



Stanford eCorner

Re-thinking Form Follows Function

Scott Summit, *Bespoke Innovations*

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Bespoke Innovations Co-Founder Scott Summit explains how the mantra "form follows function" has been contorted into the idea "form follows mechanical function." According to Summit, this change has allowed product designers to think they have a free reign to create clunky and purely utilitarian designs. Summit relates how Bespoke works to counter this idea when designing prosthetic legs that possess greater form and artistry.



Transcript

I think one of the problems is that we have this mentality, this form follows function mentality and it's kind of a bastardization of what was one said a hundred years ago by Louis Sullivan and it has come to mean that form follows mechanical function. And so, we have now come to accept that this is a mantra handed down by Louis Sullivan, which gives us free rein of creating something that's clunky and mechanical and utilitarian instead of something that really has form and beauty to it, sometimes when it's needed. So, when you are talking about form follows function in the amputee world, it usually stops at about this point, form follows mechanical function, get somebody walking, but that also overlooks the complexity of humans that we are a little more nuance than that, that the body is not simply something that keeps the head from falling on the ground. It's something that we adorn, we wrap, we cover with jewelry, we tattoo, it's so much more nuance than simply mechanical solution can allow. And so, when you are thinking about a prosthetic in that aspect the idea of function, what does the function offer is much, much broader. Well the challenge though with the prosthetic limbs is really has a lot to do with the mechanical nature of them because in this case you are talking about something that has to be mass produced and a lot of the artifacts from mass production are always going to get in the way because this is what you have to associate with mass production, it's one size fits all, it's inherently impersonal. It's inherently mechanical, there is nothing individualized about it, that's just the nature of mass production, that's the way it works. So, that's one of the reasons - such an odd juxtaposition against the human body which is inherently mass customized, it's unique, it's emotive, it's expressive. So, what I set out to do a number of years ago was actually to look at how one might change this? How you might evolve a prosthetic leg? If you threw out some of the basic tenets that guided it's evolution to this point? And so what I came up with is okay well if you are going to do that you have to create something that is really created by the person and for the person and of them and something that's as unique as their fingerprint and it has to be as fluid lined as possible, it has to be essential and sculptural and has to represent the personality as well as the physicality, if you are really going to do something that is a part of that person. So, then I got a little bit more elaborate and said okay what I wanted to be able to do is drop down into Jordan or Cambodia or Laos or you name it with nothing more than a camera and a laptop and access to the internet and scan somebody, capture their data, come up with the solution and have that solution ready to go and let it go viral so that legs can propagate all over the world, solve problems, you know, that's the kind of Utopian vision that you set out for one of these things for.

Decided also if it was beautifully sculpted and crafted it would associate some of the - it would change some of the stigma associated with prosthetic limbs, it would change the way the person actually perceives their own body and hopefully would actually change then the way society sees prosthetic limbs and amputees in general. It's a lot worse in the U.S., it's a lot worse in the rest of the world and there are many places where an amputee is a real social stigma. It stops somebody from getting a job, from getting married, all kinds of things. So, it's a fairly meaningful thing to start altering the perception that we have. The idea is that if you can change something from utilitarian to sculptural and beautiful maybe you change the dialogue that goes

on, maybe change the perception. It had to give somebody their symmetry back, but not in a way that's mimicking or emulating human because that takes us into this area we call the uncanny valley, something that is uncomfortably human but not human, so the idea is to create something that's beautiful, that suggests the person, that is unique, but doesn't try to be something it's not, it is as honest as it can possibly be.