
“A Critical Exchange”

Welding in the Sculpture Studio

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“It’s magic,” declares Amie Laird McNeel when she is asked to talk about welding and its application in the sculpture studio. McNeel, an accomplished sculptor and Chair of the Sculpture Department at the Cleveland Institute of Art, is dedicated to sharing that magic with her students. She came to the profession in a roundabout way, starting as a marine biologist documenting the migration patterns of humpback whales. But it seemed to her that marine biologists spent a great deal of time communicating their findings to other marine

Seeing space as a physical material

biologists, and she now says, “I didn’t think I could make a difference in that field.” Instead, she turned her skills of observation and thoughtful analysis to the creation of art, and she fell in love with the medium of steel.

It is clear from a single conversation with McNeel that she is equally passionate about creating art and teaching it. “Teaching, for me,” she says, “is a way of not only sharing what I have learned over the years, but of exploring new ideas and possibilities every day.” She regards making sculpture as “a way of maintaining a critical exchange between hands, materials and tools.”

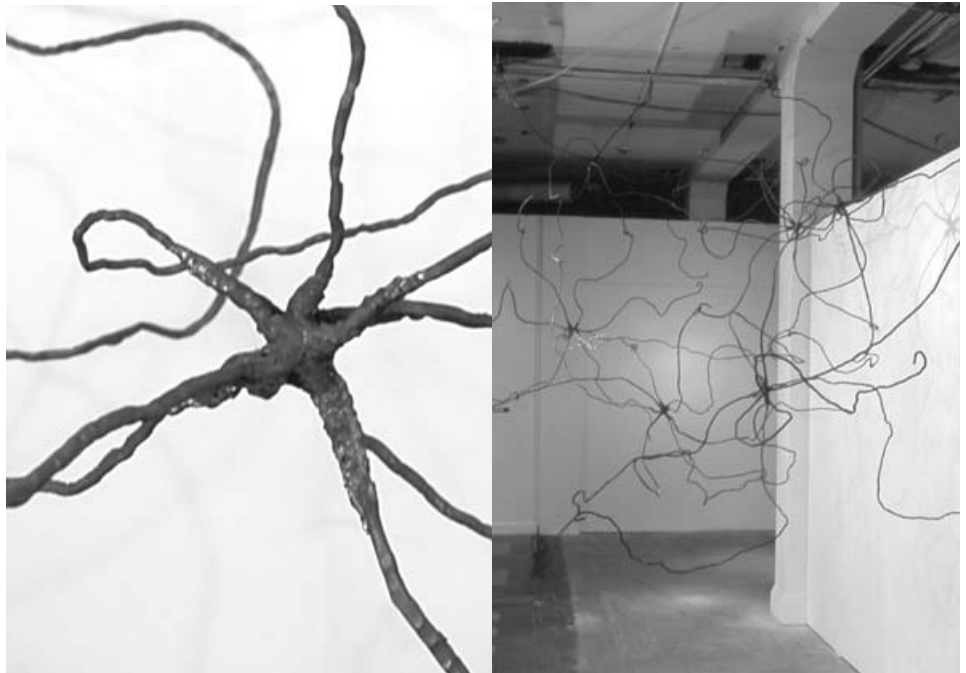


Figure 1. The close-up on the left shows one of the welded connections Jeff Guhde used to create his sculpture “Stretch and Reach,” shown on the right.

Two Student Sculptors

McNeel referred *Welding Innovation* to two of her sculpture students whose work is represented here. Jeff Guhde, class of 2004, describes MIG welding as being “just like hot glue.” To create the six segments that compose his “Stretch and Reach” (Figure 1), he explains, “I forged these centers out of what started as a cube, and then all of the linear extensions were rods that I forged just a little bit to get a hammered texture, and then they were welded on to each of the centers. So

welding is not a predominant design element, but it was used just as a means of connecting the pieces.” Guhde was drawn to working in metal initially because of the structural quality of steel, and what he refers to as the “immediacy” of welding. On a more philosophical level, he wants to explore the way that sculptural forms organize the interior space in which they are installed. He says, “It’s something that my teacher, Amie, got me started on—seeing space as a physical material.”



Figure 2. Recent CIA graduate Trevor Korn created “Winged Lion” using scrap steel and MIG welding.

Having grown up on a farm, McNeel learned early to work with her hands, and welding came fairly naturally to her. She had this in common with another of her students, Trevor Korn, who received his Bachelor of Fine Arts from the Institute this year. He credits his fascination with creating mythical creatures to having grown up around animals on his parents’ farm. His sculptures are made from scrap steel and occasionally cut-up pieces of old machinery, and fabricated using a MIG welder. Korn describes his “Winged Lion” (Figures 2 and 3) as follows: “The self-destructive nature of humanity is represented by the death of the winged lion. I used the winged lion to represent humanity because of the predatory status of the lion and because it has the ability to fly.”

“Thoughts Existing in Space”

Amie McNeel refers to her sculptural work as “thoughts existing in space.” Some of her pieces, for example, “Fins I” (Figure 4) and “Fins III” (back cover), seem to evoke the machinery of the farm and a lost agricultural Eden. “Fins II” (Figure 5) projects more of an industrial aspect. However, McNeel insists that “It is not nostalgia that

motivates this work, but a need to reevaluate such ideas as obsolescence, necessity, progress, ingenuity, and physical labor.” The 10 ft. (3m) diameter work entitled “Gaze” (Figure 6) is a visual exploration of movement without any actual moving parts. Figure 7 depicts McNeel installing “Gaze” for an exhibition.

Teaching the Welding Part

McNeel describes her teaching process with great animation. Asked how she begins, she replies, “I learned from one of my instructors that you let people experience the material first, and try to do it on their own, as long as it’s safe. Teach them safety. And teach them how to use the tool. I break down the functions of the tool...so they can problem-solve if there’s a variable that keeps them from achieving a good weld.”

Since steel is expensive and requires practice to manipulate, McNeel has her students do their initial design work using materials such as paper and cardboard. As she puts it, “They design out of a material that has the same geometric qualities but less demands. And then they move to steel.”

The beginning students learn three methods of joining: oxy-acetylene welding, oxy-acetylene brazing, and gas metal arc welding. “They feel less intimidated by the wire feed welder, so I teach them harder ones first,” says McNeel.

In the second semester, students learn to cast bronze and aluminum and, in due course, are introduced to gas tungsten arc welding of aluminum, and in some cases, steel.

McNeel laughs as she explains, “When the students have to buy their first plate of steel, they’re shocked. It’s 80 bucks for a sheet of 1/4 in. (6 mm) steel. Then, they start looking at all the scraps in a very different way. So it becomes precious once they put a monetary value on it. With aluminum


and brass and different alloys of steels, then they start to really appreciate their designs. They become much more focused on practicing because they don’t want to screw it up. We balance mechanical joinery, drilling, bending, designs of connec-

They realize how giving and flexible steel is

tions, we practice mechanical joinery, stitching, sewing, pinning, using steel dowels. They practice design along with just welding. They learn how to choose what’s appropriate design—when to weld, when to pin and bolt, when to adjust.”

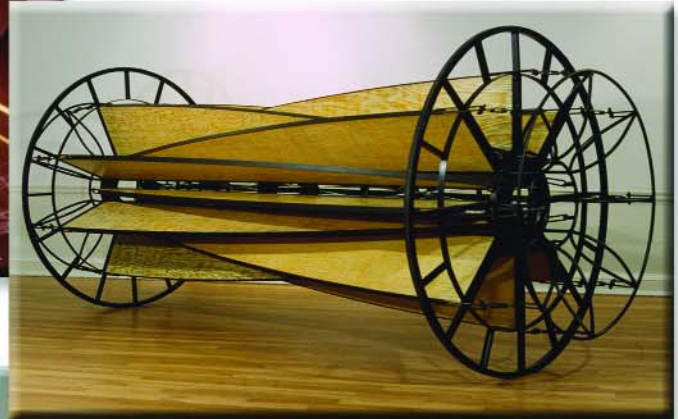
A Commitment

She goes on, “Then, we start getting philosophical about welding. Because it’s magic. Then they realize how giving and flexible and malleable steel is. But it takes a few years before their designs and their ability and practice all combine to the point where they can say, isn’t this magic? Where you can take a metal and you can establish a molten pool of it, and only in that molten pool, when you have that arc right, and that gas shield right, will it accept this material, and it’ll agree to become molten, and it’ll agree to merge with this base material, and you’ve made a permanent understanding, you’ve established a weld. That piece is now one piece. Now what kind of a commitment is that? You’ve decided this form is worthy of being a permanent thing. You kind of push them to realize that their decisions are not casual.”

McNeel sums up her experience as teacher and artist with a wry grin, saying, “Students are kind of dumbfounded with the patience you have to have with yourself and with the process in order to learn it when you deal directly with materials...it takes practice. People don’t like to practice. Just the act of doing it sometimes is the most important thing.” 



▶ Figure 3. A close-up of the Trevor Korns' mythical "Winged Lion."

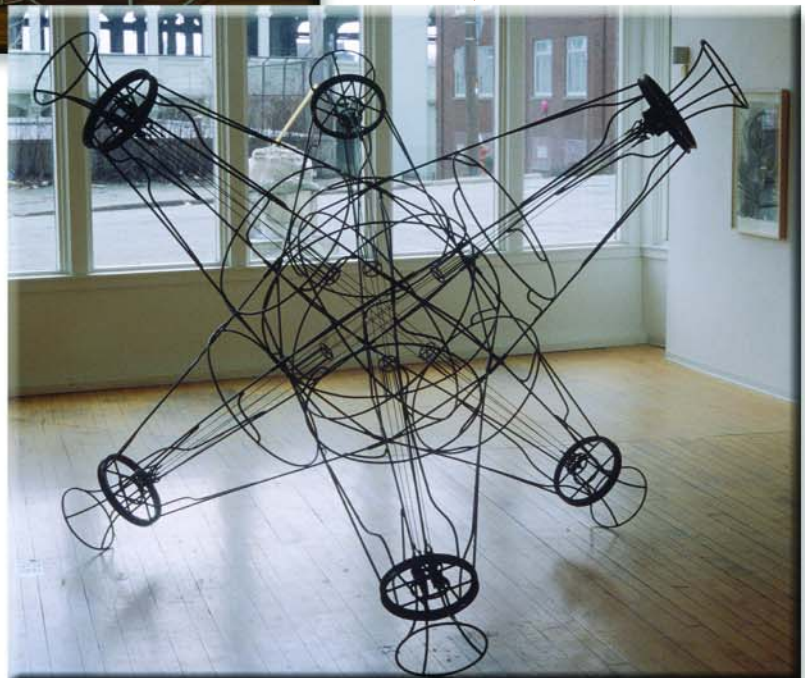


▲ Figure 4. "Fins I" (steel, wood, rubber, cables, 10 ft. [3m] long, 4 ft. [1.2 m] in diameter) by Amie Laird McNeel.



▶ Figure 5. "Fins II" (steel, wood, plastic, cables, 9 ft. [2.7 m] long, 5 ft. [1.5 m] in diameter) by Amie Laird McNeel.

▼ Figure 6. "Gaze" (steel, cables, 10 ft. [3 m] in diameter) by Amie Laird McNeel.



Photograph by MJ Toles



▶ Figure 7. Amie L. McNeel, Chair of the Sculpture Dept. at the Cleveland Institute of Art, installing her steel welded sculpture, "Gaze."