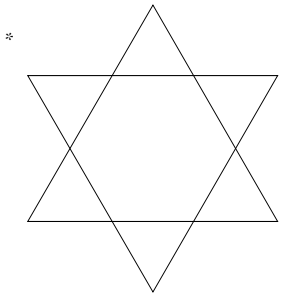
An introduction to Europolis

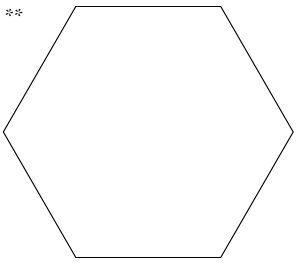
(a backwards portrait of the artist as a 12-point system)

A late summer evening; three of us; a couple of gin & tonics on a terrace by a square, around which a group of girls are running in circles, each time disappearing for a moment behind the converted church in its centre, then re-appearing again from the other side. They must have circled the square at least a dozen times by now, though its difficult to imagine why. They don't appear to be jogging. Some pedestrians are joining them for a lap or two. Maybe it's some kind of performance or act. At this point, one of my two acquaintances suggests we go and see the house where he is temporarily living. He claims that any attempt to describe the house would not do it justice. We all agree to go for a last beer.

STEP OUT OF YOUR GRAVE AND COME IN

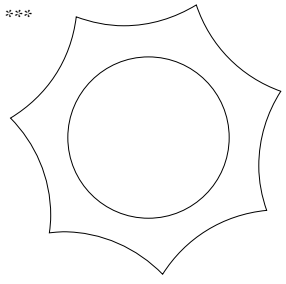
So reads a small plaque on a horizontal door leading up to the house. The door is decorated with semiprecious stones forming a Star of David.* We step into what could be anybody's ordinary apartment. But then again … not quite. The details of a stranger's life draw my attention to further details. The randomness of exploring a place for the first time soon becomes systematic. Four hexagonal** prism-shaped lamps; each with three different circular colourful shapes constructed of four equal triangles decorating every second side. Twenty-four sides in total; twelve empty sides and twelve with colourful circular shapes constructed of four equal triangles each. A geometric sun*** adorns one of the ceiling's wooden poles, with seven edges containing illustrations of sunrays, and beneath it another plastic sign reads:





THE SYMPOSIUM IS UPSTAIRS WHERE THE FOURTEEN COMMITTEE MEMBERS ARE RETHINKING THE SPECTACULAR WORK OF THE TIMELESS TRIADS

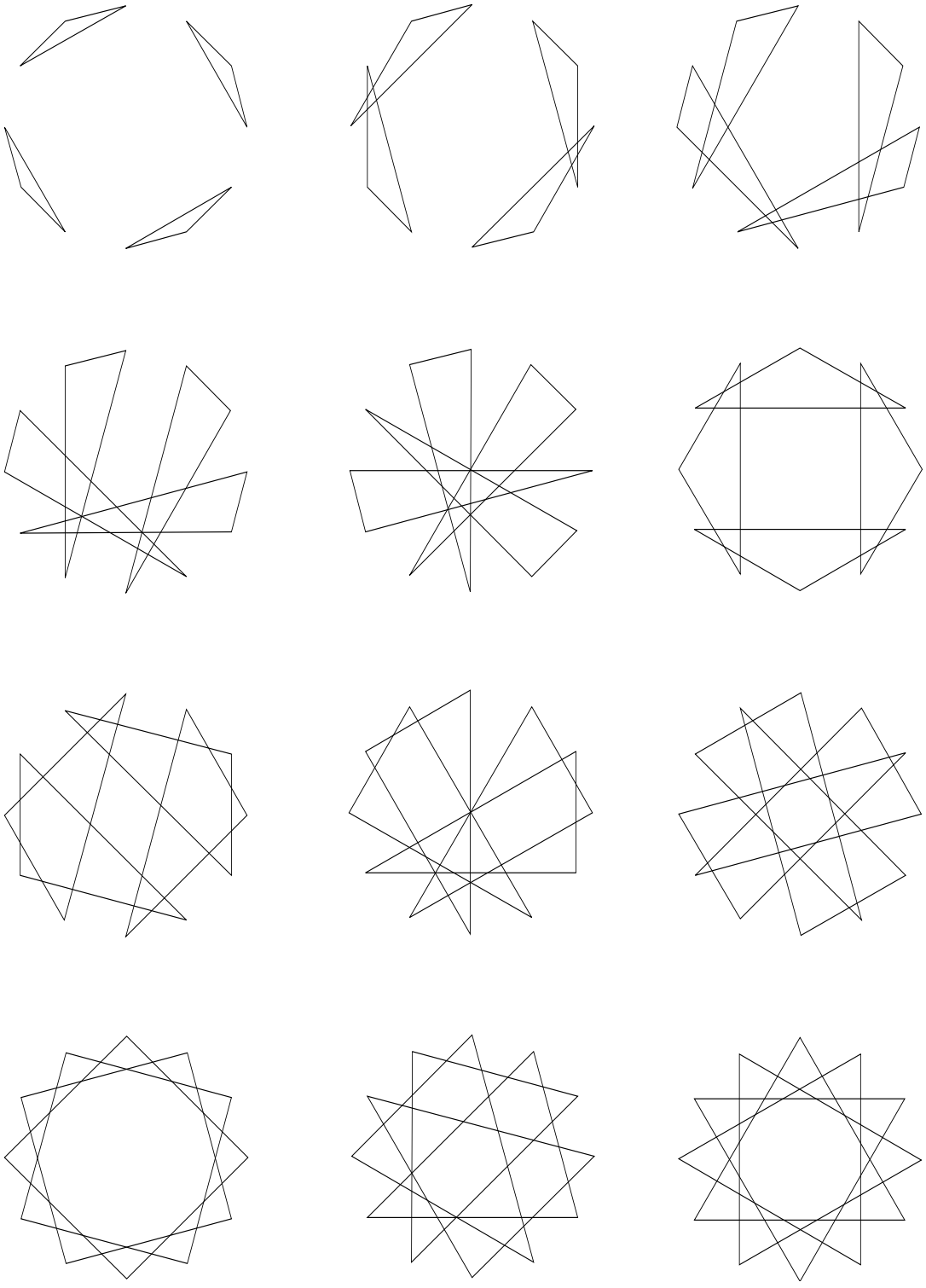
Then on the last of a set of stairs leading to another horizontal door to what must be the attic, another one:



IN THE SKY THERE SHALL BE NO SMOKING

More circular forms. Twelve of them; six stained glass windows on the sloping walls of this triangular attic facing each other. Each window is constructed of different sets of four equal triangles in different gradients of sky blue. I no longer think of it as form, but as a system of twelve.

Regular Polygons have fascinated and influenced people throughout history. Few indeed do not respond in some degree to the symmetry and



character exhibited by these shapes, each unique and yet plainly of a family.

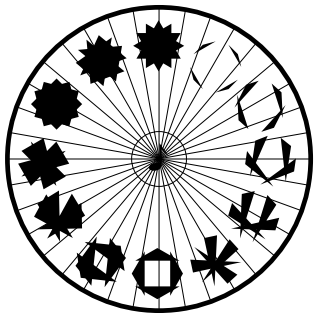
Straight-sided, they all yet inhabit a circle precisely—in fact, the circle is their final expression, the Nirvana of regularity—and the rotational and lateral symmetries thus ordained give the regular polygons not only their visible perfections of mathematical form but also the

Envelopes were filled with the full colouring of oral tradition to enthuse over the oracle in words more powerful and intoxicating than the hardest drug.

indispensably useful geometry which some of them afford to Nature and engineering alike. The equilateral triangle, the square, the regular hexagon, the circle itself—all combine purity with practicality.[1]

We are told that the house belonged to a Composer who died recently. It is only few blocks away from where we sat, close to the red light district. We cycled through the alleys looking for small paths which led us in a near straight line to the house, trying to avoid untidy groups of people in the streets. It is a common seventeenth century Dutch house. As we entered we were warned to watch our steps in the dark. The hallway and stairs seem to have been pasted on to serve the house's different functions over the years, narrow and disorganised until we reached this top floor.

The twelve windows are separated by fourteen wooden poles, each standing on a pair of carved human feet and with a single straight spiralled horn growing from their tops, then joined by a semicircular metal to the opposite horn. A black grand piano sits on one side of the room, and on top of it another twelve: those same twelve circular forms, each constructed of different sets of four equal triangles. This time it graces a golden wheel divided into thirty-six equal units by radiating spokes. The twelve circular forms correspond with the positions of the twelve hours of the clock, with a single musical note in its central hub.



Its form suggests the orbit of the sun, and if this were to be the case the note would stand as a metaphor for the earth; the earth as a tone. But no, this doesn't make sense: the earth orbits the sun, so if anything is orbiting the earth it must be the moon. Twelve lunar orbits make a year; a quarter of the moon's orbital period is three months. Twelve circular forms, forming a cycle, constructed of four equal triangles. So the system is related to nature, time and tonality. But how exactly?

TWELVE-FOLD SOCIETY

In discussing how best to organise an ideal society, Plato describes the ancient twelve-fold canon.

'[…] *the legislator's first job is to locate the city as possible in the centre of the country* […]. *Next he must divide the country into twelve sections. But first he ought to reserve a sacred area for Hestia, Zeus and Athene (calling it the "acropolis"), and enclose its boundaries; he will then divide the city and the whole country into twelve sections by lines radiating from this central point.* […] *He should divide the population into twelve sections,* […] *and* […] *divide the city into twelve sections in the same way as they divided the rest of the country* […].

'Now that we've decided to divide the citizens into twelve sections, we should try to realise the enormous number of divisors the subdivisions of each section have, and reflect how these in turn can be subdivided and subdivided again […]. *This is the mathematical framework, which will yield you your brotherhoods, local administrative units, villages, your military companies and marching-columns, as well as units of coinage, liquid and dry measures, and weights. The law must regulate all these details so that the proper proportions and correspondences are observed.'*

> *Ancient European cultures took this literally and in a design reminiscent of the twelve holes in a salt shaker around central hole, the placement of old European towns formed a hexagonal close-packing arrangement which economises market centres, maximises administrative control of outlying areas, and minimises transportation distances.*[2]

Twelve, I need to think of twelve.

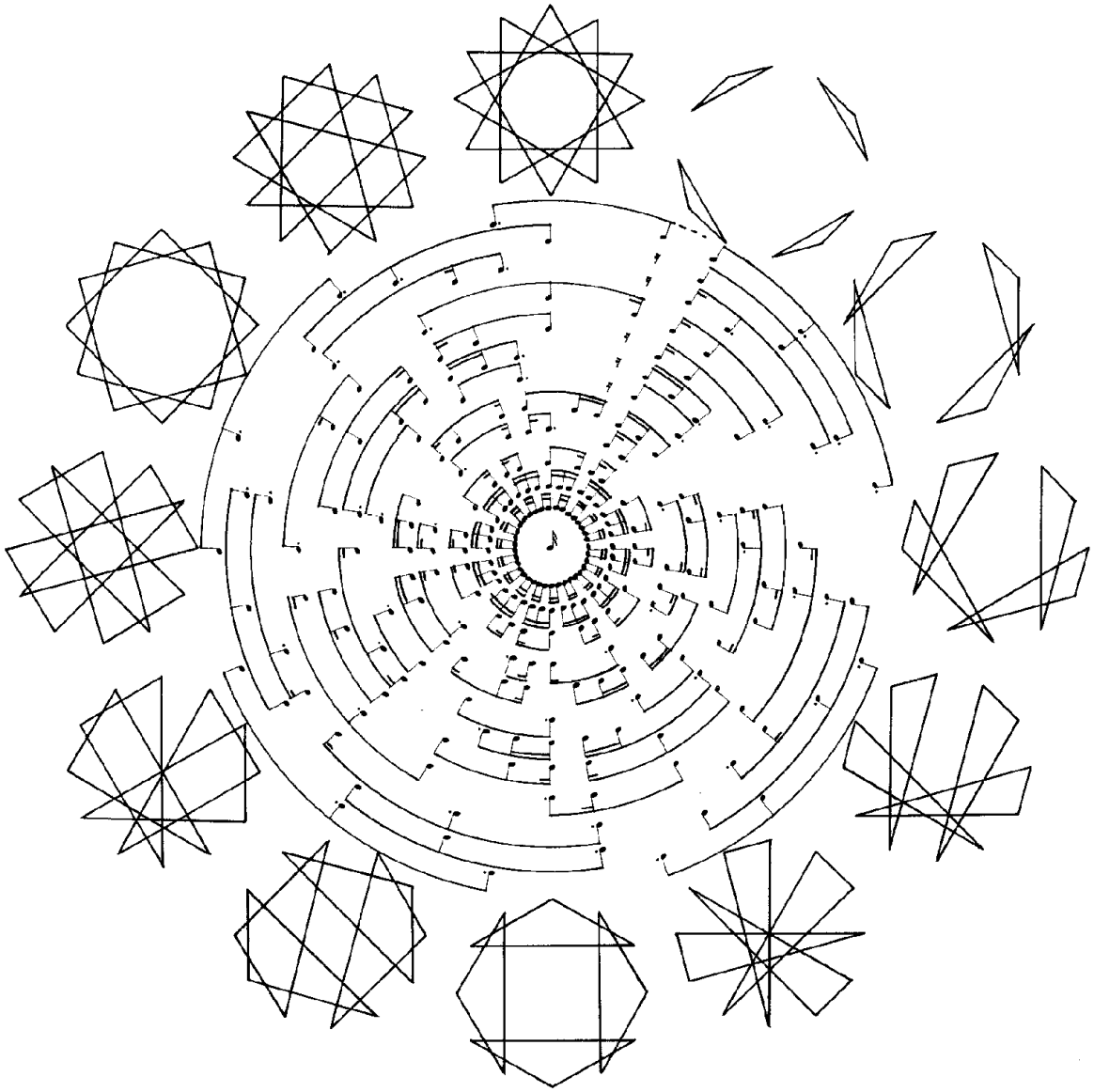
The twelve hours of a clock
The twelve months of a year
The twelve lunar orbits
The twelve zodiac signs
The twelve tones in the twelve-tone music scale
The twelve tribes of Israel
The twelve days of Christmas
The twelve years of the Chinese calendar
The twelve prophets of Peter
The twelve tables of the Romans
The twelve inches in a foot
The twelve units of a dozen

Maybe this is going too far. Perhaps I can discover the key to the system by simply observing the attic at different times of the day. But what is it *based on*? Is it some kind of Tone Clock—a system that generates tones? In another corner of the attic are crystals of different forms: circles, semi-circles, triagonals, hexagonals, tetrahedrons, octahedrons, and many more I can't define.

> […] *Architects know that the true plan determines the building. Plane, two-dimensional figures are thus paramount to our understanding of space and proportion; and the regular polygons—from-line segment to circle—constitute a definitive basic set by which order may be perceived in, and structure imposed on, our understandings.*
>
> *Not the least of these virtues is the insight given into the nature of numbers themselves: expressing numbers by presenting them as vertices of regular polygons shows very clearly properties which are not always evident from mere counting* […]
>
> *One is a dimensionless point. Two is the first line number: we need two points between which to perceive length, the first dimension. It is possible to think of two as a regular two-sided polygon which has length, but no area.*
>
> *The difference between two and three is not merely one unit: it is the difference between a line segment with only one dimension and an equilateral triangle which has two dimensions.*[3]

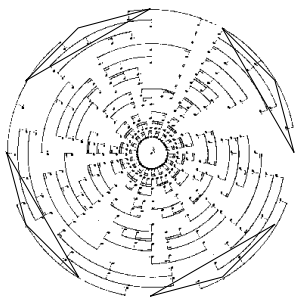
Once again I come across the circular forms constructed by four equal triangles. This time it's a drawn diagram on a big laminated sheet of paper, with that same lone musical note in the middle. But now, radiating from the centre in twelve concentric circles, is what seems to be the system redrawn as musical notes. Too bad I can't read music.

The word spread like a drop of oil from Paris throughout the world.



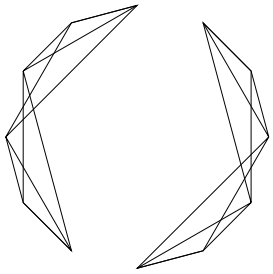
This diagram changes everything, I am now sure it is only a matter of understanding a logical consecutive sequence. Growing from the note in the centre in twelve systematic patterned circles are between five and eighteen groups of notes. It could be a visual representation of the decay of sound from one central tone to a broad range of underlying tones in the outer rings of the circle, but that would just be a simple record of sound. By now I'm convinced that the Composer's intention was far beyond that, more concerned with systemising sound towards the purity and harmony of nature.

At first it looks as if the notes are positioned at the intersection points of the triangles which build the clock. In that respect it is a circular tune. I try systematically positioning the intersection points of the triangles on the notes, starting with one o'clock.



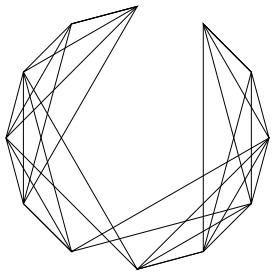
> […] *This made possible daily incommensurable quantities, in particular, of the golden ratio-practical geometry in conformity with methods of working and studio tricks embellished by a mystical philosophy, but still, after all, a labour of craftsmen. The result was, first, precision—clear ideas and exact numerical calculations; and in consequence less and less liking for compass-drawn figures that could not be calculated, and a growing taste for simple ratios.*[4]

I see straight away that trying to match the notes diagram with the circular form in position one o'clock won't work. The notes are too irregular compared to the symmetry and equality of the circular forms constructed of four equal triangles.


two + one

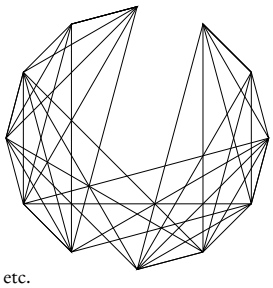
But I think of another formal method to examine the system: placing all the circular forms constructed of four equal triangles on top of each other and observing how their intersection points connect. Maybe this could illustrate how the system works. I first place the two o'clock circle on the one o'clock circle

Not much has happened. A skewed symmetry with a big hole in the middle. I position three o'clock circle on top too.

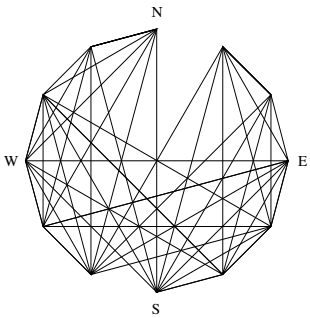

three + two + one

The left and the right sides are now connected on the bottom. Three and four o'clock have joined seven o'clock on the left, and nine and ten o'clock have joined six o'clock on the right, closing the circle on one side. But I still can't see where this is taking me. I continue with four o'clock.

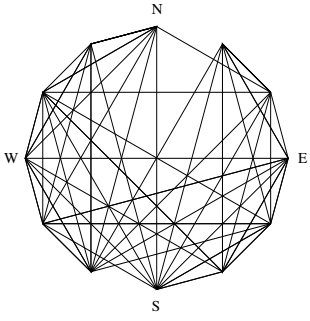
Still, there is no connection between two and three o'clock to eleven and twelve o'clock, or to the other times on the clock. The topside remains open, refusing to complete a full symmetry. Also, only six and seven o'clock don't connect on the bottom. I wonder if it has anything to do with the sun—maybe the reflection of the sun at the times of day. I decide to add new parameters: as a compass, twelve o'clock will be North, six o'clock South, and three and nine o'clock East and West. I proceed by overlaying five o'clock


etc.

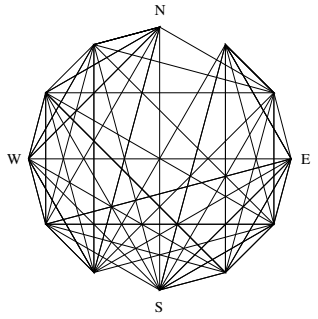
Two, three, eleven and twelve o'clock now connect to the rest, but still not between themselves. East and West still do not connect to North and South, but the cycle continues and the circle now has a centre point North to South and East to West. But the only thing really worth noting so far is a consecutive semi-symmetrical cycle. If it were to become a tune at this point I would call it *Sun Arise Sun Decrease*, or, less poetically, *Sun, Do it My Way*. Six o'clock is a half, two quarters; if there is a pattern surely it should be apparent by now.



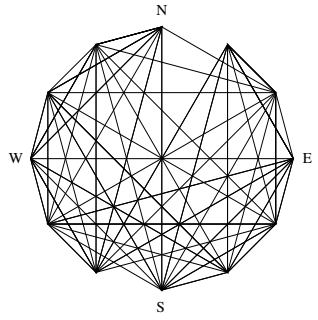
But six is still not symmetrical: East and West do not mirror. The two connecting lines between two o'clock to twelve and ten o'clock do not



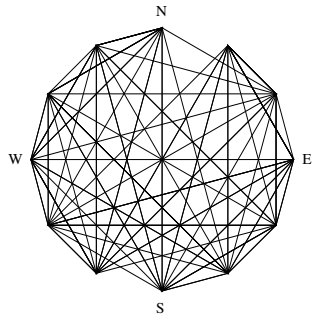
connect to their opposites in the East. Ten o'clock does not connect to one and three o'clock to construct the full symmetry. But the asymmetry feels like an *exception* to the system. East and West connect in the North, but still twelve and one o'clock are not connected to each other as six and seven are in the South. I decide to examine seven, eight and nine o'clock together as a whole quarter.



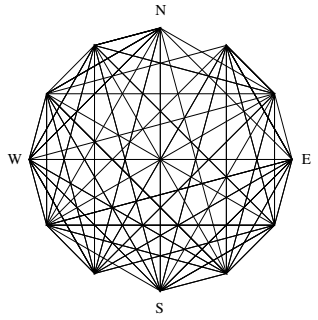
I really don't get anywhere with this system. The third quarter is not symmetrically mirrored. I do not see any systematic pattern revealed by consecutively placing the twelve hours on top of each other. Just more connections, more intersection points, at times hinting towards perfection, gradually forming a circle with all connections between all hours. Maybe it's not a consecutive system at all, just a passionately-contrived semi-regular pattern intelligible only to its creator. Still, I know I must continue, examining ten, eleven and twelve o'clock.



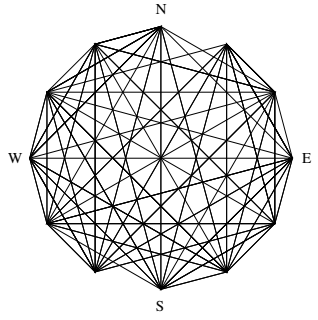
Nothing. By twelve o'clock it's still just a semi-regular pattern, symmetrically mirrored from North to South, but not from East to West. Twelve and one o'clock, and eleven and one o'clock have never connected, and the same with six and seven o'clock, and five and seven o'clock in the South. Only two, three, eight and ten o'clock have all eleven connections each. Four, five, six, nine, eleven and twelve o'clock have only ten possible connections each. And one and seven o'clock have only nine connections each.



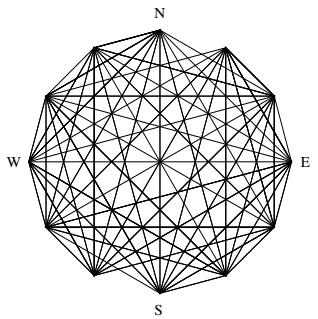
> […] *in trying to prove that a system of proportions has been deliberately applied by painter, sculptor or architect, one is easily misled into finding in a given work those ratios which one sets out to find. Compasses in the scholar's hand do not revolt. If we want to avoid the pitfall of useless speculations we must look for practical prescriptions of ratios supplied by the artists themselves* […] *Here, on the contrary, beauty resides in the relation in the first whole number, simple relationships easily read at a glance and always measurable. Curiously enough, that has never been done systematically.*
>
> *We do not find outside us that aspiration to unity, to logic and to clarity which is a need of our spirit and seems to us a reflection of the divine. Therefore, any coincidence between the forms of our mind and the outside world enchants us.* […] *Certain it is that nature is in all things similar to itself.*[5]



This test is just like the attic: six windows facing East, six facing West, North and South not connected; no complete cycle. I see it no longer as four quarters of three. Instead, two–four–six seems to be the consecutive pattern. Two hours with nine connections, four hours with eleven connections and 6 hours with 10 connections. I have to switch to numbers.



> *Because of twelve's versatility, some modern mathematicians have argued that the most practical base for a numbering system is twelve rather than ten. Their reasoning is simple: except for itself and one, ten is evenly only divisible in whole numbers by only two and five. But*



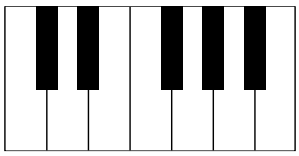
twelve can be divided into equal parts of two, three, four and six—twice as functional as ten when dividing into groups of like numbers.

Because 'duodecimal […] *is the only choice', base twelve is necessary to give complex formulae for physical and astronomical constants in the Universal Unit System.*[6]

1	o' clock has	9	connections	(1) consecutive occurance
2	o' clock has	11	connections	
3	o' clock has	11	connections	(2) c.o.
4	o' clock has	10	connections	
5	o' clock has	10	connections	
6	o' clock has	10	connections	(3) c.o.
7	o' clock has	9	connections	(1) etc.
8	o' clock has	11	connections	(1)
9	o' clock has	10	connections	(1)
10	o' clock has	11	connections	(1)
11	o' clock has	10	connections	
12	o' clock has	10	connections	(2)
88		122		(12)

Adding all the hours of the clock together results in 88, with 122 possible connections and a series of consecutive numbers that can be described as 1, 2, 3, 1, 1, 1, 1, 2, adding up to twelve.

A standard piano has 88 keys. Maybe I'm getting somewhere after all. 88 might be the missing parameter. There are 7 1/4 octaves on the piano; 7 white notes and 5 black notes to an octave; 52 white notes and 36 black notes in total.



I recall the **7** geometrical sunrays from the sun on the ceiling, possibly related to these **88** piano keys; and there was also the golden wheel divided in **36** equal units by radiating spokes. This feels right, though I still can't see where it's leading me. There are also the 1/4, the 5, and the 52, which I don't recall coming across before. I have to examine it mathematically. Maybe I can find harmony in the numbers.

There is the series 1, 2, 3, 1, 1, 1, 1, 2. But adding these numbers up to 12 seems oddly non-symmetrical? 12 has so many divisors that symmetrical calculation seems more likely, unless there is an irregular, timeless aspect—an unbalanced system of never-ending possibilities. Continuing the system yields the following rhythm:

1, 2, 3, 1, 1, 1, 1, 2, 2, 2, 2, 3, 3, 3, 3, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3…

A series that multiplies itself by 4 in an everlasting manner? If this is the case I only need to group all the 12's within it and place it parallel to the system.

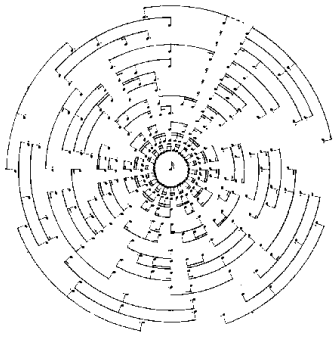
An ingenious form of expansion and pride. I'm in the city where the curse of Babylon and the oracle of Delphi have come to be one and the same. The unintelligible is the temptation.

[1 + 2 + 3 + 1 + 1 + 1 + 1 + 2 = 12]
[2 + 2 + 2 + 3 + 3 = 12]
[3 + 3 + 1 + 1 + 1 + 1 + 1 + 1 = 12]
[1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 2 = 12]
[2 + 2 + 2 + 2 + 2 + 2 = 12]

It is ingenious. Each consecutive 12 is calculated from a different set of numbers. Eventually, I suppose, identical series will appear, but that still leaves the combinations between series. Or maybe it *is* endless. There seems to be a connection with the irregularity of the clock here. Perhaps each combination corresponds somehow with one hour of the clock. I continue:

[2 + 2 + 2 + 2 + 2 + 2 = 12]
[2 + 2 + 2 + 3 + 3 =12]
[3 + 3 + 3 + 3 = 12]
[3 + 3 + 3 + 3 = 12]
[3 + 3 + 3 + 3 = 12]
[3 + 3 + 1 + 1 + 1 + 1 + 1 + 1 = 12]
[1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 = 12]

I have the first twelve combinations and they are all different from each other. It looks as if the Composer developed the Tone Clock in such a way that wouldn't merely employ the repetitive symmetrical harmony of the divisors of twelve, but using a far more sophisticated system that would form irregular combinations. I compare it with the Tone Clock, looking for any similarities with the notes towards the centre of the clock.



But there are no similarities between the series and the notes. In a random manner I can see some similarity between the 5th and the 6th series to the central cycle of equal 2 notes each, and the 8th, 9th and the 10th series to the second cycle from the centre of equal 3 notes each. But no other cycle can be convincingly linked to a series—and I am sure the Composer would not have allowed randomness in the system. The Tone Clock is a pure construction, not derived from unrelated arbitrary choice. It makes no sense to continue this series.

I need to simplify again. I return to the number 12 to observe all the symmetrical series of number combinations which, when added or multiplied, result in 12. Maybe the system is not as sophisticated as I thought.

$1 \times 12 = 12$
$2 \times 6 = 12$
$3 \times 4 = 12$
1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 = 12
2 + 2 + 2 + 2 + 2 + 2 =12
2 + 4 + 6 = 12

$3 + 3 + 3 + 3 = 12$
$3 + 4 + 5 = 12$
$4 + 4 + 4 = 12$
$6 + 6 = 12$

Only $2 + 4 + 6$ can be of any relation.

$$2 \times 9 + 4 \times 11 + 6 \times 10 = 122$$

But 12 multiplied by itself results in 144, which is a far more perfect and complete number, leading to far more symmetrical compositions. And the original circular diagram, with 12 forms each constructed of 4 equal triangles surely seeks a certain symmetry.

$$122 \div 12 = 10.166666666667$$

It is not a whole number, though it suggests infinity. Again, though, this imperfection seems fundamentally wrong.

$$12 \times 12 = 144$$

and the sum of the proper divisors of 12 is the same:

$$1 \times 2 \times 3 \times 4 \times 6 = 144$$

If irregularity is desired, why 12? Why base such an unsymmetrical system on such a regular number, complicating it and apparently reducing the possible scope of composition?

I leave the 7 and the 88 and the 1/4 and the 5 and the 52 and the 36. I realise that I don't need to examine them mathematically—not really because of any mathematical conclusion, or lack of it; just intuition that it will lead me nowhere. I recall order number one on the door when I first entered the room:

STEP OUT OF YOUR GRAVE AND COME IN

The problem is that by stepping in I seem to have dug my own grave.

> *People do know things by intuition, and the force of the word 'intuition' is explicitly to rule out the possibility of a rationale. Intuitions may come more easily in some circumstances than in others; there may in some cases be casually necessary conditions for them.*[7]

I search elsewhere for references to the Tone Clock. I must find an explanation. It just doesn't add up that someone spent his life on a system which appears so formally hermetic, but disintegrates as soon as anyone else tries to understand it. It doesn't fit that someone on a quest for

There are gatherings around the areas that have been marked, where the earth will shake and burst in two. The blinding light will announce the hasty secret once again.

symmetrical harmony, who left signposts for others to step out of their graves and come into the sky, where 14 committee members are constantly rethinking the spectacular work of the timeless triads, was not directing them towards some kind of sense in the end. Why spend so much time and energy and *life* on a Twelve, which is already so fundamentally simple and complete?

Then I come across this simple explanation—or rather, rules to be read before aiming to understand the Tone Clock. I read it carefully, hoping for some light to be shed on what seems to be by now a hopeless quest in understanding the Tone Clock.

THE TONE CLOCK

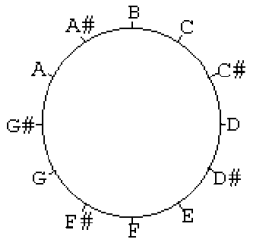
Before being able to explain the Tone Clock we have to set a few rules: When we speak of triads, we mean a combination of three intervals. Such a triad is built on the smallest interval. The intervals all have a number, which is the number of semitones between the two notes. For instance: 1 is a semitone, 2 is a whole tone and so forth. When you make an inventory then, you will come to the following result.

1-1-10, 1-2-9, 1-3-8, 1-4-7, 1-5-6... 1-6-5 ?

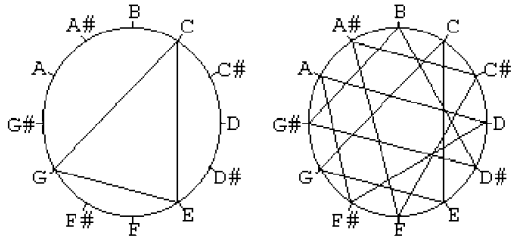
The last one is already mentioned in a different order, so we have to continue with the next new combination, which is:

2-2-8, 2-3-7, 2-4-6, 2-5-5, 3-3-6, 3-4-5, 4-4-4,

Exactly twelve triads appear and they are placed on the twelve hours of a clock in the above mentioned order. The triads are placed in a module which is also based on a clock, only now the hours are replaced by the twelve notes.



If we draw the triad C-E-G in the module the following triangle appears:



and in the following module we see that this combination of intervals fits three times in the module: two major triads and two minor triads. This figure we find on the eleventh hour of the Tone Clock. All the other combinations mentioned above fit in the module four times except the diminished triad, which is displayed as a tetrad, fitting three times in the module. Combining all the modules with their four complementary triads on the face of a clock results in the Tone Clock. The triads of every hour are steered through the twelve-tone-field by one or more hours as is shown in the next chapter.

The diminished triad at ten o'clock is a set rule; it is not a triad but a tetrad, an exception that breaks the symmetrical harmony of the Twelve to contract a perfect or minor interval by one semitone. It is further explained as 'steering'

Every hour is steered by another hour. To steer means 'to indicate the direction,' and is used in the Tone Clock to indicate the relation between the triads, in a way that can be compared to how steps in changes are being referred to in jazz.

For example, the changes II-V-I, very common in jazz, are being steered by fourths, meaning: every next step is a fourth. In the Tone Clock we find the fourths in the ninth hour, so the cadenza II-V-I is being steered by the ninth hour, in this way all the hours have their own steering.

The first hour, for instance, is steered by minor thirds. The diminished tetrad, consisting of four minor thirds can be found on the tenth hour of the Tone Clock. This concludes that the first hour is steered by the tenth hour. The second hour, for instance, is steered by the eighth hour, and the fourth is steered by the sixth hour.[8]

When applying these rules to the Tone Clock they fit; they make sense—but the Tone Clock *itself* doesn't. It is surely still more than just a simple clock surrounded by combinations of triads. Then I discover the Composer's website. The first of its twelve sections, titled The Attic, begins:

WELCOME TO MY WORKSHOP

Enthusiastically I read the Composer's notes, in hope of finding the answer:

This attic was the place where the seventeenth century merchant, who built my house, stored his goods.

I converted it into a receptor of sunlight by making twelve circular windows in its roof, and twelve more stain glassed windows on the sides, so that no sunray over the city can escape me.

You could call me a worshipper of the sun, of Aton, as the old Egyptians called him. In a northern country near the sea, where the sun is often hiding behind clouds, this is an expression of yearning for light and warmth. It also reminds me daily of the fact that we are all children of the sun. Besides, the twelve circular windows represent the twelve Hours of the Tone Clock, my concept of harmony in music.

At dawn the first rays of the sun enter through the first Hour's circular window, the last, at sunset, through the twelfth Hour's window—the orientation of the attic being East-West.
The hours on the south side of the roof project their shadows on those of the north side:

Seven pairs of barefooted unicorns stand as guardians of the Hours, in a discourse over the harmonic laws of Chromatic Tonality, thus defending the realm of Atonism.

The spiritual meaning of this attic is a daily source of inspiration to me. It is situated in the very heart of Amsterdam, on top of the house where I have been living since 1966.

I jump to the section at eight o'clock, clockwise: here's the introduction to the system, I think. It is is titled:

The image will emerge from the chemical waters and the damp will overwhelm those who look over the edge. It will expand their minds and make them speak in countless tongues. They will all be warm and eager.

Roma Pas, Paris 1.8.2004

INTRODUCTION TO A HARMONIC THEORY

The Composer starts his own introduction by declaring 'I hate composition theories, philosophies of new music, recipes of how to compose, prescriptions of style. They're mostly unreadable, unintelligible, boring, and always humourless—whilst their necessity remains a big question.' This throws me at first. Is it a double-bluff to defend his theory for being all the above? I continue reading. The Composer writes that the Tone Clock is not a theory but a device, a tool or a map. 'It is an instrument to realise the chromatic tonality, as I propose to call it.'

And then the Composer writes: 'I drew the first "map" of the Tone Clock, with great excitement, in a hotel near the Berlin wall in 1982.' This immediately gives the Tone Clock a new meaning, more convincing than any of the other scientific or mathematical explanations before. It represents the wall, which divided East from West, and the Composer looking at it and drawing the Tone Clock, thinking of achieving an infinite harmony and a connection between East and West. This is the theory I would like to imagine behind the Tone Clock: so let it be one. The Composer goes on to describe the Tone Clock as marking a transition in his musical thinking, from the Romantic-Modernist Dionysian expressionism of the time, to a more timeless Apollonian Classicism. His introduction to a harmonic theory ends though with a warning typed in red:

THE TONE CLOCK THEORY CAN ONLY BE JUDGED WHEN IT IS HEARD

> *There is no true oneiric house that is not organised vertically. With its cellar well in the earth, its ground floor for daily life, the floor where one sleeps, and the attic next to the roof, such a house has all that is necessary for symbolising deep fears … and sublimations.*[9]

Alon Levin, London 12.12.2004

EPILOGUE

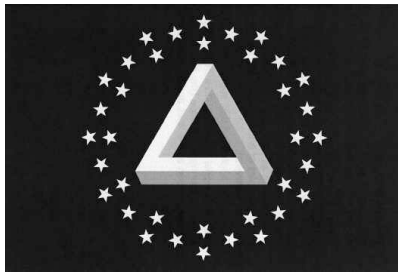
A couple of weeks later I'm back in Amsterdam sitting with a friend next to the Concertgebouw in a bar where the only music is the idle chatter of the regulars. After a couple of Gin & Tonics an old man approaches us and asks what are we discussing. When I tell him about the Composer Peter Schat and his Tone Clock, his face fills with a big smile. He excuses himself for not knowing much about the Tone Clock, but tells me that although in the Netherlands the Tone Clock was never accepted by academics, in New Zealand it is studied and practised. Why New Zealand? He does not know. We check to see if New Zealand is twelve hours from Amsterdam. Maybe the Tone Clock only makes sense on the other side of the world, where the sun shines twelve hours earlier. But New Zealand is only eleven hours earlier. An hour before perfection; the dream is over.

Can the Tone Clock be everywhere at anytime? Is it really a universal system of everything? Just when I thought I was finished with all this I come across Section X, titled *Dreaming of Europe*. It is Peter Schat's dream of Europolis.

APPENDIX I

THE GOLDEN BRAID or HOW THE CENTRE REMAINS EMPTY

On the occasion of the historical decision during the summit in Copenhagen of expanding the European Union from 15 to 25 states, I proposed on 27 November 2002 to use the necessary adaptation of the European Flag to truly enhance its symbolic power.



This can be realised by combining the expanded circle of stars with The Golden Braid by Penrose/Escher. This proposal has now been presented to Brussels and other governmental bodies for further discussion and deserves some explanation.

The Golden Braid originated after the Second World War in the work of the graphic artist M.C. Escher. In 1958 the braid reached its present elementary form by the mathematician Roger Penrose. The historical development of this 'child from the marriage between art and science' can thus be paralleled to that of the European Union.

The image represents a three-dimensional figure that can only be realised in a two dimensional fashion. One cannot give it spatial design. That is the reason that this object is also known as the Impossible or Eternal Golden Braid.

In a political context this image can serve as a powerful symbol of the Trias Politica: the Division of Powers found in a modern democracy. In this way the centre remains empty—no absolutism, no petty autocracy.

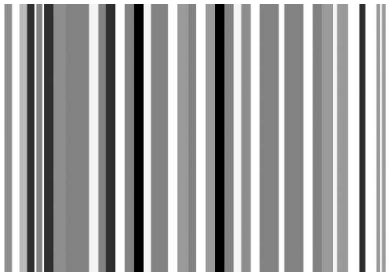
With the supplement of the desired number of stars for each member state, a modern, relativating symbol is created that is more than the sum of its parts, and is above all, unique in its sort. The 'Eternal Triangle' shall be constant reminder to us of the 'Eternal Task' of creating a united Europe.

This icon will help in a natural way the realisation of the peaceful ideal it symbolises.

Peter Schat, Amsterdam, Christmas 2002

APPEAL TO THE EUROPEAN UNION

Human beings are political as well as visual animals. They need images to develop their thoughts, icons to open new perspectives. The European flag is a case in point. It is by now, after a generation in use, a well-known symbol: a blue background with circle of twelve stars. And it is indeed what a flag should be; recognisable at first sight, and different from other icons. But it is at the same time utterly boring and of destitution that betrays the artistic poverty of its cradle: bureaucracy. Visually it is as inspiring as a dishcloth, and as such, a shame for continent so rich in images.



Rem Koolhaas has designed an attractive alternative: a bar code of the national colours of all the member states of the Union. It is a simple, colourful and direct proposal, with an ironic flavour of consumerism. But it has one serious flaw: it ignores history. It simply eradicates the previous flag with one big revolutionary stroke. This is indeed too simple for a satisfying solution. So with the impending enlargement(s) of the Union the problem remains.

It has been proposed to create a second (and eventually a third) ring of twelve (smaller) stars within the existing one, but that could result in a suggestion of second and third rate member states, which would violently clash with the whole idea of the Union. Besides, this would not change the basic visual poverty of the present design. It would just mean more of the same.

So let's give it another try. Because the time is ripe—another opportunity will probably never come again!

I propose to use Penrose/Escher's well known 'Golden Braid' or 'Impossible Triangle' as the European Icon. It can symbolise the democratic Separation of Powers, the Trias Politica, upon which the Union is based and which holds the cluster of stars of its member states firmly together. Additionally it carries with it an ironic suggestion of the 'impossibility of the European dream'. It is an intriguing, robust and 'infinite' image, that in a magical way seems more indestructible than a mere triad would be. It could even serve as the symbol of the rule of law.

Political institutions of Europe unite and give us this inspiring icon!

Peter Schat, 27 November 2002

LETTER TO MR. LARS MITEK, HEAD OF UNIT SECRETARY GENERAL OF THE EUROPEAN COMMISSION

Dear Mr. Mitek,

Thank you for your quick response on behalf of Mr. Prodi to my 'Appeal to the European Union'. I understand that there has never been any plan in adapting the European flag to the impending enlargement of the Union, as was indeed, like you wrote, 'widely reported in the press'. To be a victim of a press hype is always painful, and in this case also rather disappointing because I had a little hope that the dull and visually uninspiring European icon could be improved upon. Now it will remain, as it is, with the 12 stars—12 being the 'symbol of perfection and entirety', as you write.

As a composer, working with the 'equal tempered system', which is now in use all over the world since the time of Johann Sebastian Bach, I couldn't agree more! As I see it the twelve tones are indeed 'a symbol of perfection and entirety', as I have visualised in the 'Tone Clock'. It is the basis of all my work for the last two decades, which includes my website.

Clearly, the twelve hours of the Tone Clock are visually much more interesting than the twelve equal stars of the union flag, and they could represent the differences between the twelve original states (in size, or population) much more adequately than the present equal stars do. So why not use the Tone Clock as the new European icon? This is of course a naïve idea, if only because it has been erroneously decided that the enlargement will not touch the icon.

That the original icon will remain is in my opinion, a poor decision. It expresses only a lack of imagination and courage, and doesn't take the newcomers seriously. These new members of the Union mean a new beginning of Europe and deserve that recognition.

So my Appeal, with its strong symbolic meaning, still stands.

As a European citizen, yours truly,

Peter Schat