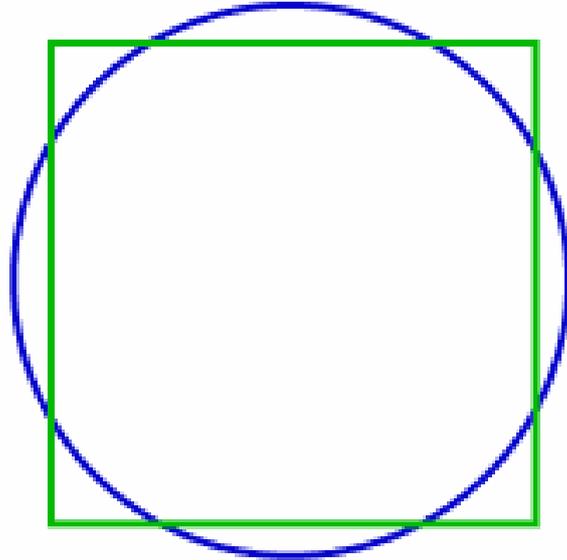


## SQUARING THE CIRCLE - AD DEKKERS BETWEEN PI AND PLATO<sup>a</sup>

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### Prologue

Ad Dekkers is generally considered to be part of the **second wave of geometric abstraction**, along with other Dutch artists such as Baljeu, Schoonhoven, Volten and Struycken. In response to the irrational outbursts of Cobra and the abstract expressionists and parallel to the rise of Pop Art, these artists fell back on the work of Mondrian and De Stijl and thus a bridge was spanned to international Minimalism (DeWitt, Andre, Morris, Kelly, Judd).

The following text is not a standard treatise on the meaning of an artist or the value of his work. It is no formal analysis, no semiotic interpretation nor an art-historical exegesis. It is an essay: an *attempt* to articulate a personal, idiosyncratic, and hopefully refreshing vision of Ad Dekkers and his oeuvre. At some point, the reader may miss the essentials, or he might get lost in seemingly unnecessary complications and digressions. Some scholars might even consider it an audacious blending of an artist and his art. To be clear, it's by no means my intention to set up an ad hominem line of argument on the art of Ad Dekkers. This text is written from a fascination and admiration for Ad Dekkers and his oeuvre, though. So much so that it stirred me to leave the beaten track and investigate a number of "sidings", which I hope will provide some surprising insights. These might result from my effort to discern some major Platonic undertones that keep humming in Dekkers' oeuvre. That his art is so well suited to philosophical wanderings I consider to be of indispensable added value.

Departing from the legacy of Plato, my main purpose will be to show that in Dekkers' oeuvre a serious contradiction exists between the pursuit of abstraction and objectivity on the one hand (for instance, an explicit exclusion of handwriting and capriciousness), and the emphasis on concreteness and

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<sup>a</sup> Originally published as: ***Squaring the circle – Ad Dekkers tussen Pi en Plato***, on the occasion of the exhibition: **'AD 2008'**, H48 gallery, Nieuwpoort, The Netherlands. Translation: Box&Cox Productions.

poetic expressiveness on the other. Furthermore, I hope to establish that from this line of argument Dekkers' struggle against "illusionism" turns out to be unwarranted. Finally, I hope to show that Dekkers' oeuvre is an excellent case for making short work of Plato's Mimesis theory of art. Other commentators might agree on this, but then again my train of thought will follow a completely different track. In my case a comparison to squaring the circle stole upon me.

As a starting point of my investigations two reliefs will serve: "**eerste fase van vierkant naar cirkel**" (1968) and "**eerste fase van cirkel naar vierkant**" (1967). (see p. 6). They put me on the trail of the quadrature.

In Ad Dekkers' oeuvre the issue of The Line occupies a prominent place. I suspect Dekkers mixes two concepts of "line" - one abstract and mathematical, the other concrete and physical. Are we dealing here with a new art movement paradoxically baptised "*concrete abstraction*", as Rudi Fuchs would have it, or rather do we encounter the old philosophical problem of universals, not to mention the mind-body problem?<sup>b</sup> But let us first look at the way Plato makes use of The Line.

### Plato's line

Plato thought that the world we live in is an illusion. Everything we perceive with our senses is plural and changeable, and only a shadow or copy of unchanging ultimate ideas or archetypes. Art is another imitation of our everyday reality and for this reason he called it a copy of a copy. According to Plato, our mission is to search for truth, goodness and beauty, all located in divine heaven. This striving for real knowledge is accomplished by contemplating such unearthly concepts as truth, goodness and beauty. However, because of its inherent illusionism, art doesn't raise us toward the Platonic ideas. Art brings us no knowledge or understanding of the world as it really is and it therefore is objectionable. Instead, art should elevate us to become something better than what we are.

We'll take up this issue later on. For now we will concentrate on the distinctions Plato draws between levels of knowledge, i.e. ignorance. Plato thereto uses the concept of the line.

Here is a quote **from: THE STATE, BOOK VI, 509-510 (in: IX)** <sup>c</sup>

*Now take a line which has been cut into two unequal parts, and divide each of them again in the same proportion, and suppose the two main divisions to answer, one to the visible and the other to the intelligible, and then compare the subdivisions in respect of their clearness and want of clearness, and you will find that the first section in the sphere of the visible consists of images. And by images I mean, in the first place, shadows, and in the second place, reflections in water and in solid, smooth and polished bodies and the like: Do you understand?*

*Yes, I understand.*

*Imagine, now, the other section, of which this is only the resemblance, to include the animals which we see, and everything that grows or is made.*

*Very good.*

*Would you not admit that both the sections of this division have different degrees of truth, and that the copy is to the original as the sphere of opinion is to the sphere of knowledge?*

*Most undoubtedly.*

*Next proceed to consider the manner in which the sphere of the intellectual is to be divided.*

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<sup>b</sup> These issues are only mentioned here; their discussion will be postponed for now.

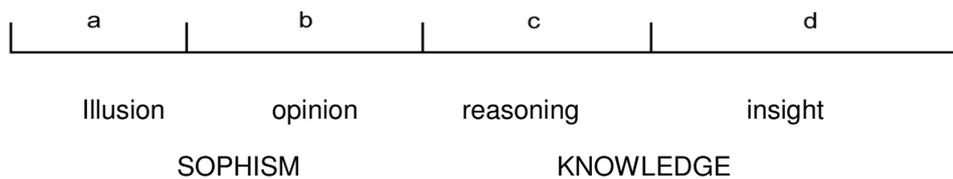
<sup>c</sup> Translation by B. Jowett. All quotes are in italics. Roman numerals denote the bibliographical items at the end.

*In what manner?*

*Thus:--There are two subdivisions, in the lower of which the soul uses the figures given by the former division as images; the enquiry can only be hypothetical, and instead of going upwards to a principle descends to the other end; in the higher of the two, the soul passes out of hypotheses, and goes up to a principle which is above hypotheses, making no use of images as in the former case, but proceeding only in and through the ideas themselves.*

This epistemological exposition can be schematized as follows:

PLATO'S LINE <sup>d</sup>



Now, under an algebraic reading of Plato's text, we can prove that the lengths b and c should be identical.

Indeed,  $a/b = c/d = (a + b) / (c + d)$ . Then holds:  $ad = bc$  and  $c(c + d) = ad + bd$ . Substitution of  $bc$  for  $ad$  shows:

$$c(c + d) = bc + bd = b(c + d). \text{ Therefore: } b = c$$

Next, we can eliminate b (Plato's "doxa", which we would call "opinion") by rewriting  $a/b = c/d$  to  $a/c = c/d$ . It then follows that  $ad = c^2$ .

Since we are dealing with a line which was subdivided into carefully chosen units, a geometric interpretation of the above formula is apparent. The formula states that the area of a rectangle with sides a and d is equal to the area of a square with sides c (where c is called the "middle term"). In other words, for each rectangle there exists a square having the same area. We call this result "the squaring of a rectangle".

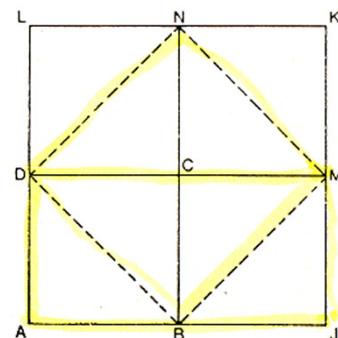
By way of illustration we take the next figure from MENO, where Plato puts Meno's slave to the stage in order to make his theory of anamnesis (remembrance) plausible. <sup>e</sup>

Consider the square BDNM and rectangle ADMJ. It is easily seen that both areas are of equal size, for they each consist of four equilateral triangles, with segment BD here as middle term. So, if we want to prove that BDNM is the quadrature of ADMJ, we have to prove that:  $AD \times DM = BD^2$ . An algebraic proof runs as follows:

Let's take AD to the unit size, then  $MD = 2$  and  $BD = \sqrt{2}$ .

Consequently,  $AD \times DM = 1 \times 2 = 2$  and  $BD^2 = (\sqrt{2})^2 = 2$ .

So:  $AD \times DM = BD^2$



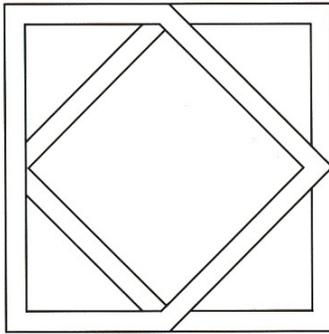
<sup>d</sup> See XI, p. 46

<sup>e</sup> See IX, part 1

In other words, this shows that BDNM is the quadrature of ADMJ.

It is not surprising that the above figure can be encountered in different variations in Dekkers' oeuvre. Because, here we stumble upon a beautiful example of how a mathematically determined relation serves as a blueprint for Dekkers' artistic endeavour. Notwithstanding the fact that, however alien Plato's intentions may have been to Dekkers, the principle of doubling or halving a given square unites Plato's illustration with Dekkers' relief as a common ground. An even more beautiful specimen of this principle will be presented further on (see footnote i).

The following figure is a schematic representation of "***vierkant en vierhoek in overgang***" (1971), a so-called "***begrenzingsrelief***" (relief, consisting of a metal frame), in this case made of anodized aluminium tubes.



It's by no means my intention to compare Ad Dekkers with Meno's slave. Without any doubt, Dekkers was focused on investigating the basic structure of simple geometric figures, but certainly his ambition reached beyond school mathematics, possibly to .... squaring the circle.

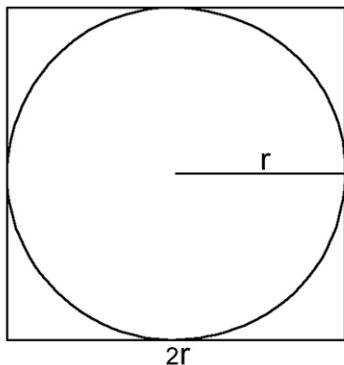
(By the way, the investigation of halving squares is beautifully brought about by Carel Visser in the 1972 series: ***1,2,3,4 keer gevouwen***)

## Pi and Dekkers

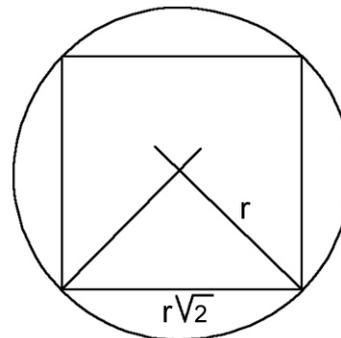
Since it is implied by the preceding considerations that each rectangle can be "squared", naturally the question arises whether it is also possible to express the area of a circle into that of a square? This is the ungodly question of squaring the circle.

Prerequisite to answering this question is having an exact measure of the area of a circle. If so, we then could express this quantity in terms of the area of a square. But here arises an insurmountable problem. The area of a circle can not be determined precisely, not any more than its perimeter. This stems from the impossibility to establish the value of pi ( $\pi$ , Greek "p" standing for "perimeter"). Pi is a so-called "irrational" number, not expressible as a fraction of two integers. In the year 1882 it was even proved that pi is a transcendental, non-algebraic, number. That is, a number excluded from arithmetic because its exact value cannot be ascertained in principle. Since the area of a circle is described by the formula  $\pi r^2$ ,  $r$  being the radius of the circle, that area is in principle indeterminable, too.

Therefore we must look for approximations of pi. Surprisingly enough, Ad Dekkers shows us the way here! Take, for a start, the circumscribed and inscribed square of a circle; then the area of the circle must lie between the values of these two squares.



**circumscribed square**



**inscribed square**

When we look at the above figures, we notice that the area of the circumscribed square is equal to  $4r^2$ . The inscribed square measures  $2r^2$ , because  $(r\sqrt{2})^2 = 2r^2$ . (That the bottom line of the inscribed square equals  $r\sqrt{2}$  follows from Pythagoras' theorem for right-angled triangles.) Now, the value of the area of the circle has to lie between  $4r^2$  and  $2r^2$ . So, let's say:  $3r^2$ . That is, the value of pi would be equal to 3.

Well, this appears to be an Old Testamental guess! In I Kings 7, 23 we read:

*And he made a molten sea ten cubits from the one brim to the other: it was round all about, and his height was five cubits: and a line of thirty cubits did compass it round about.*

An outline being 30 cubits and a diameter of 10 cubits means that the circumference equals 3 times the diameter. As the circumference of a circle is described by the formula  $\pi d$ , d representing the diameter, a value of 3 results for  $\pi$ .<sup>f</sup>

Despite this 'divine' discovery, the estimate turns out to be too crude. By sheer calculation Archimedes already established that pi had to lie between  $22/7$  and  $223/71$ . Sure enough, the value  $\pi = 3.14$  with which we operate at school is equally inexact (see Annex 1). Recently, the number of decimals of  $\pi$  has been calculated to the trillionth (i.e., a 3 followed by 1000000000000 digits!). Clearly the end is not in sight, though.

To return to Ad Dekkers, I wonder whether he was acquainted with the problem of the irrationality of pi, and if so, whether it played a role in his artistic endeavours. Not in the sense of illustrating an outdated mathematical problem, but rather of shaping the beauty and purity of a mathematical problem. Of course, **geometric abstraction** seamlessly fits in with his artistic point of view. Alternatively, it might have been Plato's Eros, the desire for the unification of the true, the beautiful and the good, which he tried to satisfy in basic mathematical shapes, just like the famous philosopher.<sup>9</sup>

Dekkers states in III:

*I figure a circle is also the purest symbol of beauty, balance, harmony.*

But mathematical form itself was not Dekkers' chief concern:

*(...) It has never been, and never will be, my intension [sic] to merely elucidate mathematical problems.*

*(...) What I am concerned with is the visual impact of my work on the spectator. (IV in: VI, p 162)*

Indeed:

*I do not think I proceed mathematically. It's of no concern to me. (In: III)*

So far, so good. Nevertheless, Dekkers pre-eminently uses geometrical forms.

### Dekkers' line

*My recent drawings and so-called woodcuts should (...) be taken as the reformulation of a problem area that I have been dealing with intensively since 1965: the problem concerning the function and character of the line. (Dekkers in: VI, p. 166)*

Dekkers' description of the line indicates it's purely abstract character:

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<sup>f</sup> In this case the corresponding polygon would be the hexagon, as an approximation of the circle. When you imagine this figure being composed of six equilateral triangles, with R being the length, it easily follows that the ratio of the perimeter (6R) and diameter (2R) –which is  $\pi$  by definition- equals 3. (see also Annex 2). Moreover, we incidentally owe the formulas for the circle and the sphere to Archimedes.

<sup>9</sup> Tetrahedron and cube, two out of five perfect bodies, were considered by Plato as the building blocks of all being. In his cosmogony they are identified with the elements fire and earth, respectively.

*The line emerges as a basic quality; she finds herself as it were in an early stage of development (...)she encloses no form and equals no form, and she has an immaterial thickness or volume. Actually, she has only one dimension: length and a direction of length. (Ibid, p 166-7)*

Likewise, his definition of the line is of a purely mathematical or even metaphysical character:

*(...) A straight line is the shortest connection between two points and arises from the progression of a point (...) (ibid, p.167)*

At this point, however, I must submit that Ad Dekkers' lines are anything but abstract mathematical entities. They are actually drawn, cut or milled objects, apparently having two, but in fact three dimensions: length, width and height! Evidently, a milled line is simply a moving hole, so it is a concrete physical object by consequence. A mathematical point, on the contrary, has no dimension whatsoever; neither does it move!<sup>h</sup>

It looks like Dekkers employed two different notions of "line", the one mathematical and the other physical. It's my conviction that he thereby saddled himself with an insoluble problem. Jean Leering, Rudi Fuchs' predecessor as a manager of the Van Abbe Museum, describes this as follows (in: VIII, p 18):

*Here, the issue inhering the theme is already present in full extent. The line: belonging to a geometric, abstract representation, while at the same time part of a concrete operation,.*

But let Dekkers' art speak for itself once more:<sup>i</sup>



First, take the relief from 1968: "**eerste fase van vierkant naar cirkel**" (left picture)

Fuchs comments on this (see: VII, p. 8):

*In a relief of two layers (...) the line of shadow along the curved edge of the second layer may look very hard and edgy under a given incidence of bright light.*

He considers this as Dekkers' great dilemma: "*as the problem of concreteness versus the **admissibility** of illusionism*". After all, didn't Dekkers state before(1967):

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<sup>h</sup> A mathematical definition of "line" is: "infinite sets of points". However, other definitions of "line" are in use, each of which play a role in the oeuvre of Dekkers. First, a line could be defined as the intersection of two planes. This notion plays a decisive part in his reliefs, notably in his so-called "*omzettingsreliefs*" (reliefs, made of a bent, metal plane). Or "line" is defined as "circumference of a circle with infinite radius". Both latter definitions suffer from the fact that they presuppose the notion ("line") which they attempt to define. Hence both are unfit to clarify the concept. See annex 4 for further discussion of this subject.

<sup>i</sup> Reminding ourselves of both figures at the bottom of p. 4, we now are able to recognize the circumscribed square of a circle, of which we are presented only a quarter, in the left relief ; the relief on the right, however, is composed of a complete circle, with only the base of the inscribed square. This mathematical blueprint of in- and circumscribed square can be discovered in dozens of drawings, reliefs and sculptures by Ad Dekkers, in all kinds of variations. One realizes the fruitfulness of such a basic principle, say a mathematical archetype, in the course of Dekkers' career in general and in the inquiry of the relationship between the square and the circle in particular (which effort I have denoted "squaring the circle").

*Without an illusionistic effect occurring, the light constantly changes the appearance of the piece." (in: VI, p. 161).*

Indeed, Fuchs touches the sore spot which he takes as the central aesthetic dilemma in Dekkers' oeuvre:

*(...) when he wants to articulate a surface, it brings about an illusionistic effect that might be unacceptable; pursuing concreteness of the line may trigger a curious discrepancy between two kinds of form, which may also be unacceptable.*

Of course, Dekkers is aware of this problem, despite the careful wording of Fuchs.

In the same catalogue he states:

*Moreover, it is remarkable to note that the lines impose various sorts of behaviour on the white field on which they are put. This phenomenon, still unresolved, these uncontrollable spatial effects, have led me to make drawings which take their start from space. On a slightly translucent sheet of paper I put -both on the front and on the back- lines that are closely related to each other. Now space is very definitely present, visible due to a different gradation of tone in the two line segments and tangible by the thickness of the paper. (V: *ibid*, p.12)*

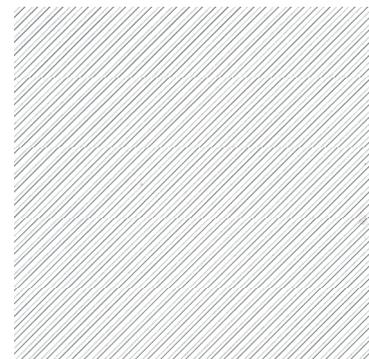
Nevertheless, Fuchs proclaims the "*summa*" of Dekkers' development -the transparencies- as a solution to the dilemma: the elimination of illusionism follows from the transparency of the two-sided drawn sheets of paper:

*the space of the drawing (...) is precisely the minimal thickness of the sheet of paper. (ibid, p.10).<sup>j</sup>*

And Dekkers:

*Using this method the notion front-back becomes corrupted: the distinction between them disappears (...) (ibid, p.12)*

But this shows precisely the illusionistic impact of these drawings! The crux is that the thickness of the sheet is visually indeterminable and therefore continues to exercise an illusionistic effect. Just like Mondrian's red coloured areas about which Dekkers vehemently protested. I dare to say: negation of a present space is as illusionary as suggestion of an absent space! Dekkers' dilemma seems to be fundamentally insoluble: the "illusionism" is ineradicable. Furthermore, it's crucial to realize that the visual arts are not to blame, because the construction of reality is an essential ingredient of our perceptive and cognitive apparatus.<sup>k</sup> Numerous sources could be quoted to underpin this point, from psychophysiological and cognitivist to epistemological studies. So the fight against illusionism in the arts is itself an illusion!



**transparent drawing** (1973); untitled

It resembles chasing shadows in Plato's cave, for truth's sake.<sup>l</sup>  
A desperate venture, just like ..... squaring the circle.

<sup>j</sup> On another occasion, an introduction to the catalogue *Als golfslag op het strand* (see: VIII), Fuchs takes too easy a position to dissolving illusionism. He there repeatedly mentions: "*abstract (rather: concrete) art*" (p.11), "*abstract and concrete art*" (p.11, p. 13), and "*artists of the new-abstract/concrete denomination*" (p. 15). Fuchs doesn't clarify in the least how we must conceive of something like a "concrete abstraction" or a "abstract concreteness". Neither do we get an advanced understanding of why "abstract" and "concrete" are interchangeable at will.

<sup>k</sup> Leering takes a similar view. In the same catalogue he writes: *(...) doesn't a topic like that [i.e., that of the relationship between tangible reality and imaginary representation, between direct experience and oblique awareness, between the given and thought] emerge in lots of other disciplines, apart from the visual arts?* (VIII, p. 21)

<sup>l</sup> See IX, The State, Book VII, 514 ff

## Plato and the arts

Once again we return to Plato. Let's take another fragment from THE STATE, Plato's description of an ideal society from which artists had to be excluded. In Book X we read (see: X, p. 22-24):

*(..)Now we (...) have carefully distinguished the various elements of the human psyche, it appears to me much clearer that we must allow absolutely nothing that has to do with art.*

*Why is that?*

*(...) it is a plague, anything that those people create is a great danger to the mind of someone who comes into contact with it, as he has no antidote in the form of insight into the true nature of an artwork.*

*What are you thinking of?*

*You'll agree with me that what a painter creates is not real. Yet, in some sense he creates a bed, doesn't he?*

*Yes, but that is indeed an image.*

*And a carpenter (...) what he makes is another kind of image too (...) Shall we try to answer the question what "art" really is from these examples?*

*Please, if you want.*

*Well, we thus have three types of beds - one 'original' bed which, I think we should say is designed by God - for who else could be the maker? - Then another one which is made by the carpenter, and then one made by the painter, that's how it is? (...)And a painter, what is he in relation to the bed?*

*I think the best way to describe this is by saying that he "impersonates" or "imitates," what the carpenter "manufactures".*

*So, you think his work is a copy of a copy, the third stage from reality?*

*Exactly.*

An absolute iconoclasm reigns over Plato's state! After all, his conception of art (not only the visual arts, but all of the arts, including poetry, dramatic art and music!) as mere imitation, should be interpreted as an iconoclastic critique of the arts. So the Platonic maxim might read: ideas, the archetypes of all objects and beings that we are acquainted with, are not to be displayed. For each specific and concrete image will only be a partial and imperfect token – i.e. an "imitation"- of an ideal type.

Within this scope the problem of illusionism (Fuchs's "*concrete abstraction*") pops up in Dekkers' oeuvre. The line is an idea in the Platonic sense: the abstract, perfect, divine originator of all possible lines that can be drawn in all eternity. Any concrete line Dekkers has, or could put up would have been nothing more than an imperfect approximation of the one and only original LINE. How trying a time this Sisyphean labour must have been to Ad Dekkers appears in the following quote (in: VI, p 153):

*(...) You see, I have been lonely for so long, and it's my conviction that I will be ever more lonely.*

*Because few people are able to share and understand what it is to squeeze out a beginning of a bisection of a square by saw-cuts, qua thinking (all considerations taken into account).*

In my view, Dekkers achieved the best approximation to the ideal line in his series **Blanco Action**, in which lines are cut INTO the paper sheet. Truly, this renders the lines an almost intangible, abstract and elusive character.

## Epilogue

Mimetic arts, Plato proclaims, create an illusion and they therefore don't help us to become better people. In this respect, according to Plato, a craftsman like a carpenter, is better off than an artist, because the first one is closer to the heavenly prototypes than the latter. Should we understand Dekkers' next remarkable statement from this perspective?

*I don't feel like an artist at all. I am not convinced that I make art, too. (In: III)*

Did he perhaps feel closer to a craftsman, someone nearer to Plato's world of ideas and as a consequence better aware of and more responsible for his actions, than an artist who falls prey to illusions and spoils others? Wasn't Dekkers trained earlier as a craftsman before he joined the academy? And doesn't his desire for purity, his marked anti-illusionism fit perfectly into Plato's moral appeal to the arts? For how narrow-minded Plato's concept of art may be, we can surely take it as a moral appeal to the arts. Undeniably, Plato would permit the arts a prominent place in his ideal society should it lead the people closer to truth, residing in Platonic heaven. Art that would improve the world! Art that leads people to God?

So, for one thing, the arbitrary character of Plato's conception of the arts as essentially mimetic now becomes abundantly clear. For why should art ipso facto be mimetic, instead of edifying, as in Dekkers' case? Secondly, we may notice a strong similarity in the scope Dekkers and Plato impute to the social influence of the arts. For better or for worse, I would like to add! Because, in Plato's case making art is a potentially dangerous enterprise. In Dekkers' case, however, it is thought to be a vehicle for sublimation, possibly resulting in a better society. This issue raises a lot of other items regarding the autonomy, or the alleged utopian dedication of the arts. These topics will not, however be addressed here any further.

Ad Dekkers is given the final word (in: VI, p. 158).

*AD: Everyone is still far from harmonious because of an inner alienation from himself. To remove this alienation, we'll have to come up with something better. (...) My work is a fusion of these feelings and thoughts.*

*K: Do you believe in the improvement of humanity and that you can realize through your creations that people become more balanced, more harmonious, as you put it?*

*AD: This belief is the core of my work and in this way I hope to contribute to the formation of an equilibrium, which each and everyone must obtain to 'live'. However, to achieve this, our own self-awareness is the biggest obstruction (...)*

Don't we read here a paradoxical search for self-realization on the one hand, against a desire to transcend all concreteness and limitation, to go across the line on the other? Unfortunately, his desire for self-withdrawal gained the upper hand.

leoNart, AMSTERDAM, 2009

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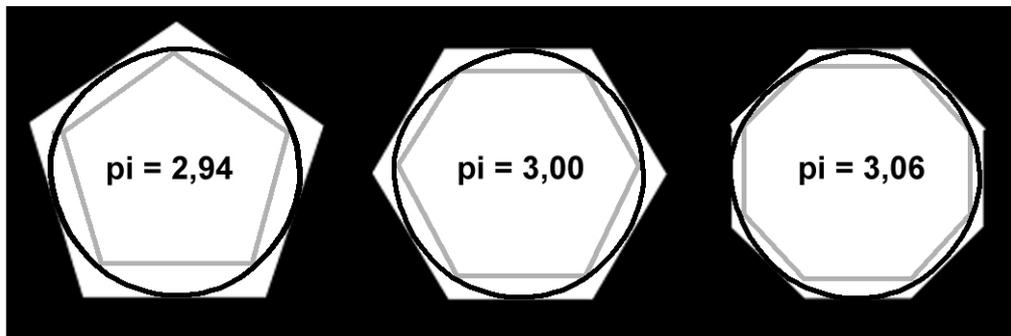
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**ANNEX 1 - THE FIRST 1999 DECIMALS OF PI**

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977472684710404753464620804668425906949129331367702898915210475  
216205696602405803815019351125338243003558764024749647326391419  
927260426992279678235478163600934172164121992458631503028618297  
455570674983850549458858692699569092721079750930295532116534498  
720275596023648066549911988183479775356636980742654252786255181  
841757467289097777279380008164706001614524919217321721477235014  
144197356854816136115735255213347574184946843852332390739414333  
454776241686251898356948556209921922218427255025425688767179049  
460165346680498862723279178608578438382796797668145410095388378  
636095068006422512520511739298489608412848862694560424196528502  
221066118630674427862203919494504712371378696095636437191728746  
77646575739624138908658326459958133904780275901.....

From: XII, p. 4

## ANNEX 2 - ARCHIMEDES' APPROXIMATION TO A CIRCLE BY MEANS OF POLYGONS



The more angles a polygon contains, the better a circle - and consequently the value of pi - is approached. The illustration shows an approximation of pi for a pentagon, hexagon and octagon, respectively. Archimedes was able to calculate the value of pi for a polygon containing 96 angles!

Nota Bene: Cusanus (Christian philosopher of <sup>the</sup> 15th century) considered the approximation of the circle by means of an infinite series of polygons a model for the limits of human cognition, the circle being the symbol of divine, unknowable truth. (In Dekkers' case, the circle symbolizes womanhood). Surprisingly enough, the line itself can be understood as such an unattainable pure abstraction, namely as the circumference of a circle with infinite radius (see Annex 4). To this extent the problem of the circlequadrature seems to be solved. However, we are dealing here with a CIRCULAR (sic) definition of LINE: the definiendum (**line**) is contained in the definiens (**radius**). Alas, a circular definition is unacceptable in our discourse.

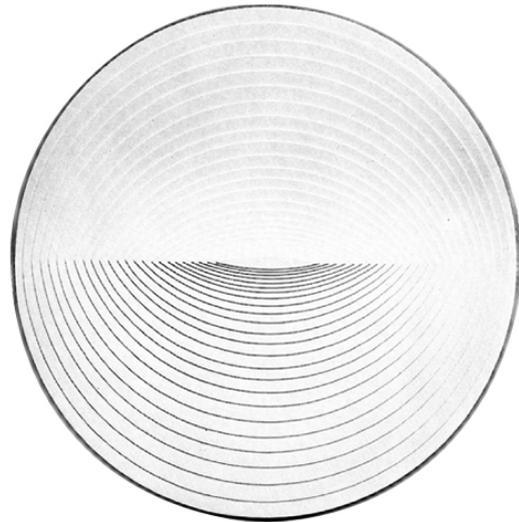
### ANNEX 3 - DEKKERS AND ARCHIMEDES



**BROKEN CIRCLE** - This concrete sculpture of Dekkers was soon nicknamed the "Gat van Duisenberg", due to its erection in front of the tax office, at the Mauritskade in Amsterdam. Of late, the towering work has been relocated to the Spaarndammerdijk in Amsterdam (see picture).

#### ANNEX 4 - THE APPEARANCE AND DISAPPEARANCE OF THE LINES

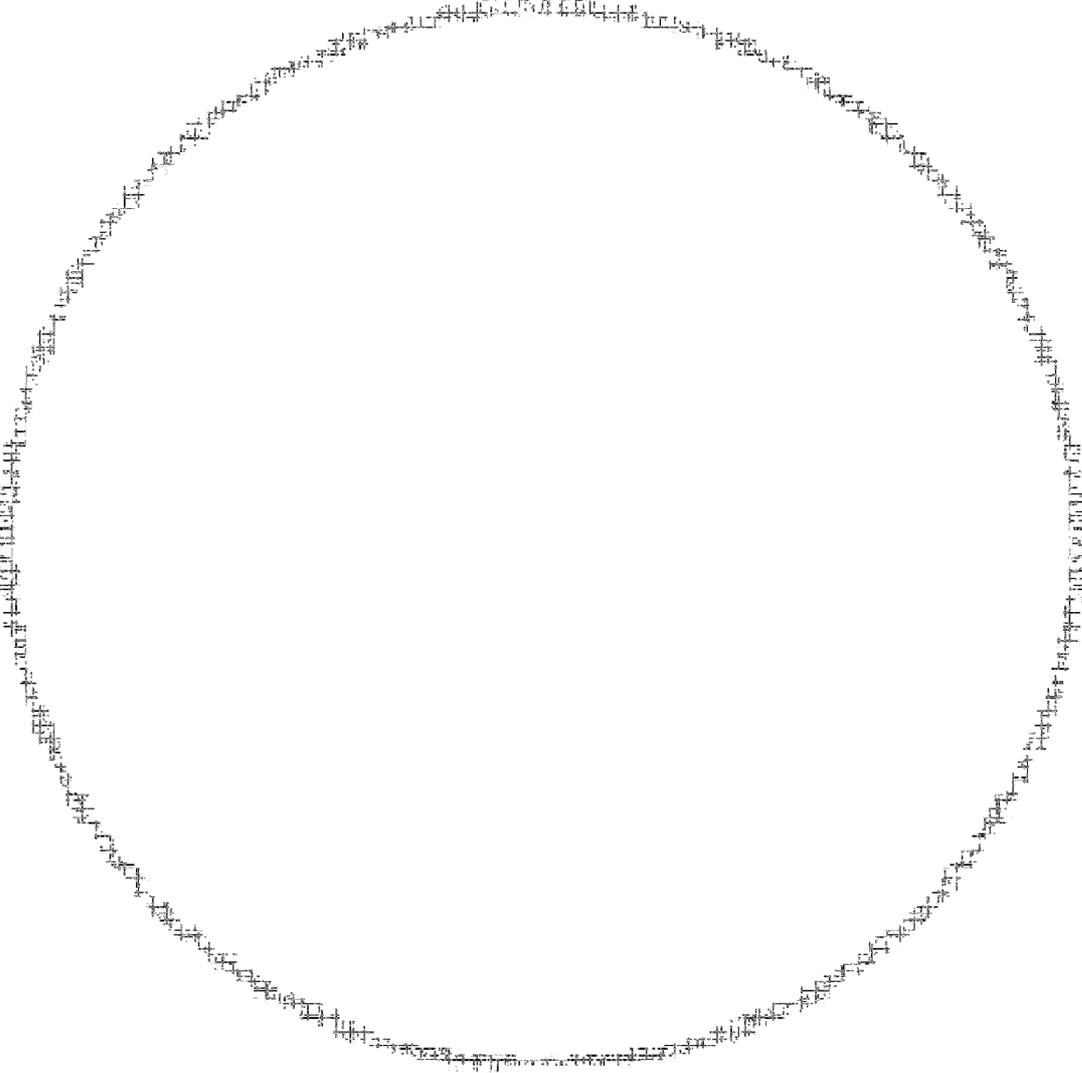
This figure shows the following. First of all, we see a perfect illustration of the idea that a straight line can be seen as circumference of a circle with infinite radius. Indeed, the segments approaching the middle of the figure show a declining curve, as they are part of a circle with increasing radius. Secondly-and this was probably Dekkers' objective- the impression of a line results, due to the narrowing of segments down to the centre. But I instantly add: **the illusion of a line!** Subsequent addition: outwardly the line disappears into infinite space. This follows from the fact that the ends of the segments of the lower half circle appear and disappear as points on a straight line. There you are.....our first definition of "line" from note 7.



Ad Dekkers: Variaties op cirkels no. 1(1965)

Likewise, our second definition of "line" as a concept of limitation, can be understood by means of the above figure. Because in this masterpiece - cut entirely by hand! – we see the essential role of the light in the issue and poetry of the line. Dekkers repeatedly argued that the action of the light expresses the poetic element of his oeuvre. (See for instance: VI, p. 161). When it strikes a (white) surface, the light makes the lines appear and disappear (see also Fuchs in VII, p. 7, where he compares the light with the wind sweeping over the grass). "Line" can be interpreted as a boundary of two planes. When two planes intersect, we talk about the "curve of intersection". Notably, this is the case in the so-called "omzettingsreliefs". In this case a different angle of incidence reveals the line. No light, no line. Conclusion: The line has no substance of its own, it either results from the optical effect of light on a plane or from a set of points. Problem solved? Or: illusion of an illusion? Probably, my conclusion diametrically (sic) opposes Dekkers' conception of "line". But in my opinion, the issue of the reality of the line still remains: how concrete or abstract is the line? And furthermore: what kind of reality do abstractions have?

**ANNEX 5 – THE QUADRATURE ACCORDING TO leoNart**



**leoNart: Quadrature - 2007**

## ANNEX 6 - POSTSCRIPTS<sup>m</sup>

Postscript *SQUARING THE CIRCLE* (2008): poetic summary

*"For the thought of the sublime, the contour, the frame, and the trace point to nothing but themselves – and even this is saying too much: they do not point at all, but present (themselves), and their presentation presents its own interruption (...), as this suspension of imagination (or figuration) in which the limit traces and effaces itself" (Jean-Luc Nancy, in: J.F. Courtine (1993.): Du Sublime, p. 42)*

After more than one year of preparing the exhibition **A.D. 2008** the time has come to propose a definitive definition of the concept of.....**the line**.

- 1 - We define it as: Dekkers' X-factor.
- 2 - The line is a fracture - The line is the fraction  $x / y$ .
- 3 – In other words, Dekkers' X-factor is the decimal preceding the X, which is:  $1 / Y$
- 4 - Dekkers' line is implied by his X-factor, it is the breach of unity.
- 5 - It also is the separation between subject and object and a desperate search to recover unity.
- 6 - The line is the uniform, multiple, complex, impure recurring decimal.
- 7 - The line is the shattered glass - the broken connection - the breaking of relations.
- 8 – In this regard, the line is considered a negative thing: a disruption of harmony, of a whole, of a plane. Remarkable, considering that Dekkers was striving for harmony!
- 9 – Struck by the stroke!
- 10 - The line spreads discord! Like the farmer ploughing his field.
- 11 – Or a milling-machine which traverses a plane, or a ditch that divides the country.
- 12 - The line is limiting and fixing, the line defines.
- 13 - The line separates one from the other, in so doing the line organizes. From this point of view the line is something positive.
- 14 - The line is fair. Owing to the line a surface obtains a definite form, for instance as a circle or a rectangle.
- 15 - The line creates a determinate and determining order into nothingness. The line is proportion, the line is ratio.
- 16 - The line sets a limit.
- 17 - The line creates distance.
- 18 – If we stipulate the core of Dekkers' oeuvre as: "*the search for essences*" (de Voigt; private communication), then this also implies: the search for the boundary of mortality. This is so because essentials are perpetual, say 'immortal', in that "origination" and "decay" are not applicable to them.
- 19 – Hence the line is: the boundary between life and death.
- 20 - This limit was Dekkers' fascination.
- 21 - Dekkers had to cross this self-created border.
- 22 - Art is: crossing borders.

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<sup>m</sup> Both postscripts were added in 2008, some months after the end of the exhibition.

Postscript *SQUARING THE CIRCLE* (2009): **non-poetic summary**

- 1 – DEKKERS' OEUVRE HAS PRE-EMINENTLY TO BE UNDERSTOOD FROM THE PHILOSOPHY OF PLATO (UNITY OF THE TRUE, THE BEAUTIFUL AND THE GOOD).
- 2 - PLATO'S CRITICISM OF THE ARTS IS A CLEAR-CUT CASE OF ICONOCLASM.
- 3 - DEKKERS GOT ACQUAINTED WITH PLATO'S THOUGHT BY READING JAFFÉ ON MONDRIAN.
- 4 - DEKKERS' ICONOCLASM IS BASED BOTH ON THE INFLUENCE OF MONDRIAN ON HIS THINKING AS WELL AS ON THE PROHIBITION OF IMAGES, STEMMING FROM HIS CALVINIST UPBRINGING.
- 5 - DEKKERS' "*PROGRAMMED GEOMETRIC ABSTRACTION*" (J. Leering) HAS TO BE CONSIDERED AS A STRONG KIND OF ICONOCLASM.
- 6 - DEKKERS' ICONOCLASM IS IN FIERCE CONTRADICTION TO HIS JOKEY STATEMENT THAT ..... "I ACTUALLY STILL MAKE LANDSCAPES". (Venema; radiobroadcast, 1972)
- 7 - IN DEKKERS' OEUVRE A PROBLEMATIC OPPOSITION EMERGES BETWEEN THE STRIVING FOR ABSTRACTION ON THE ONE HAND AND THE DESIRE TO FOCUS ON CONCRETENESS ON THE OTHER.
- 8 - DEKKERS' DEFINITION OF A LINE AS "*THE SHORTEST CONNECTION BETWEEN TWO POINTS*" IS IRRELEVANT TO THE UNDERSTANDING OF HIS WORK.
- 9 - DEKKERS' DEFINITION OF A LINE AS "*RESULTANT FROM THE PROGRESSION OF A POINT*" IS OF NO USE FOR A MATHEMATICAL DEFINITION OF "LINE".
- 10 - A NON-CIRCULAR, MATHEMATICAL DEFINITION OF "LINE" IS: *INFINITE SET OF POINTS*.
- 11 - DEKKERS DID NOT USE A CLEAR CONCEPT OF "LINE".
- 12 – DEKKERS' LINES ARE PURE CONCRETENESSES.
- 13 - THE LINE IS AN IDEA IN THE PLATONIC SENSE: A PURE ABSTRACTNESS.
- 14 - THE FIGHT AGAINST ILLUSIONISM IN ART IS AN ILLUSION AS SUCH.
- 15 - SUGGESTION OF AN ABSENT SPACE IS AS ILLUSIONARY AS THE NEGATION OF A PRESENT SPACE (AS IS THE CASE IN HIS TRANSPARENCIES).
- 16 - THE EXISTENCE OF AN UNCLEAR CONCEPTUALISATION (IN RESPECT OF 'LINE' OR 'ILLUSIONISM') COULD POSSIBLY ACCOUNT FOR THE IMPASSE IN WHICH DEKKERS REPEATEDLY FOUND HIMSELF.
- 17 - COMMENTATORS, SUCH AS C. BLOTKAMP, DON'T ANALYSE DEKKERS' NON-COHERENT USE OF CONCEPTS. THEY ONLY DESCRIBE IT AS PART OF AN ARTISTIC PROCESS WITHOUT ANY CRITICAL COMMENTARY.
- 18 - DEKKERS' OEUVRE SHOULD BE CONSIDERED AS AN IMPRESSIVE REFLEXION OF AN INTELLIGENT RESEARCH PROGRAMME (vid. I. Lakatos), IN WHICH ONE IDEA GETS MATERIALIZED IN AS MANY DIFFERENT WAYS AS POSSIBLE INTO AN EVER SELF-IDENTICAL PRESENTATION.
- 19 – DEKKERS' OEUVRE CONTAINS A PRONOUNCED ETHICAL DIMENSION, COMPARABLE TO THE DOCTRINE OF MONDRIAN OR PLATO'S MORAL APPEAL TO THE ARTS.
- 20 – IT IS CURIOUS THAT DEKKERS CONSIDERED HIS "***BROKEN CIRCLE***" (AMSTERDAM 1974) AN INFERIOR REALIZATION OF THE ORIGINAL DESIGN, IN STEAD OF A LEGITIMATE RESEARCH ITEM IN THE TRANSITION FROM SQUARE TO CIRCLE.
- 21 – DEKKERS' NOTION OF A WORK OF ART THAT IS "*INCORPORATED BY ARCHITECTURE*" (KRÖLLER-MÜLLER) IS CLOSELY RELATED TO MONDRIAN'S NOTION OF ART BEING ENTANGLED IN LIFE.
- 22 –IF DEKKERS' OEUVRE HAS A BEARING, IT IS ANYTHING BUT "*EVIDENT AS THE SWAYING OF THE REED, OR THE WASHING OF THE WAVES.*"

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