

Channeling Tom Hanks

By Ed Quesenberry, S.E.



One of the last people I thought I would ever get professional advice from is Tom Hanks. Then it happened. It was during my daily lunchtime indulgence of surfing YouTube for a good comedy or anything unrelated to engineering. I stumbled upon a video of Tom Hanks' acceptance speech for the Golden Globe Cecil B. DeMille Award, which is for outstanding contributions to the world of entertainment. After the traditional, heartfelt expression of thanks to his family for their support, he summed up the key to his success by saying, "...you're a **dope if you don't steal from everybody you have ever worked with.**" Hanks went on to name some of the people he had unapologetically stolen ideas from during his career, including names such as Streep, Eastwood, Scorsese, and DeNiro.

This kernel of wisdom resonated with me, and I immediately began assessing my career and, eventually, our entire profession through this lens. I will save you all from the reflections on my own past but would like to share a few on our profession.

When it comes to *stealing* technical knowledge, I do not believe Mr. Hanks would classify structural engineers as dopes. The history of structural engineering is steeped with the *pilfering* of ideas, *theft* of mathematical theories, and outright *looting* of scientific discoveries, all in the name of advancing the practice and enhancing public safety in the built environment. It all started with *stealing* concepts of structural stability and proportion from the Ancient Egyptians. It progressed through time with an *appropriation* of discoveries made by the likes of Archimedes, the Ancient Romans, DaVinci, Galileo, Hooke, and Newton. Our profession continued to refine its craft by taking ideas from Euler, Bernoulli, Bessemer, Freyssinet, and countless others, and formulating the foundation of structural analysis and design that we all still use to this day. Modern-day structural engineers have much more vast libraries of technical knowledge to *plunder* than our predecessors did, including the institutions of higher learning, national professional organizations such as SEI, NCSEA, CASE, and all of their respective state-level organizations. Perhaps the most enduring victim of our theft is our fellow Structural Engineer, for who among us would be where we are today without acquiring knowledge from our mentors and coworkers? It's an open-and-shut case; Structural Engineers are accomplished *thieves* of technical knowledge.

When it comes to banding together on a national scale to secure and solidify the future of our profession, it was not until recently that Structural Engineers created national associations to more

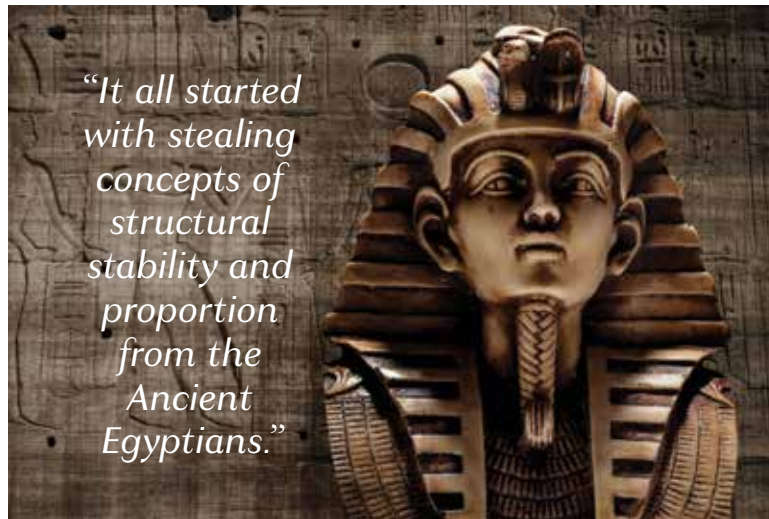
easily share their thievery with other engineers across the country. CASE was formed in 1987, and NCSEA and SEI were formed in

1993 and 1996, respectively, all well after the AIA (1857) and ASCE (1852) were established by the professionals they represent. Until the last couple of years, these three national organizations have operated relatively independently from each other, with each advancing different aspects of the structural engineering profession. In 2019, the profession realized that there is something to the adage "there is strength in numbers." As a group, they formulated the *Joint Vision for the Future of Structural Engineering*, which is a road-

map for collaboration between each of the 3 national organizations that support our profession. It has taken us a while to get to this point, but thanks to our willingness and ability to *steal* from each other, we are working together in new, exciting ways to advance the practice of structural engineering.

This advancement is going to occur in areas beyond the technical realm and is going to require a sharp application of our knowledge of appropriation skills to be realized. We could learn a few things from our friends in the architecture industry about promoting the value of our profession, perhaps starting with studying the effectiveness of their use of social media, www.youtube.com/user/AIANational. We may want to steal some tactics from the sportswear and automotive industries (i.e., Nike and Tesla) about how to position ourselves as innovators in our industry. We could begin to fill the gaps in structural engineering education as the hi-tech industry has done for the computer science fields-of-study, through an investment of capital, materials, and human resources. As I write this, I see the need for our profession to learn from the world's reaction to the COVID-19 crisis as we both advocate for more resilience in the built environment and fortify our position in the disaster response community.

As you can see, there is plenty of heavy lifting to be done to achieve the *Joint Vision*. SEI, CASE, and NCSEA will need to rely on crafty thieving by all of you that read this article and by those that work with you to make it a reality. The time has come for you to channel your inner Tom Hanks and *steal* some great ideas for the good of the profession. Don't be a dope. ■



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