing rules of architectural procession under which a visitor to his Yale

University Kline Biology Tower complex "... should be able to get *from any door to any door clearly*" (Johnson 1965, 170).

Where Johnson also described how within a building with elevators on both sides of its circulation path a visitor might have to take a different path each time they take an elevator trip (Johnson 1965, 168), the variations in spatial procession which those circulation methods generated would, like the "teleporter zones" connecting spaces in Nitsche's game world, be able to "reposition" a passenger or a game character "in a new area" (Nitsche 2008, 119-120). The shifting and moving spaces located behind an elevator door could share some aspects of unpredictability and arbitrariness with those modulated in games via teleportation to randomly-accessible locations stored in computer files. Like maps loaded within a game, the elevator connects spaces based on abstracted logical relationships instead of direct adjacencies. The potential similarities between building circulation systems and a computer's capabilities are significant enough that one early method of positioning a computer hard drive head, which happened to operate with a similar pattern of movement to an elevator serving all of its destinations in one travel direction at a time, the "SCAN algorithm", was also nicknamed the "'elevator' algorithm" (Worthington, Ganger and Patt 1994, 242.).

REFERENCES

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IMAGE CREDITS

All drawings and images by the author.

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