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## Effects of Biophilic Design in Worship SPaces

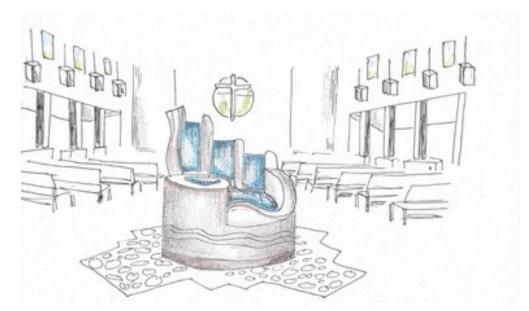
Biophilic design has many benefits, both physically and psychologically, and the inclusion of biophilia in places of worship can make studying and performing acts of devotion an experience of something greater than what is on this earth. Creating a space that includes natural elements and features can increase comfort in a space, and that is a high priority for all places of worship. These spaces are meant to be a safe haven away from a busy world outside, much like going out into nature is an escape from a big city. This also means that these spaces should include calming elements that aren't distracting and blend in enough to the environment that one feels familiar and comfortable. Thus, making these spaces as warm and welcoming as possible is something to be thoughtful and serious about.

A perfect example of the effects of biophilic design is Antoni Gaudi's Sagrada Familia. In a 2007-2008 survey that gathered people's most Extraordinary Architectural Experiences (or EAEs), by *Faith & Form* magazine, it was found that this structure in Barcelona, Spain, had a greater effect on people than even Notre Dame or the Pantheon. The question is, does biophilia play a role in this? The branch like columns and the beautiful use of light strongly suggests that the popularity of this space is directly correlated to biophilic elements. Gaudi himself even claimed that "God created and he just copied" (James Hundt), thus making the connection that this space was inspired by nature, which is not and could not be man made.

In a journal titled *Environment International*, it was discovered after careful study that after placing participants in 4 different rooms, one with biophilic elements and three others that

were similar but did not contain biophilia, that there was a big difference in anxiety levels. With levels being measured by the State-Trait Anxiety Inventory test, it was "found that participants in biophilic indoor environments had consistently better recovery responses after stressor compared to those in the non-biophilic environment, in terms of reduction on stress and anxiety." This proves that incorporating elements of biophilia directly relates to an experience of peace and serenity, which can be argued to be one of the main goals when creating a religious space.

While it is possible to create a religious space without the inclusion of biophilia, the benefits of these elements is much greater than creating a simple design that excludes them. When creating a religious space, the people who design it must be able to see nature as an experience that isn't black and white. Biophilic design can be used the wrong way, even if the intentions were right. It is important when creating a space that each decision is well thought through so that the final product can be more than a visual experience, but a spiritual one as well.



A baptismal font located at St. Francis Catholic Church in Muncie. Before: A simple fountain with tile. After: Hanging light fixtures added for more light, three tiered waterfall added to create sound and color, tile replaced with stone.

## Works Cited

Foresight, James Hundt. April 6, 2020. https://foresightarch.com/the-biophilia-effect/

http://foresightarch.com/extraordinary-architectural-experiences/

Science Direct, Jie Yin, Jing Yuan, Nastaran Arfaei, Paul J. Catalano, Joseph G. Allen, John D. Spengler. March 2020.

https://www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiety/www.sciencedirect.com/science/article/pii/S0160412019336347#:~:text=Their%20anxiet/science/article/pii/S0160412019336347#:~:text=Their%20anxiet/science/article/pii/S016041201936347#:~:text=Their%20anxiet/science/article/pii/S016041201936347#:~:text=Their%20anxiet/science/article/pii/S016041201936347#:~:text=Their%20anxiet/science/article/pii/S016041201936347#:~:text=Their%20anxiet/science/article/pii/S016041201936347#:~:text=Their%20anxiet/science/article/pii/S016041201936347#:~:text=Their%20anxiet/science/article/pii/S016041201936347#:~:text=Their%20anxiet/science/article/pii/S016041201936347#:~:text=Their%20anxiet/science/article/pii/S016041201936347#:~:text=Their%20anxiet/science/article/pii/S0160412019847#:~:text=Their%20anxiet/science/article/pii/S0160412019847#:~:text=Their%20anxiet/science/article/pii/S0160412019847#:~:text=Their%20anxiet/science/article/pii/S0160414847#:~:text=Their%20anxiet/science/article/pii/S016047#:~:te