

## Art and Science Intersect

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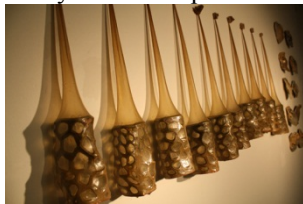
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### Abstract.

Scientists such as biologist Gunther von Hagens and medical doctor Mark Gilbert, among others, have been turning to art to create scientific sculptures whose main purposes are not only to teach to general public and science community, but also be aesthetically pleasing. However, Von Hagens and Gilbert create their pieces with more than just the science community in mind. Conversely, contemporary artists, including Damien Hirst, Mel Chin, and many others, seem to be turning to the science field for inspiration in creating their artwork by incorporating various aspects of science into their artwork. Artists can gain their inspiration from science, but science can also gain inspiration from art. Can these intersections cause aspects of art to fall into a scientific range and aspects of science to be considered art?

### Introduction

Without question, people accept works created by the likes of Leonardo Da Vinci, Michelangelo Buonarroti, and Michelangelo Merisi Da Caravaggio as art. Works such as Da Vinci's anatomical sketches as well as other sketches he had depicting inventions including aircrafts and weapons are accepted today as art, but during their lifetime religion was the most acceptable subject matter. Presently, there are many more choices of what artists can include in their artwork, and several seem to be turning to math and science. For example, Damien Hirst chooses to use organisms within his work that discusses the fragility of life. Conversely, scientists are turning to art, including botanist Mel Chin, biologist Gunther von Hagens, and medical doctor Mark Gilbert. I, also, am turning to science within my artwork. I am fascinated with the medical world, so I often incorporate biology into my work to explore emotions of people surrounding health issues.



Kristen Tripp, *Tense Situations*, 2012

Stoneware Clay, Polyester Resin, Nylon

### Art and Science Intersect: Current State

Michelangelo was hired to paint the [Sistine Chapel Ceiling](#), 1508-1512, something he was not eager to complete. He used the figures on the ceiling as anatomical studies. Caravaggio's [Death of the Virgin](#), 1606, was controversial because he researched what happened to people's physical bodies when they died and depicted the virgin as bloated and stiff with rigor mortis. This outraged many of the religious figures of the time to see their beloved Mary in this state, but also because Caravaggio often only had prostitutes available to research the effects of death on a body. During the Renaissance, people preferred the religious view and glorifying the holy figures to reality (Adams). Today, Da Vinci, Michelangelo, and Caravaggio's pieces are all considered art. However, they were already well known artists in their time. Even Damien Hirst's work is readily seen as artwork, but Mel Chin, Von Hagens, and Mark Gilbert seem to be located further within the science field; this place in the science world creates a hesitation among people to accept their work as art.

Damien Hirst is a sculptor who incorporates biology into his art, often communicating about the fragility of life, as well as working to emphasize the beauty of the organism's internal and external features. Examples of works that explore this include [The Physical Impossibility of Death in the Mind of Someone Living](#), 1991, which has a 14 foot shark suspended in a tank of formaldehyde, [This Little Piggy Went to Market, this Little Piggy Stayed Home](#), 1996 (Art 21). Hirst doesn't talk about the science behind his work, which seems to make it more acceptable in the art community than Von Hagens or Chin's work.

Biologist Von Hagens creates statements using donated human bodies that he plastinates in specific positions or with specific props, sometimes pulling apart muscles to create precise compositions, a few of them looking as though they were inspired by previous artists. Though, Von Hagens states that his primary goal with his creations is to teach people about biology, you can draw similarities between the compositions of his works and works done by artists such as Salvador Dali, Umberto Boccioni, Michelangelo, and Gasper Becerra. Comparing Von Hagens' *The Runner*, 1997, *The Drawer Man*, 1999, and *The Skin Man*, 1997, to Boccioni's *Unique Forms of Continuity in Space*, Dali's *Burning Giraffe*, and both Michelangelo's *Last Judgment* and Becerra's [copper engraving](#), 1556, of a flayed man holding up his own skin, respectively. Von Hagens' concern for aesthetics were obvious in *The Runner*, as he chose to pull back muscles, as though the figure is still in motion and running against the wind, giving the form a great forward movement, emphasizing the strong physical qualities of a runner or athlete. This form is very similar to Boccioni's sculpture. *The Drawer Man* has segments of the body pulled out at varying openness or swung open, similar to drawers. This piece was inspired by the compactness of bodily interiors. One can form a connection to Dali's *Burning Giraffe*. *The Skin Man* was to celebrate the independent skin organ and to demonstrate the vulnerability one looks without their skin to protect their bones, muscles, and organs. This can be related to the *Last Judgment* scene of Saint Bartholomew holding flayed skin in the Sistine Chapel. The concept and look is also very similar to Becerra's copper engraving. It is decisions like these that blur the line between science and art when looking at von Hagens' anatomical sculptures. He makes conscious decisions about the display and makes sure his intentions are communicated through the created piece. The scientific process of plastination is controversial because it preserves a body so well it eliminates the possibility of decay, which is what most people think of as dying (Hagens).

Mark Gilbert, artist and medical doctor, participated in a two-year study at the University of Nebraska Medical Center. Using portraiture, Gilbert intended to explore the idea of care and care giving, blurring the line between art and medicine. Twenty-six patients and 20 caregivers were subjects in the study. Gilbert drew/painted 100 portraits during the study, and a team was created to analyze the portraits and subject data ([example 1](#), [example 2](#)) The data showed the change of subjects over time, the focus on mortality, the presence of hope even in difficult times, and the importance of compassion in care (Gilbert). The relationship built with the subjects contributed to the pieces. Though the pieces themselves are done in traditional media, which help to convince viewers that it is more art than science.

Mel Chin uses his knowledge of botany to change a blank stretch of land into a unique sculpture, often incorporating art in places such as destroyed homes and toxic landfills. He often works with other scientists to sculpt gardens of hyper accumulators (plants that can take heavy metals from contaminated ground) in some of the most polluted sites in the world. Chin sees art as something that should be self-sustaining and functional. By doing this, a diverse and ecologically balanced life can return to form a wonderful sculpture of plants that wouldn't have been able to grow without Chin's idea and wouldn't have grown that specific formation. Even though, he doesn't use cadavers, many find it difficult to accept Chin's work as art, accusing him of only using the art community to fund his science experiments (for example, *Revival Field*, 1990) (Weintraub). If they were considered just science experiments, he would have them labeled with a control group containing specific conditions. Instead, he has sculpted the land into a unique composition.

## Conclusion

Works by Von Hagens, Chin, and Hirst are questioned because of the chosen media that they use to create them. Many people seem to have a preconceived idea of what art is, but there are so many things that can and should be considered art that people don't see because it doesn't follow the strict "rules" or "definition" of art. Artists use science and scientists use art to explore concepts, communicate to others, and to discover something new. Art can be classified as science and science as art in some circumstances.

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