Cathedral Effect

A relationship between the perceived height of a ceiling and cognition. High ceilings promote abstract thinking and creativity. Low ceilings promote concrete and detail-oriented thinking.

It is widely accepted that people prefer high ceilings to low ceilings. Lesser known, however, is that ceiling height can influence how people approach problem solving. Depending on the nature of the problem, ceiling height can either undermine or enhance problem-solving performance.

Conspicuous ceiling height—that is, noticeably low or noticeably high ceilings—promotes different types of cognition, with high ceilings promoting abstract thinking and creativity and low ceilings promoting concrete and detail-oriented thinking. No effect is observed if the ceiling height goes unnoticed. In self-report measures, people predictably rated their general affect as "freer" in high-ceilinged rooms versus "confined" in low-ceilinged rooms. In word tasks, subjects were able to solve anagram problems more efficiently when the anagram aligned with ceiling height. For example, subjects in a high-ceilinged room could solve freedom-related anagrams (e.g., "liberation") faster than those in a low-ceilinged room, but were slower to solve confinement-related anagrams (e.g., "restrained") than those in the low-ceilinged room. A more practical example is an experiment in which two groups were asked to conduct product evaluations, one group in a high-ceilinged room and one in a low-ceilinged room. The group in the high-ceilinged room tended to focus on general product characteristics, whereas the group in the low-ceilinged room tended to focus on specific features. One hypothesis is that this effect is due to priming—the stimulation of certain concepts in memory to promote and enhance cognition regarding related concepts. With the cathedral effect, high ceilings prime "freedom" and related concepts and low ceilings prime "confinement" and related concepts.

Consider the cathedral effect in the design of work and retail environments. For tasks that require creativity and out-of-the-box thinking (e.g., research and development) favor large rooms with high ceilings. For tasks that require detail-oriented work (e.g., surgical operating room) favor smaller rooms with lower ceilings. In retail environments, favor spaces with high ceilings when consumer choice requires imagination (e.g., home remodeling store) and spaces with lower ceilings for more task-oriented shopping (e.g., convenience store). Favor high ceilings to extend the time in which visitors remain on site (e.g., casino) and low ceilings to minimize loitering (e.g., fast food restaurant).

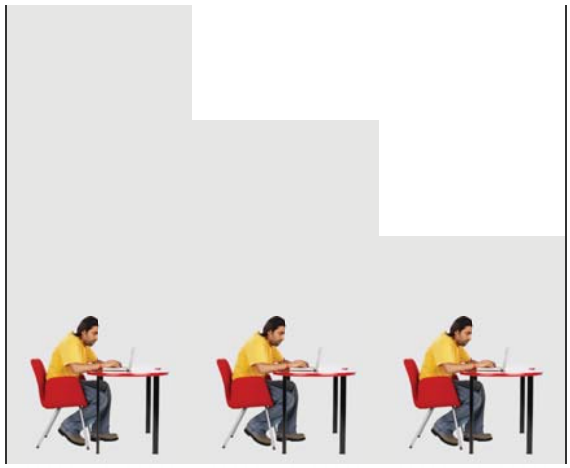
See also Defensible Space, Exposure Effect, Priming, and Prospect-Refuge.

[1] The seminal work on the cathedral effect is "The Influence of Ceiling Height: The Effect of Priming on the Type of Processing That People Use" by Joan Meyers-Levy and Rui (Juliet) Zhu, *Journal of Consumer Research,* August 2007.

Worm's Eye View

Bird's Eye View

Creativity



Focus

High Ceiling

Low Ceiling

The ability to focus and perform detail-oriented work is enhanced by environments with low ceilings. The ability to perform more creative work is enhanced by environments with high ceilings. A related effect pertains to visual perspective: worm's-eye views (looking upward) evoke cognition and associations similar to high ceilings, whereas bird's-eye views (looking downward) evoke cognition and associations similar to low ceilings.