

Q&A
Nathan Martell

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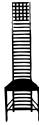
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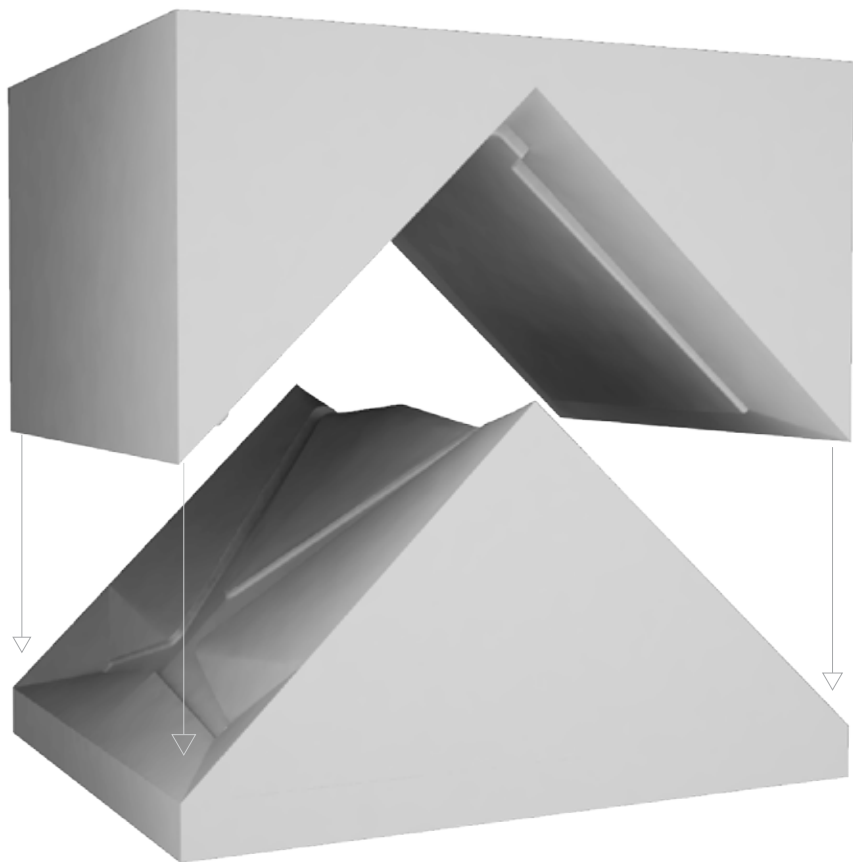
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Q: WHY DID YOU CHOOSE TO DESIGN A CHAIR?

A: Personally, I see the chair as the front runner of furniture design. Most, if not all eras of furniture design (and often design as a whole) can be identified through chairs acting as icons. Breuer's 'Wassily Chair' and the Bauhaus, the Eames' 'Shell Chairs' and Mid-Century Modernism, Panton's 'Panton Chair' and the Space Age are all examples from the last 100 years -- prior to them, people such as Thonet and Mackintosh come to mind.

I was intrigued by the idea of creating my own icon; a representation of my ideals and my time and place in design.





Q: HOW IS IT MADE?

A: The seat is formed using a sheet metal process called 'drawing.' Male and female molds are used to essentially stretch the material into shape via high pressure forming (see opposite page). Heat can also be used as it has shown to increase the elasticity of the material in certain applications.

The process for the seat goes as follows:

An aluminum sheet is cut slightly oversize to the flattened profile of the seat (this is to compensate for stretching).

The sheet or 'blank' is placed between the male and female sections of the mold and is drawn into shape before removal from the mold, the end product is stamped out of the excess sheet material by a secondary cutting/trimming process

The legs are made from a simple aluminum extrusion, cut to the length and welded to the underside of the seat.

Q: WHY ALUMINUM?

A: I wanted the chair to be as versatile as possible, this meant it needed to be an indoor/outdoor design. This versatility also led me to make the decision that it needed to be stackable, which gave me the requirement that it needed to be light weight. Plastic meets those requirements, but was ruled out because my intentions for this chair were that it would age well, and last through several generations of users. I also wanted all elements of the chair to be able to be recycled at the end of its life cycle and the high performance plastics that would be needed to achieve the very thin material thickness I was envisioning did not give that option. Aluminum proved itself as the right choice for its durability, versatility, light weight, and recyclability.

Q: IS IT 'SUSTAINABLE'?

A: For me, 'sustainable' is a troublesome word, often misinterpreted, and commonly abused by the emerging green-washing trend.

Instead of claiming that my design is sustainable -- as an attempt to distance myself from certain connotations and misconceptions -- I would rather state that my chair was designed with a high level of environmental considerations.

Firstly, the chair is designed using a single material, an 80/20 recycled/virgin aluminum blend. This allows the chair to be 100% recyclable. However, I have designed this chair so that it will last multiple generations, with the hopes that its material choices and design details will allow it to age gracefully and sustain its value. Furthermore, a major influencing factor in my design process was exploring options to reduce overall material usage down to the structural necessity, and finding new ways to lower that amount.

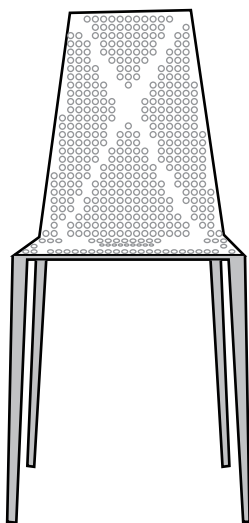
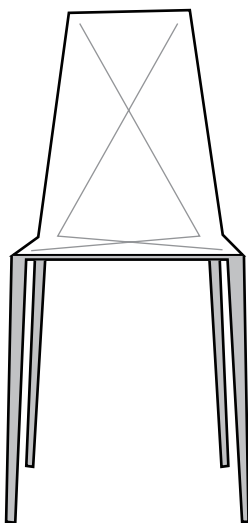
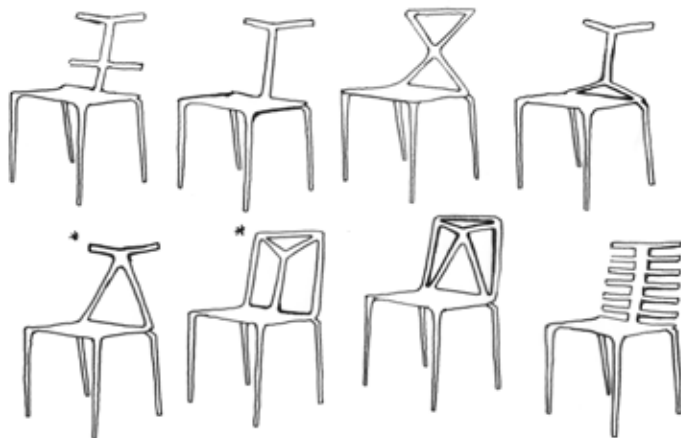
The chair has proven itself in several comparisons to its market competitors using the Okala assessment (SustainableMinds.com). Furthermore, outfitting an interior or building with the chairs would qualify you for LEED (Leadership in Energy and Environmental Design) credits in the sectors of construction waste management and recycled content due to its responsible material and production choices.

Q: HOW DID YOU COME UP WITH THIS DESIGN?

A: Since the beginning of the project I had been playing around with rather geometric designs and patterning. I initially translated those patterns into 'structural skeletons' and was experimenting with the idea of reducing all of the surrounding material via perforation (see opposite page bottom).

I then took the idea of the skeleton one step further and eliminated the perforated element altogether. The resulting form was born out of a very quick initial sketch in a series of reductive explorations (see opposite page top).

It was further refined when I decided casting (which I had initially been envisioning) was no longer the most appropriate method of manufacturing for this design and began thinking about how the chair would change if it were to be stamped and drawn from a sheet material. Using this process, I was able to substantially reduce the overall material thickness. The chair found it's structure through the addition of a 'lip' running around all perimeter edges of the seat. The lip becomes wider where more structure is needed and narrows in less crucial areas to make the most efficient use of the material. The detail of the slight crease in the back and pan of the seat is primarily an ergonomic decision, however, it also adds rigidity to the sheet material.



Q: WHO IS THIS FOR?

A: As previously mentioned, versatility was key in my design process. I wanted to design something that would be viable in the wholesale contract furniture market (public buildings, restaurants, offices, etc.) as well as being successful in the retail consumer market. I wanted my design to compliment a variety of interior environments, both formally and functionally.

Q: WHAT WERE SOME OF YOUR INSPIRATIONS?



1. Charles and Ray Eames
2. Transmaterial
3. Muji Catalogue
4. Making It
5. Towards a New Architecture
6. The Architecture of Happiness
7. The Poetics of Space
8. It's Not How Good You Are, It's How Good You Want To Be
9. Materials for Inspirational Design: Metal

Q: WHAT NOW?

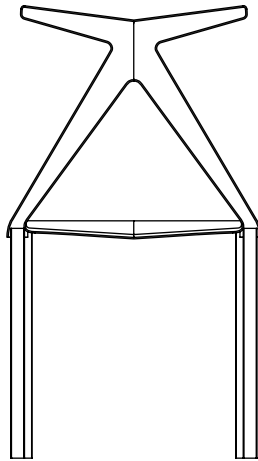
A: I will stick to answering that in a sense that is strictly related to the chair and we will temporarily ignore the fact that I just graduated.

I'm planning to continue on with this project, with the next logical step being a full scale prototype made from aluminum.

As far as taking the chair to a level of mass production, it is something I would love to do (and hope to do) but it is not something I can do on my own at this point. I hope my refined full scale prototype can serve as vehicle for exposure and will generate some interest from individuals and/or companies that may be able to assist me in furthering the project.

Thank you.

*More questions?
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A&O
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