



Public Perception of Structural Engineers

By Dilip Khatri, Ph.D., S.E.

Who are we to the Public? Do they know or care about what we do? Sadly, the public doesn't know who we are or what we do. Structural engineers have allowed our clients (architects) to define the meaning of "buildings" and thus have grabbed credit for our work for the past 100 years. An architect represents every project, with no space/room for the technical accomplishments that make those projects happen. This is not to say that we should be angry with architects. By no means does this article imply or suggest that we should direct any criticism towards our partners in the creative design world. The focus of this article is on us, on our profession, because we are the cause of our own problem.

Let's start with two examples of structural engineering accomplishments with zero public recognition. The Empire State Building, New York City's symbol and America's icon of the "Empire State" and a nation on the rise, was designed by the architects Shreve, Lamb, Harmon. Mr. William Lamb has received accolades of credit for this building, which was cited as the 8th Wonder of the World. Where is the name of Homer Gage Balcom? He was the genius structural engineer that created the structural system to pioneer this first, tallest building of its kind. No one remembers H.G. Balcom.

More recently, the Disney Concert Hall, lauded as an artistic masterpiece, was designed by Frank Gehry. Not a mention of the extensive computer modeling and seismic analysis that went into this curvilinear steel membrane nightmare that made no sense to anyone, until a structural engineer could translate it from Frank Gehry's sketches into working drawings. The Disney Concert Hall was a "pipe dream" that would have never happened without the hard work of John A. Martin & Associates transforming a design plan from a "doodle sketch." Yet, there is not a mention of them by the Honorable Frank Gehry in any of his speeches or public recognition.

I could go on for pages and pages, but let's focus on the solution.

Structural engineers have three prominent character traits (among others) that prevent them from gaining recognition:

- 1) *Lack of Image Recognition:* Our professional culture does not demand "Image Recognition". We regard ourselves as "above" all that nonsense, and we don't seem to care whether our name goes on the plaque in front of the building or is mentioned in a press release. We are, by nature, a very humble profession considering our accomplishments.
- 2) *Too Busy to be Bothered:* We are so busy with taking care of our workload and meeting deadlines, the idea of public participation seems ludicrous and impossible. We don't participate in public events in a leadership role, so consequently the public doesn't get to know us.
- 3) *We do not engage the Press:* The Press loves to interview architects, and they love the attention. We don't invite the Press to any of our events and are scared of anything in the media with our name on it due to fear of consequences or a bad photo.

Our culture starts with our college experience. When we were students, we were among the hardest working on campus – engineering is tough. I'll be the first one to admit that I hated my humanities courses and general education. Political science and psychology were low points in my college experience. Now, after 33 years in the business, I wish I had paid attention to these subjects earlier in my life, as I find they dictate my success now with as much (or more) value than my engineering skills. I've never had a client walk away from me because I couldn't design a beam or column, but they will walk away if they can't get along or communicate with you.

Recognition and public awareness have to be built over years of participation in the public arena. We are a long way off. The media doesn't know we exist. Watch the news after a major hurricane or earthquake; they seldom interview a structural engineer to ask his/her opinion. They will talk with a firefighter, a

paramedic, or a priest, but don't have a clue who we are.

So what do we do?

First, the younger generation needs to stay in the profession. The average professional tenure in civil engineering is only around 14 years, according to the U.S. Department of Labor. We need to attract and keep our best and brightest engineers for the long haul.

We need to collectively change our attitude when it comes to public recognition. We need to seek it, demand it, and eventually create a public relations channel so that every great project allows our industry to be recognized. I have many ideas on this topic. Others will as well. Now is a good time to spark the conversation and raise awareness on this important issue.

Think about real estate brokers. They have a professional license but minimal education compared to engineers. They demand a set commission and have no problem taking full recognition for their work. They sell the buildings that we design! They only sell them! They don't design them! Yet, everyone knows who a real estate broker is and has a public image of what a broker wears, drives, and looks like. As a reward, brokers and agents can demand higher commissions for their work.

I'm not advocating that we become like brokers. But a little salesmanship will help us. We need to partner with our architect clients to share in the recognition. One day, everyone will know who the structural engineer was that designed the White House, the Burj Khalifa, the Empire State Building, the Hoover Dam, the Golden Gate Bridge, and all of the other countless monuments and icons that dot the world because of our efforts. ■

Dilip Khatri is the Principal of Khatri International Inc, Civil and Structural Engineers, based in Las Vegas, NV, and Pasadena, CA. He was a Professor of Civil Engineering at Cal Poly Pomona for 10 years. He serves a member of the STRUCTURE Editorial Board and may be reached at dkhatri@aol.com.

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