

Q5. How is it continuing to develop? What is the future of shape grammars?

A5. As interest in design and innovation grows, work on shape grammars is sure to grow, too. For art and design practice and in education, schemas are key – defining them and applying them to exploit insight and imagination. Even alternatives to schemas and rules are possible to expand the sweep of established practice, in concert with the embed-fuse cycle for visual calculating. And computer implementations will remain an important area of work, first for exotic elements (odd curves and crazy surfaces) and what they mean for embedding, and then for schemas and the assignments that fill in open variables to say when shapes look alike – are there measures for when they're copies, or examples of the same thing? – and to try rules. But visual calculating in shape grammars is so agile that future work may strike anywhere, like lightning – why not something far-out, something strange the way shape grammars were originally and may still be. It's not for me to know how shape grammars and their applications will evolve. It's for others to say, the heroic few who try them and test them out. And luck matters, as it does in shape grammars. I'm ready to be surprised. It will be great to see this unfold. The trick is to be patient and to hang around long enough, or so my friends tell me. This can't be rushed – at least if Coleridge's imagination is any gauge (200 years), or Thomas Kuhn's scientific revolutions. It may take a long time to see things anew, for the paradigm shift that embraces shape grammars totally. Visual calculating alters everything in the flash of new perception. Of course, paradigm shifts happen all the time in shape grammars; they're part and parcel of how rules work when they're tried – hence, neither numinous nor ever a mystery. I don't need to cast about, helpless for new ways to go on. They're what I see now, in plain view – everything is superficial, never hidden out of sight, always ready to use. There's no secret structure, no visual analogies, to interfere with the parts I find, recognizing a few special ones and barring the many that remain – structure is an especially invidious kind of censorship. This is pretty heady stuff, and a key aspect of seeing at the quick of art and design. It's the reason for embedding and why shapes fuse. This explains how rules exploit ambiguity as they apply to shapes to change them, and it opens the way in for insight and imagination. (To Wilde, a beautiful form is superficial – “one can put into it whatever one wishes, and see in it whatever one chooses to see.” This turns to beauty and delight, and away from thought –

so superficial as Thought. To me, Beauty is the wonder of wonders. It is only shallow people who do not judge by appearances. The true mystery of the world is the visible [whatever the fickle eye sees now], not the invisible [whatever structure the mind takes for granted]. (*The Uncensored Picture of Dorian Gray*)

Victorian scruples against “writing stuff that were better unwritten” are why this title is necessary; the ambiguity highlights what I want to say. Beauty overtakes the visual analogies thought contrives. Maybe this structure is the way of the mind, but it blinds the eye – beauty is superficial, as long as there’s more to see. Without underlying structure and units, only the superficial is left, in splendid profusion for art and design. In shape grammars and for Wilde, there are simply uncensored appearances. These change in the blink of an eye – for shapes and pictures, and Dorian Gray, Lord Henry, et al. What was is only what is in the mind, when things are objects with a definite structure – “essentially fixed and dead.”) It strikes me sometimes that going on and on about embedding and shapes that fuse is tiresome. But it repays the effort, especially when I’m not in the mood to see for myself, and I retreat too eagerly to visual analogies and rote structure. It’s frighteningly easy to welcome dull fixity when others do, and they invite you to join them – there’s comfort in numbers. Some of this is from Coleridge, when he talks about “that despotism of the eye,” “the film of familiarity,” and “the lethargy of custom.” His words needn’t have a particular gloss; their uses are many – now, for the kind of invariant seeing without seeing in STEM, that’s taught in schools and tested rigorously. It’s a function of imagination to overcome the film (cataracts) of expertise and the lethargy of learning to see for the first time – time and time again. Is there any better reason to teach art and design equally in their own right, purely as art and design – not because some say they’re instrumental and make it easier to teach other, more important things, but because they make it easy to see how to see, uncensored, with nothing definite in aims and goals? Then, embedding extends farther than identity, past fancy, and fixed units and counters, to modify seeing entirely on the fly. I’d like to find an alternative way to go on, if only to talk about something else for a change – no luck. Embedding is implicated fully in whatever I try, whenever I look, in perfect repetition that ensures new perception throughout. Everything is vital; nothing stays the same.

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