We were discussing the book the other day, and Julia used a word I had never heard before: polysyndeton, referring to the use of several coordinating conjunctions in succession. The sentence in question, “By seven o’clock the orchestra has arrived, no thin five-piece affair, but a whole pitful of oboes and trombones and saxophones and viols and cornets and piccolos, and low and high drums,” is emblematic of how language can paint a picture and influence your thinking.

And it doesn’t have to be an entire book or even a long phrase. Sometimes a single word can do it. “Green” is one such trigger word. When I hear it, my imagination travels to pristine beaches and virgin forests. And that mental image can be a problem.

As a matter of fact, the wood industry has capitalized on that image to create a false impression of environmental stewardship in association with wood construction. However, the truth is far more complex than our daydreams.

The wood industry would have us believe lumber comes from sustainably managed forests and is harvested in an environmentally sensitive manner. Unfortunately, in 2016 the American Forest and Paper Association reported that only 20% of forests in the U.S. are certified as being managed sustainably, with less than half of those using harvesting practices that are certified as being sustainably performed.

When considering the green pedigree of wood, you also need to consider waste—and only 34% of a tree’s biomass is used in typical harvesting and milling practices. Why? It turns out that 40% of the tree (small branches, leaves, bark, roots) is left behind to decompose and release carbon, and of the remaining 60%, more than half is lost to sawdust, trimmings and other odds and ends, according to forestry experts at North Carolina State University. (Think of it this way: When you convert a cylinder into rectangles, you lose a lot of material.) And claims that the waste results in a reduction in environmental impacts by being converted for energy production are misleading. Burning wood waste actually results in a larger production of CO₂ per BTU than coal!

And these issues don’t even take into account the use of adhesives and other materials to produce cross-laminated timber, glulam and other wood products.

So don’t be lulled by flowery language. Almost all construction materials have green attributes and almost all have an Achilles’ heel. Energy use, carbon emissions and waste are just a few of the issues that have to be taken into consideration. While almost every material offers a life cycle assessment (LCA), to be truly meaningful you need to instead look at a whole-building LCA on a case-by-case basis.

If you need to know more about green construction, please visit www.aisc.org/sustainability or contact the AISC Steel Solutions Center (866.ASK.AISC).