The Prometheus Challenge

Arnold Cusmariu

Abstract: Degas, Manet, Picasso, Dali and Lipchitz produced works of art exemplifying a seeming impossibility: Not only combining incompatible attributes but doing so consistently with aesthetic strictures Horace formulated in Ars Poetica. The article explains how these artists were able to do this, achieving what some critics have called ‘a new art,’ ‘a miracle,’ and ‘a new metaphor.’ The article also argues that the author achieved the same result in sculpture by means of philosophical analysis – probably a first in the history of art.

Keywords: Brâncuşi, Dali, Degas, Horace, Lipchitz, Manet, Picasso.

Tout ce qui est beau et noble est le résultat de la raison et du calcul.

Charles Baudelaire

The Prometheus Legend

Prometheus was the Greek Titan who gave mankind fire he stole from Mount Olympus in defiance of Zeus, king of the Olympian gods. For this transgression, Prometheus was made to endure horrific punishment. He was chained to a mountain where a vulture would peck at his liver day after day. Because Prometheus was a demigod, the liver would heal overnight but the vulture would return the next day. This gruesome cycle continued for many years until Hercules killed the vulture and freed Prometheus.

Brâncuşi Poses a Conundrum

In the winter of 1985, about a year after I began making sculpture, I visited the Hirshhorn Museum in Washington, DC and saw Constantin Brâncuşi’s masterpiece Prometheus (1911). A simple and beautifully understated composition, it seemed to show Prometheus sleeping, perhaps trying to get

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1 Owing to actual, possible or potential copyright restrictions, only links in footnotes are provided to internet sites where images of artworks under discussion are available; apologies for the inconvenience. The author owns all images shown in this article and hereby grants permission to this journal to publish them.

2 The Temple of Aphrodite in Geyon, Turkey has a stone relief showing Hercules freeing Prometheus. Image available at: https://www.pinterest.com/pin/134545107591714476/. Accessed May 4, 2017. Hercules wears a lion’s skin, which is a reference to the first of his twelve labors, killing the lion of Nemea.

much-needed rest until the next day when he knew he’d be facing the same ordeal all over again.\textsuperscript{4}

The work made a deep impression but it also raised questions I pondered on the way home and for days afterward. For example, where was the Prometheus that generations of mythology buffs (me included) had admired for his courage and defiance in the service of conscience? Why was that element missing from the Brâncuși sculpture? Why were other elements of the legend missing?

In a sense, nothing was missing. In telling a story, artists are entitled to choose whatever point they wish to get across – including not telling a story at all or telling one without a point. Rather, as a professional philosopher, I wanted to know whether there were purely logical reasons why other aspects of the Prometheus legend were not included in the Brâncuși sculpture and by extension whether artists in general, explicitly or implicitly, had to abide by the same logical limitations. If they did, what were those limitations and could they be gotten around somehow? What would be the point of doing so?

\textbf{Two Types of Combinations}

The following pairs of legend elements are compatible with one another in the sense that they could occur simultaneously and thus could be represented in a work of art:

- Prometheus holding a lighted torch.
- Prometheus wondering what to do.
- Prometheus chained to the rocks.
- Prometheus looking skyward apprehensively.
- Prometheus fighting off the vulture.
- Prometheus grimacing in pain.
- Prometheus free of his chains.
- Prometheus looking relieved.

On the other hand, the following pairs of legend elements are not compatible with one another because they could not occur simultaneously, so there does not seem to be a way of combining them into a work of art:

- Prometheus sitting listening to Zeus.
- Prometheus walking away from Zeus.
- Prometheus chained to the rocks.

\textsuperscript{4} Brâncuși has been my strongest influence by far, though my sense of form and structure comes from classical music, mainly Mozart and Beethoven. I like to think that I make music in stone.
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- Prometheus free of his chains.
- Prometheus grimacing in pain.
- Prometheus smiling triumphantly.
- Prometheus asleep on the rocks.
- Prometheus speaking with Hercules.

**Compatible Combinations in Art**

To get a clearer sense of the problem at hand, let us consider two well-known works of art depicting aspects of the Prometheus legend, one in sculpture and the other in painting.

Nicolas-Sébastien Adam’s elaborate marble carving *Prometheus Bound* (1757)⁵ exemplifies the following legend elements:

1. Prometheus chained to rocks.
2. Prometheus looking skyward.
3. Prometheus grimacing in pain.
4. The vulture pecking at Prometheus’ liver.
5. The vulture’s talons sunk into Prometheus’ flesh.
6. Prometheus struggling to get away from the vulture.
7. Chains preventing Prometheus’ escape.

Logical difficulties would not stand in the way of combining any pairs of legend elements on this list; nor, indeed, all of them, which Adam evidently succeeded in doing.

The same is true of the famous painting by Peter Paul Rubens, *Prometheus Bound* (1611-12),⁶ which exemplifies the same seven legend elements:

1. Prometheus chained to rocks.
2. Prometheus looking skyward.
3. Prometheus grimacing in pain.
4. The vulture pecking away at Prometheus’ liver.
5. The vulture’s talons sunk into Prometheus’ flesh.
6. Prometheus struggling to get away from the vulture.
7. Chains preventing Prometheus’ escape.

**Incompatible Combinations in Art**

Can incompatible pairs of legend elements be combined in a single work of art? To test this out, consider the following sculptures by Jacques Lipchitz on the Prometheus theme, a theme he considered a focal point of his sculpture (Lipchitz 1972, 136):

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1. *First Study for ‘Prometheus’* (1931, cast 1960s), which shows Prometheus on his back apparently shackled to the mountain, grimacing in excruciating pain.

2. *Study for Prometheus Maquette No. 1* (1936), which shows Prometheus strangling the vulture with one hand while waving the other in a triumphant gesture.

3. *Prometheus Strangling the Vulture* (1936), which shows Prometheus standing over the vulture writhing on the ground as he strangles it.

4. *Prometheus Strangling the Vulture II* (1944/1953), which shows Prometheus strangling the vulture with one hand while the other holds its legs.

Attributes of 1 are evidently incompatible with attributes of 2, 3 and 4. Even if such incompatibilities could be overcome, it is unclear that combining the attributes of 1 with those of 2, 3 or 4 would have aesthetic value.

This is not any simpler to do in painting. Consider the following four artworks:

1. *Prometheus Bringing Fire to Mankind* (1817) by Heinrich von Füger, which shows Prometheus holding a lighted torch as he ponders what to do with it. Below him is a dark, seemingly lifeless figure representing mankind.

2. *Prometheus Bound* (2012) by Howard David Johnson, which shows Prometheus chained to the mountain, staring helplessly at the approaching vulture.

3. *Prometheus Bound* by Peter Paul Rubens.

4. *Prometheus* (1865) by Carl Rahl, which shows Prometheus chained to the mountain looking down at the vulture sprawled on the ground, evidently dead.

Once again, attributes of 1 are evidently incompatible with attributes of 2, 3 and 4. Even if such incompatibilities could be overcome, it is unclear that combining the attributes of 1 with those of 2, 3 or 4 would have aesthetic value.

**The Prometheus Challenge: Preliminary Statement**

These considerations lead to a preliminary statement of the Prometheus Challenge:

- Create a work of art that combines incompatible attributes.\(^\text{13}\)


\(^13\)
The Prometheus Challenge

The Challenge Met: Hieronymus Bosch (1450-1516)

Widely collected and copied in his day, Bosch is famous for his fantastic images, especially his macabre and nightmarish depictions of hell. *The Last Judgment* (c. 1495-1505)\(^\text{14}\) contains many images that combine incompatible attributes and thus meet the Prometheus Challenge. For example, we are shown a bird’s head attached to human body; a human head attached to a pair of walking feet; a rat’s head attached to a human body; and so on. Similar imagery can be found in *The Garden of Earthly Delights* (c. 1495-1505).

The Challenge Redefined: Horace (65 BC – 8 BC)

There is no need for me to argue that the artworks of Bosch and his modern followers in the Surrealist movement\(^\text{15}\) represent an aesthetically unsatisfying solution to the Prometheus Challenge as stated above. Instead, I will reformulate the problem by adding conditions that the lyric poet Horace enunciated in *The Art of Poetry* (Horace 1904 [19 BC], 433-4). I will not try to decide here whether artworks that meet Horace’s conditions are aesthetically preferable to those that do not, which is a topic for another time.

Horace comes to the point right away with typical clarity and succinctness:

Suppose a painter to a human head
Should join a horse's neck, and wildly spread
The various plumage of the feather'd kind
O'er limbs of different beasts, absurdly join'd;
Or if he gave to view a beauteous maid

Above the waist with every charm array'd,
Should a foul fish her lower parts infold,
Would you not laugh such pictures to behold?
Such is the book, that like a sick man's dreams,
Varies all shapes, and mixes all extremes.

‘Painters and poets our indulgence claim,
Their daring equal, and their art the same.’
I own th' indulgence—such I give and take;
But not thro’ Nature's sacred rules to break,
Monstrous to mix the cruel and the kind,

Serpents with birds, and lambs with tigers join'd.

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\(^\text{13}\) The term ‘attribute’ is being used generically here to cover properties – what are true or said of something – as well as scenarios, events, elements, features and interpretations. For my work on the metaphysics of properties as applied to aesthetics, see Cusmariu 2016.


\(^\text{15}\) The fact that Bosch was the first Surrealist is not always acknowledged. Salvador Dali, Max Ernst, Andre Breton, Yves Tanguy, and René Magritte are considered the major figures of modern Surrealism.
The Prometheus Challenge: The Definitive Formulation

- Create a work of art that combines incompatible attributes in a way that is consistent with Horace’s contention that art should not depict ‘a sick man’s dreams’ or a ‘monstrous mix of the cruel and the kind.’

This is not the place for a defense of Horace. Bosch and modern Surrealists are evidently not consistent with his aesthetic.

Meeting the Challenge: Six Solution Categories

Philosophical analysis identified six categories of solutions to the Prometheus Challenge in its definitive form. Works of art by the following artists can be interpreted as having met the challenge in various ways analyzed below:


An important caveat: I am not suggesting that Degas, Manet, Picasso, Dali and Lipchitz were aware of what I have described as the Prometheus Challenge, let alone that they set out to meet it. To be sure, they had a working aesthetic they could have articulated if they wished – Delacroix, van Gogh and Cezanne did. However, making art based on philosophical analysis of the kind described in this article is another matter entirely.

As to conceptual influences on my own work, those were philosophical in the technical senses explained and illustrated below. I learned that other artists could be interpreted as contributors to the problem I was trying to solve only after I had already done so and began work on this article.

Category 1: Mirror Imaging – Degas, Manet, Picasso

An artwork depicts a reflection in a plane mirror in a way that is incompatible with the way the mirrored object normally looks. Such depiction is incompatible also with the concept of mirroring itself, which only allows left-right inversion. Incompatible interpretations are suggested or encouraged as well, prompting viewers to wonder which image corresponds to reality.

16 Horace seems to be taking issue with Aristotle’s views in the Poetics assigning value to art as a means to purification and purgation of powerful emotions such as pity and fear.

17 André Breton famously stated (1969, 14, original italics): “I believe in the future resolution of these two states, dream and reality, which are seemingly so contradictory, into a kind of absolute reality, a surreality, if one may so speak.” Surrealism plays into the hands of skeptical arguments made famous by Descartes denying the possibility of knowing the difference between dreaming and reality. As a professional philosopher aware of these arguments, it would not have occurred to me to make art seeking the ‘resolution’ Breton mentions.

18 I achieved this result through philosophical analysis. See Cusmariu 2009, for which I have notes dating back at least six years earlier, and Cusmariu 2015.

19 I have not found Degas, Manet, and Picasso pictures that used mirror imaging to combine incompatible attributes other than those analyzed below.
Category 2: Image Overlapping – Picasso

Two physical objects cannot be in the same place at the same time, while images of objects superimposed over one another obscure details. Picasso seems to be the first (only?) painter who succeeded in getting around these limitations, managing to suggest incompatible interpretations as a result.

To get a clearer sense of Picasso’s achievement, let us note the technical difficulties involved in applying this solution in painting. Thus, imagine a version of van Dyck’s famous portrait of King Charles I (1635) done using Picasso’s overlapping method, which van Dyck would never have dared even considering doing. A modern painter might have considered it but pulling it off is another matter entirely, e.g., Francis Bacon’s Three Studies of Lucian Freud (1969). Note also that Duchamp’s Nude Descending a Staircase, No. 2 (1912), which applies stop-action photography to painting, would not work using Picasso’s method either. All three pictures would be a jumbled mess.

Category 3: Seeing-As Vision – Picasso, Dali, Lipchitz, Cusmariu

Ordinarily, we see that an object has a certain property such as shape, color, and size. Sometimes, we see an object as having various properties. Thus, we may see a cloud as a sheep, or a mountain outcropping as a human head, e.g., The Old Man of the Mountain in New Hampshire. Incompatible images are combined in a work of art when its aesthetic content can only be captured by seeing A as the B of C and as the D of E, where B and D are incompatible and C and E are distinct objects. In cases where C and E belong to different categories, seeing-as vision allows movement from one category to another.20

Category 4: Directional Vision – Picasso, Cusmariu

Directional vision is applied when reading text.21 Thus, we read from left to right in English, French and German and from right to left in Hebrew and Arabic. Chinese and Japanese require vertical vision as do some hotel neon signs. A work can combine incompatible attributes by means of directional vision by suggesting one interpretation if the work is seen in one direction and an incompatible interpretation if the work is seen in another direction. Directional vision effectively turns a single work of art into two. Picasso used this method in painting by requiring the viewer to rotate the angle of vision clockwise a few

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20 ‘Seeing A as B’ may well be analyzable in terms of ‘Seeing that A resembles a B.’ We can leave the concept of seeing-as vision in intuitive form for the time being.
21 Directional vision is also assumed in mathematical notation. For example, 236 + 75 = 986 is false if read from left to right but true if read from right to left. Criss-crosswords require entering words diagonally downward from left to right and from right to left.
degrees. He did not use it in sculpture, however. I applied directional vision along the x-axis, from left to right and from right to left.\textsuperscript{22}

**Category 5: Discontinuous Attributes – Cusmariu**

I began experimenting with philosophical concepts to find solutions to the Prometheus Challenge in 2000, the year after I began carving stone. I did not realize at the time, however, that the solutions I would discover would represent a paradigm shift away from assumptions sculptors had taken for granted for a very long time.\textsuperscript{23}

For example, the goal in sculpture has always been to create physical objects with aesthetic attributes. This raises a fundamental question: What is a physical object?

Phenomenalism, a philosophical theory due to Bishop Berkeley (1685-1753), answers by identifying physical objects with collections of actual and possible sense data. I did not assume that Phenomenalism was a philosophically correct theory, however, so it did not matter for my purposes that philosophers had raised objections against it on various grounds and felt no need to respond to these objections. I also did not assume that there were such things as sense data and thought I could bypass objections against them as well. Because Phenomenalism for me only had practical value, the issue was whether this view of physical objects could help solve the problem at hand.\textsuperscript{24} It could, and it did.

Now, Phenomenalism entails two basic facts: (1) Sense data decompose the same physical object; (2) the ordering sequence of sense data is consistent with that object. Photos of ordinary physical objects taken a few degrees of arc apart – in effect, sense-data snapshots – will confirm these facts.

The trick to applying Phenomenalism to the Prometheus Challenge is to recognize that neither assumption need be true of sculptures. Decomposition into collections of sense data of which (1) or (2) (or both) are not true would make clear just how different works of art were from ordinary physical objects.

Category 5 sculptures require changing the viewing angle along the vertical or y-axis to fully capture aesthetic content, which can be very different from one view to the next. As will be shown later, such sculptures exemplify the following attributes: (a) There is a suggestion that more than one artwork is in view; (b) there is no easy inference from what is seen to what is not seen; (c)

\textsuperscript{22}The availability of other Category 3 or Category 4 sculptures is discussed at the end of this article.

\textsuperscript{23}For detailed discussion of these issues, see Cusmariu 2009 and Cusmariu 2015.

\textsuperscript{24}Phenomenalism is intended as a general theory about physical objects. If asked, Berkeley would readily have agreed that sculptures are not an exception to the theory even though they are not ordinary physical objects. That is, the fact that sculptures are physical objects with aesthetic properties does not entail that they are not collections of actual and possible sense data in the way that ordinary physical objects, which lack such properties, are collections of actual and possible sense data.
there is little or no compatibility from one view to the next; (d) different views may suggest (incompatible) association with different kinds of objects.

The aesthetic content of a Category 5 sculpture can be captured by moving around it or by placing it on a slowly rotating carousel. The latter makes it evident that an artwork is dynamic and has the ontology of an event.

Finally, a different concept of abstraction applies to Category 5 sculptures. Stated in Phenomenalist terms, the standard concept of abstraction abandons consistency with sense data associated with ordinary physical objects but retains consistency with their ordering sequence (Read 1964). The converse is true of Category 5 sculptures, which retain consistency with sense data associated with ordinary physical objects but abandon consistency with their ordering sequence.25

Category 6: Interweaving Forms – Cusmariu

The protagonist of my script Light Becomes Her (2001)26 is a sculptor who declares: “I make music in stone.” In 2002 I began work on Counterpoint, which became a series27 that sought to combine attributes by analogy with the parts of a musical score.

This development occurred mainly because Phenomenalist decomposition of physical objects seemed to me unable to meet the Prometheus Challenge for multiple-figure sculptures – a difficult aesthetic problem in its own right. Concepts from philosophical sources proved once again invaluable.

The first source was Plato’s Theory of Forms, which was the topic of my Ph.D. dissertation at Brown University titled “A Platonist Theory of Properties.” Specifically, I found very useful a famous comment in Plato’s Sophist (Plato 1997, 235-293, 259 e5-6): “The weaving together of forms is what makes speech possible for us.” I added to this beautiful metaphor the mereological view that complex physical objects are collections of parts, which I studied with Roderick M. Chisholm in his metaphysics seminar that led to a book (Chisholm 1976, Appendix B).28

Part-whole logic proved extremely fruitful, though again I made changes that suited my purpose. Thus, I borrowed seeing-as vision so that A could be seen as a part of B and of C, where B and C were distinct objects and A was not a part of B the way A was a part of C. I borrowed directional vision so that A could be a part of B in one direction and a part of C in a different direction, where B and C were distinct objects. I borrowed the discontinuous attributes concept so that part-whole relations could change, even radically, by changing viewing

25 The availability of other Category 5 or Category 6 sculptures is discussed at the end of this article.
26 This script is available at Francis Ford Coppola’s website https://www.zoetrope.com/.
27 The ten sculptures completed so far are shown in the Appendix. Seven others are in various stages of completion.
28 For a critique of Phenomenalism, see Chisholm 1957, 189-197.
angle a few degrees of arc from a given angle. Mereology let me explore part-whole relations as I saw fit and led to another concept of abstraction: Sculptures could exemplify part-whole relations that ordinary physical objects could not.

**Category 1: Mirror Imaging**

Edgar Degas: *Madame Jeantaud au miroir* (1875)

Degas and Jean-Baptiste Jeanteaud served together in the army in 1870 during the Franco-Prussian war. This portrait is of Jeantaud’s wife Berthe-Marie.

Degas challenges the viewer to ask unusual questions such as: who is the woman in the mirror; how is she related to Mme Jeantaud, if at all; which image shows Mme Jeantaud as she really looks; and do the two images show people existing contemporaneously. The images are not compatible with one another or with the concept of mirroring because mirror images are not normally blurred and here the mirror image seems to be looking at the viewer rather than at Mme Jeantaud as one would expect in a normal reflection.

The woman in the mirror could be Mme Jeantaud’s mother or it could be Mme Jeantaud as will look when she is her mother’s age; or the picture may be a portrait of a woman at two stages of life; or the base image may be a flattering portrait of Mme Jeantaud – the sort that painters usually do on commission – and the mirror image is what she looks like, reversing the usual interpretation; and so on.

Édouard Manet: *A Bar at the Folies-Bergère* (1882)

Considered Manet’s last major work (he died in 1883), this picture was exhibited at the Paris Salon in 1882 and has fascinated critics ever since.

It is evident here as well that the two images are not compatible with one another or with the concept of mirroring. The composition also suggests a double portrait. For example, the plain image shows a dreamy-eyed, stylishly dressed young woman looking at the viewer, whereas the mirror image shows a barmaid paying close attention to the customer ordering drinks who resembles Manet. Moreover, the two images may not be contemporaneous. The base image suggests the young woman is facing the viewer or the people in the crowded bar, possibly before the customer arrived or after he left. The picture can also be interpreted as a double portrait of Manet himself. In the mirror we see him as a

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customer in a bar but, of course, there is also an unseen Manet painting the picture we are looking at.\textsuperscript{31}

Pablo Picasso: \textit{Girl Before A Mirror} (1932)\textsuperscript{32}

Picasso began a relationship with Marie-Thérèse Walter when she was about seventeen and he was forty-seven. She became his mistress and eventually his muse. This picture is also a double portrait showing images inconsistent with one another as well as with the concept of mirroring. On left, we see Marie-Thérèse apparently pregnant, looking radiant – she became pregnant after this picture was made, giving birth to a girl in September 1935. The mirror image seems to show Marie-Thérèse red with embarrassment by being a mistress – Picasso was married at the time to the Russian ballerina Olga Khokhllova – while the base image shows her the way Picasso saw her, cheerful and happy.

\textbf{Category 2: Image Overlapping}

Pablo Picasso: \textit{Bust of a Young Woman} (1926)\textsuperscript{33}

Marie-Thérèse Walter is the subject of this picture as well. The incompatibility here is with the fact that two objects cannot be in the same place at the same time and that in real life objects cannot share body parts, as they evidently do here. Picasso uses a ‘see-through’ method to overcome these limitations.

The dark image may be Picasso himself. He seems to be trying to kiss Marie-Thérèse. Her lips are closed shut, perhaps suggesting disinterest. They share facial features such as an eye and parts of a nose. Her right shoulder blends into his upper back. The Picasso image is on top, suggesting he was the dominant partner, which is probably accurate. Half her face is in shadow, suggesting she felt stifled by the relationship, which is probably accurate as well.

Pablo Picasso: \textit{The Dream} (1932)\textsuperscript{34}

This is another double portrait of Marie-Thérèse and Picasso. The overlap is so extensive here that the viewer cannot easily tell where one figure ends and the

\textsuperscript{31} Manet may have been inspired here by a similar device in \textit{Las Meninas} (1656), though, unlike Manet’s, Velazquez’s picture corresponds to reality in that it shows him painting the picture we are looking at. This masterpiece cannot, accordingly, be considered a solution to the Prometheus Paradox. Note also that the mirror images of Philip IV and his wife, Mariana of Austria, are accurate. Indeed, it could not have been otherwise.


other figure begins, as Picasso no doubt intended. The picture reflects the physical and emotional bonding between the people in a relationship. It was painted five years into their relationship. Psychologists would have a field day with some of the details, which border on the erotic.

Picasso is shown in profile sleeping with his head tilted back and face turned upward. Marie-Thérèse is asleep in a chair, her head leaning on her right shoulder. The two figures share features such as noses, cheeks, chins, and a right shoulder. Walter’s right eye doubles as Picasso’s right eye. Her right arm doubles as his right arm. Quite possibly they are dreaming about each other.

Pablo Picasso: *Dora Maar Seated* (1937)\(^{35}\)

Picasso met the French poet and photographer Dora Maar in 1935. She became his mistress as well as his muse. They were together for about nine years.

The picture combines two views of the same person superimposed over one another a few degrees of arc apart, contradicting the normal expectation that two persons are present. One view shows the subject in profile facing the blue wall with horizontal stripes, looking inward and turning away from inquiring glances. The other view, rotated slightly clockwise, is a more detailed image that shows the subject in a cheerful mood. Her flushed right cheek can also be seen as an apple, inside of which a small lemon can be seen, suggesting a sweet-sour aspect of the subject’s personality. The small leaf attached to the apple’s stem doubles as the subject’s eyelid. The figures share a chin and lips. Pupils and hair are of different color and further contrast the two views. The rest of the subject’s body and clothing seem most compatible with the cheerful view as suggested by the orientation of the hands, arms and shoulders, likewise the chair in which she sits. The cheerful Dora Maar seems the dominant personality in this picture, even though Picasso often represents her in tears and she herself produced several self-portraits titled *La Femme qui pleure* (Caws 2000).

Pablo Picasso: *Woman in a Yellow Hat* (1961)\(^{36}\)

Jacqueline Roque was Picasso’s second wife. They met when she was 26 and he was 72, and married in 1961. The marriage lasted until Picasso’s death in 1973, during which time he made over 400 portraits of her, more than any other woman in his life.

Overlapping images suggests physical closeness but also the psychological clash of strong personalities. The hypnotic eyes and the shared arms and clothing (including the hat) encourage the impression of a single figure, though it

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is clear that there are two. The red streak out of a nostril appears to be blood, but whose nostril is not clear; it could be both.

**Category 3: Seeing-As Vision**

Salvador Dali: *The Image Disappears* (1938)\(^{37}\)

This picture recalls Vermeer’s *Woman in Blue Reading a Letter* (1663-1664), a painter Dali admired. Commentators have pointed out that the male figure may be Dali himself or the painter Velazquez.\(^{38}\)

Seeing-as vision enables Dali to combine the following incompatible attributes:

- The woman's head $\leftrightarrow$ the man's right eye
- Her shoulder $\leftrightarrow$ the bridge of his nose
- Her breast $\leftrightarrow$ his nostril
- Her forearm, hand and letter $\leftrightarrow$ his mustache
- Her skirt $\leftrightarrow$ his lower lip and goatee
- His hair $\leftrightarrow$ a drapery
- His shirt $\leftrightarrow$ a tablecloth

Salvador Dali: *Slave Market with the Disappearing Bust of Voltaire* (1940)\(^{39}\)

Seeing-as vision enables Dali to combine incompatible attributes in the images of Voltaire and of the two women.

- The women's heads $\leftrightarrow$ Voltaire's eyes
- The women's hair $\leftrightarrow$ Voltaire's eyebrows
- The women's neckwear $\leftrightarrow$ Voltaire's cheeks and the bridge of his nose
- The women's hands $\leftrightarrow$ Voltaire's chin
- The women's dresses $\leftrightarrow$ Voltaire's neck
- Voltaire's forehead and white hair $\leftrightarrow$ the open arch of a building

Salvador Dali: *Old Age, Adolescence, Infancy (The Three Ages)* (1940)\(^{40}\)

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\(^{38}\) Seeing-as vision will be abbreviated by means of the double arrow symbol $\leftrightarrow$. Note that “A can be seen as B” implies and is implied by “B can be seen as A,” so that $\leftrightarrow$ is a symmetric relation.

In this highly complex composition, Dali uses seeing-as vision to combine incompatible attributes in all three components. Let us consider them in turn.

**Left Image**

- The old man’s hair, forehead, eye, cheek, moustache and chin ⇔ features of a landscape.

**Center Image**

- A young man’s eyes and eyebrows ⇔ a mountain range and grottos across the lake
- The young man’s nose ⇔ a woman’s head
- The young man’s lips ⇔ the woman’s back
- The young man’s beard ⇔ the woman’s dress
- The young man’s forehead ⇔ the sky
- The young man’s cheeks ⇔ the lake.
- The young man’s hair ⇔ the arch outline.

**Right Image**

- The seated woman’s head, back, left arm, belt, and dress ⇔ the eye, nose, cheek, nose, teeth, and jaw of the grinning female figure shown in outline.
- The water and shore of the lake ⇔ the woman’s chest.

**Pablo Picasso: Bull’s Head (1942)**

Roland Penrose (1981, 345) described this sculpture as follows:

Picasso’s ingenuity, combined with his sense of the right time and the right place, worked together to bring to life from the humblest sources a new kind of sculpture, in fact, a new art. He gave life with a magic touch where life, to casual observers, was apparently absent; and with bewildering assurance, he succeeded at a time when such a miracle was most precious to all.

Here is Eric Gibson on the subject:

[The sculpture] is a moment of wit and whimsy ... both childlike and highly sophisticated in its simplicity, it stands as an assertion of the transforming power of the human imagination at a time when human values were under siege.

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Finally, this is how Picasso described *Bull's Head* to photographer George Brassaï:

Guess how I made the bull's head? One day, in a pile of objects all jumbled up together, I found an old bicycle seat right next to a rusty set of handlebars. In a flash, they joined together in my head. The idea of the *Bull’s Head* came to me before I had a chance to think. All I did was weld them together. The marvelous thing about bronze is that it can give the most heterogeneous objects such unity that it’s sometimes difficult to identify the elements that compose it. But that’s also a danger: *if you were only to see the bull’s head and not the bicycle seat and handlebars that form it*, the sculpture would lose some of its impact (Brassaï 1964, 61).

Had Picasso said “*si l’on ne voyayait plus comme [as] la tête de taureau et non comme [as] la selle de vélo ...*” he could have been credited with awareness of seeing-as vision and of the need to literally see *Bull’s Head* differently to detect the incompatible attributes combined in the sculpture. What a pity!

Pablo Picasso: *Baboon and Young* (1951)

E.H. Gombrich explicitly used seeing-as terminology to describe this sculpture:

Picasso took a toy car, perhaps from the nursery of his children, and turned it into baboon’s face. He could see the hood and windshield of the car as a face, and this fresh act of classification inspired him to put his find to the test. Here, as so often, the artist’s discovery of an unexpected use for the car has a twofold effect on us. We follow him not only in seeing a particular car as a baboon’s head but learn in the process a new way of articulating the world, a new metaphor, and when we are in the mood we may suddenly find the cars that block our way looking at us with that apish grin that is due to Picasso’s classification (Gombrich 1960, 104, my italics).

Here are the incompatible pairs of attributes combined by means of seeing-as vision:

- The baboon’s ears \(\Leftrightarrow\) The car’s rear wheels
- The baboon’s eyes \(\Leftrightarrow\) The car’s windshield
- The baboon’s teeth \(\Leftrightarrow\) The car’s front wheels
- The baboon’s nose \(\Leftrightarrow\) The car’s hood
- The baboon’s nostrils \(\Leftrightarrow\) The car’s headlights
- The baboon’s jaw \(\Leftrightarrow\) The car’s front bumper

Jacques Lipchitz: *Mother and Child, II* (1941-45)

Here is the sculptor’s own description:

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43 I have checked the French original for accuracy. Italics at the end of the passage are mine.
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In 1935 I was in Russia and one night, when it was dark and raining, I heard the sound of a pathetic song. I tried to trace it and came to a railroad station where there was a beggar woman, a cripple without legs, on a cart, who was singing, her hair all loose and her arms outstretched. I was terribly touched by this image, but I only realized years later, when I made the *Mother and Child*, that it was this image that had emerged from my subconscious. Although the sculpture is obviously much changed, the woman is without legs, and in the final version, without hands. The winglike projections at the side are the legs of the child that I added. For some curious reason, the child’s projecting legs and the woman’s breasts seem to form themselves into the head of a bull, something that gave a quality of aggressiveness to the sculpture. That, I think, indicates my feelings at this time, in the midst of the war (Lipchitz 1972, 148-151).

Lipchitz may have had seeing-as vision in mind because he uses the expression ‘seem to form into.’ Here are the incompatible pairs of attributes such vision is able to combine.

- The woman’s arms ⇔ The bull’s horns
- The woman’s breasts ⇔ The bull’s eyes
- The woman’s pelvis ⇔ The bull’s nostrils
- The child’s legs ⇔ The bull’s ears

Arnold Cusmariu: *Ariel* (2001)

We are at the circus, watching a trained seal balancing a ball atop a slender stick. Seeing-as vision connect spectator and performer in a new way.
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- The seal’s balanced ball ↔ The spectator’s head
- The seal’s stick ↔ The spectator’s neck
- The seal’s head, neck and nose ↔ The spectator’s shoulder, torso and arm
- The seal’s back and legs ↔ The spectator’s back and legs

Most viewers would naturally identify with the spectator. But, the piece asks, are there circumstances in our lives during which we are likely to act like a ‘trained seal?’ Thus, there is a disturbing undercurrent here belied by the child-like simplicity of the piece.

Arnold Cusmariu: *Swan Lake* (2001)

The sculpture is a simple way of expressing the idea of unity with the environment by making the lake part of the swan’s body, which cannot literally be true.

- The black angles-within-angles ↔ the swan’s plumage.
- The black angles-within-angles ↔ the wake as the swan glides across the lake.

As we know, identification with nature has resulted in great poetry, e.g., by Keats, Wordsworth, and Whitman.
Arnold Cusmariu

Category 4: Directional Vision

Pablo Picasso: The Three Dancers (1925)\(^45\)

Clement Greenberg writes:

[T]he Three Dancers goes wrong, not just because it is literary … but because the theatrical placing and rendering of the head and arms of the center figure cause the upper third of the picture to wobble (Greenberg 1989, 62).

The upper third of the picture does not ‘wobble.’ What Picasso was doing is actually quite clever. He figured out a new method of giving his composition aesthetic unity by having the middle figure look in both directions at once and in a way that reflects the moods of the two flanking figures. This method assumes directional vision, requiring the viewer to rotate the angle of vision clockwise from the position used to perceive one detail until another detail becomes apparent. Once this is done, it becomes possible to appreciate why The Three Dancers is a solution to the Prometheus Challenge.

Note first that Picasso seems to realize that two figures are necessary to express incompatible moods, an exuberant figure on left and a somber one on right. The problem is how to combine such contradictory moods by means of a single figure and in a way that complements the other two. Picasso succeeds in doing this through directional vision: Looking at the head of the middle figure ‘straight on’ reveals the serious mood, while rotating the angle of vision clockwise reveals the grinning, happy mood. By this method Picasso also manages to have the middle figure look in two different directions at the same time. Shared facial features help to achieve these effects: the tiny mouth and elongated eye of the serious expression double as an eye and mouth of the happy one, respectively. Their noses are also shared, though they are drawn differently.

Arnold Cusmariu: Prometheus (1986)

As noted earlier, a Brâncuși masterpiece based on the Prometheus legend sparked my interest in sculpture. Below is the version I produced, which answered questions posed by the Prometheus Challenge. Over time, this initial effort led to the discovery of the working aesthetic described in this article, aided by training in analytic philosophy. It would be more than a decade of exploration before I applied directional vision again, however. As other artists have discovered, it takes time to devise alternatives to traditions of long standing.

Prometheus is shown atop the mountain after he was freed by Hercules, reacting to his ordeal in two incompatible ways detectable only through directional vision. Seen from left to right, Prometheus stands triumphantly projecting confidence in the rightness of his cause. Seen from right to left, he recoils with rage at what he was forced to endure for defying a divine command. Viewers may wonder whether Prometheus would have acted the same way if he had to do it over again – a question that has no easy answer.
According to legend, Zeus came to Leda in the form of a swan seeking protection from a pursuing eagle. Their consummation resulted in a daughter later known as Helen of Troy, ‘the face that launched a thousand ships’ and the Trojan Wars. Seen from left to right, Leda appears as Zeus saw her as he approached her disguised as a swan. Seen from right to left, the result of their consummation is apparent: Leda is evidently pregnant. Seeing-as vision is necessary to capture the full aesthetic content. Thus, the breast-shaped volumes can be seen as part of Leda’s hair in both directions.

A comment is in order at this point about the geometry of so many of my bases. There is a good reason why that geometry is essentially textbook. My bases stand for the predictable elements of our world, which science tells us are expressible in mathematical terms. The superstructure, which is anything but predictable, is what art is about. How to balance the two is a basic problem in art, though the distinction seems to me critical.
Arnold Cusmariu: *David* (2001)

My rendition of the biblical showdown between David and Goliath described in the Books of Samuel takes viewers to the field of battle. Seen from left to right, the figure looks unyielding, projecting confidence of victory despite the overwhelming odds. This is what Goliath saw as he faced David, who understood he must not show fear. Seen from right to left, a diametrically opposite impression emerges and suggests the dread that David and his compatriots must have felt if he failed. Seeing their champion dead, the Philistines took to flight and the Israelites followed in hot pursuit. Had David failed, the consequences would have been serious. Massive negative space is used to suggest that, while these consequences would have been serious, they would not have been fatal for the Israelites.

**Category 5: Discontinuous Attributes**

Arnold Cusmariu: *Alar* (2000)\(^46\)

*Alar* suggests that more than one artwork is in view. It is also evident that: View 2 is not readily inferable from View 4; View 5, not seen from View 1, is not

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inferable from it; View 5 is not compatible with other views; and it is not obvious that views are of the same wing. View 4 shows the influence of Brâncuși’s *Bird in Space* series, begun in 1923.


The photos show incompatible views of a bird, a heart and two wings, the latter of which may or may not be views of the same wing; as in *Alar*, views are not easily inferable from one another; we cannot infer View 4 from View 1, even though one is the reverse side of the other; Views 3 and 4 are compatible only as
the kind of object they are, but not in specific shape; a bird suggested in View 1 is not consistent with a heart, suggested in View 2.

**Arnold Cusmariu: Eve (2001)**

![View 1](image1.png) ![View 2](image2.png) ![View 3](image3.png) ![View 4](image4.png)

The title is from the Bible. Readers should ask why the sculpture is mounted at one of the foci of an elliptical base.

Shown these four photos side by side, several people concluded they were looking at more than one artwork, which is a typical response to a sculpture exemplifying discontinuous attributes made possible under Phenomenalism.

View 1 is not inferable from View 3; there is no easy inference that Eve is pregnant as shown in View 2 from views not seen such as View 3; Views 1 and 3 are not compatible owing to significant differences in scale; surface configuration are not consistent in Views 1 and 3; View 1 shows standard carving technique while View 3 uses bas-relief; Views 1-4 show events in nonlinear fashion: View 1 shows what Adam saw that made him fall in love with Eve; View 2 shows Eve pregnant; and View 3 shows her holding an apple while contemplating the fateful decision whether to bite into it. The sculpture’s position on the base appears to change foci in Views 1 and 3 and is not consistent with positions apparent in Views 2 and 4.
View 1 is a side view of a traditional female torso. View 2 confirms this impression but also shows something inconsistent: a left shoulder that is not to scale compared to the right shoulder and that resembles a fetus in the womb, thus not belonging to the same figure. View 3 shows that the shoulder belongs to a second, much smaller female figure, whose long, braided hair was first seen in View 1. The final example of incompatibility is the hair itself, which can be seen as a standing female figure that is not apparent from previous views. Perceptual discontinuity is exemplified; normal vision as well as seeing-as vision is involved in capturing aesthetic content. Counterpoint 1-7 sculptures were all made in one year.

Arnold Cusmariu: Counterpoint 2 (2002)
This composition was made only a month or so later and is considerably more complex. Male and female figures are discernible. The male figures are clearest in Views 2 and 3, though they are not the same, nor are the female figures shown. Mereology changes with the viewing angle as do the various relationships between the figures.

Arnold Cusmariu: *Counterpoint 5* (2002)

Forms interwoven in this composition are larger and more space exists between the various elements. Directional vision is needed in the view at right. From right to left, the female figure faces inward, as if bound in the stone, arms in front and above her head. From left to right, the figure faces outward, arms up behind her head, as if seeking to escape the confines of the stone. More photos would reveal how other incompatible attributes are combined.

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As many as five figures are interwoven in this composition and they are more tightly linked. Small differences in degree of arc reveal incompatible attributes not evident from previous perspectives. Consistency of scale, which is a near absolute requirement in traditional sculpture, has been completely abandoned.


There are many more interconnected figures than is apparent from three photos. Seeing-as vision is required to absorb the elements present, identify incompatible attributes, and even count the number of figures. The viewer's memory is taxed extensively to link attributes evident as the viewer moves around the sculpture even as little as ten degrees of arc apart. Variations of scale add to the complexity of the composition.

**Other Category 3 or Category 4 Sculptures?**

Though he began making sculpture early in his career and continued to do so throughout his life (Spies 1971), we rightly associate Picasso primarily with painting; so it is no surprise that he applied new techniques such as cubism first to painting and then to sculpture. Unfortunately, by the time he made *Bull's Head* (1942) and *Baboon and Young* (1951), which applied for the first time a different kind of vision, his major contributions to painting were well behind him. I will not speculate why Picasso, unlike Dali, never exemplified seeing-as vision in painting. As to the sort of directional vision applied in *The Three Dancers* (1925),

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which requires rotating the angle of vision, he never applied it again in painting or in sculpture, as far as I have been able to determine. Why not is also a matter of speculation I will avoid here.

Seeing-as vision is necessary only for Lipchitz’s *Mother and Child*, II (1941-45). His first sculpture with this theme is in cubist style, *Mother and Child* (1930). In 1949 he made *Mother and Child*, I, for which normal vision is sufficient as well. Though the list of 20th century sculptors contains many illustrious names – Archipenko, Brâncuși, Calder, Duchamp-Villon, Epstein, Fabbri and Giacometti cover only the first seven letters of the alphabet – none of their artworks fit under Category 3 or Category 4.

**Other Category 5 or Category 6 Sculptures?**

As far as I have been able to determine, no one else has even considered applying technical philosophical theories from metaphysics or epistemology to sculpture.

Category 5 conditions are conceptually difficult to meet and are likely to seem counterintuitive to many artists. For example, it has been assumed without question that a figurative sculpture of the human body must be consistent with its anatomy all the way around in a 360-degree circle. This is also true of abstract sculptures of the human body as well as the geometric sculptures of David Smith, which consist of steel volumes welded on top of one another. Consistency with the geometry of each volume is observable throughout; otherwise the volumes could not be identified as cubes, spheres, ellipsoids, cylinders, cones and tetrahedrons and Smith could not have used the title *Cubi* for his series of sculptures.

Category 6 might seem more promising. For example, Picasso’s *Bull Head* and *Baboon and Young* and Lipchitz’s *Mother and Child*, II might seem to qualify as Category 6 solutions in addition to Category 3. This is not the case.

Picasso followed the anatomy of a bull’s head in attaching the handlebars to the bicycle seat to create *Bull’s Head*. Indeed, any other configuration would have prevented the viewer from seeing the composition as a bull’s head! The anatomy of a baboon’s head is replicated accurately as well, as are the automobile parts that can be seen as its head.

The same is true of Lipchitz’s composition. The anatomical details of a bull’s head are just where they should be and the scale of each detail is equally accurate. Lipchitz’s four *Prometheus* sculptures, shown earlier, follow the mereology of the human body despite (slight) inconsistency of scale. The same is true, for example, of Henry Moore’s many reclining figures. Though some of them make extensive use of negative space and as such come close to being scattered

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objects, nevertheless it is easy to see that they accurately represent human mereology.

Cubism is not an exception either. Despite its abstract rendering of human anatomy – abstract in the usual sense – mereology is preserved. Otherwise Lipchitz could not have used such titles as *Reclining Nude with Guitar* (1928), where the mereology of guitars is also accurate; nor could fellow Cubist Alexander Archipenko have used the title *Woman Combing Her Hair* (1914). Many other examples could be cited of which the same is true.

**What Will the Critics Think?**

Critics seem not to have noticed the conceptual links between the Category 1 pictures by Degas, Manet and Picasso analyzed above. The conceptual links between the four Category 2 Picasso paintings likewise failed to register with critics. Evidently oblivious to the novel method Picasso used to express aesthetic content in *The Dream, a New York Times* art critic launched a rather vulgar attack on this artwork and its creator (Cotter 2008):

> As for “The Dream,” it’s not too good because it’s so ordinary. Marie-Thérèse, with large, lumpish, standard-issue Picasso limbs, sits in a chair asleep, head to one side, one breast exposed, a smile on her lipstick-red lips. It’s hard not to notice that her face is split down the middle and that one half, the top, has the shape of a phallus. So she’s dreaming about her terrific older lover, and that’s all that’s on her mind, and that makes her smile? Please, Pablo, give us a break. This is an eroticism on the level of all those images of the artist as minotaur ravishing his models that you churned out by the thousands and that no one takes seriously any more, if anyone ever did.

Penrose and Gibson failed to realize that seeing-as vision is a requirement for capturing the full aesthetic content of *Bull’s Head*. They lavished (well-deserved) praise on Picasso for creating this sculpture, as did Gombrich on *Baboon and Young*. All three, however, failed to note that Lipchitz had, in effect, created the same solution to the Prometheus Challenge contemporaneously with the two Picasso sculptures in *Mother and Child, II*, which depicts the horrors of war every bit as effectively as Picasso’s *Guernica*.

It has been noticed that Dalí’s *The Image Disappears* is a double image but not that special vision is required to capture the full aesthetic content of this and other pictures50 where Dali applied the same method.51

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As noted above, Clement Greenberg missed the role of directional vision in *The Three Dancers*. Lawrence Gowing and Ronald Alley also missed it and came to wrong-headed conclusions as a result. Gowing (1966, 10) opined that the picture “is like a Crucifixion” while Alley (1986, 22) contended that the middle figure “is associated with [Picasso’s friend Carlos] Casagemas” who committed suicide. My analysis of the picture as a Category 4 solution to the Prometheus Challenge gives Picasso the credit he deserves.

It remains to be seen what critics will make of my Category 5 and 6 sculptures, which are conceptually far more radical than the artworks in the other four categories, including my own. I am hoping this article will help. A Category 7 may be waiting to be discovered, so I better get back to work.

References


On the subject of visual illusions, the reader may find of interest Luckiesh 1965 and Seckel 2004.


Appendix: Ten *Counterpoint* Sculptures, 2002-2003

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