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The Bridge Between Beauty and Functionality

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The Bridge Between Beauty and Functionality

Abstract

"While our human creatureliness and limited understanding often lead us to pit form and function against each other, God provides glimpses of their unity."

Posting about balancing aesthetics and practicality in design from *In All Things* - an online journal for critical reflection on faith, culture, art, and every ordinary-yet-graced square inch of God's creation.

<https://inallthings.org/the-bridge-between-beauty-and-functionality/>

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Comments

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in things

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The Bridge Between Beauty and Functionality

Justin Vander Werff

We live in a seemingly increasingly divisive world. Liberals versus conservatives. STEM versus liberal arts. Android versus iPhone. Packers versus Vikings. As Christians, we recognize the antithesis of good versus evil. We also recognize that although none of the previous supposed dichotomies really align with THE dichotomy, it is far too easy for us to live as such.

One such division in the engineering world is beauty versus practicality. When I was a graduate student in structural engineering, many of the engineering students with whom I was studying were truly flabbergasted (and not only kidding so) that I could share an apartment with an architecture student. If you haven't hung around such circles, this divide may be a surprise to you, but far too often it is very real. As engineers, we are pressured to pit form versus function for the sake of economic stewardship. The architect wants to move the unsightly column from the otherwise-spacious lobby, but the engineer realizes that this modification will significantly increase cost. The city planner wants to incorporate aesthetically-pleasing details on the faces of the precast concrete bridge girders, but the engineer realizes that this too will add considerable expense.

Abraham Kuyper wrote, "By the term *beauty* we are to understand what Scripture calls the 'divinity' that shines through in the creation in terms of God's eternal power, involving not merely its wise plan but also its outward appearance."¹ He recognized that the things we see as beautiful are probably those things that best reflect God's glory shining through the shadows of sin—those things that are well-planned within and have outward beauty.

While our human creatureliness and limited understanding often lead us to pit form and function against each other, God provides glimpses of their unity. These glimpses are

beautiful. Consider, for example, suspension bridges. I can still recall the feeling I had as a young teen the first time I encountered a large suspension bridge. The soaring towers, slender and graceful cables, and majestic curve of the bridge deck of the Mackinac Bridge in northern Michigan took my breath away! What is interesting about the beauty of a suspension bridge is that most, if not all, of its beauty comes from simply being designed to accomplish its intended purpose. Suspension bridges incorporate tall towers that, in addition to being aesthetically dramatic, provide anchor points for draped cables that can span very long distances and carry load as tension-only elements. Vertical cables that hang down from the draped cables also carry load as tension-only elements. Since tension is an extremely effective way to use materials to carry load, the result is an assembly that is very effective to carry loads over long spans. Suspension bridges are beautiful because they are so structurally well-designed.

So, what is our take-away? We will often continue to struggle to avoid simply balancing beauty and functionality rather than getting it right and discovering how to incorporate integrally beautiful function. But we can enjoy the search and appreciate the glimpses God gives us. My experience in structural engineering provides a lens that helps provide some clarity in the beauty of suspension bridges; certainly, your experiences and abilities give you foretastes of this focus in other arenas of God's creation. Ultimately, these hints point us toward Christ, increasing our gratitude for His selfless sacrifice for us, and helping us to more eagerly anticipate His complete consummation of the new heavens and earth.

Psalm 19:1 says, "The heavens declare the glory of God, and the sky above proclaims his handiwork." We tend to think of this proclamation and similar ones found throughout Scripture (and the Psalms in particular) as referring to the "natural" or "undeveloped" creation, but God's glory is also declared through the way that He sustains materials that are used in structures made by human hands. In the instances and applications where God's Spirit provides our dim human eyes a glimpse of His wonderful design and technique, the works of our hands provide a taste of His handiwork. God in His grace has allowed us to comprehend some ways to use His materials efficiently, and in doing so, He has provided us with a hint of His glory. With Paul in Romans 11 we proclaim, "For from Him and through Him and to Him are all things. To Him be glory forever. Amen."

FOOTNOTES

1. Kuyper, Abraham. *Wisdom and Wonder: Common Grace in Science and Art*. Christian's Library Press, 2011, pp. 139.