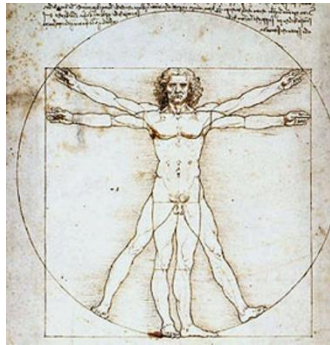


Size and Scale in Abstract Sculpture

Their Interrelationship and the Effect on a Viewer's Perception



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Images overleaf

Fig 1

Tony Smith (1961) *Cigarette*.

Fig 2

Leonardo da Vinci (c. 1490) *Vitruvian Man*.

Figure 3

Tony Cragg (1995) *Secretions*.

Q: Why didn't you make it larger so that it would loom over the observer?

A: I was not making a monument.

Q: Then why didn't you make it smaller so that the observer could see over the top?

A: I was not making an object.

Tony Smith (as quoted in Morris, 1966, p. 236)

This dissertation focuses on abstract sculpture and the effects of size and scale on its perception and interpretation. The dissertation argues that size and scale are different yet interrelated, and how works of the same size can have very different scale perceptions. This dissertation restricts itself to studying abstract sculpture, as representational and figurative sculpture have other aspects that predominate when analysing the effects of size and scale. The dissertation proposes a system of interpretation but will borrow and adapt ideas from several artists and writers.

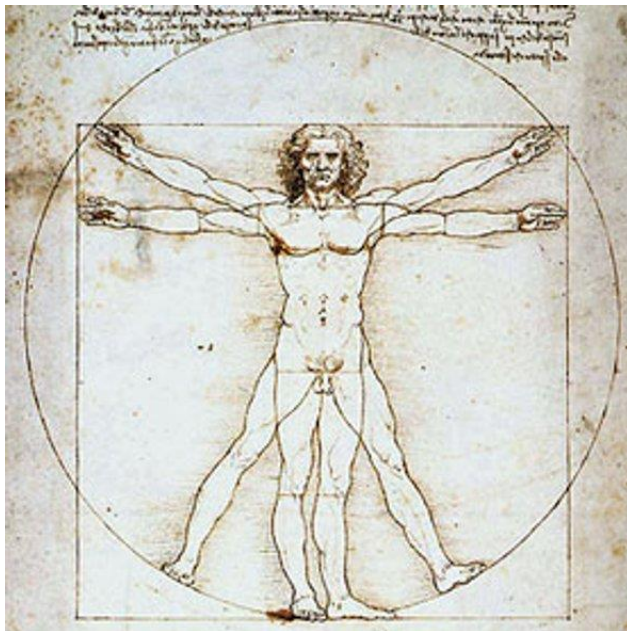


Figure 4
Leonardo da Vinci (c. 1490) *Vitruvian Man*

The introductory quote by Tony Smith above, in a seemingly pithy way, brings in issues that are remarkably complex as one delves deeper into them. The quote was in response to a question about *Die* (1962) (fig. 33) that is a 1.8m high steel cube. In talking about *Die*, Tony Smith notes that Leonardo's drawing, by which he means *Vitruvian Man* (fig. 4), determined the size of the work, (Smith, T. (2007), p. 24). The implication is therefore that the human body is a reference point for the viewer, and referring to Smith's quote, that works larger or smaller than this size are either monuments or objects respectively, and that our interpretation of them changes accordingly.

The dissertation discusses different concepts to size and scale, but all of them refer to some degree to the human body, with differences being whether the human body refers to size, scale, or both.

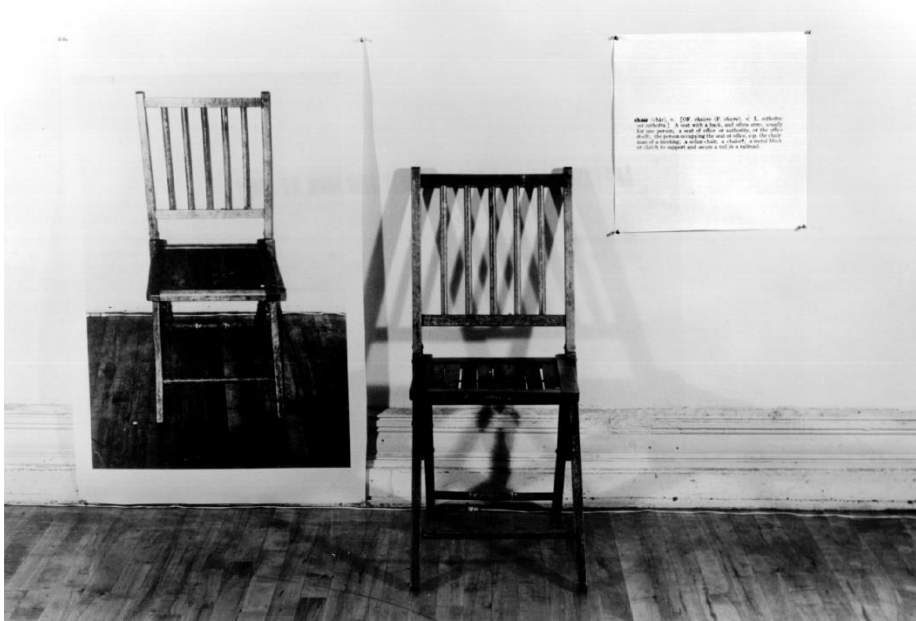


Figure 5
Joseph Kosuth (1965) *One and Three Chairs*.

Representational sculpture by definition refers to the idea of an identifiable object. Joseph Kosuth's *One and Three Chairs* (fig. 5) uses a chair as an index. The physical chair is a 'normal' size for a chair and sets a reference point for the baseline size of the object which then influences the viewer's interpretation of the associated photo and the text. The work also alludes to the idea of a cultural context that surrounds the concept of 'chair' and how the viewer can recall this concept because of some printed text or a photo in addition to the actual object. For a representation object such as a chair, the cultural context has a more significant influence on the perception of the work compared to an abstract artwork.



Figure 6
Arthur Ganson (2009) *Thinking Chair*.



Figure 7
Romy Scheroder (2011) *When She Comes*.



Figure 8
Daniel Berset (1997) *Broken Chair*.

The three works above (figs. 6-8) are representational sculptures, each of which refers to a chair. There are many aspects to each of the works, but one of the most immediate aspects is that the viewer will register that the artwork is smaller, the same size, or larger than a 'notional' chair. Abstract sculpture does not have this defining size benchmark, and therefore other factors influence our perception of its size. Secondly, in representational sculpture, the object will typically have some form of use, which in the example above is a chair. The artwork references this use – in the case of Berset's *Broken Chair*, the size of the work challenges the size of the viewer – is the viewer a miniature person in the land of the giants? Because the viewer 'knows' what a chair is, the broken leg infers something amiss. These are all questions brought about by the representational nature of the work.



Figure 9
Willem de Kooning (1989) *Leda and The Swan* Series.



Figure 10
Jacob Epstein (1907) *Dancing Girl*.



Figure 11
Damien Hirst (2002-3) *Charity*.

In the context of size and scale, figurative sculpture has many of the same issues as the representational sculpture, but it has significant additional associations by making direct reference to the human figure. Similar to representational sculpture, a reference size is given to the interpretation of the work by the viewer's interpretation of their own body. The de Kooning, Epstein, and Hirst examples above are examples of what a viewer will consider as small, life-size, and large sculptures. Figurative sculpture directly references the human body, whereas as will be shown, abstract sculpture references the human body indirectly. The direct referencing of figurative work engages the viewer with the work in a different way than abstract work – and these factors include cultural and societal issues such as gender, race, and class.

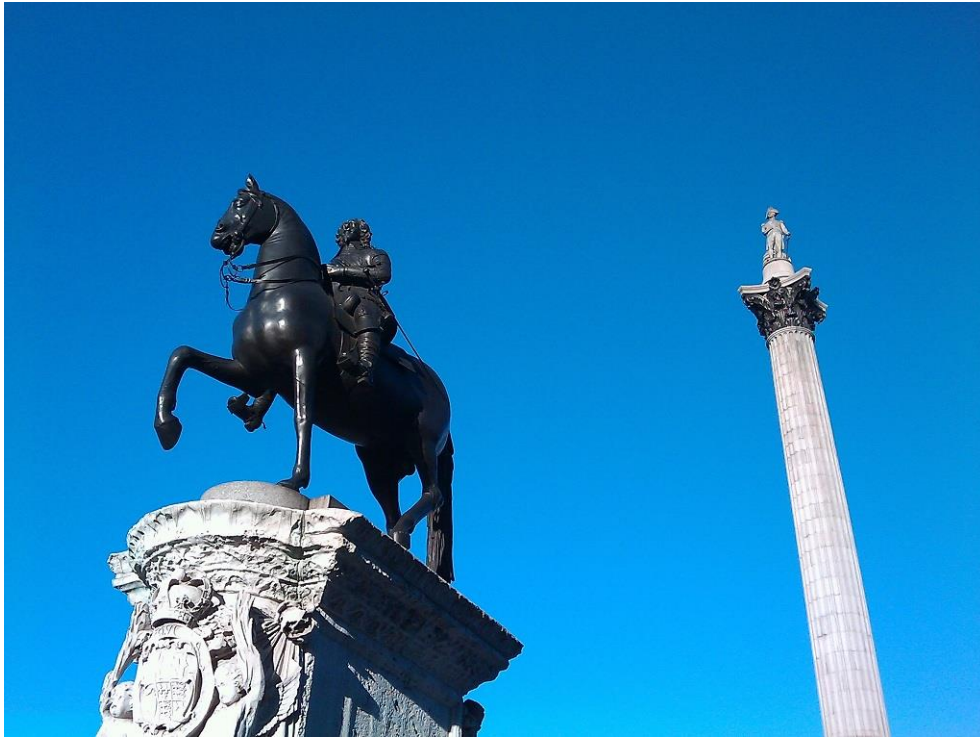


Figure 12
Hubert Le Sueur (1633) *Equestrian statue of Charles I*.

Representational sculpture also comes from a history of commemoration and collective memory which are issues that touch on but are separate from the themes of this dissertation. A typical example is the *Equestrian statue of Charles I* in London (fig. 12). The monument makes reference to the English Civil War and the overthrow of the monarchy of King Charles I and the establishment of the English Commonwealth (BBC, p. 1). Its location and physical presence within the city carry multiple and significant meanings. It is both a physical marker for the collective memory of the United Kingdom as well as means of shaping the current meaning of historical events. This work and most others of a similar nature tend to be larger than life-size. Susan Stewart, who will be discussed later, notes that ‘the miniature is . . . a metaphor for . . . interior space and time . . . [and] the gigantic is considered as a metaphor for the abstract authority of the state and the collective, public, life’ (Stewart, p. xii). The sculpture above highlights the significant importance of the cultural environment in the interpretation of the work. In the case of abstract sculpture there will not be the same degree of reliance on the cultural environment, but as will be noted, our social framework influences our interpretation of artworks. Extending from Stewart’s analysis, the size of an artwork, irrespective of it being representation or abstract, will bring with it interpretive meaning and memory as to whether it is in the private or public realm.

* * *

It is worth starting with a discussion on the difference between size and scale which are given many different interpretations by different writers.

In her book *Scale in Contemporary Sculpture*, Rachel Wells defines size as the ‘1:1’ size of the object (Wells, 2013, p. 1), whereas scale “focuses upon a difference in degree between two similar objects

(Ibid., 6). Her study depends on having similar objects for comparison, i.e., the '1:1' size object and the presented object – the difference between the two is the scale. Interestingly, and importantly, Wells brings the concept of memory into the interpretation of scale, in that the viewer must remember the 1:1 original in order for the effect of scale to be perceived by the viewer. (Ibid., 16-17). Wells limits her study to works that are definable, which she terms 'naturalistic' as opposed to objects that are abstract. This is because abstract objects are not similar in kind, and can therefore not cause emphasis of scale perceptions in the viewer as he/she has no 1:1 memory of what the object 'should' be. For Wells, abstraction renders the object interesting in terms of size rather than scale (Ibid., 10). This dissertation argues that abstract objects can have comparative differences in kind, albeit of a different nature to what Wells proposes and that these qualitative differences in kind influence the viewer's perception of scale.

Anne Wagner in discussing Henry Moore postulates that size is not the same as scale. She notes that scale is "the appearance of size, which may or may not stand up to verification by objective means . . . the scale of an object is how big or small it looks . . . In short, scale is comparative or relational, as well as contextual" (Wagner, 2011, paras. 14 – 16). For Wagner, context influences scale perception, and that scale is not solely the size of something relative to the human figure.

Robert Morris, a prominent abstract minimalist artist active in the 1960s, views size in direct relation to the human body. He notes that 'the human body enters into the total continuum of sizes and establishes itself as a constant on that scale' (Morris, 1966, p. 236). Morris interchanges the terms size and scale when he notes that "scale is a function of the comparison made between that constant, one's body size and the object." He does, however, nuance his definition of scale by referring to the distance between objects and the viewer, and that this is part of the sculpture. Larger objects need a greater distance between the object and the viewer than does a smaller object" (Ibid., 236). For Morris, there is a three-way relationship between the viewer, the object, and the environment and all three constitute the artwork. In his work (figs. 13 and 14) Morris often used simple shapes, which he termed 'unitary forms' to create a haptic rather than optical experience that engages the viewer's body with the self-reflexive (Morris, 2008, p. 125). This dissertation builds upon Morris' views and looks at sculptural objects that are more complicated than 'unitary forms' and how their qualitative differences affect viewer's perceptions, and in turn how the three-way framework of the viewer, object, and environment frame and influence the qualitative perceptions.

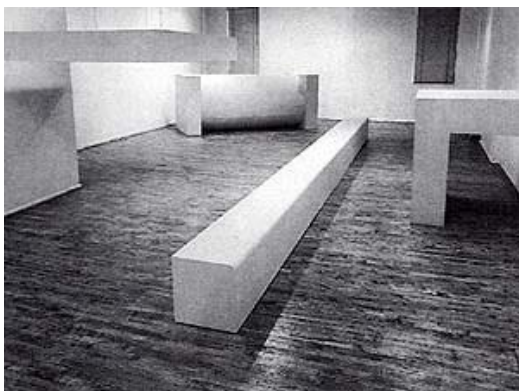


Figure 13
Robert Morris (c. 1965) Installation photograph.



Figure 14
Robert Morris (1965) *Untitled*.

TJ Clark notes that size and scale are different. Size is “literal – a matter of actual, physical intuition . . . the relating of everything to body size . . . Scale on the other hand, is unabashedly metaphorical, and accepts size as a mere effect of representation” (Clark, 2000, pp. 15-16).

Susan Stewart in her book *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection* interchanges the terms size and scale, and notes the “body is our mode of perceiving scale” (Stewart, 1993, p. xii). The size of the human body defines a range of perception, and miniature objects become self-contained outside of the human body, whereas the gigantic becomes a container that is perceived only in part. (Ibid., 71). Importantly, Stewart discusses a concept she calls ‘aesthetic size’ which she calls the relationship between genre and significance. However, these are not absolute concepts, and they are relative to the surrounding cultural environment. She notes that ‘aesthetic size cannot be divorced from social function and social values’ (Ibid., 94-95). This view is different from Robert Morris, where arguably his three-way relationship between viewer, object and environment is absolute, and not influenced by cultural perceptions, and it goes further than TJ Clark’s contention that scale is unabashedly metaphorical. The dissertation borrows from Stewart’s views on aesthetic size and the effect of social values on the viewer’s perception of size and scale.

Finally, Barbara Hepworth noted that “Scale is not physical size . . . a very small thing can have good scale or a very large thing poor scale . . .” (as quoted in Smith, 2013, p. 8). She is referring to an intrinsic quality of the work, which is similar to TJ Clark’s view that scale is metaphorical. For Hepworth, the scale of a sculpture is its spiritual inner life (as quoted in Krauss, 1981, p. 141).

This dissertation will base size as a direct relation to the size of the human body. Scale is much more difficult to define, and will be viewed more metaphorically, and includes elements of aura, presence, complexity, and temporal engagement. The perception of scale is also culturally influenced.

* * *

The images below are of Conrad Shawcross’ *Paradigm Black Oxide (Solid)*, with the image on the left as permanently installed at the Francis Crick Institute in London, and the image on the right which is the proposal maquette developed by Shawcross. The final work measures 14m high whereas the maquette is approximately 1.2m high.

One of the first notable effects is the relationship of the viewer relative to the artwork. In order for the viewer to see the work in its totality, the viewer must be much further back from the full-size version compared to the maquette. The physical distance creates a psychological distance between the viewer and object which decreases the intimacy. There are not any other corresponding features of the work that increase intimacy as one gets closer with only a partial view of the entire object.



Figure 15
Conrad Shawcross (2016) *Paradigm Black Oxide (Solid)* as installed at the Crick Institute, London. The sculpture is 14m high.



Figure 16
Conrad Shawcross (c. 2016) maquette for *Paradigm Black Oxide (Solid)*. The maquette is approximately 1.2m high.

Tony Smith's monument/object classification based on the object's size relative to the human body is instructive here and arguably a tipping point in intimacy when an object's size goes above or below human size. Susan Stewart argues that a smaller (miniature) sized object relates more to interior space and time of the viewer, whereas larger (gigantic) objects relate the abstract state and public life (Stewart, 1993, p. xii). While size influences intimacy, other culturally influenced factors, that will be discussed further, such as materiality and tectonics also influence intimacy.

The greater physical distance also activates the relationship of the environment to the object, as well as to the viewer. In the maquette view, (fig. 16) it is much easier to be able to see the artwork as a standalone object without much interaction with its environment. It is much harder to have this visual detachment when looking at the full-size installation. In the full-size version, the artwork influences the viewer's interpretation of the environment, as well as the converse where the environment influences the reading of the artwork. The laws of perspective state that an object appears larger when closer to the viewer than when further away. The buildings constituting the environment of the artwork are further away and as a consequence to not appear to change in visual size to the same degree as when moving towards or away from the artwork. The result of this is that the visual setting of the artwork relative to the environment will change as one moves towards it. This same effect does not happen anywhere near as dramatically in an internal setting, as the physical boundaries of the room are much closer, and therefore the visual comparison between artwork and environment does not change as much. Also, many internal artwork environments, e.g., galleries and museums, deliberately try to mute the intervention of the environment on the viewer's perception of the artwork.

The viewer is much more conscious of his physical position and movement through the environment with the full-size piece compared to the smaller maquette. In the gallery setting the viewer's distinct impressions based on distance from the object are fewer, and therefore (excluding other factors) there is less of a perceived relationship between the viewer, the object, and the environment.

The previous discussion has concentrated on the size of a piece of work, and how perception changes when an 'identical' piece is scaled up or down. It is worth considering the effect of scale in these situations. Looking again at the images of *Paradigm Black Oxide (Solid)* above (fig. 15 and 16), the smaller object has a greater scale, and the viewer, therefore, has a stronger connection to the object. In this instance, this is because there is a greater degree of perceived articulation. Separate from the effects of distance and size, this greater articulation creates a stronger connection of the viewer with the object. This connection is principally between the viewer and object, with the corresponding effect of the environment being a significantly smaller factor. The example cited is interesting because many other factors (material, geometry, relative articulation) are the same. In this context there is a fixed 'quantity' of scale applied to the work and the impact of scale is diluted or increased as the size of the object is enlarged or reduced.



Figure 17
Conrad Shawcross (l-r) (2018) *Exploded Paradigm (Philadelphia)* and (2018) *Fracture (R24R2)*. Sculptures are 3.2m and 2.4m high respectively.

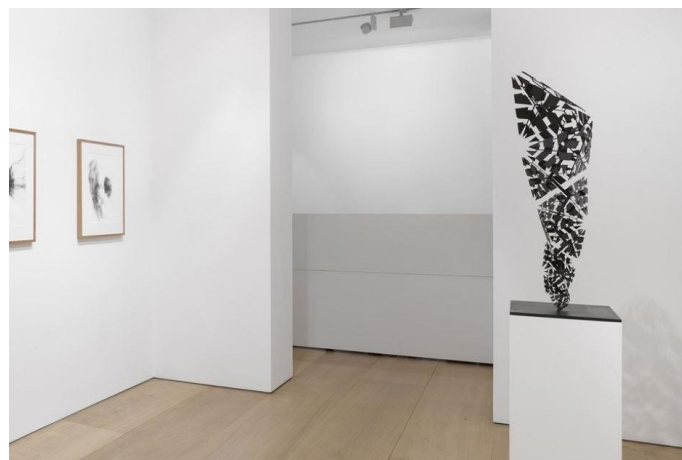


Figure 18
Conrad Shawcross (r) (2018) *Fracture (R12B1)*. The sculpture is 1.2m high.

It is worth comparing the maquette for *Paradigm Black Oxide (Solid)* (fig. 16) and *Fracture (R12B1)* (fig. 18). Both are the same size at 1.2m high. *Fracture (R12B1)* however is much more highly articulated. The piece has an overall geometry that is loosely similar to the maquette for *Paradigm Black Oxide (Solid)*. The facets of the geometry comprise separate smaller elements that form a series of relationship within their respective panels and relationships between the different panels. These facets add a degree of complexity and increase the scale of the work. Also, the combinations of solids and voids, and view of and through the object increase the connection of the viewer to the object.

* * *

The later work of Henry Moore demonstrates the difference of scale perception when a sculpture changes size. Moore often worked from small maquettes that were later enlarged by his studio assistants and cast in bronze (Wells, 2015). The images below show installation views and a maquette for *Large Two Forms* (1966). Unlike the Shawcross works discussed above, the Moore

piece 'feels' largely the same from the maquette to the installation pieces. The maquette photograph is somewhat deceptive in that there are no visible external markers to help indicate the objects actual size, and one's gaze is therefore solely fixed on the object without reference to context.



Figure 19
Maquette for Henry Moore (1966) *Large Two Forms*.



Figure 20
Henry Moore (1966) *Large Two Forms*. Installation view at Gagosian Gallery, London in 2012.



Figure 21
Henry Moore (1966) *Large Two Forms*. Installation view at Yorkshire Sculpture Park.

The Moore piece is less articulated than the Shawcross example, and there are no visible human marks or applied objects on the work that allows the viewer to relate the work to some known size, nor is there articulation of a smaller scale on to which the viewer can 'mentally grasp'. The work becomes more about the relationship of the forms and the environment, and shares many of the characteristics of Robert Morris' minimalist gallery installations (see fig. 13) where the Morris forms are objects used to create a 3-way relationship between the viewer, the object, and the environment. Size is particularly important in the Moore work, and in the external setting of the Yorkshire Sculpture Park (fig. 21), the piece would have considerably less presence if the size were smaller than human size.

The Moore piece is amorphous concerning the size that it should be, and feels 'scaleless' but not in the way that Moore meant it. In discussing scale in Moore's work, Anne Wager notes that as objects are enlarged (or scaled up in the example of Moore's large sculptural works), at a certain point they 'become inert and lose definition, or what Moore called their 'edge' . . . they separate themselves from their surround' (Wagner, 2011, para. 30). *Large Two Forms* does not feel to have 'correct' size, and it feels separated from its environment. Moore has said that "everything I do, I intend to make on a large scale... Size itself has its own impact, and physically we can relate ourselves more strongly to a big sculpture than to a small one." (Moore, 2012).

A look at one of Moore's earlier works helps explain why the later work of *Large Two Forms* feels scaleless. Figure 22 shows *LH 162 Reclining Figure*, a 1936 hand-carved work from Moore that is approximately 89 cm long. One can sense the presence of a direct human hand in a 1:1 relationship to the work – both in the complexity of the shapes, but also from the observation that it is a direct carving. Also, the grain of the wood is readily apparent, and this articulation adds scale. If the work were enlarged, it would have a different perceived scale, which is separate from the effect generated by a change in size. By contrast, *Large Two Forms* does not appear to be made by a human hand, the geometry is simpler, and the material is amorphous.



Figure 22
Henry Moore (1936) *LH 162 Reclining Figure*.
The work is approximately 89cm long.

Moore maintained, at least in his later works, that "I don't make my maquettes and models for that purpose of trying to show to somebody else what the big one was going to be like. No, as I make this, the size is any size that I like. I can make it any size in my imagination that I want it to be." (Wagner, 2011, para 9). Moore was correct that the work could be any size, but at the consequence that the work loses its perceived scale. Moore's perceived scale was the 1:1 object that was the maquette for the artwork.

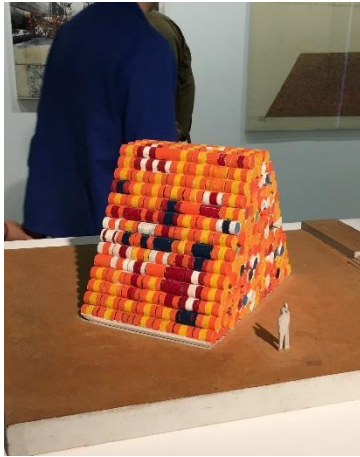


Figure 23
Christo and Jeanne-Claude,
maquette proposal for
unidentified project.

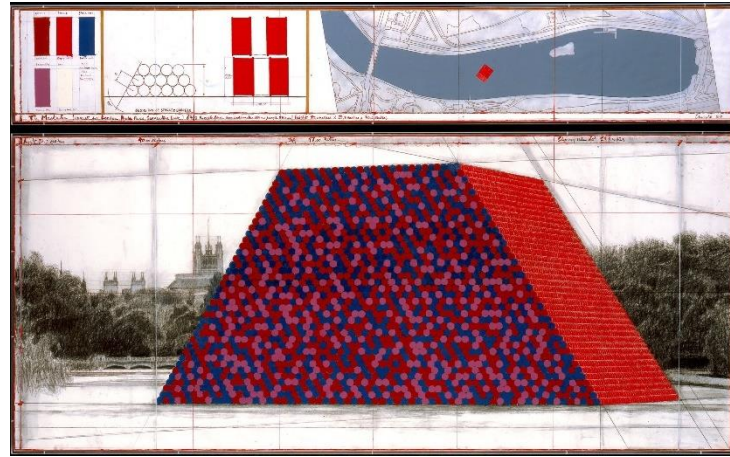


Figure 24
Christo and Jeanne-Claude (2016). Proposal drawing for *London Mastaba*.

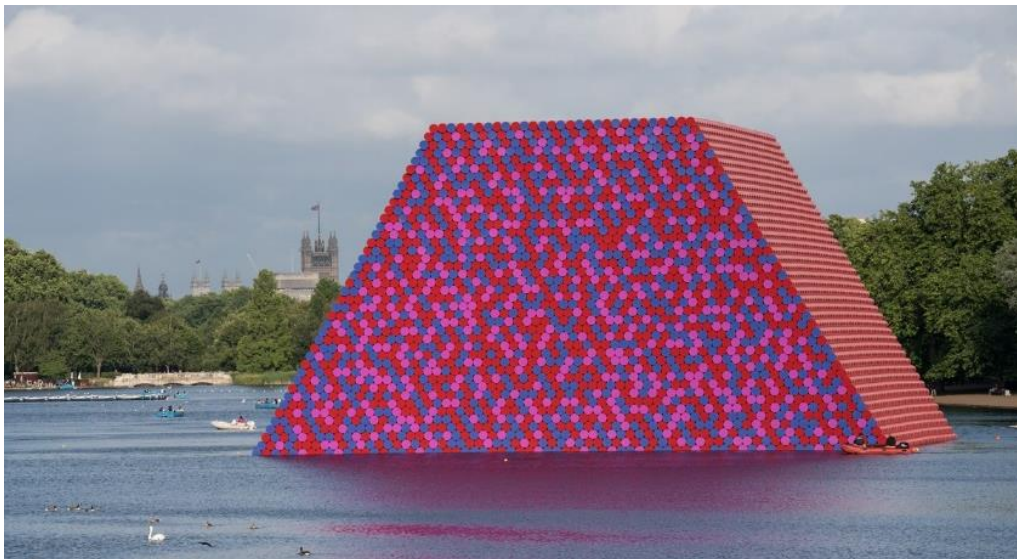


Figure 25
Christo and Jeanne-Claude (2016-18). Installation view of *London Mastaba*.

The images above show the proposal drawings and final installation of Christo and Jeanne-Claude's *London Mastaba* (2016-18). The basic building block of the installation is standard 55-gallon steel barrel (fig. 26), and this is evident both in the maquette and in the proposal drawings. This building block gives a relatable object back to the size of the human body.

The project scales up well from the proposal stage to the final installation. The proposals are firmly set within a definitive scale relationship to the environment as is evidenced by the proposal visualisation and an installation photograph from the same angle (figs. 24 and 25). The use of modular steel barrels, which are of an identified size to a human figure (fig. 26), strengthens the connection between the proposal and final installation. The size of the barrels, relative to a human figure, does not change between the proposal stage to the installation stage.



Figure 26
Installation view of an exhibit at Christo and Jeanne-Claude *London Mastaba* at Serpentine Gallery, London on 18 June 2019.

In the absence of the articulated barrels in *London Mastaba*, it would be harder for a viewer to determine the actual size of the work. The work sits within a body of water, and without adjacent boats to make a size comparison, the viewer would rely on the environmental context which is some distance from the work, making a judgement of size less accurate. The articulated barrels increase the perceived scale of the work, and they reinforce the perception of size for the viewer. This work, in particular, depends on its size for its effectiveness.

* * *

We have discussed the size of an artwork relative to the viewer and how this affects perception. We have only briefly touched on the size of the environment in which the work sits and how this affects perception, and this is worth exploring more fully. In an interview, Richard Serra is asked by architect Peter Eisenman if there is scale specificity intrinsic to a work of sculpture that isn't anthropomorphic. He replies:

Whether something is large or small has nothing to do with scale. Large or small has to do with size. Scale deals not only with the interrelationship of the parts of a sculpture but also, more importantly, with the sculpture's relationship to its context. The context always has its boundary, and it is in relation to that boundary that scale becomes the issue . . . Scale is dependent on context. (Serra, 1983, p. 347)



Figure 27
Richard Serra (2006) *Sequence*, as temporarily installed at Stanford University, before its placement at SFMOMA.



Figure 28
Richard Serra (2006) *Sequence*, as permanently installed at the San Francisco Museum of Modern Art (SFMOMA).

It is interesting to note Serra's assertion that scale is dependent on the context in addition to the interrelationship of a sculpture's parts. Anne Wagner expresses a similar sentiment in her scale assessment of Henry Moore (Wagner, 2011, paras. 16-17), and Robert Morris's work emphasises the 3-way relationship between object, the viewer, and the environment. Following this logic, the scale of an artwork will be perceived differently depending on its environmental context. Richard Serra's *Sequence* (figs. 27 and 28) gives an excellent example of this.

The images above show Serra's *Sequence* in both a gallery and external setting. The physical size of the work is the same, but the perception of the works' scale (as perceived via a photograph) is nonetheless different. As previously discussed with the Conrad Shawcross' *Paradigm Black Oxide (Solid)* (fig. 15), when the viewer moves around *Sequence* in its external setting, the relative perspective view of the work will change significantly relative to the environment, whereas this cannot happen in the gallery setting. As a result, an artwork in an external setting will have a larger perceived scale. Arguably, a similar effect happens with Henry Moore's *Large Two Forms* when it is displayed in a gallery versus an external setting (figs. 20 and 21).

Using the logic of Tony Smith and Susan Stewart, the larger perceived scale makes the work feel more 'monumental'. There is a cultural connotation at work regarding one's scale perception. Our cultural conditioning is that artwork outdoors is 'public' sculpture, whereas artwork indoors is private. We associate public sculpture with greater grandeur or monumentality. Furthermore, the gallery setting for *Sequence* introduces a sense of theatricality into the interpretation of the work, which again references back to a cultural connotation. The work is presented as if on a stage, denoting a degree of specialness and value. Using Susan Stewart's view, the gallery setting gives a cultural encoding to the perception of the work that makes this an 'object' in the personal realm, rather than a monument that resides in the public realm. By objectifying the work in this way, it becomes more of a gallery-type object that gallery-goers might typically associate with being on a plinth, which in turn reduces the perceived scale.



Figure 29
Robert Smithson (1970) *Spiral Jetty*



Figure 30
Robert Smithson (1970) *Spiral Jetty*



Figure 31
Robert Smithson (1970) *Spiral Jetty*

Robert Smithson's *Spiral Jetty* (above) at nearly 500m long, and set in the Great Salt Lake, is not an artwork that would sit in a gallery situation and can only be perceived externally. The context of the Great Salt Lake is open and flat and requires an artwork of significant size to engage with this environment actively. *Spiral Jetty* does work in this regard, but only when viewed from a slightly higher position where there is the backdrop of a lake against which the viewer can see the entirety of the work. An eye-level view (fig. 31) does not produce the same result. The considerable size and the external environment provide robust cultural coding that the artwork is a 'monument' rather than an 'object'. Unlike the previously mentioned Conrad Shawcross and Richard Serra works, the Smithson work is so large, and with relatively little articulation between components, that an individual has great difficulty relating the work to their body size and as a result almost automatically assign the work into the mental category of a monument.

* * *



Figure 32
Richard Deacon (2005) *Restless*.



Figure 33
Tony Smith (1962) *Die*. Installation view at the Museum of Modern Art, New York.

The viewer's position in space relative to the size of an object has been discussed, but this also is a factor in the perception of scale. Consider two very different sculptures – *Restless* by Richard Deacon and *Die* by Tony Smith (figs. 32 and 33). The Smith sculpture could hardly be more uncomplicated – a 1.8m steel cube set in the landscape. We perceive the shape and volume of the work almost instantly. While the relationship between the object and the environment will change as the viewer walks around it, the viewer's interpretation of the object itself will change very little – the object is the same from whatever position viewed. The Deacon sculpture, on the other hand, is very different. It is perceived differently as the viewer moves around the work, and the complexity compels the viewer to view it from different vantage points. The viewer needs to mentally assemble these views in order to comprehend the many internal relationships of the piece. This mental assembly adds a component of both time and position into the understanding of the object, which again is separate from the time and position effects of the object relative to the environment. The time and position components each amplify the perception of scale.

The degree of emphasis on whether an artwork should be a piece whose interpretation in the context of the environment and viewer is more important than an interpretation of the artwork and viewer with the environment being a secondary factor is an artistic decision. Using the Deacon and Smith pieces to illustrate – *Die*, set into the (former) garden of New York's Museum of Modern art does establish a 3-way relationship between the object, the viewer, and the environment. In the same situation, if a work similar to *Restless* would create very different relationships. A more 'active' work would concentrate attention upon itself, and this shift of focus then decreases the viewer's interaction with the environment. If the environmental setting is significant to the artist in the interpretation of the work, then the artist can use the effects of scale, as one of many tools, to calibrate the impact of the work within its setting.



Figure 34
Tony Cragg (1995) *Secretions*.



Figure 35
Tony Cragg (1995) *Secretions*.
Detail.

A sculpture can be perceived differently at different distances that affects the perception of scale. The sculpture *Secretions* (1995) by Tony Cragg (images above) illustrates this point. The image at left can be read as an organic sculpture – there are a series of forms that relate to one another forming a composition. The viewer needs to be a certain distance back from the piece in order to comprehend it as a whole. The relationships of the piece to itself, the environment, and the viewer work at a distance. The sculpture then changes as the viewer gets closer – see the image on the right. At a closer distance, the viewer becomes aware of two things – a detailed texture formed by a series of small objects, and a realisation that these objects are dice, which have an everyday connotation to the viewer.

There are additional complex meanings relating, as Susan Stewart would note, from the cultural connotations surrounding dice, gambling, games and the setting of this within a gallery. These factors add to the perceived scale of the work. When the viewer steps back from the piece and again has an overall view of it, the perception will be different from when they saw it for the first time. When the viewer is now viewing the piece, whether going closer or further away, they have to synthesise the differing impressions. This additional synthesising adds complexity to the work, and by extension is increasing its scale.

Henri Bergson in *Matter and Memory* notes

. . . if there be memory, that is, the survival of past images, these images must constantly mingle with our perception of the present, and may even take its place . . . Our perceptions are undoubtedly interlaced with memories . . . These two acts, perception and recollection, always interpenetrate each other, are always exchanging something of their substance . . . (Bergson, 2011, pp. 70-72)

Applying Bergson's theory, when the viewer subsequently looks at this work, even from a distance, he will recall its construction with dice. His perception of the work will, therefore, be different from the first time he saw the work not realising the construction from dice. These subsequent views, because they have the memory of the detail, will increase the perceived scale of the work for the viewer. One aspect that is interesting is that the change in perception due to memory, in this case, is only one-way, and can't be undone. If another set of viewers were to view the work, but the

logistics of the installation were such that they could only view from a distance, then their interpretation of the work would be different from those viewers who had also experienced the work from a close distance. Arguably, the above effect applies to some degree to the perception of all artworks, but it is more pronounced in the Deacon work compared to say Alice Aycock's work (fig. 42) where the latter is an assembly of smaller elements that in themselves are not as heavily loaded with meaning.



Figure 36
El Anatsui (2010) *Ozone Layer*. Aluminium and copper wire, 420 x 540 cm.



Figure 37
El Anatsui (2010) *Ozone Layer* (detail).

The idea of the effect on the perceived scale when the work contains recognisable elements is interesting to pursue further. Consider the work of El Anatsui, and *Ozone Layer* (2010) (figs. 36 and 37). When looking at the work from a distance, it is clear that it is made up of a series of components, and these components cause a ripple and shimmering pattern in the work that in itself increases the perceived scale. A closer inspection reveals that the components are standardised metal tags woven together with coloured wire. The close-up detail is very intricate and draws the viewer in both in the small size and interaction of the components, but also in the recognition that the components are something else – i.e., metal tags.

It is interesting to compare Tony Cragg's *Secretions* with El Anatsui's *Ozone Layer*. While both comprise of small recognisable components, the acknowledgement of the component nature is very different when looking at the works from a distance. With *Secretions*, there is a separation between the overall form when perceived at a distance, and the perception of the work when viewed close up. On the other hand, when viewed from a similar distance *Ozone Layer* reads like a definitive assemblage of components, and viewing from a closer distance reinforces this perception. With the later work the viewer is drawn more into the work, and therefore the perceived scale of the work is greater. Similarly, the dissonance between the distant and up-close perception of *Secretions* introduces an element of distance between the viewer and the work. With *Ozone Layer* the viewer is intimately connected to the work at a close distance, whereas at a similar distance with *Secretions* the viewer is close to the work, but is psychologically held at arms distance.



Figure 38
Anthony Caro (1971) *Canal*. Rusted steel, 104 x 184 x 165 cm.



Figure 39
Silhouette figure at approximate scale size relative to sculpture shown at left.

The previous two examples used small components to make much larger composite works. The example above, Anthony Caro's *Canal* uses larger recognisable components, in this instance steel beams, tubes and plates. The scale of the component pieces (relative to the size of the human body) is much larger in this work compared to the previous examples, and as such are more identifiable as discreet pieces of the composition rather than making a tapestry or collage. Regarding size, the work is not as tall as a person standing but is slightly larger than a person laid horizontally. The perceived scale of the work is smaller than this due to the fewer pieces, singular material, and monochromatic colour. The viewer cannot be intimate with the piece in the same way possible with the Anatsui sculpture, and there is a greater psychological distance between the viewer and the work.

The 'literalness' of the component piece is also an issue in the scale perception. The steel beams in the Caro work are recognisable, but arguably there is less of a memory in the mind of the viewer for this type of object compared to (an arguably large) set of hand tools in as will be seen in David Smith's work (Fig. 40). This decreased physical memory on the part of the viewer means that he/she will tend to view the work more abstractly.



Figure 40
David Smith (1963) *Volton XVIII*. The sculpture is 2.78m tall.



Figure 41
Silhouette figure at approximate scale size relative to sculpture shown at left.

David Smith's *Volton XVIII* (fig. 40) is also a work made from assembled pieces, some of which are recognisable objects. The height of the work at 2.78m is considerably taller than a person and has a degree of presence based on its size alone. The work includes several industrial-scale tools, a wrench and a pair of tongs that while very large, nonetheless gives the viewer a more direct feeling of the size of the piece. While the tools used contain a particular meaning and response, this does not seem to be the primary emphasis of the work, and Smith uses the tools as components in an abstract fashion. Their inclusion does change the scale perception of the work. In the previous examples by Caro and Anatsui, the components are so small relative to the overall work that individually they are a small part of the whole. In the case of *Volton XVIII*, however, the industrial tools are a significant portion of the total work and therefore are a more significant factor in the interpretation of the piece. These tend to make the perceived scale of the work smaller, and arguably the Caro piece has a larger perceived scale despite it being physically smaller.

Using the Caro and Smith pieces as a reference, one can argue that the larger the component pieces are in an assembled sculpture relative to the size of the human body, the smaller will be the perceived scale of the piece. Recognisable components that make up the work, of which the viewer has some physical memory is significant in the scale (rather than size) perception. If all of the

components of the assembled piece are non-recognisable elements, then the perception becomes a reference to size (i.e., comparing to one's body size) and to the pattern and density of the components relative to the whole.



Figure 42
Alice Aycock (2014) *Hoop-La*



Figure 43
Silhouette figure at
approximate scale size
relative to sculpture
shown at left.

Alice Aycock's *Hoop-La* (2014) is similar to the Caro and Smith pieces in that they are all made from smaller components. *Hoop-La* differs in that the components are abstract, and are not recognisable elements either assembled or re-purposed to make the whole. The viewer's physical memory activated in the Caro and Smith pieces is not activated when viewing this work. Size predominates in this work which is 5.8m high x 7.32m long. The key to the viewer is the relation of the work and the components relative to his/her body size. The components are large and range from half size to several times the size of the viewer. The intricacy of work brings the viewer into the work, but the size of the components and the work keep the viewer at a certain distance away (see fig. 44 below). The perceived scale will tend to be smaller rather than larger, and in the setting of an expansive external environment as pictured, will require a larger size in order to establish a 3-way relationship between the environment, the viewer, and the work.



Figure 44
Alice Aycock (2014) *Hoop-L*. Detail

* * *

This dissertation started by looking at the work of several writers and artists and their views on size and scale. The dissertation considered their views as they pertained to abstract sculpture and developed from that starting point. Morris conflated size and scale and didn't consider effects of the qualitative aspects of scale. The dissertation adapted and expanded his observations on the three-way nature of artwork, viewer, and environment. Rachel Wells uses a 1:1 original reference size as a baseline to evaluate size and scale. For much of abstract sculpture with no identifiable scale elements this approach does not work, although when a sculpture comprises recognisable objects (say steel barrels in the *London Mastaba* example) that these affect the size and scale perception. Susan Stewart uses the body as a reference frame and works outward to miniature and gigantic with our interpretations socially influenced. The dissertation argued that the scale and contents of the external environment act inwards, in other words, they influence a viewer's perception of size and scale. Barbara Hepworth focused on the qualitative aspects of the work, and while size is of importance, this seems to have been accommodated intuitively by her. The dissertation shows the 'fine-tuning' that can occur between perceived scale and actual size depending upon the intentions of the artist. TJ Clarks' definition of size and scale is the closest model to that used in this dissertation in that the size of the human body determines an object's size, and that scale is qualitative, but the dissertation also demonstrates how the three-way relationship between the artwork, the viewer, and the environment influences scale perception.

The dissertation argues that while size and scale are different, they are very much interrelated. Depending on the artistic intentions, and artwork can be 'tuned' in the relationship between size and scale to calibrate the perception of the viewer. This calibration includes the amount of psychological distance between the viewer and the artwork, as well as the degree to which the environment is a factor in the perception of the artwork.

* * *

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REFERENCES / BIBLIOGRAPHY

Books

Bergson, H., Palmer, W.S. and Paul, N.M. trans. (2011) *Matter and memory*. Mansfield Centre (Conn.): Martino Publishing. First published January 1911

Foster, H. (1999) *The Return of the Real*. Cambridge, Massachusetts: The MIT Press

Fried, M. (1992) *Art and Objecthood – Essays and Reviews*. The University of Chicago Press.

Kalb, P. R. (2013) *Charting the contemporary: art since 1980*. London: King.

Kee, J. and Lugli, E. (eds) (2015) *To scale*. Chichester, West Sussex; Malden, MA: Wiley Blackwell, an imprint of John Wiley & Sons Inc.

Krauss, R. (1981) *Passages in Modern Sculpture*. Cambridge, Massachusetts: The MIT Press paperback edition.

Krauss, R. (1986) *The Originality of the Avant-Garde and Other Modernist Myths*. Cambridge, Massachusetts: The MIT Press paperback edition.

Morris, R (1966). *Notes on Sculpture, Part 2*. As included in Wood J., Hulks, D, Potts, A. (eds.) (2007) *Modern Sculpture Reader*. Leeds/Los Angeles: Co-published by the Henry Moore Institute and J. Paul Getty Museum, pp. 235-240.

Morris, R. and Tsouti-Schillinger, N. (2008) *Have I reasons: work and writings, 1993-2007*. Durham: Duke University Press.

Merleau-Ponty, M. (1962). *Phenomenology of Perception*, trans. Colin Smith. New York: Routledge & Kegan Paul

Potts, A. (2000) *The Sculptural Imagination*. New Haven: Yale University Press.

Serra, R. (1983). Originally published in *Richard Serra, Writings/Interviews*. Chicago: University of Chicago Press, 1994, pp. 141-54, as reprinted in Wood J., Hulks, D, Potts, A. (eds.) (2007) *Modern Sculpture Reader*. Leeds/Los Angeles: Co-published by the Henry Moore Institute and J. Paul Getty Museum, pp. 343-355.

Smith, T., Smith, S. and Smith, K. (2007) *Not an object, not a monument: the complete large-scale sculpture of Tony Smith*. First edition. Göttingen : New York, NY: Steidl ; Matthew Marks Gallery.

Stewart, S., 1993. *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection*. Duke University Press Books.

Wells, R. (2013) *Scale in Contemporary Sculpture*. London: Routledge

Wood J., Hulks, D, Potts, A. (eds.) (2007) *Modern Sculpture Reader*. Leeds/Los Angeles: Co-published by the Henry Moore Institute and J. Paul Getty Museum.

Articles

Best, S. (2006). 'Minimalism, subjectivity, and aesthetics: rethinking the antiaesthetic tradition in late-modern art', *Journal of Visual Art Practice*, 5:3, 127-142. Published by Routledge, a Taylor and Francis Group.

Caro, A. (1966) 'Sculpture's New Spaces' in *Art and Architecture: Journal of the Art and Architecture Society and Public Art Forum*, Spring 1996, No.44. [ONLINE] A shortened version of the talk available at: <https://www.readingdesign.org/sculptures-new-spaces/> [Accessed 21 December 2018]

Clark, T.J. (2000), 'Pollock's Smallness', in Varnedoe, K. (2000) *Jackson Pollock: New Approaches*. New York: Harry N. Abrams. pp. 15–28.

Meyer, J. (2004), 'No More Scale: The Experience of Size in Contemporary Sculpture' in *Artforum*, Summer 2004. [ONLINE] Available at: <https://www.artforum.com/print/200406/no-more-scale-the-experience-of-size-in-contemporary-sculpture-6960> [Accessed 21 December 2018]

Smith, R. (2013). 'Figure and Landscape: Barbara Hepworth's Phenomenology of Perception', in *Tate Papers*, no.20, Autumn 2013, <https://www.tate.org.uk/research/publications/tate-papers/20/figure-and-landscape-barbara-hepworths-phenomenology-of-perception>, accessed 16 October 2018

Wagner, A. (2011) 'Scale in Sculpture: The Sixties and Henry Moore: Rothenstein Lecture', in *Tate Papers*, no.15, Spring 2011. [ONLINE] Available at: <https://www.tate.org.uk/research/publications/tate-papers/15/scale-in-sculpture-the-sixties-and-henry-moore> [Accessed 20 June 2018]

Wells, R. (2015) 'Scale at Any Size: Henry Moore and Scaling Up', in *Henry Moore: Sculptural Process and Public Identity*, Tate Research Publication, 2015. [ONLINE] Available at: <https://www.tate.org.uk/art/research-publications/henry-moore/rachel-wells-scale-at-any-size-henry-moore-and-scaling-up-r1151302> [Accessed 20 June 2018]

Misc

BBC - History - King Charles I (no date). Available at: http://www.bbc.co.uk/history/historic_figures/charles_i_king.shtml (Accessed: 16 January 2019).

Moore, H. (2012) As quoted in Gagosian Gallery website surrounding their exhibition on Henry Moore entitled 'Late Large Forms', May 31–August 18, 2012, Britannia Street, London [ONLINE] Available at: <https://gagosian.com/exhibitions/2012/henry-moore-late-large-forms/> [Accessed 19 November 2018]