

**The Logic and Influence of Circle and Square**

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### **Statement of Originality**

This study is the result of my own independent work in which I have acknowledged the sources of my material.

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## Abstract

"...what one does essentially as an artist is that you create a highly limited situation in which to operate and then you use it in such a way that people don't think it's limited at all." (Michael Craig-Martin talking to John Tusa)<sup>1</sup>

In the spirit of *Craig-Martin's* assertion, this enquiry will limit the situation by focusing on the use of circle and square in the oeuvre of two artists: *Victor Vasarely* and *Anish Kapoor*.

There will be a case study for each artist. Each study will seek to place the chosen artist in an appropriate context; give a brief overview of their process, their use of motif and materials; detail some significant outcomes; show how their work might relate to circle and square; and explore how this might illuminate *Craig-Martin's* assertion.

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<sup>1</sup> TUSA, John, *The Janus Aspect*, Methuen, London, 2005, p.49.

## Introduction

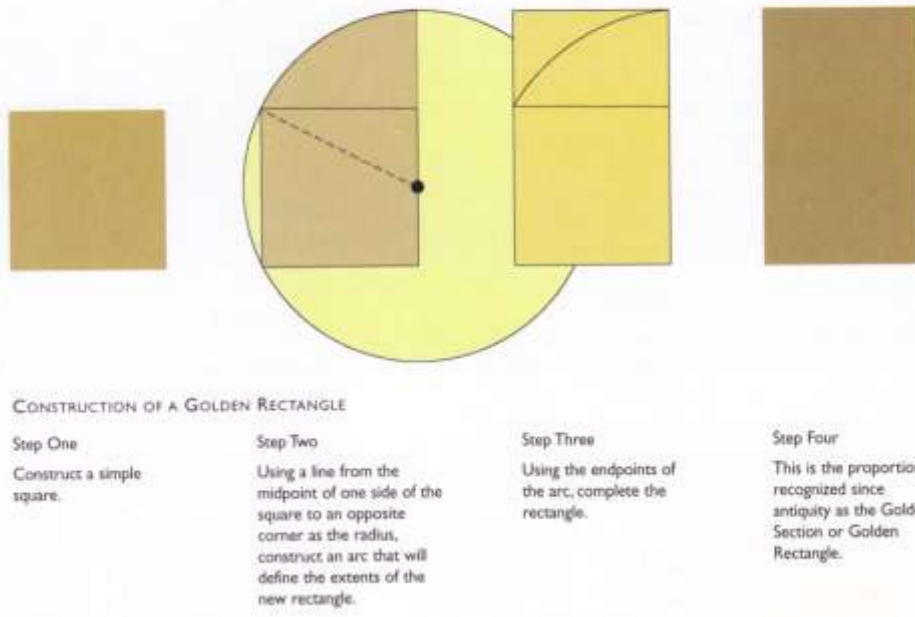
We could legitimately start in circa 529 BC with the formation of the Order of the Pythagoreans, but it is perhaps more relevant (for this study) to begin with *Aristotle's* (384 BC – 322 BC) famous table:

The Pythagorean Table of Opposites				
Limited/ Unlimited	Odd/ Even	Unity/ Plurality	Right/ Left	Male/ Female
At Rest/ In Motion	Straight/ Curved	Light/ Darkness	Good/ Evil	Square/ Oblong

To this set of examples we could add Circle/ Square as a pair, justifying their inclusion as opposites (of similar type) because both: enclose a two dimensional space or area and are symmetrical about their horizontal and vertical axis; while circle utilises a continuous curved line and no straight lines; and square utilises four equal length straight lines and no curved lines. So circle and square make for good metaphor in relation to opposites. Of course, what is considered opposite may be rather subjective, but this was true of *Aristotle* and the Pythagoreans too<sup>1</sup>.

Circle and square are also important shapes for Renaissance artists, where one use was as an aid to construction of a golden section rectangle, which in turn was used as a map to aid the layout of work that maintained a visually appealing proportion<sup>2</sup>.

## THE GOLDEN SECTION: A MAP FOR EARLY ARTISTS



**Figure 1: The Golden Section: A Map for Early Artists**

“The Golden Ratio divides a whole so that the smaller part is to the larger as the larger is to the whole”<sup>3</sup>. However, here we will not be diverted into discussing the influence of the number sequence described by *Fibonacci* as this is discussed in great detail elsewhere.

By accepting circle and square as metaphor for opposites it can be suggested that these symbols be useful in visually representing the two states of a logic system. Such states are more often represented as presence and absence or true and false and more conveniently as the symbols 1 and 0 (zero). By using circle and square a visual balance can be created between the symbol pair with square replacing 1 and circle replacing 0. We may add to this acceptability by ensuring the square and the circle enclose equal areas.

As you can see (in continuing this line of enquiry) there is a significant danger that we might become embroiled in an already well discussed and documented

intersection between mathematics and art. This quote might help us stay on message:

"...What one does essentially as an artist is that you create a highly limited situation in which to operate and then you use it in such a way that people don't think it's limited at all." (Michael Craig-Martin talking to John Tusa)<sup>4</sup>

In the spirit of *Craig-Martin's* assertion this enquiry will, while acknowledging the influence of circle and square throughout art history, focus on the oeuvre of two artists: *Victor Vasarely* and *Anish Kapoor*.

Both *Vasarely* and *Kapoor* present interesting examples of the use of circle and square in their art. However, there is a significant difference in the manifestation of that influence. *Vasarely's* use is overt, circle and square run throughout his main works, they are key elements of his oeuvre; *Kapoor* much less so, with circle and square directly influencing a much smaller number of works.

However, we can see the use of opposites throughout *Kapoor's* work - usually in the form of object / non-object or presence / absence; where presence and absence can relate to what is physically present and what can be imagined to be present. So our table of opposites might now include:

Circle/ Square	0/ 1	False/ True	Object/ Non-object	Presence/ Absence	Physical/ Imagined
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However, while keeping the other opposites in mind, in researching *Vasarely* and *Kapoor* we will focus on their use of circle and square.

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1 In the context of this study, the concept of opposite is very subjective, as indeed it was with *Aristotle*.

“... [Aristotle’s] references [to the table] are made merely in the interest of supporting certain views of his own...”

...Aristotle’s formal table has 10 members, because Pythagoreans considered 10 the perfect number. But pairs varied in different authors. Possibly no list or set number of opposites became canonical Among the Pythagoreans.”

See: ANON, “Table of Opposites”, <http://www.britannica.com>, accessed January 2010.

2 HEMENWAY, Priya, *The Secret Code*, Evergreen GmbH, Köln, 2008, pp.106-107.

3 CALTER, Paul A., *Squaring the Circle: Geometry in Art and Architecture*, Key College Publishing, New York, 2008, p.40

4 An excerpt from *John Tusa’s* interview with *Michael Craig-Martin* discussing the use of a limited vocabulary.

“(Craig-Martin) There’s no modulation in the colour at all, and so I have the images which came from one vocabulary, I have the colours that come from another vocabulary. They’re both comparatively limited: twelve colours; out of a couple of hundred images I actively at any time am using about fifty. It’s to do with bringing together these very limited things that I am trying to find as complex a realm of things to do as I can.

(Tusa) Is that one of the key things: the tension between the limited nature of the means and then the final richness of the outcome?

(Craig-Martin) Yes, but I would say that this has been true of art through the ages. What one does essentially as an artist is that you create a highly limited situation in which to operate and then you use it in such a way that people don’t think it’s limited at all.”

See: TUSA, John, *The Janus Aspect*, Methuen, London, 2005, p.49.

## Chapter 1: Victor Vasarely – a case study

This study will place *Vasarely* in a context of influences for using circle and square, look at his use of process and materials in relation to several works and examine a single work in more detail.

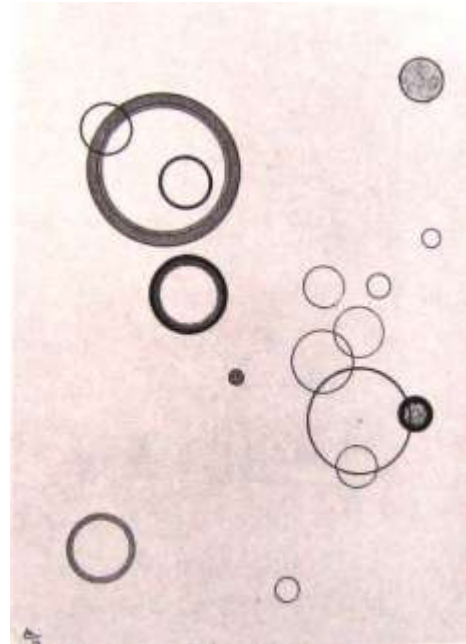
Probably even a casual observer of *Vasarely's* oeuvre would recognise his pervasive use of circle and square, both forms are found throughout his famous works. Here we are interested in the deliberately limited means as embodied by the use of circle and square, and so, from where might *Vasarely's* use of these basic geometric forms emanate?

There appear to be three main identifiable influences: his training at a *Bauhaus* inspired art school, his work as a graphic designer, and his scientific training in medicine. He also became recognised as a leading op-art artist, but reliable documented evidence suggesting *Vasarely* was influenced by other op-art or another op-art artist has not been found while researching this study.

Starting with the art school, *Vasarely* studied at the Bauhaus inspired Budapest Muhely Academy 1929-1930, where his teachers include: *Laszlo Moholy-Nagy*, *Joseph Albers*, *Paul Klee* and *Herbert Bayer*. The Bauhaus belief that, design and fine art were equally important must have influenced *Vasarely*, possibly encouraging him toward his highly designed outcomes<sup>1</sup>. Of course, within the scope of *Bauhaus* there are many potential influences for the use of circle and square.

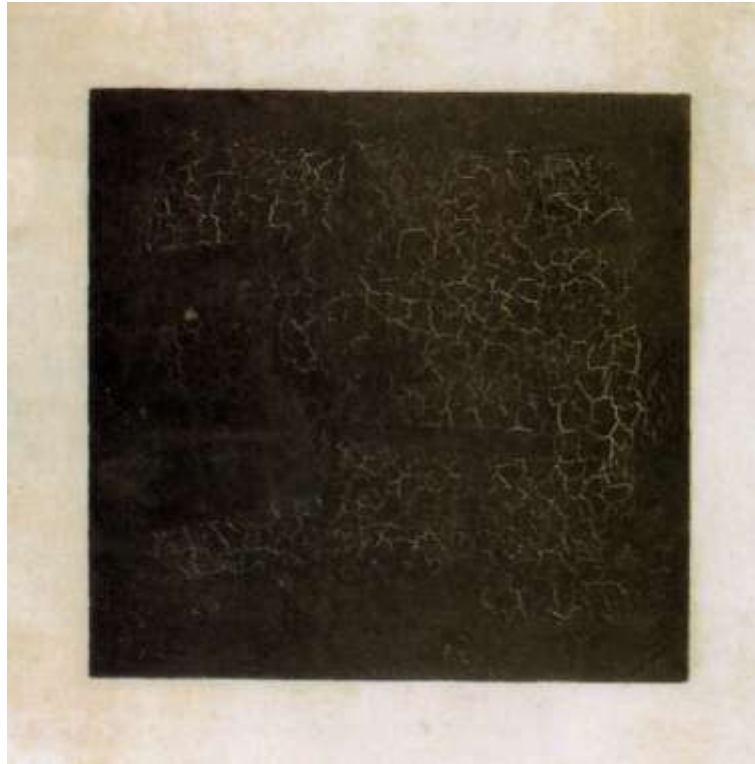


**Figure 2: Wassily Kandinsky**  
**Several Circles, 1926**  
oil on canvas, 140 x 140 cm

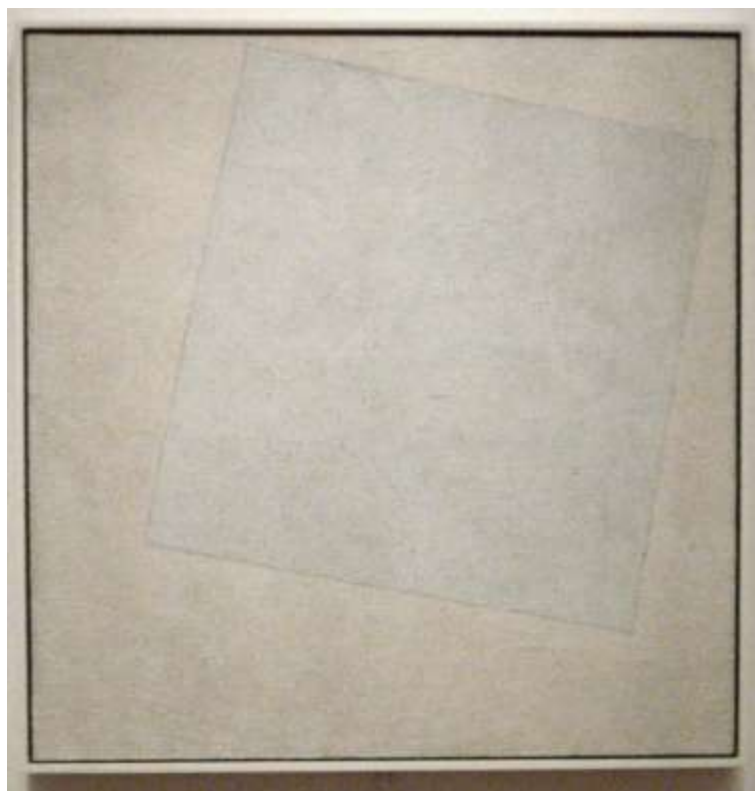


**Figure 3: Wassily Kandinsky**  
**Drawing No. 1, 1923**  
Pencil and ink on card 32 x 23 cm

Of these, it is difficult to avoid, *Wassily Kandinsky* and his use of circles in works such as *Drawing No. 1* (1923) and *Several Circles* (1926), both made while he worked at a *Bauhaus* school (in Germany). In these works *Kandinsky* used circle size, placement, line width, tone and colour to create depth and an impression of movement. Both works encourage the viewer to scan the entire surface moving from one circle to the next. We will see later how this impression of rhythmic movement might translate to *Vasarely's* work. For now, it is fair to say that *Kandinsky's* use of circle is a prime candidate as influence for *Vasarely's* own use of circle.

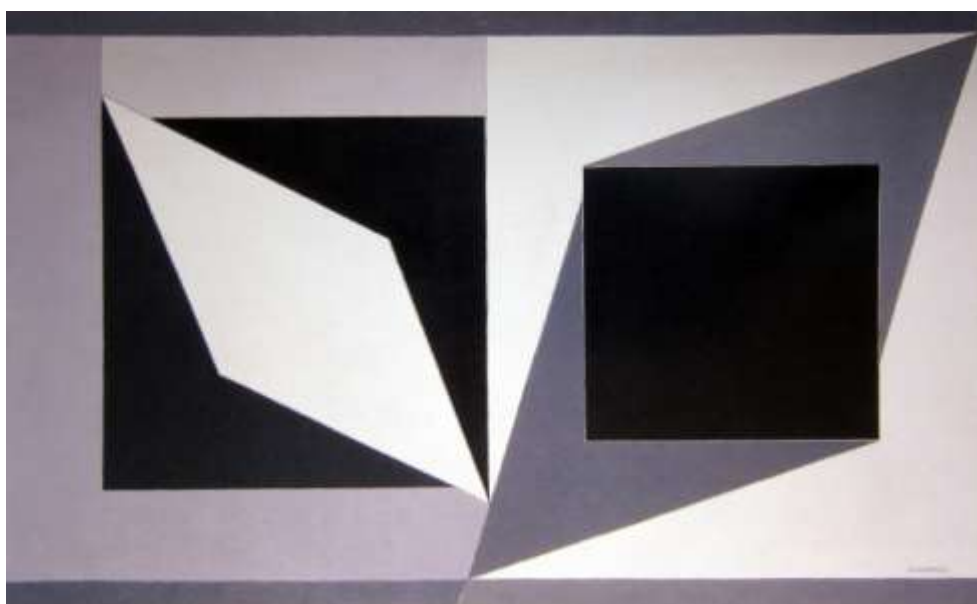


**Figure 4: Kasimir Malevich, Black Square on a White Ground, 1915  
oil on canvas, 79 x 79 cm**



**Figure 5: Kasimir Malevich, Suprematist Composition: White on White, 1918  
oil on canvas, 79 x 79 cm**

*Kandinsky* also used many other geometric shapes in his work, but a significant influence for *Vasarely's* use of squares must be attributed to *Kasimir Malevich* and works, such as, *Black Square on a White Ground* (1915) and *Suprematist Composition: White on White* (1918). Both works explore the use of square, the second with the inner square skewed in relation to the outer square.



**Figure 6: Victor Vasarely, *Homage to Malevich*, 1953  
oil on canvas, 130 x 195 cm.**

*Vasarely* went on to recognise this influence when he painted *Homage to Malevich* in 1953. In this work he combines the ideas of concentric square and skewed inner-square and then takes these concepts further by deliberately using them to create visual depth and movement (by distorting the square into a rhombus). An influence confirmed in *Vasarely's* own words when he said:

“The square of Malevich, beginning and end of the plastic adventure on the plane, has overcome its fate: The rhombus, another configuration of the square, is beautiful and quite definitely square + space + motion + time.”<sup>2</sup>

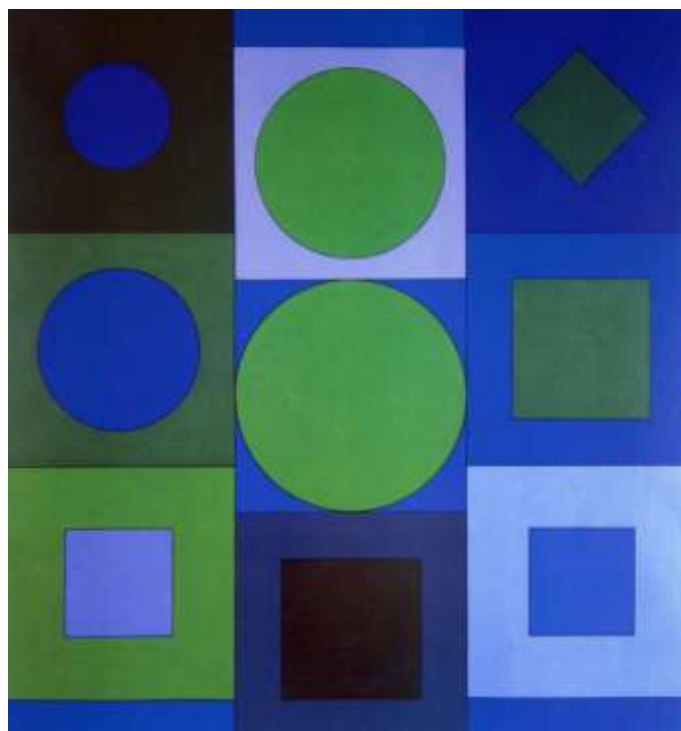
The second influence may have been *Vasarely's* work in graphic design, where it is quite normal practice for assistants to work-up designs based on ideas outlined by the lead designer (we will return to *Vasarely's* use of assistants later). *Vasarely* worked for several Paris based advertising agencies: Havas, Draeger and Davembez<sup>3</sup>. It is said that, he considered this the day job and, like many artists struggling to get by, spent all his spare time pursuing his own art with the goal to eventually make the night job the day job<sup>4</sup>. He succeeded, however, *Vasarely* did return to advertising when he agreed to help modernise the public image of Renault by designing their new logo in 1972, suggesting advertising remained an influence well into his career. Renault's familiar geometric logo has since been modified to coincide with the modern trend for curves in car design, but still bears the design mark of its originator<sup>5</sup>.



**Figure 7: Victor Vasarely, Etudes Bauhaus (A, B, C and D), 1929  
oil on board, each 23 x 23cm**

The third influence may be *Vasarely's* scientific background. He had abandoned his study of medicine at the University of Budapest (after two years, 1925-1927) to study drawing at the Podolini-Volkman Academy, also in Budapest (1928), before enrolling at *Sandor Bortnyik's* workshop, the Budapest Bauhaus, where he studies constructivism<sup>6</sup> leading to his first geometric abstractions (*Etudes Bauhaus*) - confirming the early influence of *Bauhaus*. Already these early works show evidence of a formal systematic and analytical approach coupled with a meticulous and precise graphical style; a style that would develop and grow.

We have seen *Vasarely's* use of square and geometrically transformed versions of square (in *Homage to Malevich*) and speculated as to the source of his use of circle (via *Kandinsky*).



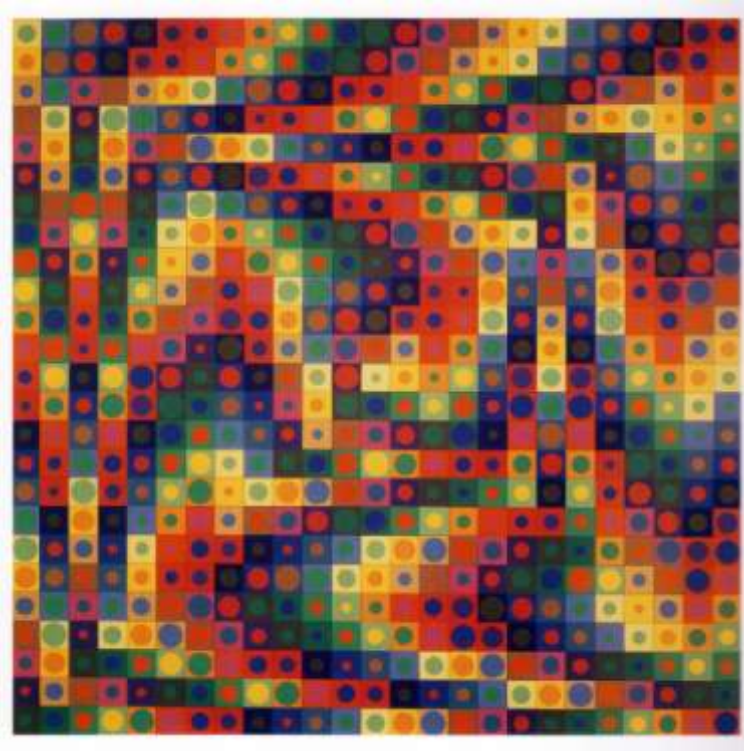
**Figure 8: Victor Vasarely, Alphabet VB, 1960  
acrylic on canvas, 160 x 150 cm**

The speculation re circle is (maybe) arguable, but what is not, is that he went on to employ square and circle as base components in his modular approach to creating art. Both forms can be found in his works *Alphabet VB* and *Alphabet VR* (both 1960). These are considered seminal to his oeuvre, so much so that, just prior to showing these works *Vasarely* took out a patent on this, his most far-reaching invention he called the 'plastic unit', a module consisting of a square and an inscribed geometric figure (very often a circle), which, in analogy to the letters of an alphabet, may permit nearly unlimited combinations of form and colour<sup>7</sup>. This concept was so fundamental to his work that *Vasarely* said:

“My plastic units: multicoloured circles, squares, are counterparts to the stars, atoms, cells and molecules, but also grains of sand, pebbles, leaves and flowers.”<sup>8</sup>

Thus recognising the grand purpose of his 'plastic unit', that circle is as of equal importance to square, and that he considered his art relates to the construction of all things (making a conceptual link with his scientific training).

*Vasarely* went on to use these geometric forms throughout his art, and specifically when exploring two major lines of enquiry: geometric order and inner structure (where detailed examination reveals a clearly defined repeating pattern described by an applied set of rules); and visual distortions with the illusion of a three dimensional form on a two dimensional surface.



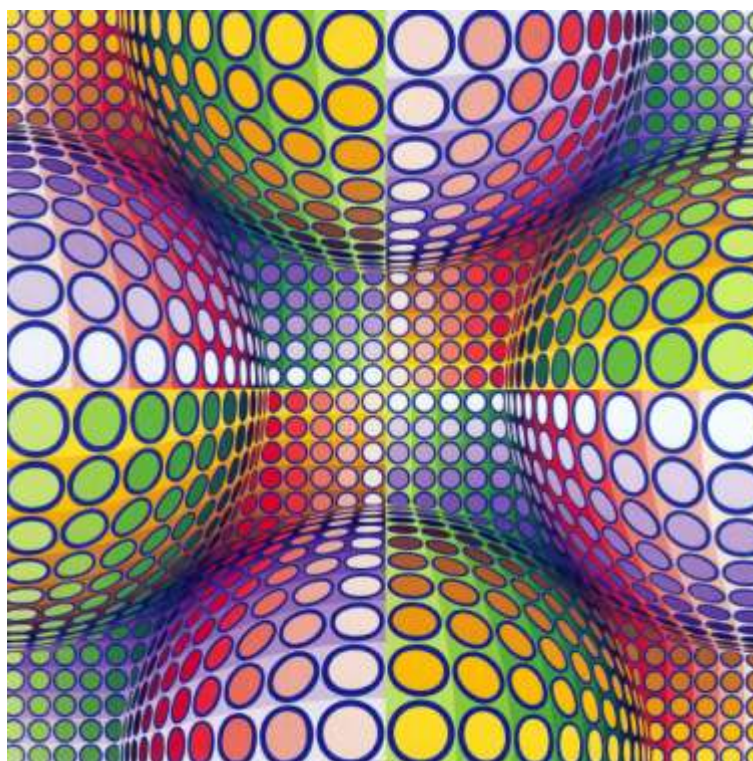
**Figure 9: Victor Vasarely, *Majus-MC*, 1967  
acrylic on board, 52 x 52 cm**

For example in 1967 he painted *Majus-2* where he utilised square within square to explore “a cyclic sequence of form and colour combinations”<sup>9</sup> and also *Majus-MC* where he used circle within square to depict a very similar rhythmic sequence. With the exception of local contrast between adjacent elements, both works are visually rather flat<sup>10</sup>, but the repeating pattern and the placement of contrasting colour and shape, manage to manipulate the observers’ eye, encouraging repeated scans of the entire painting surface. These paintings demand to be viewed in a rhythmic way, as if they are in-motion (like *Kandisky’s* circles). Both works are good examples of *Vasarely’s* use of geometric order and inner structure.

In the late 1960s and on into the 1970s and beyond, *Vasarely* explored the potential for creating a three dimensional illusion on a two dimensional surface.

He achieved this by applying spherical distortions to a polychromatic grid, where the surface appears to have been warped, giving the feeling of something trying either to extend forward or to recede back from the surface<sup>11</sup>.

One major series, the *Vaga* series, primarily employed circle or square, or a combination of circle and square to depict these structural surfaces. Of course, in the final image the circle and square have been distorted into a two dimensional representation of three dimensional space, but they still register to the viewer as being the familiar base components of *Vasarely's* oeuvre.



**Figure 10: Victor Vasarely, *Vaga-Lep*, 1970  
acrylic on board, 150 x 150 cm**

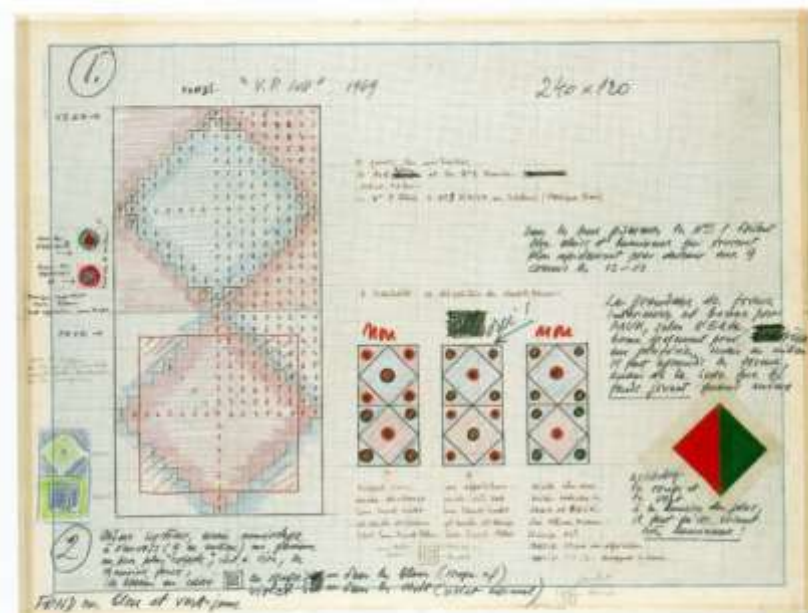
In *Vaga-Lep* it appears that colour and tone are as important as shape and composition; colour and tone make an equally important contribution to the illusion of three dimensions, so important that *Vasarely* invented a modular system for colour to work along-side his plastic units.

This system consisted of:

“...six scales, each with twelve or thirteen nuances, ranging from light to dark, [to which he] added coloured blacks...” (Vasarely in discussion with French art critic Jean-Louis Ferrier)<sup>12</sup>

Vasarely described this combination of modular colour and modular inscribed geometric shapes, as his *alphabet plastique* (plastic).

The Vasarely alphabet was then used in conjunction with scale (graph) paper to make preliminary drawings that he called *programmations* (programs). These programs are said to be the soul of Vasarely’s oeuvre, the most intimate expression of his visual language, a language that allows for a work of art to exist in a virtual space, a work that is planned, but remains unmade until someone follows and applies the programs instructions<sup>13</sup>.



V.P. 108, 1969

**Figure 11: Victor Vasarely, oeuvre VP108, 1969  
scale paper drawing**

These programs are so important to Vasarely’s oeuvre it is fair to say they “embody the true moment of creation”<sup>14</sup>. That is, once the program had been

defined the final outcome was (in a sense) inevitable; a characteristic that would be put to great effect via Vasarely's use of assistants to implement the programs. Until 1965, Vasarely rendered the programs he devised as paintings himself, then he enlisted the help of assistants. He continued to make single pieces, but multiples and print editions based on the programs were all made by assistants<sup>15</sup>. Vasarely acted as the chief designer, working as he may have done in the advertising industry.

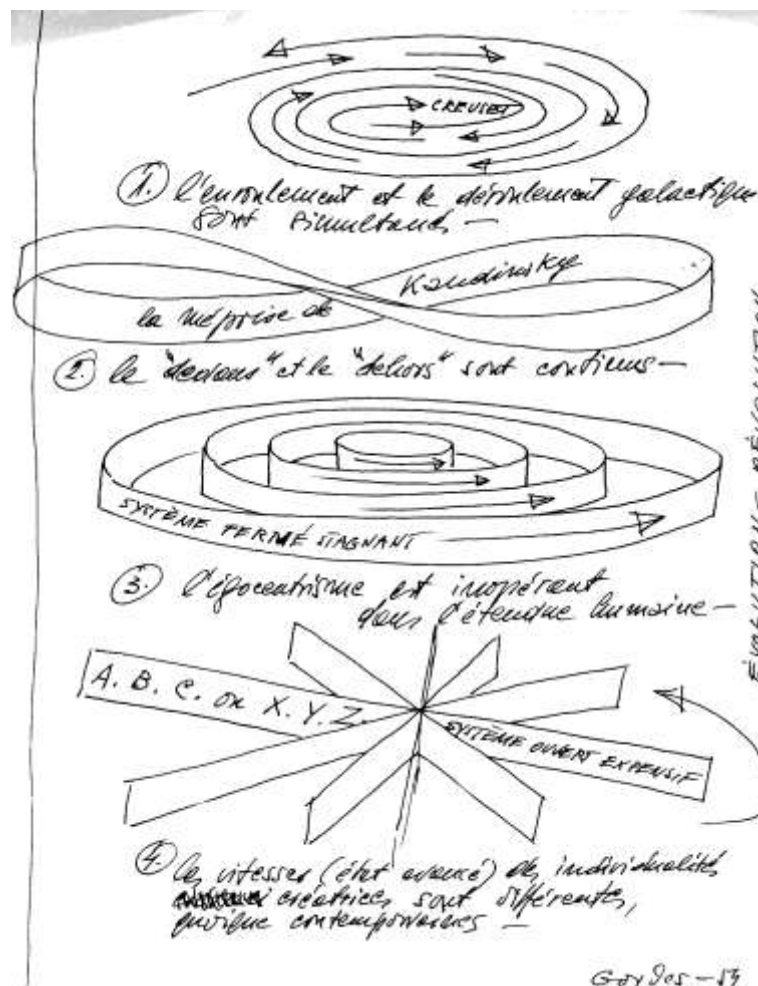


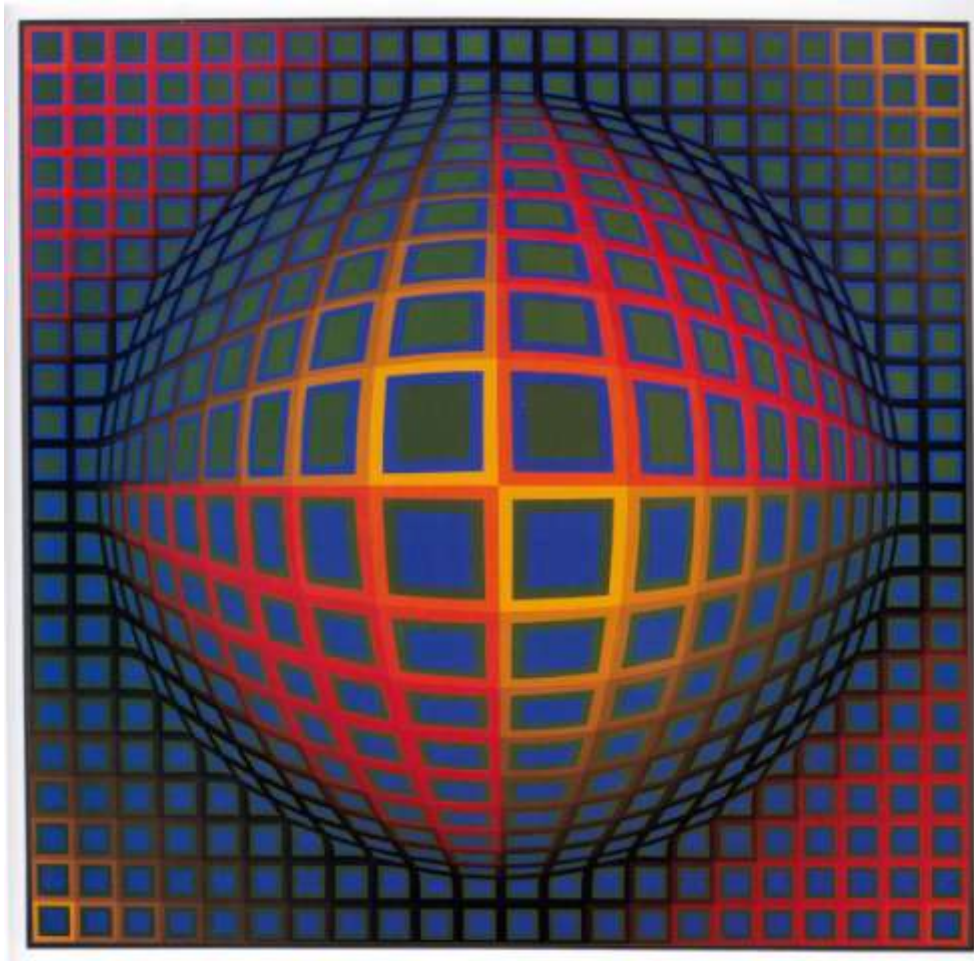
Figure 12: Victor Vasarely, journal drawing, 1959

In addition to the (arguably) scientific, highly organised and methodical system provided by the alphabet and the programs, like many artists, he is also known to have roughed the initial ideas in a journal (or sketchbook). This example

entry shows a train of thought and the initial development of an idea. The sketch appears to explore how evolution and revolution might be depicted using a graphical language or how the viewer might be persuaded to think of evolution or revolution by the types of motif employed. It also provides a further link to *Kandinsky* as an influence and exposes *Vasarely* thinking on a grand scale.

*Vasarely* employed contemporary materials. Making a brief survey of his work, we discover that he utilised a number of materials including: scale paper; pencil; ink; serigraph on aluminium panel; silk screen on aluminium; canvas and acrylic paint with smaller works on board; acrylic and silk screen; aluminium sculpture, hand painted by assistants; and acrylic on wood sculpture. Oil paint on canvas was used in the earlier part of his career, but gave way to acrylic for his more famous oeuvre works. The sculptures were generally geometric three dimensional forms embellished with two dimensional designs built using circle and square or geometrically distorted (transformed) circles and squares; creating a blend of optical three dimensions on a two dimensional surface and optical three dimensions on a three dimensional surface.

There were many works and series of works made using circle and/or square as basic modular blocks. The *Vaga* series deals with creating a three dimensional illusion on a two dimensional surface using circle, square and geometric distortions. At this point we will focus on a single work from the *Vaga* series: *Vaga-nor*.



**Figure 13: Victor Vasarely, *Vaga-nor*, 1969  
acrylic on canvas, 200 x 200 cm**

The following description relates *Vaga-nor* to circle and square and how this might fit with *Vasarely's* systematic use of modular components. Unfortunately this specific work has not been directly observed, but maybe – given *Vasarely's* propensity for making (his) work available to as many people as possible through prints (he called multiples) - he would not mind so much if this work is analysed via one such reproduction. So, the description here is written from observing a relatively small print in the *Robert C Morgan* book *Vasarely*, other small web image versions on the Internet, and related *Vaga* series work in the *Taschen Vasarely Portfolio*.

*Vaga-nor* is currently held in the Albright-Knox Art Gallery Masterworks Collection in Buffalo, USA. It is a large acrylic on canvas painting (200 x 200 cm). The painting is of modular design with a base component of square within square. To be more precise there are three squares in each component. The squares are arranged concentrically to form a cell and multiple cells are arranged as a grid over the surface of the painting. There are 484 (22 x 22) cells and therefore 1452 (484 x 3) squares. The grid is, however, not uniform. It has been geometrically distorted to create the illusion of a hemispherical bulge in the surface of the painting, either concave or convex depending upon your propensity and perspective. In actuality the bulge is a little less than a full hemisphere. Given the grid (and its similarity to the dimpled surface on a golf ball), you could observe that the result has been created by pushing a ball into the back of an elastic grid. This (description) would fit well with the stretch observed as being greatest at the (imagined) maximum point of deflection - at the centre of the painting. Systematic use of tonal variations on the base colours of red, orange, yellow, green and blue supplement the illusion. The application of structural rotational symmetry increases the overall illusion of roundness. The use of hot colours near the centre and cooler colours on the periphery make it more likely that the surface will be observed as convex (basic colour theory suggests that cooler colours recede and hot colours are pushed forward). All of this can be observed from the reproductions.

What cannot be observed (in such a small reproduction) is the quality of the painting and the effect of scale. However, using our experience of viewing other large scale work<sup>16</sup> we can speculate that the illusion of the bulge will be

enhanced by a scale that matches the frame of a typical human body – the diameter of the bulge being around 160cm. This size will also allow the work to be observed from a large range of distances. From across the room we would see the whole image at a single glance; standing within a metre of the painting would force large head movements to scan the entire work. As we approach the work it is likely that at some point the illusion will be lost and we will instead be encouraged to focus upon the quality and accuracy of the brushwork. Indeed down-sizing an image for publication in a book, or a relatively small print, does increase the impression of accuracy and fineness of line. However, observing the success of the overall illusion points to the work being fine enough (fit for purpose); and possibly very fine indeed.

Here *Vasarely* has taken his most basic plastic unit of square within square, applied it to a grid and then distorted that grid to imply a third dimension and a circle that is never actually drawn. It is a powerful example of his systematic application of modular components.

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## 1 Bauhaus

“Revolutionary school of art, architecture and design established by the pioneer modern architect Walter Gropius at Weimar in Germany in 1919. Its teaching method replaced the traditional pupil-teacher relationship with the idea of a community of artists working together. Its aim was to bring art back into contact with everyday life, and design was therefore given as much weight as fine art.”

See: ANON, “Tate Collection Online Glossary: Bauhaus”, <http://www.tate.org.uk>, accessed December 2009.

2 ANON, *Taschen Portfolio: Victor Vasarely*, Taschen GmbH, Köln, 2006, no page numbers.

3 ANON, “Victor Vasarely: Chronology”, <http://www.vasarely-2008.com>, accessed October 2009.

4 ANON, “Victor Vasarely”, <http://op-art.co.uk>, accessed October 2009.

5 An extract from the Renault web site describing Vasarely’s contribution to the design of the company logo:

“Abstract art in the Renault logo and on France’s motorways

To modernize its image, Renault asked Vasarely to design its new logo in 1972. Vasarely had already worked in the advertising world and he placed his graphic talents at the service of the brand. The transformed logo maintained the diamond shape but gained cleaner, more dynamic and angular lines. A seventies design that has since been revised to reflect the new more rounded lines of the brand’s styling cues.”

See: ANON, “Victor Vasarely”, <http://www.renault.com>, accessed December 2009.

6 VASARELY, Michèle, “Victor Vasarely – The Inventor of Op-Art”, <http://vasarely.com>, accessed December 2009.

7 op cit. ANON, *Taschen Portfolio: Victor Vasarely*, no page numbers.

8 ibid. no page numbers.

9 ibid. no page numbers.

10 CUNNINGHAM, John M, “The whole and its parts - a Tribute to Victor Vasarely”, <http://vasarely-2008.com>, accessed October 2009.

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11 ANON, "Victor Vasarely", <http://op-art.co.uk>, accessed October 2009.

12: MORGAN, Robert C, "Starting Points", *Vasarely*, George Braziller Inc., New York, 2004, no page numbers.

13 ANON, "Victor Vasarely", <http://www.vasarely.com>, accessed September 2009.

14 *ibid.*

15 *op cit.* MORGAN, Robert C, "Starting Points ", *Vasarely*, no page numbers.

16 For example, works on a similar scale from artists such as: Mark Rothko, Jackson Pollock, and Bridget Riley as viewed on visits to the Tate Britain and Tate Modern galleries in London. See the bibliography for gallery visit details.

## Chapter 2: Anish Kapoor – a case study

This study will place *Kapoor* in a context of influences for using circle and square, look at his use of process and materials in relation to several works and examine a single work in more detail. Where appropriate, there will be commentary comparing *Kapoor* with *Vasarely*.

It is harder to directly relate *Kapoor's* art to specific influences for circle and square, instead we will start by looking more generally at who might have influenced him. In recent years there has been much said by *Kapoor* regarding the source of his own inspiration (usually via presentation or interview), making it unproductive for us to speculate too much. For example, in this quote *Kapoor* directly associates himself with both Modernist and Asian art:

“This is where two traditions – the modernist and the Asian – coincide very well. The modernist art that I admire views the self as the springboard from which the work takes on a life of its own. You find a very similar attitude in Asian art, where the self isn't the entity out of which all expression is determined. The self is only the means. That's why I keep saying 'I have nothing to say'.”<sup>1</sup>

Later in the same interview he goes on to pick out *Donald Judd*, *Dan Flavin* and *Sol LeWitt* for particular mention:

“On one level you could say that of Judd's boxes that what you see is what you see, but the truth of the matter is that if one looks in the full context of art, they are not only what you see. A stack of boxes is not just a stack – it's a ladder, it carries a whole series of very different pertinent emotional and even esoteric references. The same is true when one looks at Flavin today, and I would say the same is true of dear old Sol [LeWitt], even though Sol worked very hard to keep all that at a good arms length.”<sup>2</sup>

So what *Kapoor* is saying is that, despite the stated intention of the artist, once made, the work has a life of its own and is therefore open to the viewer's own

interpretation. The three artists mentioned all worked with geometric shapes in two and/or three dimensions. They utilised a wide range of materials and techniques; and they all gravitated towards serial working and serial outcomes.



**Figure 14: Donald Judd, Large Stack, 1968**  
Stainless steel and amber Plexiglas (10 units)  
470 x 102 x 79 cm, each unit: 23 x 102 x 79 cm

This can be seen in *Judd's* boxes, of which he made many installations in different materials and different colours. The boxes are rectangular (and of course square is a special form of rectangle), but the influence on *Kapoor* might

have more to do with the serial nature of the repeated object and the special relationship between object and space; an example of presence and absence.



**Figure 15: Dan Flavin, untitled (to the "innovator" of Wheeling Peachblow), 1966-1968  
daylight, yellow, and pink fluorescent light 244 cm square across a corner**

*Dan Flavin* is also well known for using many similar components in serial form to create his work (florescent light tubes). However, here he has created a singular piece and a very specific square displayed in a corner (as *Malevich* had displayed *Black Square*<sup>3</sup>). The influence on *Kapoor* may have more to do with *Flavin's* use of light as a material, but the square appears repeatedly in *Flavin's* work and may have influenced *Kapoor* too.

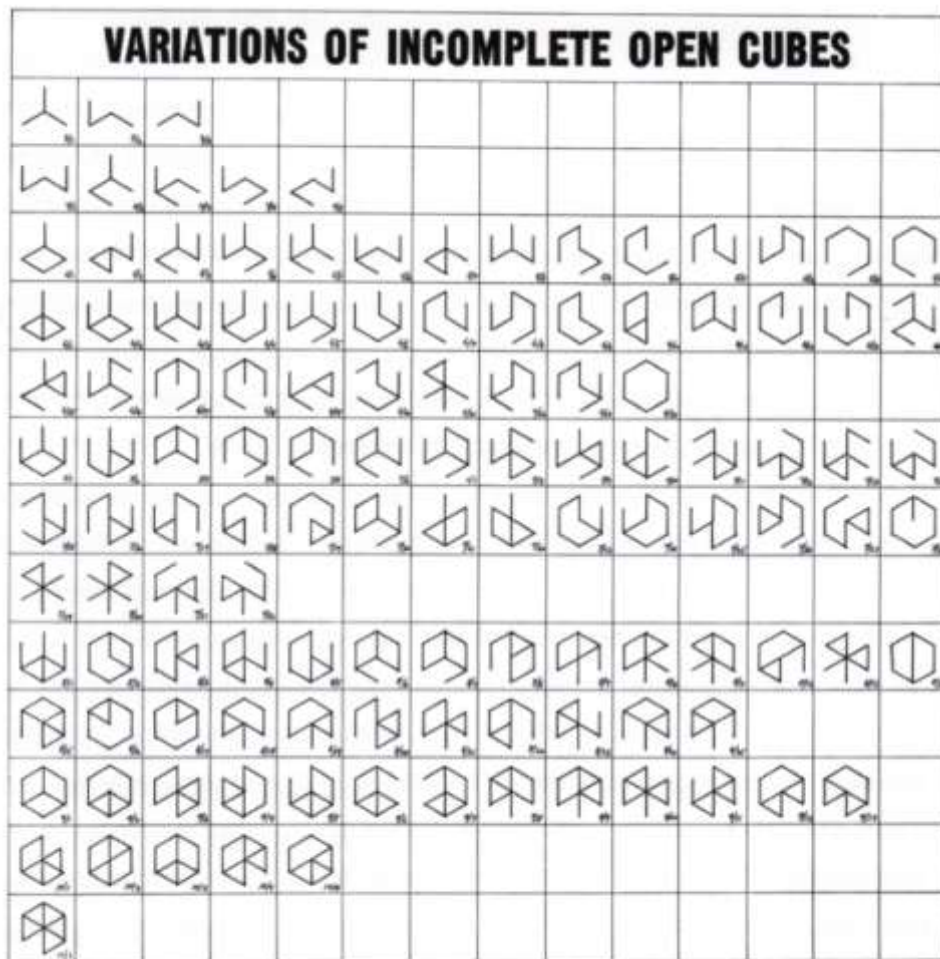


FIG. 19

**Figure 16: Sol Lewitt, Incomplete Open Cubes, 1974  
centre spread form a printed 4 page catalogue, 28 x 41 cm**

*LeWitt* worked with the square in a serial exploration of all the possible incomplete open cubes. Here they are drawn out as the centre spread of a catalogue, but he also went on to create many human (furniture) sized sculptures from this blueprint.



**Figure 17: Sol LeWitt, Incomplete Open Cube #7/1, 1974  
aluminium and enamel, 107 x 107 x 107 cm**

These incomplete cubes invite the viewer to use their own imagination to question and complete the form. Not only does this work deal with the square, as there are bits of the cube missing, it also deals with presence and absence. *Kapoor's* interest in presence and absence is suggested in a short biography published by his representing gallery (the Lisson Gallery):

“Kapoor sees his work as being engaged with deep-rooted metaphysical polarities; presence and absence, being and non-being, place and non-place and the solid and the intangible”.<sup>4</sup>

Another major influence on *Kapoor* may be the materials, processes and enabling technology available toward the end of the twentieth and start of the

twenty first century. Many of his more recent architectural scale creations would simply not have been viable without today's computer aided design and manufacturing.



**Figure 18: Anish Kapoor, still from video interview showing Kapoor discussing a drawing that morphs circle into square, drawing made in 1974**

Here is Kapoor discussing an early drawing that influenced a series of major works including *Marsyas*, as famously installed in the *Tate Modern Turbine Hall*, London in 2002.

“One of the first things I ever made as an artist some, almost 30 years ago now [in 2002]. This is a drawing I did I think in 1973 or '74, '74 probably. In which I asked a computer to change a circle into a square. What interests me about it is that I determined the two ends and in a sense the computer imagined the rest. I think I like that idea as a model for a way to think, that in fact you set-up the ends and the form in-between is at one level logical and another level I like the idea of it being imaginary”. (Anish Kapoor)<sup>5</sup>

This work and *Kapoor's* own explanation goes right to the heart of the influence of the idea of a logical progression from one state to another through a series

of, initially imaginary, but ultimately concrete stages; and gives a direct link for the influence of circle and square. While working through concepts for the Tate Modern Turbine Hall, *Kapoor* used this drawing as inspiration.



**Figure 19: Anish Kapoor, still from video interview showing Kapoor discussing a maquette related to his work Marsyas**

Initially the idea was to recreate the drawing on the grand scale of the hall, but it soon became obvious that the space provided by the hall and in particular the central platform demanded a different solution. Instead of moving from vertical-circle at one end to vertical-square at the other end, the final design acknowledges the presence of the hall's central platform by moving from vertical-fixed-circle at one end through to floating-horizontal-circle over the central platform and back again to vertical-fixed-circle at the other end.



**Figure 20: Anish Kapoor, Marsyas: Tate Modern Turbine Hall installation, 2002  
steel rings and PVC membrane**

The work succeeds in exploring the relationship between the opposites of vertical and horizontal, fixed and floating; and exploring the logical transition from one to the other by means of a flexible PVC skin. In *Marsyas*, Kapoor has morphed the ring (circle) between the vertical and the horizontal and back to the vertical once more. In addition, as another example of the use of opposites, the PVC skin teases us with apparent rigidity when in fact it is highly flexible.



**Figure 21: Anish Kapoor, *Melancholia*, MAC Grand-Hornu, Belgium, 2004**

*Kapoor* went on to realise his initial idea in 2004 with his work *Melancholia*. This time the chosen installation space allowed for a much purer relationship between that initial concept and the final outcome. In *Melancholia*, *Kapoor* matches the brief by morphing vertical-circle to vertical-square, in what is the truest rendition of his 1974 idea.

In reality *Kapoor's* oeuvre is not about, or limited to, circle and square. So, not all, or even the greater part, of *Kapoor's* output can be said to have an overt connection with circle and square, but if we accept circle and square as metaphor for opposites, then this can be seen in the vast majority. Indeed a recurring theme is to search for the non-object via the making of objects.



**Figure 22: Michael Heizer; North, East, South, West; 1967/2002**

*Kapoor* is by no means the only sculptor to explore the negative or non-object. For example there is a visual and probably a conceptual connection with *Michael Heizer's* excavations (negative sculptures) and particularly his work *North, South, East, West*. This work employs negative space by making circular and square excavations in the gallery floor (on a very large scale approximately 600 x 600 x 3800 cm).

So *Kapoor's* work has a strong connection with positive/ negative, object/ non-object, presence/ absence, and therefore the logical concept of opposites. He has also utilised circle and square directly to represent opposites in his series of work that encompass *Marsyas* and *Melancholia*.

*Kapoor* explores many of his ideas via drawings made on, or fixed to, the walls of his studio; we have already seen one example where he is shown discussing the drawing output from a computer program that morphed a circle into a

square. In the same video we can see drawings made or displayed on many of the studio walls. Each idea for a sculpture is also explored through the making of maquettes, these models allow critical analysis of the use of space and how the final work might sit at the intended installation site.



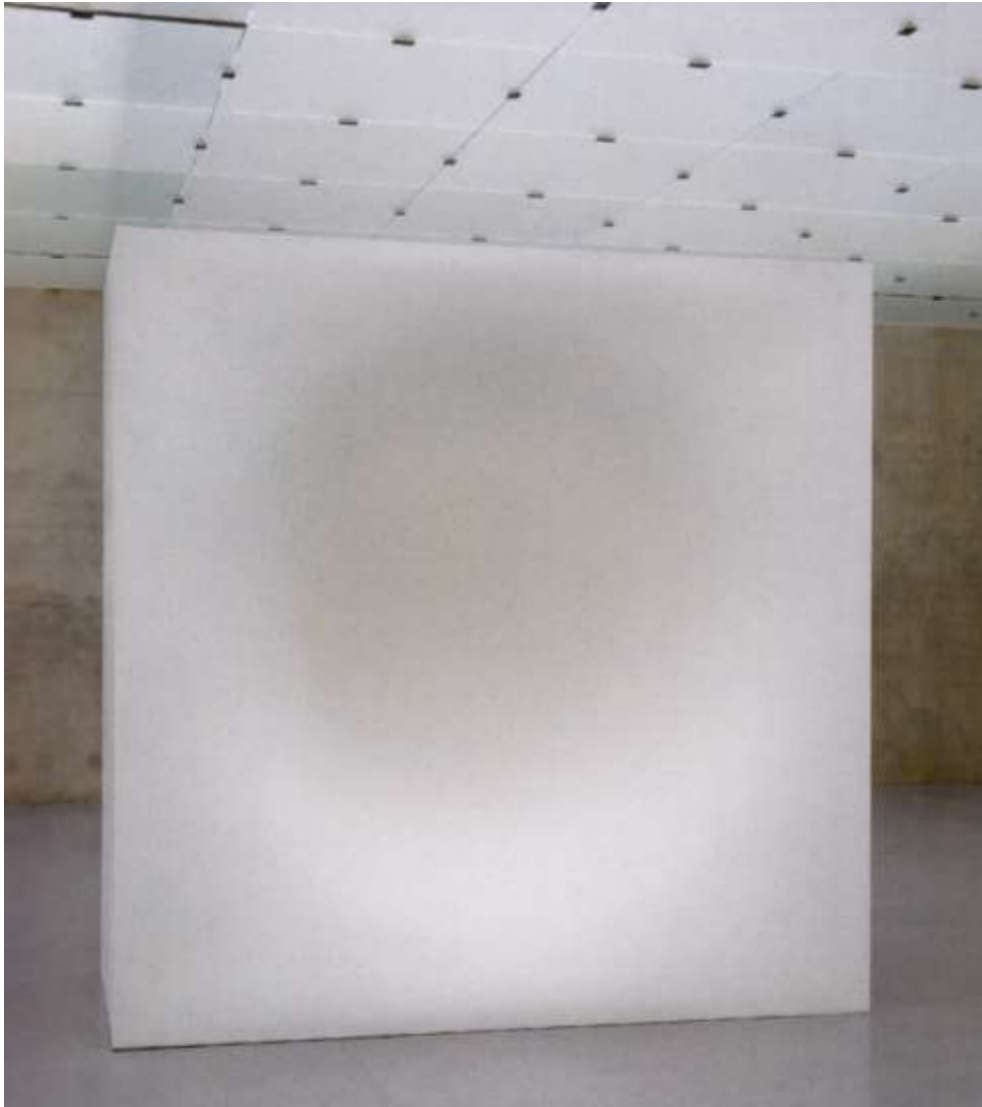
**Figure 23: Anish Kapoor, Past Present and Future, sketchbook extracts**

Sketch books are also used, as witnessed by the many sketchbook extracts interleaved between the pages of the Institute of Contemporary Art / Boston catalogue for Kapoor's 2008 exhibition – *Past Present and Future*<sup>6</sup>. The sketches, as with *Vasarely*, appear to explore the initial idea and may provide for a way of getting started and working out what is required to make the first maquette.

Like *Vasarely*, *Kapoor* has employed contemporary materials. If anything *Kapoor's* range of materials and processes exceeds that of *Vasarely*. Materials used so far include: pigment, fibreglass, steel, stone, resin, mirror, pvc, wax, concrete and even smoke!<sup>7</sup> *Kapoor* appears to revel in not being tied down to any one material or construction process.

Like *Vasarely*, *Kapoor* started out making all his own work; in those early days the scale was more manageable for a lone artist. Now, of course, when working on an architectural scale, great use is made of experts: from computer aided design and manufacture experts through to structural engineers, steel fabricators and construction engineers. Indeed an expert for every specialist process. This use of assistants and helpers now extends even to the smaller works, where he guides others to do his bidding, becoming hands-on only when it is necessary to show (by example) what is required<sup>8</sup>.

We have looked at the influence of circle and square on *Marsyas* and *Melancholia*, but there is another series of work that seems to connect with *Vasarely* in a more direct way.



**Figure 24 Anish Kapoor, White Dark VI, 1998**

In 1998 *Kapoor* made *White Dark VI* where he used a three dimensional concave surface to morph square into circle in the form of a large solid free standing block painted white. Maybe he was directly influenced by *Malevich* or even by *Vasarely* (an observation that may make more sense later). This is an important work, but we will look in detail at its larger more famous sibling, *Yellow*.



**Figure 25 Anish Kapoor; Yellow; 1999 - installed at the Royal Academy, London, 2009, fibreglass and pigment paint, 600 x 600 x 300 cm**

*White Dark VI* is free standing whereas this time (with *Yellow*) the concave surface is buried in the gallery wall, but the square is still morphed into a circle via the device of a concave surface. This picture was taken at *Kapoor's* Royal Academy Retrospective (2009) to clearly depict the scale of the work and the problem of viewing it properly in a crowded gallery. Ideally the work would be viewed alone when it could be contemplated without the interference of fellow observers. *Yellow* is very large (600 x 600 x 300 cm), so large as to dwarf the viewer. *Yellow* is bright, not in a shiny way (being matte), but in an absorbing way, the viewer is bathed in the warm glow of an imagined sun. *Yellow* should be approached from the front along the centre axis, when an illusion of a (*Rothko* like) two dimensional colour field painting is palpable. That is until you

are within touching distance, when the third dimension becomes fully apparent. The third dimension is such a surprise; disappearing 300 cm into the wall *Yellow* has us thinking twice about the thickness of the wall. Is the wall so thick, or is there a huge protrusion on the other side. We are not allowed to see the other side of the wall, so this is left to our imagination. Of course it is highly unlikely that the wall is that thick. So, *Yellow* has us imagining a very large intrusion on the negative (other) side of the wall. We can see the space released by the concave surface on this side but have to imagine the space occupied by the imagined convex surface on the other side. *Kapoor* is playing with our concept of object and space, and the relationship between what is in view and what is hidden (what is physical and what is imagined).

There is a strong visual link between *Yellow* and *Vaga-nor*. *Vasarely* used geometric illusions constructed with distorted squares (and an imagined circle) to depict a three dimensional image on a two dimensional surface. *Vaga-nor* is human in scale (at 200 x 200 cm). *Kapoor's Yellow* is three dimensional; but alludes to a two dimensional colour field painting (especially when viewed from a distance on the centre axis). *Yellow* is also very large, extra human in scale, a scale which probably helps seal the illusion (by encouraging us to view from a distance). In a very real sense *Yellow* provides for a similar but opposite experience to *Vaga-nor*. On approaching *Yellow* there is an illusion of two dimensions, which is broken as you approach within touching distance and the 300 cm depth becomes apparent. On approaching *Vaga-nor*, there is an illusion of three dimensions which is broken as you approach within touching distance and the flat surface of the painting becomes apparent. Both works play with our

concept of surface, volume and visual perception. Both images use the manipulation of circle and square to achieve their goal. Both images use deceptively simple means to convey complex ideas about how we visually perceive our environment.

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1 BAUME (editor), Nicholas, *Past Present Future*, The MIT Press, Boston, 2008, p.34.

2 Ibid. p.45.

3 An extract from an article discussing the first exhibition of *Malevich's Black Square*.

“Consider, for example, the way Malevich first showed it [Black Square] in the 1915 show "0.10. The Last Futurist Exhibition of Paintings," to which he contributed thirty-nine Suprematist works. An installation photograph shows Black Square mounted in an upper corner of the gallery, diagonally connecting two walls.”

See: ARTHUR, C Danto, “Paint it Black”, <http://www.thenation.com>, accessed January 2010.

4 ANON, “Anish Kapoor”, <http://www.lissongallery.com>, accessed December 2009.

5 ANON, *theEYE: Anish Kapoor*, Illuminations DVD, London, 2005.

6 BAUME, Nicholas (editor), *Past Present Future*, The MIT Press, Boston, 2008.

7 Anish Kapoor talking to John Tusa:

JOHN TUSA: “You work both with organic materials and with inorganic materials. Clearly I would say the appeal of the organic - the rock and the stone - is in no way greater than what you can get, the subtleties, the effects, with the inorganic. That's not a barrier for you in any way.”

ANISH KAPOOR: “No. I do like the idea that artists nowadays work in all sorts of materials. I've just shown you a work I've been making with smoke. To be an artist, in any of a huge number of ways, seems to me to be a huge psychological liberation. (Picasso?) He worked incredibly hard to liberate himself. You know he was able to fracture the world and make cubism, and then to reconstruct the world and make these very whole organic kind of images, and then very sexual things towards the end of his life. We can now, if we can liberate ourselves enough, open the possibility. The art world is so much more open.”

See: TUSA, John, *The Janus Aspect*, Methuen, London, p.158.

8 op cit. ANON, *theEYE: Anish Kapoor*.

## Conclusion

This study has examined the use of circle and square in art. It has done so by deliberately limiting the search for evidence to the oeuvre and influences of two artists: *Victor Vasarely* and *Anish Kapoor*. The decision to limit the scope of the enquiry was encouraged by a quote from *Michael Craig-Martin*, where he said that artists create a highly limited situation in which to operate, but then go on to use it in such a way that people don't think it limited at all.<sup>1</sup> Limiting the study was necessary to avoid a potential for almost infinite expansion of scope if the whole of art was studied for the influence of circle and square.

Very early on, a difference between *Vasarely* and *Kapoor* was recognised by accepting that *Kapoor's* limited situation is (generally) connected more with presence/ absence than it is with circle/ square. However, this did not stop us finding good examples of circle and square in *Kapoor's* art, allowing for good visual comparisons with *Vasarely's* art (for example *Yellow* with *Vaga-nor*).

Strong links were found for influences relating to circle and square in *Vasarely's* training at a Bauhaus inspired art school and strengthened by the school's connection with *Kandinsky* and *Malevich*. *Vasarely* used the deliberately limited motifs of circle and square to create a visual language, a language he then used to create a large number of works, made over many years.

From *Kapoor's* own words, came links to artists (such as *Judd*, *Flavin* and *LeWitt*) who worked with geometric shapes to make many diverse, often serial, outcomes. *Kapoor* used circle and square in a much more limited number of works (than *Vasarely*). However, *Kapoor* has stated that he is occupied with the

search for the non-object, he is intrigued by what is physical and what can be imagined;<sup>2</sup> his limited means is rooted in opposites. To accommodate this, a case was made for circle and square being used as metaphor for opposites and the subjectivity of opposites was briefly considered. In doing so (to stay within scope of the *Craig-Martin* assertion) it was suggested that exploring opposites might also be considered a limited situation. In any case good examples of *Kapoor's* use of circle and square were found.

Considering the use of circle and square in the context of *Craig-Martin's* assertion enabled a detailed examination of two artists from a very specific perspective. This examination uncovered several common (if subjective) factors that shed light on how an artist might expand an initially limited situation into one that does not seem limited at all. They are:

- first, a willingness to reference what has gone before;
- second, the use of a systematic well designed and understood process;
- third, a willingness to tackle new materials;
- fourth, the use of assistants, allowing them to command and direct others to make work and significantly expand their output in terms of both scale and quantity.

This last factor should not be underestimated, particularly with reference to our chosen artists, both of whom are well known for their prolific output. Indeed, the making of many highly regarded outcomes may be recognised as an important representation of what *Craig-Martin* described as 'not limited at all'.<sup>3</sup>

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1 TUSA, *The Janus Aspect*, Methuen, London, 2005, p.49.

2 ANON, *theEYE: Anish Kapoor*, Illuminations DVD, London, 2005.

3 op cit. TUSA, *The Janus Aspect*, p.49.

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