

## Proposal for a Pair of Sculptures

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My design for a sculptural installation for the University of Minnesota's new Physics and Nanotechnology Building is inspired by a view of the human body through the lens of quantum physics.

Quantum physics lies at the heart not only of nanotechnology, but all natural sciences. In addition to having brought us virtually all of modern technology, quantum physics has shattered some deeply held tenets about the workings of the universe. One such tenet is that the world can and must be described as if the observer was separate from the observed. But quantum physics tells us that we, as beholders of our world, are fundamentally inseparable from it; dividing the world into subject and object is ultimately untenable. This is one reason why I envision the human figure as central to my installation, representing the observer as well as the observed.

In addition to having separated subject from object, science has for centuries applied reductionism with great success, yet dire consequences. It appears inescapable to me that the fact that our environment is on the brink of collapse is, in part, a consequence of the destructive aspects of the classical scientific mindset. We must evolve a more holistic science inspired by the tenets of quantum physics—a science that aims at “reconnecting the dots,” that is, reintegrating ethical considerations and ensuring that the benefit of all beings remains its central focus. I believe it is critical for contemporary science and technology to refocus on humanity, another reason that compels me to base my installation for the new building on the human figure.

Renditions of the human body are as old as art itself. Humankind's most ancient sculptural artifacts, primarily female figures, date back at least 35,000 years. It was only a hundred years ago that art shed the requirement to visually represent reality and modernism emerged. Modernism explored how far art can go while “denying the body,” as sculptor Antony Gormley puts it, but it did not take long for representations of the human body to reappear. A recent and vibrant movement in contemporary sculpture emphasizes a renewed focus on the human figure, and I see my proposed installation as part of this next stage.

Inspired by quantum physics, I developed an approach that transforms the human figure into a large number of vertically arranged, parallel steel slices with constant spacing. This style creates the impression of a three-dimensional topological map, evoking the fundamental scientific act of measuring the world. The visual effect this style produces is striking and echoes quantum physics' paradoxical nature and its critical dependence on the observer's point of view: On first glance appearing to consist of solid steel, the sculptures virtually disappear as the viewer moves past them, enticing the audience to interact playfully with these works. Conceptually, it is the very act of analysis through dissection that reveals the interconnectedness of the figures: Both sets of slices comprising the figures fall on the exact same planes and therefore appear as a continuation of each other and as manifestations of the same underlying 'field'. As quantum physics suggests, and Eastern traditions have stressed for centuries, the world is fundamentally one, and everything and everybody we see is but a manifestation of an underlying wholeness. Like in the history of science leading up to quantum physics, the application of the reductionist knife eventually forced us to see that nature, in its very essence, is indivisible.

The proposed use of stainless steel slices creates unique light effects. Since the slices are arranged parallel to each other, light hitting the sculpture from one side bounces freely between them to exit on the other side. The light shining through the sculpture gives the work a surprising, almost otherworldly, quality: when someone passes by the sculpture, a viewer on the other side sees a blurry reflection of that person moving through the sculpture, even when the metal completely blocks any direct view of the passer-by. Much of the light hitting the sculptures will reflect off the slices' clean, laser-cut edges, which shimmer as the viewer passes by. The lighted edges draw the three-dimensional sculptural volume into space, an effect that is especially pronounced to the moving observer.

I propose to create a male and a female figure facing each other. The two figures will represent nature's omnipresent pairs of opposites. These dualities are a fundamental facet of nature and are found in Western science as well as in Eastern traditions. They are critical to the emergence of new levels of meaning in science, and, in the case of the two human genders, critical to the emergence of life. Like the positive and negative electric charge in physics or the yin-yang in Chinese philosophy, neither woman nor man can exist without the other.

Both figures will be in a basic kneeling pose with their hands on their thighs. Positioned essentially on the ground, on shallow concrete plinths, the figures will be approximately 10' tall (See Fig. 1 for comparison with a typical viewer). Both sculptures will be designed in an identical fashion, using the same steel thickness and spacing. Figs. 2 and 3 show computer sketches of the individual sculptures (See

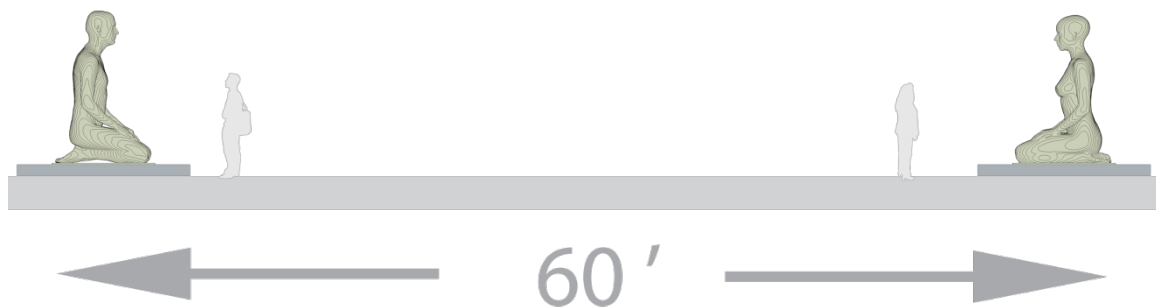
figure captions for links to video clips). In addition to the abstraction achieved through the slicing technique, the figures' underlying shape is stylized to emphasize the more timeless and universal qualities of the human body. In addition, the figures are depicted in neutral and virtually identical poses to further encourage the audience's interpretation as pairs of complementing opposites.

Male and female figure will be looking directly at each other, their gesture activating the space between them. As students and faculty will frequently be going in between Akerman Hall and the new building, an unobstructed corridor will be left connecting the two entrances in a straight line (Fig. 4). The south-facing male figure will be placed just north of this corridor so the foot traffic between the two buildings can easily flow between the two figures, pulling the audience into the figures' gaze. The north-facing female figure will be located at the southwest-most corner of the site's utilizable area. Both figures are approximately 60' apart. Each plinth measures 8' by 10' and is 8" tall.

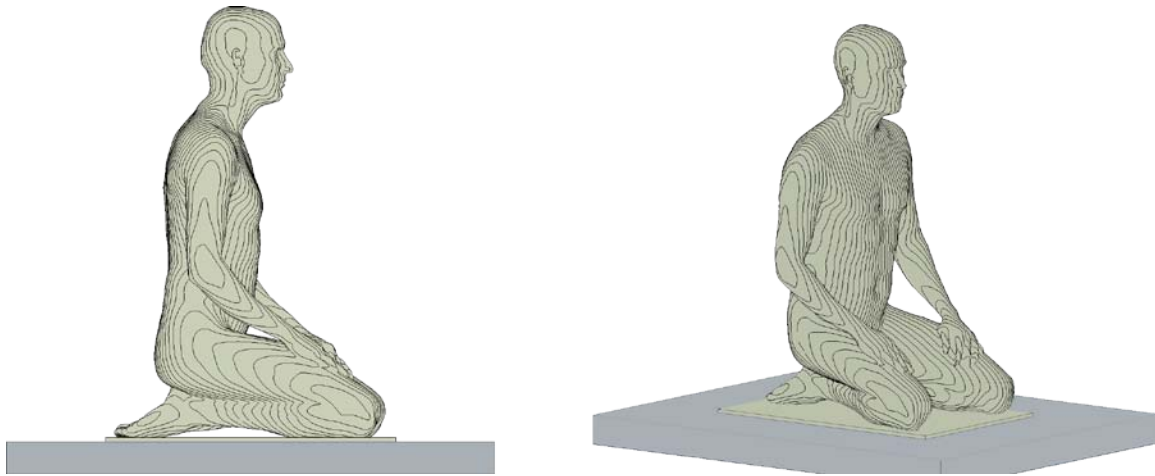
My design combines the timeless beauty of the classical human figure with an arresting contemporary feel, which will engage scientists and non-scientists alike. The metaphorical energy of the relating figures as well as the dynamic and luminous visual play created by the vertical slices of polished stainless steel will enliven the space and, most importantly, become a signature and memorable part of the University of Minnesota's new Physics and Nanotechnology Building.

*Julian Voss - Andrew*

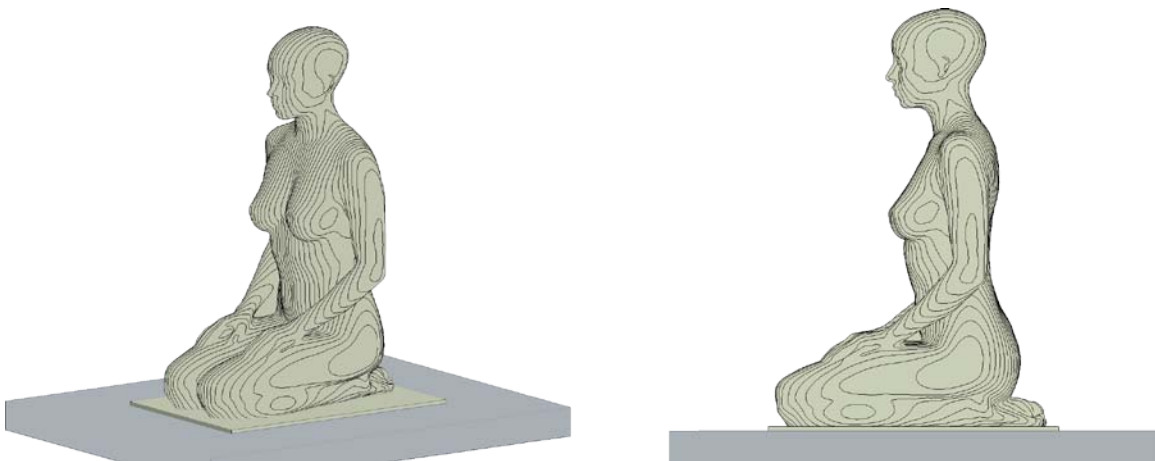
Elevation (view from Akerman):



**Figure 1: Elevation (view from Akerman Hall). Computer rendering: <http://youtu.be/ikgm8DdKo6E>**



**Figure 2: The male figure, height with plinth 9'-7". Computer rendering: <http://youtu.be/eqZXDM3tRD8>**



**Figure 3: The female figure, height with plinth 9'-4". Computer rendering: <http://youtu.be/e75hGTPxhJM>**

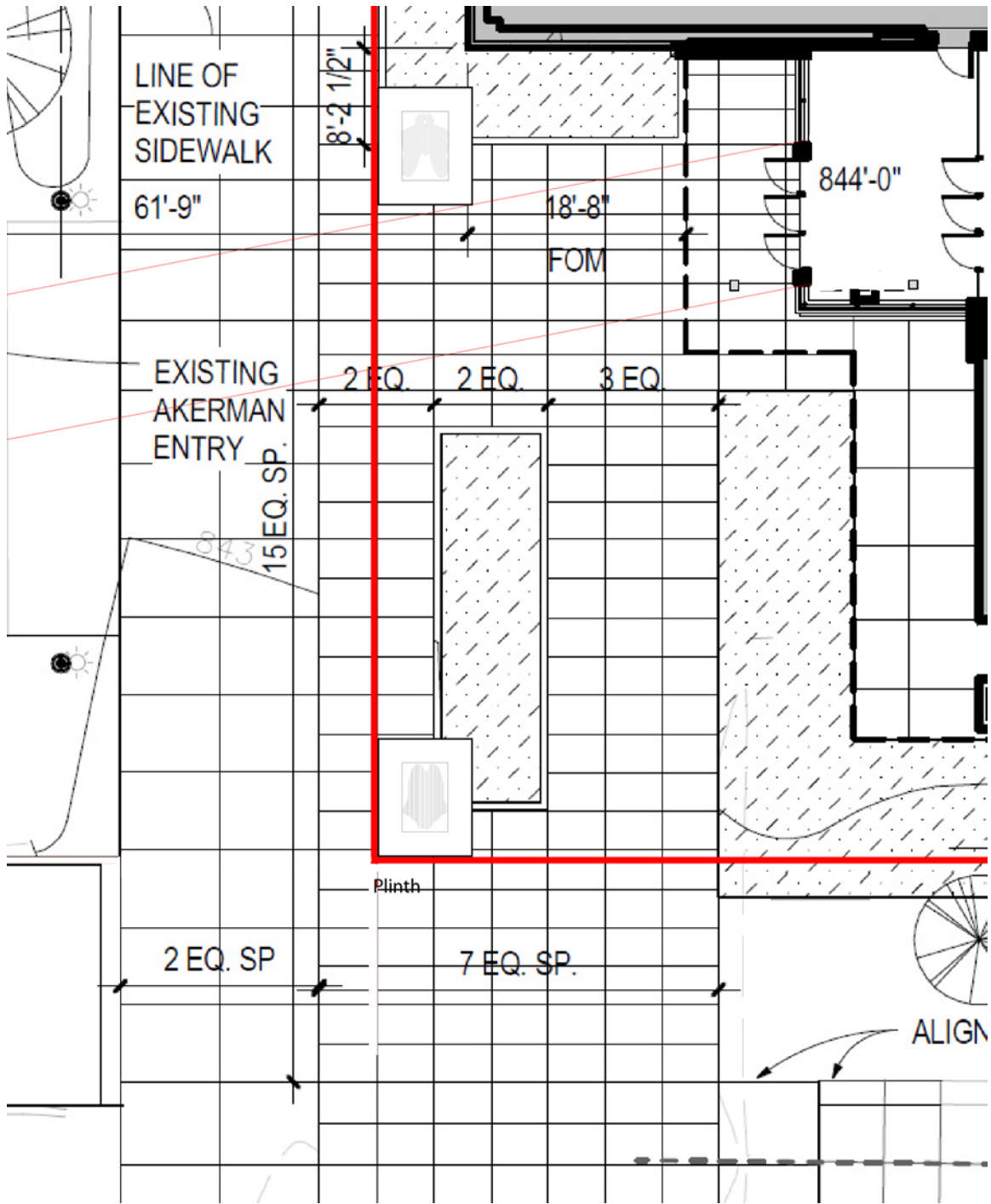


Figure 4: Plan of the proposed sculptures. The thick red lines denote the boundaries of the utilizable space. The thin lines mark a 12' wide corridor connecting the entrances of Akerman Hall and the new building.