ATLAS ELIPTICALIS *(ENGLISH VERSION)*

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 # 0

Through a fundamental and basic relationships and dependencies model I'll try to think about sign / sense and object / subject potential pairs and I will *endeavour* to *exude* the produced *entanglement*. The research is developed using conceptual elements derived from knowledge fields related to aesthetic production of meaning (e.g. philosophy, semiotics, visual and poetic creation) but also from potentially close fields but oriented to the production of scientific-technical knowledge (e.g. astrophysics, geometry, maths...).

A conceptual tool called The Machine $\widehat{M}$ will be used in the project's development.

The project starts from the establishment of an essential relationship, orbiting, between two very basic objects but with, perhaps, highest capacities for evocation, "utility" and function: different colours Post-iT (s) from the most common and used collection.

The Post-iT (s) will be *subjected or submitted* to a series of processes and techniques related to representation that aim to "excite" and develop the aforementioned aesthetic and poetic evocation capacities but also its "usefulness" and function to reflect *from and on* models of semiotic, geometric and physical analysis that are intertwined and fused with the poetic *spirit* and lifeblood to produce aesthetic sense from mere non-oriented signs that are transformed and re-oriented through *allegoresis* processes.

#1

Atlas Elipticalis as a project is part of the development and evolution of a works' series that have aimed to investigate the multiple and multiplying relationships that occur in the world of objects (subjects) and how from the signs that emanate from them the sense is excited and becomes sacked *(tremor)* through *allegoresis* processes. This involve the description, narrativity and deconstruction of these signs in text and their subsequent reconstitution in textual (trans) images that are an expression of the interrelationships of signs and meanings, and of objects and subjects as unstable intertwined pairs but in constant process of affectation and recombination of the involved links. Even so the allegorical processes are linked to defined sources from which the signs emerge and to specific contexts in which the sense emanates and is established itself as a potential differential.

The project's denomination, Atlas Elipticalis, refers to a musical John Cage's composition almost of the same name, Atlas Eclipticalis (1961/62), which was inspired by the works of the Czech astronomer Antonin Becvár (1901) who produced star maps of immense utility over decades (50's). Cage's work uses the star maps of Becvár, maps that he knew in the Wesleyan, to deploy and apply Change Operations, that is, to generate events, tunings and random scores, a constellation of them that will affect 86 "orchestral" instruments (in some of its played versions).

In *Atlas Elipticalis* the name difference is given because while in the Becvár's star maps and in the Cage's concerning composition the elements image_text (stars or score) are part of the celestial map of the earth's ecliptic, in *Atlas Elipticalis* it is about the orbital relations established between pseudo-empty objects of mnemonic and semiotic (sic) function.

To develop the conceptual elements of the project I have employed $\widehat{M}$, The Machine, a theoretical analysis conceptual tool that allows me to observe a series of potential fields of interaction, incorporate and exchange new fields, and observe and analyse the possible interrelationships that become a kind of "condensed" and "radiated" context (environment) coming from a point O or object "a" of high semiotic probabilistic density.

$\widehat{M}$ Therefore is an *insignificant* pocket laboratory... a humble semiotic production experimentation factory.

The operations carried out with $\widehat{M}$ will be indicated by the sign # and a number referring to the attached diagram operation number inside the machine's inner space.

The functions, those we ought to think as the relationships between the different elements, variables and constants, are an interchangeable catalog_stock that tries to show the idea of feedback enunciated by Prigogine in his triad (<> function <> flow <> structure <>).

The interchangeable knowledge fields or areas used in the current project (unsettled at this time yet), those dragged by the accretion disk (# 1), have been or are being as follow: Newton's movement fundamental principles, the gravitation kepler's laws, and the related Richard Feynman's ideas about these principles that he develops to construct a brilliant hypothesis on orbitation, and that he demonstrates geometrically (# 2); coming from the music field the attracted materials are, as I indicated earlier, the work Atlas Elipticalis by Cage, certain aspects related to the works of Alvin Lucier, Lamonte Young or Ornette Coleman; from the visual arts' field some pop art aspects, considering the works of Andy Warhol, Wessellman or Jasper Johns even with increasing interest as an influence on my production of aesthetic sense, or artists' works and reflections that subtly decline geometric abstraction as created by Kenneth Noland or Ellsworth Kelly, or authors who move between a deep sense of abstraction and a too strong transcendental feeling related to immanency like Ryman, Agnes Martin, Blinky Palermo or Imi Knoevel, and in strange playful or metaphysical aspects pointing to the works of Calder, Brice Marden or James Lee Byars (# 3); from the literature's analyse and the literary mix, not agitated, a poetry particular compositional structure, the *sestine*, so the poems by Arnaut Daniel or lucy Lippard's literary work, *-I see, you mean-* (in addition to his perception of the dematerialized object / subject) (# 4), as well as Kenneth Goldsmith's attitude and his hybrid and trans textual works, among others authors that appear in my life. All they are so intimate influences giving me a plain sense of joyful (# 5); in what refers to the philosophy field, beyond what The Machine, M, already contains by itself as mechanisms of analysis, parts of mechanisms, drag, the Leibniz and Deleuze reflections on infinitesimal calculus (# 6), the fold (*le pli*) and the effects of transitivity, and some very sensible semiotic analysis from Mieke Bal (# 7) ... all these fields and authors are oriented to build images within the aforementioned allegoresis process through constructions and structures that rely on certain modes or coming and going states, from (to) the mathematics, geometry or topology integration processes which sink their self into feedback with metamathematical formulations that are derivative and referring to a big amount expression problems related to the application of $\widehat{M}$ when dragging on and processing up all the indicated fields with her.

In addition to the conceptual operations that are carried out with $\widehat{M}$. It's important to bear in mind that the *quasi-result* obtained from the dragging and processing of the aforementioned materials gives rise to, produces, aesthetic sense condensed into strongly allegorical images, although the readability of them requires attending to the processes implemented by $\widehat{M}$ and therefore to processes of intertextuality and transtextuality, that is, $\widehat{M}$ generates and is the starting motor of a type of system like a *perpetum mobile* state that interlaces and "de-interlaces" everything *ad aeternum*. The result of all these operations of transformation (#8) are the different plastic and visual configurations that have as starting point the notions of support, memory, work, orbititation, and an singular and highly specific object, the Post-iT, that has the so clear attribute of changing its status based on its own *potential of differe(a)nce* (# 9).

#3

Atlas Elipticalis is formed by a series of works –items, (from now on solutions or conformations) resulting from the interaction, correlation and transformation (trans_relation) conceptual processes previously indicated. The generation work / process with these materials (sic) is focused on plastic and visual conformations oriented to stress the pair <figuration / abstraction> as well as to establish a series of visual correlations that are presented as allegories (image <> reading <> text) from a whole linguistic tensions series referring to diverse discourses that converge in pseudo solutions or process_project' transitory states. The different solutions do not suppose a finalization of the same one, being the project a work in development that previously could have had different configurations, also transitory, considered probable solutions, of here that it is suggested to think the pair <process | project> as a probabilistic complex.

The different materials (#), conceptual and visual, have provided conformations that are open to be detailed analysis object. Here we present, in a particular turn (path), a singular conformation oriented to aspects related to the orbiting state.

On the one hand a series of notebooks (on the surface) in which are recorded the relationships pattern that occurs between the basic objects raised as the genesis of the process, e.g. the Post-iT (improper objects -what they represent) , the orbitals, and the electromagnetic recording supports (own objects -what they are) that develop the orbitals, as well as a first relation with a combinatorial structure that has as reference the *sextine*, a poetic kind of composition, that generates the structure of this first conformation ; also the colour analysis of the Post-iT and the painting_object (pictorial) image contexts in which these materials interact and produce signs oriented towards a structuring specific rhyme. This first configuration is an project's essential part: configured by notes and basic documentation analysis drawings. This first transitive solution consists of 6 + 3 notebooks of small dimensions: 6 grey colour of 9 x 14 cm. and 3 black colour of 6.5 x 10.5 cm. all of them deposited on a shelf. Only its central pages (twofold page) are "used". The rest blank pages are the each one potential state.

As process' next step, two polyptychs formed by 20 modules each one, approximately 300 x 250 cm. with a central hole (square) of 100 x 100 cm. approx. In these two objects can be recognized a chromatic proliferation, or colour tuning, both of the Post-iT and referred to the orbital relation (topological geometry) that is established between the colour synchronies and the singularity that occurs in each one due to the adjustment attempts - a quantum colour element, (Post-iT) is so different to the tuning state context. The orbital line, in the different and probable solutions and steps, is the potential Post-iT's ghost witch marking the possible orbital trajectory derivative points.

There is no magnetic tape yet, only white colour material surfaces (paint) witch chaotically stirring in each module ... trying to orient itself, enduring against the magnetic fields of its *potential of differe(a)nce*.

A third solutions set formed by four elements of 300 x 250 cm. approx. each one with a flat and flatten colour field and near massive matter (paint) referred to the four Post-iT's most popular collection colours (green / yellow / blue / pink). Upon the colour fields, the VHS video magnetic tape is developed (unfolds and folded) forming a topological ellipse whose perimeter is adjusted to the colour field area and the painted object (rectangle). On the tape, in opposite and quasi-symmetrical points can be seen Post-iT markers (paint) with the same tape's width (½ ") and with different colours to the colour's field on which they are (within the group of colours defined by the Post-iT's collection). In each one of the VHS audiotapes there is recorded a thought (cogitatio), a small narration, even reflection, or a poetic composition, referred to the tensor pair <elipse | elipsis>: discourse_approach.

There are two more Atlas Elipticalis' performed solutions, one has kinematic character, the other one concerning sound, tapes and criss-cross voices, even blended, (love & sex).

The kinematic conformation is based on a manipulated 16-mm. film projection. This solution shows an ellipse "burned" with a tin soldering iron, photogram by photogram (with no photographic processing at all) on a black celluloid, that is, a gap with an elliptical perimeter that is different every frame and trembles because of the fractal precision related to the singularity of each one of them (a tremor due to over accuracy but not enough). Everything moves at 24 frames per second, opening a gap of light in darkness of the space wall (from the real to virtual) (Hieronymus Bosch, Visions from beyond) 1503/04). A reserve projector waits its turn watching from its generator of the sieve screen point of potential light instead of the sieve screen that is already the intersection of the observed subject (Beckett, Film, 1968). Okushin instead of Bauer and vice versa.

The solution referring to sound is developed through the exhibition space wall and becomes a kind of mixed media art machine. A loop of magnetic tape with an elliptical (ovoid) structure (sic) passing through the playback magnetic head and which spread the recorded four criss-crossed speeches, intense reflections (cogitations, those before indicated as speech_approximation), around the pair <ellipse | ellipsis> (4 different tracks mixed on one with no cuts… such a rap).

I would like to underline that across the present analysis only will be developed one of the main aspects related to the process_project presented here, the orbitals, although other relevant aspects can be shown as necessary argumentation just if needed.

 # 3.1. POST-IT: GENERAL DYNAMICS OF ORBITATION. <PTX1 | PTX2> (R, V, A, AM)

This project is oriented to investigate the relationships density and the inherent complexity of them as well as the materials with which the research is carried out, that is to say, the necessary raw material and the interactions that in this are given for the production of solutions or aesthetic configurations of sense. It is not a question of mere observation and translation of the observed items, it is the assumption that observation changes everything and transforms everything (uncertainty principle). By observing we perform Change Operations (Cage). All observation should be considered an alteration of the observed (about those things we do not know how they are or where they are going on (Beckett / Gaye) and therefore the observer's point of view inclusion inside

the described phenomenon and from which the meaning is given in production terms: *poesis* (attribute of the action of doing). In a certain way it could be considered that production of sense, aesthetic in this case, is a possible uncertainty or indeterminacy principle expression, and maybe the intersection or condensation coming from the conceptual and substantial materials: dust to dust (sic).

The research takes as starting point two simple objects of high semiotic potential, as much by its ordinary function as well as its abstract capacity of temporary displacement, also by its high value of contextualization within the simplicity of its character of device. The object in question is the Post-iT®, more specifically its 4 colours standard basic collection: Blue, yellow, green, pink.

The Pos-iTs fulfill a mechanical mnemonic function that comes to replace the need to remember actions to be carried out, or not to forget orders, what was done or what should be executed in a given time period: human responsibility is derivate to a pure surface and coloured object that has to save and "alert" us of a certain event or to do action. But the Post-iT, as the indicated function, goes beyond a technical memory surface imago_mecánica (the device), it establishes, anyhow, a direct link between objects and actions, this is the nature of any function: Poetry (transformation), and therefore generates a system of relations that rotate (orbit) around its given primary function: The Post-IT interacts inside a biotope (context) exciting the environment inherent dynamics; Post-IT as a device, is a singular extension of the subject / object referred to the language and sense that emanate from them… again(s) poetry.

Post-iTs are one of the dragged materials by the accretion disk (#) (logarithmic spiral) generated by the object **a / 0** enunciated by The Machine (#) as a kind of *sense's* hyper_condenser (we don't know what happens beyond the event horizon, but we are able to observe how the materials are apparently processed just to disappear in its going beyond the boundaries (sic))

In a way the Post-IT supplants or subrogates certain subject / object attributes and excites other attributes based on the visuality of the memory and about the relation text <> image. That is to say, and this is a functional hypothesis that allows experimentation, it is possible to substitute, partly - metaphorically, the subject / object for another Post-iT that must remember (to us) such substitution or change operation (mutatio). In principle with the colour variation we already have two (to four) very well differentiated objects and we can stop remembering the substitution operation carried out (A. McCollum), which is simple but essential, and we can start to operate with (it) them: each one is in place of something else and none of the things substituted is exactly the same as the other (*potential of differe(a)nce*). This operation generates aesthetic tension, and as a probability correlation tends to be defined by factors such as force, sense and form (scalars and vectors). In the case concerning us, the present investigation object, the force is weak because it tends to be elliptical and fateful.

The ellipticity (sic) of the relations is singularly important in this proposal.

While two pseudo objects determined by the substitutes or surrogates (something that is after what they replace: Post-iT (hereinafter PTs) -the later, but also language and message, communication and what is behind this: post it, also what is sent) so it is necessary to determine the dynamics relationship, and firstly as one approaches the other and in turn replaces it or subrogates (re) generating a plus of sense. This relationship is nail-biting and so expressive: the substitutes are replaced ad infinitum generating sense. This is neither easy nor instantaneous. It is a slow process that produces large amounts of energy (beta decay or GRB) to maintain core stability (sic).

The nuclear relationship that arises between PTs is given by gravitational factors: one is attracted to the other and vice versa. It is difficult to discern which of them prevails in the relationship and therefore it is appropriate to consider that the relationship tends to be close to equivalence (quasi) and related to certain symmetry. The context is so relevant and the chromatic questions become determinant (visible electromagnetic spectrum).

Considering that a gravitational effect is produced it is appropriate to think that this can be observed as movement of approximation and distancing orbital (attraction / repulsion), and therefore elliptical to a greater or lesser degree or angulation. For this the process_proyect considers a series of laws that allow generating geometrically the orbits of expression or pseudo collision that the PTs tends to generate through this accidental relationship (it is necessary not to lose sight that PTs subrogate anything, and even to the thing itself).

The principles or laws that are considered in gravitational and geometric (mathematical) terms are Kepler's gravitation laws, Newton's principles of motion (Principia) and Richard Feynman's demonstration of why planets move by describing ellipses and not perfect circles (which is developed and collected in the previous authors but which Feynman develops other way and synthesizes in a brand new demonstration). However, what is intended to contribute in the present research process is a geometric solution that locates the foci of a possible ellipse –even an ovoid, a case with more than two centers or foci- provoked by the PTs (any relation of object) in The ellipse itself or in the trajectory generated by the gravitational relationship between the subrogated (this is an ideal model that is susceptible to being transferred to more complex conceptual relational situations), and therefore, it is what is proposed, the definition of ellipse is not necessarily, or exclusively, that in which the geometrical *locus* of the plane's points whose sum of distances to two fixed points called foci is constant (fig.1), which suggests that the points will not be in any case included in the ellipse itself, that is, the points are external (internal) to the trajectory that an ellipse can describe as a result of gravitational or formal stresses, and therefore non proper to the ellipse (even in the case that the foci tend to infinity and we become facing a potential definition of line that tends to be straight). Feynman's demonstration allows us to consider, he does not, that the points that generate the ellipse, the orbital, can be specific to a singular orbit, even though this supposes a kind of paradox that we are trying to solve here (geometrically) in terms of probability in the pair <sign | sense> as a enunciable problem, allegorically, referred to a singularity chasing itself by its *potential of differe(a)nce*.

The 3 Kepler's laws were enunciated to describe in mathematical terms the movement of the planets in their orbits around the Sun. At present time these laws are enunciated in the following way (he did not describe them this way):

> First law (1609)
> All the planets move around the Sun describing elliptical orbits. The Sun is in one of the foci of the ellipse.
> Second law (1609)
> The vector radius that unites a planet and the Sun sweeps equal areas in equal times. The law of the areas is equivalent to the constancy of angular momentum, that is, when the planet is furthest from the Sun (aphelion) its speed is lower than when it is closest to the Sun (perihelion).
> Third law (1618)
> For any planet, the square of its orbital period is directly proportional to the cube of the length of the semi major axis of its elliptical orbit.

The principles of Newton's movement are just three principles from which a part of the questions raised in classic mechanics is explained, in particular those related to the bodies movement. The first law, well known as inertia's law, is a consequence of Galileo's experiments and his own inner daring feelings to imagine the emptiness and the weird energy preservation possibility ad its tendency to keeps unquiet.

> First Law or Law of Inertia
> Every body perseveres in its state of rest or uniform and rectilinear movement unless it is forced to change its state by forces impressed on it.
> Second Law or Fundamental Law of Dynamics
> The change of movement is directly proportional to the printed driving force and occurs according to the straight line along which that force is printed.
> Third Law or Principle of Action and Reaction
> With all action always occurs an equal and opposite reaction: it means that the mutual actions of two bodies are always the same and directed in the opposite direction.

As far as Feynman is concerned, what interests me is his curiosity about Newton's demonstration of Kepler's laws using only geometry, and not being able to go beyond a certain point, given that Newton used mysterious properties of conical sections -ellipses, parabolas and hyperbolas- (mysterious and unknown to Feynman since the seventeenth century was very intense in the study of this kind of geometric issues), Feynman decides to develop his own demonstration to influence that nature is structured, in some sense, following laws of geometrical and mathematical character.

There is a property of ellipses that is very particular. If in F1 (one of its bulbs) a light bulb is lit, and if the inner surface of the ellipse reflects like a mirror, all the reflected rays will end up being reflected in F2 (the other focus or bulb) ... and vice versa: all the light rays that start of a focus will be concentrated in a point on the other focus (fig.2). Perhaps this is a possible second ellipses fundamental property that establishes a direct relationship between any point of the ellipse (or any other curve – this is a supposition I do not intend to demonstrate here) and the straight line that rubs the curve without cutting it at such point, its tangent at that point (here Leibniz and Deleuze make their valuable contributions and twist the ellipse driven it to its hyper tangential rectitude). The light is reflected in such a point as if it were a flat surface or a straight line. We only have to expand the image mentally and the curve stretches and stretches and becomes almost as flat as the tangent (and we are speaking about light, photons, reflecting in an interior - potential black body / monad). The closer we look at, the less difference there will be between the curve and the tangent at that point. Therefore if the ellipse / orbit is actually the trajectory of an object (even in terms resulting from an non evitable relationship), the tangent shows the direction of the object at each point that is referred to the relationship of equality that occurs between the angles of the incident ray and the reflected rays, but at this point it is possible that both, Newton and Feynman, lose sight (not Kepler), blinded by light, that there is an essential tension between a set of points, infinite, which define an ellipse ... and an almost infinity of correlative but different positions that describe the trajectory of an orbiting object, only one, in relationship to another(s) -gravitation sometimes, always, exceeds the pair, and the least action principle only occurs when conditions can permit it , that is, and this is a thought hypothesis: a ray of light derives, or integrates, its angle of reflection until the least action principle occurs (sic) and there is an observer who is able to verify the event not bringing meaning to the reflection_reflexion (including itself or himself, anyway). Feynman demonstrates what has been said (which is, in essence, the general definition of ellipse) through a series of geometric developments that confirm the curve point's relationship with their potentials associated tangents. In this step we have to take in mind that the point_position (or the Bergsonian moving object (target):

nuance and tension) describing the orbital ellipse is the Post-iT (the singular case I propose, and in which the foci will tend to vanish, to maximize its position (> infinite) from the ellipse inner space -according to the canonical definition- to the ellipse itself: this is the question that the process_project tries to demonstrate as a special kind of performance and art development both related to significant, sense and meaning (poetic).

The geometrical analysis developed by Feynman goes to show that starting from two points which we want from the geometrical plane **(F1y F2)** or **<PTx1 | PTx2>,** in the special case I intend to visualize (the demonstration is quasi-parallel), and determining a third point (**G'**) located on an arbitrary line from one of the previous **F1** points can be determined, through a bisector, two congruent triangles from whose vertices, one of them, is a point external to the ellipse itself (**G'**) and whose distance to the other pre-established point **F2** is the same as that between **F1** and **F2** passing through **P**, which is the point that determines the greater angle of the congruent triangles that are given by the bisector that becomes tangent to any of the points of the elliptic curve, which means that the bisector would reflect the light from **F1** to **F2** at point **P**, in fact, the line **F2PG'** (fig.3) has a special property that is given by the triangles congruence: if we draw an ellipse with the string method (gardener's ellipse) **G'** will be the point that we will reach by stretching the string, and when developing a circumference taking **F2** as centre and diameter **F2G'**, the point of tangency (contact curve / bisector) **P** would describe an ellipse. Thus for each eccentric point inside a circle lurks an eccentric ellipse (sic). But this is not what Feynman intended to prove, I return to it, the aim was to demonstrate that the construction of the ellipse with string is equivalent to projecting light rays from **F1** to **F2** or from **PTx1** to **PTx2**, and that the point **P** is, by construction, just *walking the line*, at the ellipse and in the trajectory, at place and in displacement (This is a Fermat's principle particular case: light always follows the fastest path between two points - principle of minimum action - but Fermat's principle is given in a moment ***xt*** regardless of the observation, is just when observing that we could be able to verify that at a certain moment it is fulfilled (take place), not in the previous moment -we don't know, according to the cases, the chain of minimum actions preceding the instant of observation and verification (the nuance) (fig.4). All the other tangent line points will be outside the ellipse.

Up to this point Feynman has already developed everything that interests us to know about the ellipse (as far as its demonstration is concerned) and then moves on to dynamics, which is, to the forces and movements that result from them. The diagram that Feynman drew in his notes is copied directly from Newton's *Principia*. In the diagram of Newton **S** represents the position of the Sun (which will later be e.g. **PTx1**) while **A, B, C, D, E** and **F** (which will be later e.g. **PTx2 ... PTx2n**.) Are successive positions at equal intervals of a planet in orbit around the Sun (which will be later a singular orbit of approximation and distancing / expression). The planet's movement is the result of the relationship between the tendency of the planet to move constantly in a straight line (vacuum / Galileo) while no force is exerted on it (Galileo / Newton's law of inertia) and movement due to the gravitational traction of the Sun (smooth curve orbit) -Newton represented it by straight segments due to inertia, interrupted by abrupt changes of direction (a certain nautical drift) (fig.5). Both, Newton and Feynman, before reducing the time interval to obtain a smooth orbit, prove that the planet's orbit sweeps equal areas in equal times, and that each area is proportional to the planet's angular momentum (object) and that the force exerted towards **S** does not modify this relation. What we have understood so far is that if Newton's first and second laws are true, Kepler's observation about the equality between times and planetary areas assumes that the force of gravity exerted on the object is directed towards **S** or **PTx1** (fig.6).

Just from this point Feynman cannot go further using Newton's *Principia Mathematica* and begins to use time and velocity diagrams like the ones he creates and use for and on his QED proposals (Quantum Electro Dynamics -*Quod Erat Demostrandum*).

All cosmological objects performing orbits comply with Kepler's laws, our solar system in its almost circular orbital path and other stellar objects showing an extreme ellipticity. Here is where Kepler's third law comes into play most obviously. This means that the gravitational force of an object decreases with the square of the distance to it (this is a relevant factor in terms of the acting forces) (fig.7) and here is where Feynman uses the positions and velocities diagrams (QED) and where the demonstration involves the gravity effects. Feynman instead of dividing the orbit in imaginary segments that represent similar intervals of time with centre in **S**, does it in equal angles, that is to say it divides the orbit in equal angles and not in equal areas and therefore they do not take the same and sweep areas different respecting the proportionality between time and area (fig.8). All the resulting triangles have the same central angle at **S** and are therefore similar triangles. This means that given the base of the larger triangle it will be double that of the minor and therefore the height will also measure twice as much. Thus, the time invested in any part of the orbit is proportional to the square of the distance **R** to **S** (Kepler's third law) and we know that the force from **S** decreases with the distance according to the law of the inverse of the square, e.g. $\mathbf{F\text{-}1 / R^2}$. We must bear in mind that the greater the force $\mathbf{F^2}$, the greater the speed increases, $\mathbf{\Delta v}$, and likewise the longer the time, $\mathbf{\Delta t}$, the greater the speed change $\mathbf{\Delta v: (\Delta v F \Delta t)}$, but as $\mathbf{F\text{-}1 / R^2}$ and $\mathbf{\Delta t\text{-} R^2}$, $\mathbf{\Delta v - (/ R^2) \cdot R^2 = 1}$ ... This comes to tell us that $\mathbf{\Delta v}$ does not depend on **R** at all and that therefore at all orbits' points, distant or close to **S**, the $\mathbf{\Delta v}$ is the same, and this happens, I would remind myself, since moving away from **S** the force is reduced according to the square of the distance, but the time during which the force is exerted it also dilates according to the same ratio $\mathbf{\Delta v - (/ R^2) \cdot R^2 = 1}$. The conclusion and hard core, according to Feynman, from which everything will be deduced, is that "equal speed changes occur when the orbit describes equal angles", and yet the $\mathbf{\Delta v}$ towards **S** are now of same magnitude also, unlike of what happened in Newton's demonstration.

Using these data Feynman built the orbital and velocities' diagrams where a parallelism between the resulting arrows of the velocity diagram and the distances between the different points (sections) of the orbit to **S**, step by step, infinitely occurs; and where the velocities' diagram is always circular, although with an origin of velocities not necessarily in the center, and the orbital diagram, on the other hand, describes the orbit itself. Although this may not seem like this, it allows us to further simplify the involved dynamics geometry: the instantaneous velocity, which is the velocity that has a body at a specific moment on a certain point in its trajectory, will be tangent to the smooth curve of the orbital. In this way Feynman, using the corresponding velocity diagram and its tendency to decentralize the origin, can determine the vector and the angular dependence that orients the tangent in each point at the orbiting diagram and develops it. Of course, Feynman applies a series of tricks that allow us to easily visualize the relationship between both diagrams: geometric familiarity, turns, etc...

Here we have to return to the beginning and recover the bisector, but in this case, the bisector will be the one generated between the point of origin, off-centre, familiarized and rotated, from the orbital diagram and a point **p** from the circumference of such a diagram; also as we know that it is perpendicular to the line that goes from origin to point **p**, it will be parallel to the tangent that expresses the instantaneous velocity in the velocities' diagram **vp** and will cut at a point **P** the line that goes from **p** to the geometric center of the velocities' diagram ... and as point **p** moves along the circumference of the circle, the intersection **pC** and the bisector move describing their own orbit ... which is what was proposed at the beginning of this brief non-demonstration (still very synthesized)

that have travel laws and geometric developments that have allowed us to go from **F1** and **F2** to their corresponding Origin and Center, from this moment, that depend on a point **G'** o **p** that is external to the ellipse and that defines the circle's circumference that generates the ellipse's typical tangents (fig.9).

In the following I will try to describe through the Feynman's demonstration concerning the possibility of establishing a geometric link between any two points located at a geometric plane such that both points are inscribed within a closed elliptical (near to an ovoid) curve and that this is a display of the geometric construction that is established as their orbit (figs. 10 and fig. 11), that is, the *foci* **F1** and **F2** will not be external to the characteristic elliptical orbit but belong to it. In this particular case the points are interchangeable as long as their *potential of differe(a)nce* does not change and does not affect which one of them will be **O**rigin (i.e.) and which one of them is will be the **P** point (i.e.); **P** point that deploys the orbit of *pseudo-collision* or catastrophe. The foci **F1** and **F2** are, just by circumstances, given that they are also the elements, geometrically interlaced objects, running away over their own orbital trajectory. The points α and ω therefore will be related through an oval orbit that is flattened towards its origin and curves more and more from its destination (sic). This is in principle a little bit paradoxical but depends on the geometric generation model resulting from applying the previous procedures with the indicated exception (figs. 12, 13 and 14): it is not generated by strange or external (internal) foci to the ellipse, which would be the case of stellar and planetary pure elliptical orbits, here we will find objects that generate gravitational singularities that become orbits (collision or ex_pression ovals). Understand the gravitational factor as a matter of interest, curiosity or production of sense (aesthetic), that is, the dependence or interlacing caused by language or visuality and the derivations that stem from it within a *communicational context* (*I see, you mean* -Lucy Lippard) The collision and ex_pression orbits are orbits with objects on the run (away) (sic), that is to say interchangeable objects between themselves, in the orbital relation, like interchangeable by a different object in any of the multiple, even infinites, poles and orbiting contexts. It is an attraction / repulsion polarized relationship at each point, this is what give the dynamics and energizes the different geometrical planes *perpetum mobile*, the points of view and the language vital contexts.

Returning to how ellipses are generated without considering the definition in which it is resulting, point by point, from the sum of distances to its foci, and considering the ovoid one (a class of ellipse) as a closed curve composed by an even number of arcs linked together and symmetrical with respect to their axis major, and taking into account the above, it is possible to apply all the preceding procedures (Kepler, Newton and Feynman) obviating the need for foci, as I have already mentioned, without it - or precisely because of it - the type of ellipse becomes (derives) straight as the position_stress from its foci in the plane stretches towards infinity. The condition of ellipticity is maintained even when the foci are located in the orbital trajectory itself –we have to consider that to generate an ovoid it would be necessary four different foci or curvature centres: the two proper for the semicircles and the two corresponding to the polar semicircles union arcs (sic). Applying the Feynman's geometric solution, a solution that considers issues of *exteriority*, angularity, tangentiality, distance, time and speed, it is therefore possible to develop an orbital ovoid trajectory from a focus and an external point and not from the *canonical* four foci, one of them internal, which is the standard case. It is also necessary to consider that the shape of the resulting ovoid (quasi ellipse / gravitational singularity) will be independent from the distance between the origin α, or outcome, and the point of link or destination ω. The case that has been developed here is intended as a general hypothesis that activates a relational model based on processes of allegoresis, and therefore on a model of language expansion related to its transtextuality and transimaginality

potential and even considering the interferences between both fields just regarding the essence of the allegoresis processes.

#4

Both, the Kepler's and Newton's solutions become nature's laws as well as the geometric solution proposed by Feynman, who returns to demonstrate the character of law through a transformation of the different orbital function elements (times by changes of speed and areas swept by angles) one of the foci, **F1** e.g. simply fulfills the function by defining the orbit in conventional terms, that is, the point **P**, typical of the orbit, is dependent on the relationship defined by the foci. Feynman also relies on Newton's conception but develops it through a new path, although it continues to use **F1** as an orbital ellipticity guarantor, that has been previously *avoided* just in the intermediate step by solving tangentiality through an external point **G'** that is associated with the focus **F2**, perhaps the main one (sic), and whose bisector cuts the radius (not necessarily by its center) of a circumference at a point that determines both the elliptical orbit and the tangents that define the ellipse closed curve.

As a conclusion I feel the necessity to insist on this question: the foci are not the orbit, just in the case of a canonical ellipse they are something so different from the orbit, and this is verified by all the demonstrations applied on the ellipse. What was intended to demonstrate in these lines is how you can build an ovoid (type of ellipse or a kind of no so regular but soft closed curve) following part of the steps and considerations of Newton and Feynman, and inscribing, this is the difference, the foci as elements related to the orbital itself, that is to say as a dynamic point **P** that describes and develops the orbital and that is liable to certain inner forces of such dynamics related to the geometric tensions and moments derived from them. An ovoid that, apart from its four foci or centres (in this case only two), can describes by itself and from itself a singular orbital trajectory that is determined only by the tension link of the pair **<PTx1 | PTx2>.**

This pair's dynamic-geometric relationship **<PTx1 | PTx2>**, which becomes an orbital relationship (or even a immanent and transcendent link through the orbital), is essential within the Atlas Elipticalis' project since the analysis and purpose of the demonstrations used allow gently the development of gravitational, plastic, visual and sound elements as well as the conformations around the idea of types of ellipses and the allegorical character of relations and tensions that these entanglements make possible between potential pairs such as presence and absence, sign and sense, ellipse and ellipsis, which are in a certain way, even sense, derivations and integrations of the orbital relation that shows the process_project and that constitute the proposal's semantic field and the heart of this research in development, even a written approach to a kind of theoretical and poetic performative essay. There is not intention at any time, given the work's process immature moment as well as the incipient state, that these inquiries be understood as an attempt looking at for precision, rather the opposite, what was intended is to approximate the separate and remote and commit oneself to be launched towards a conceptual, sound and visual orbit (all together) even to uncover this performative essay to the gravitational real life singularity with the purpose that becomes approximation (almost near to collision) and an aesthetic sense heartfelt production. That's all folk… no one theory of local hidden variables can reproduce all the predictions of language (sic).

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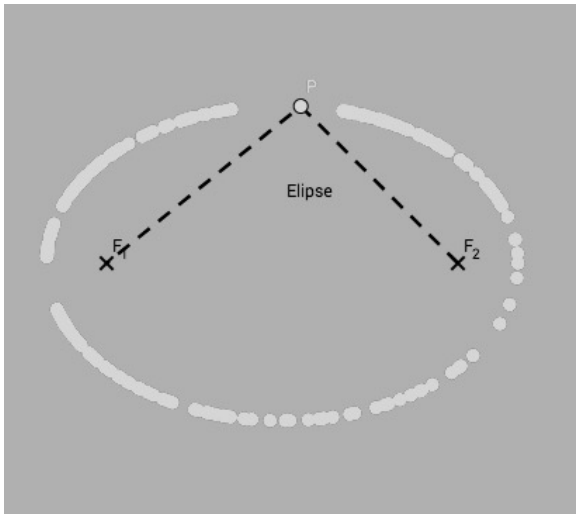
Notas (diagramas)



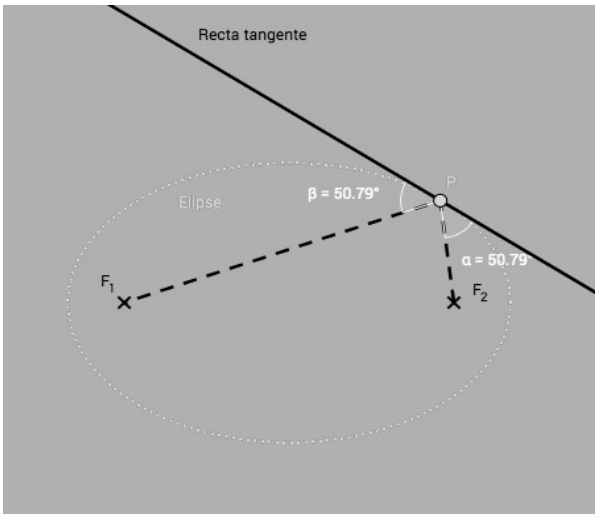
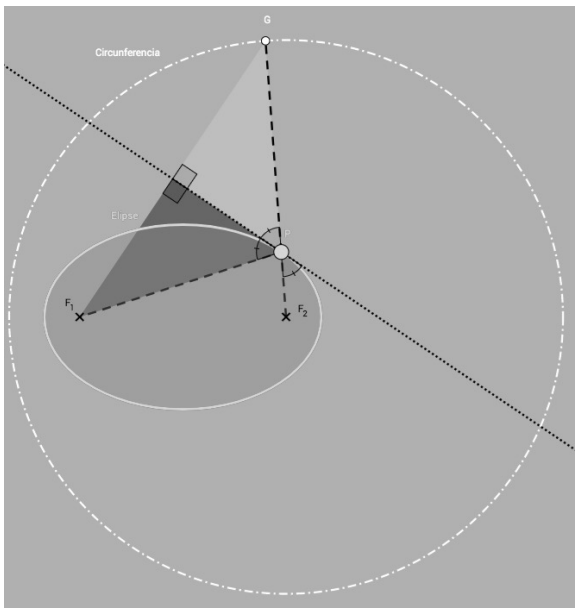


fig.1 y fig.2



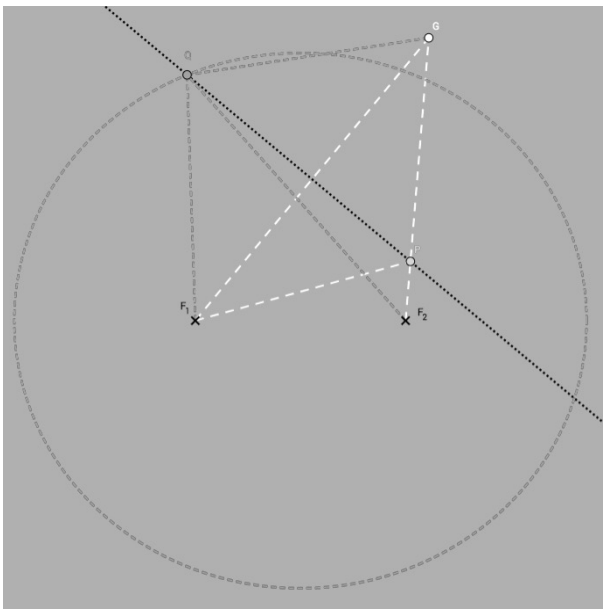
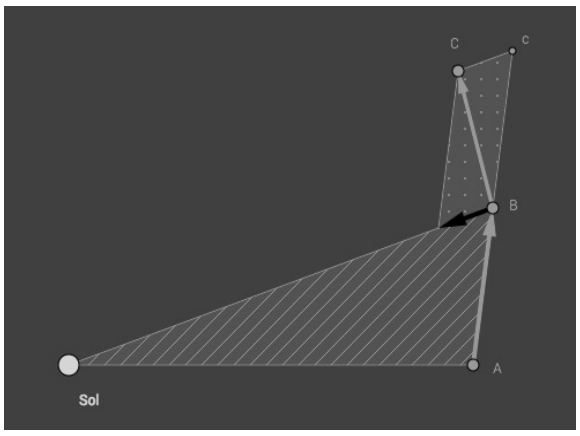


fig.3 y fig.4



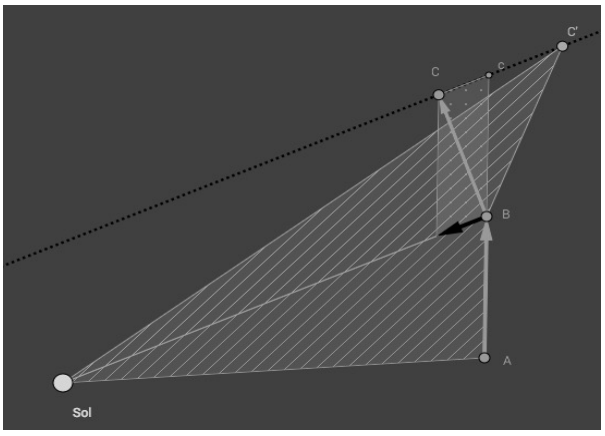


fig.5 y fig.6

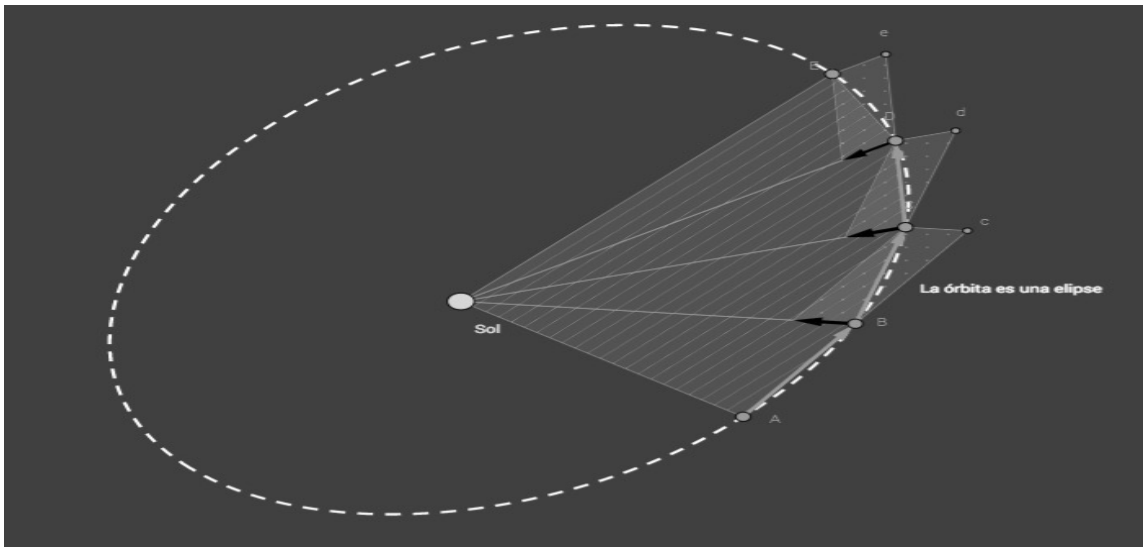


fig.7

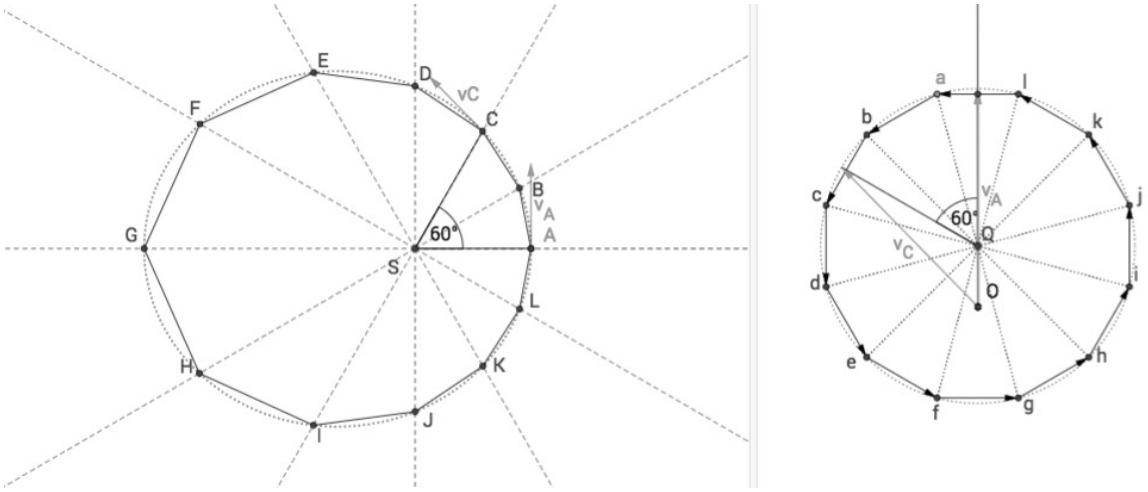


fig.8

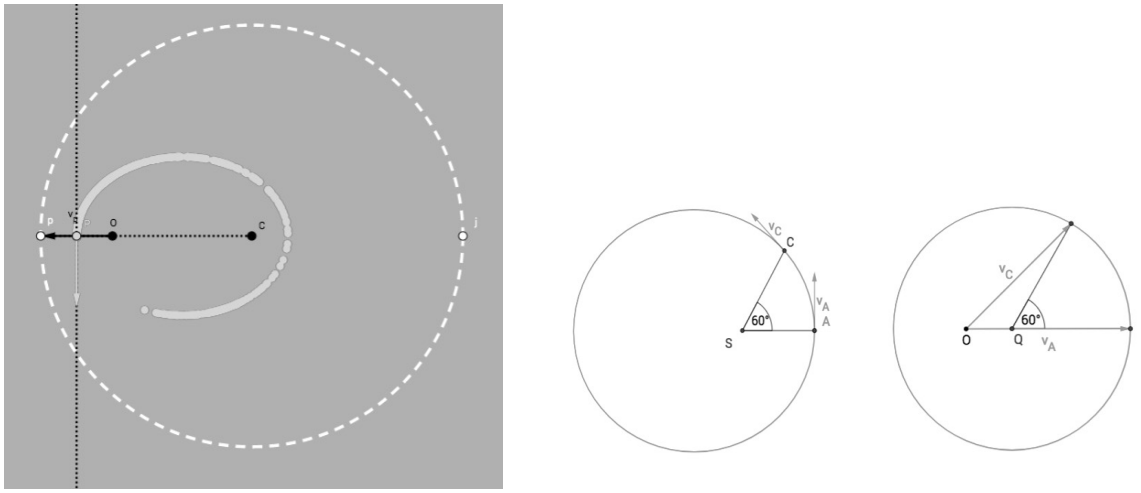
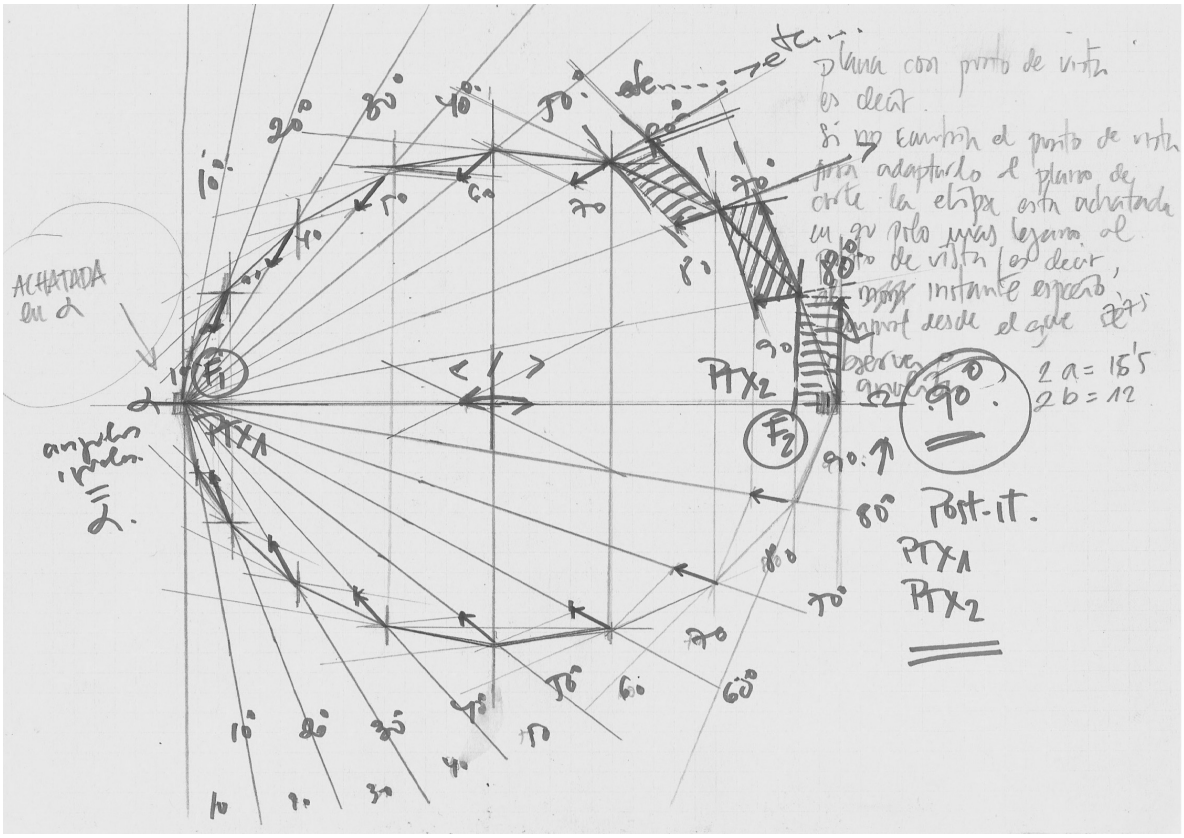


fig.9


ACHATADA en 2
ampliación = 2.
PTX1
PTX2
F1
F2
2a = 15'5
2b = 12
80° Post-it.
PTX1
PTX2

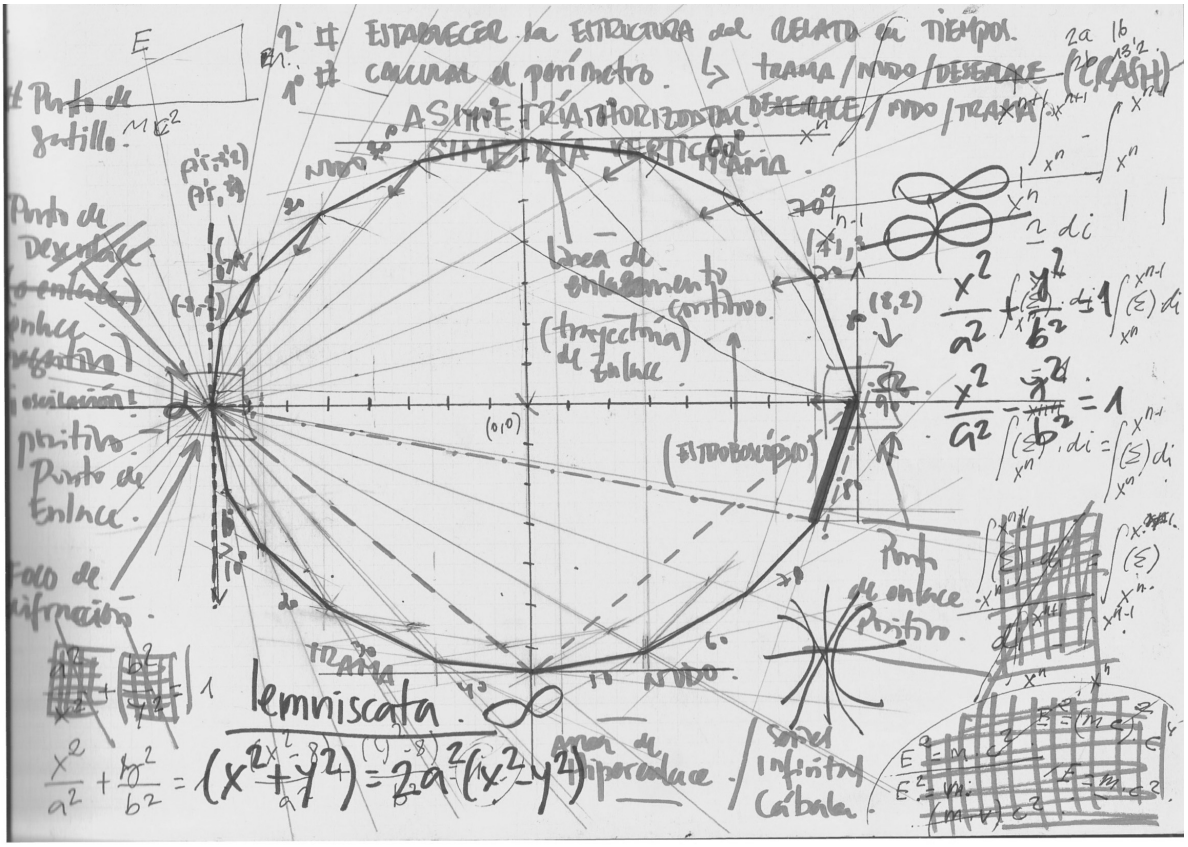
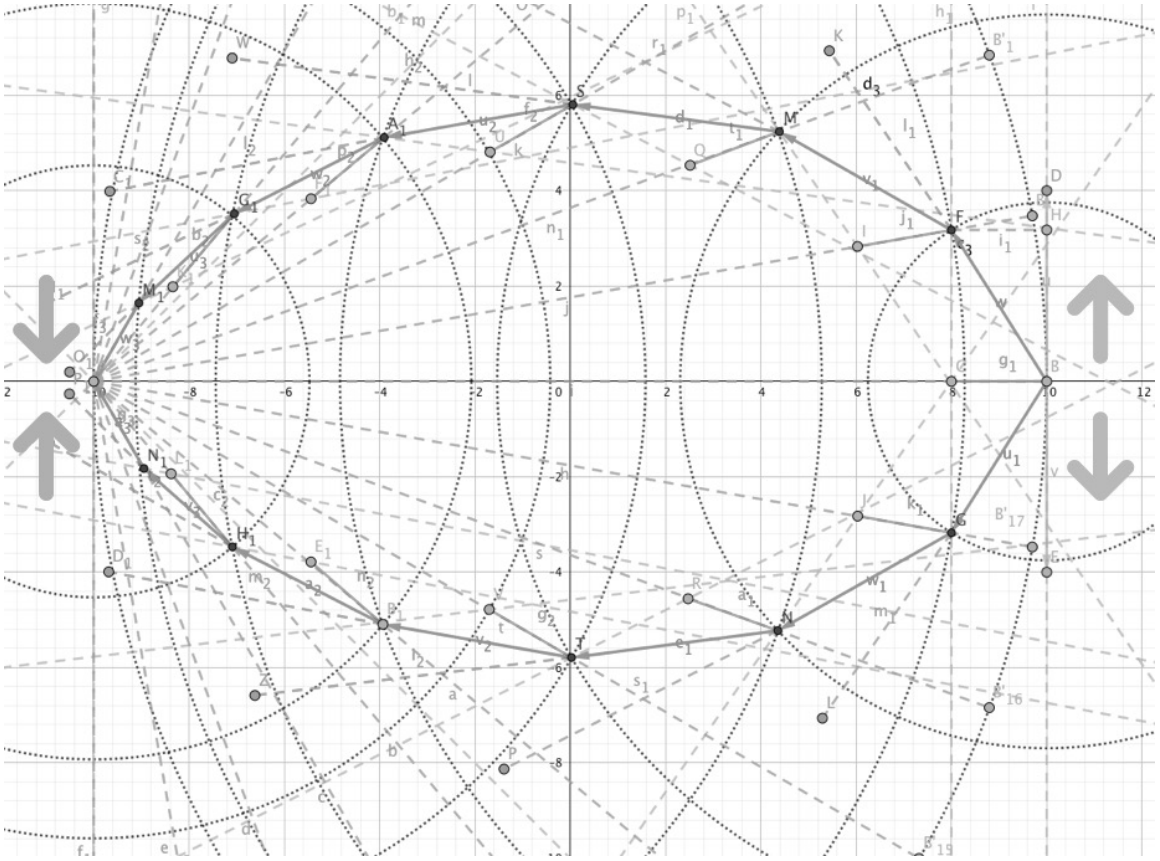
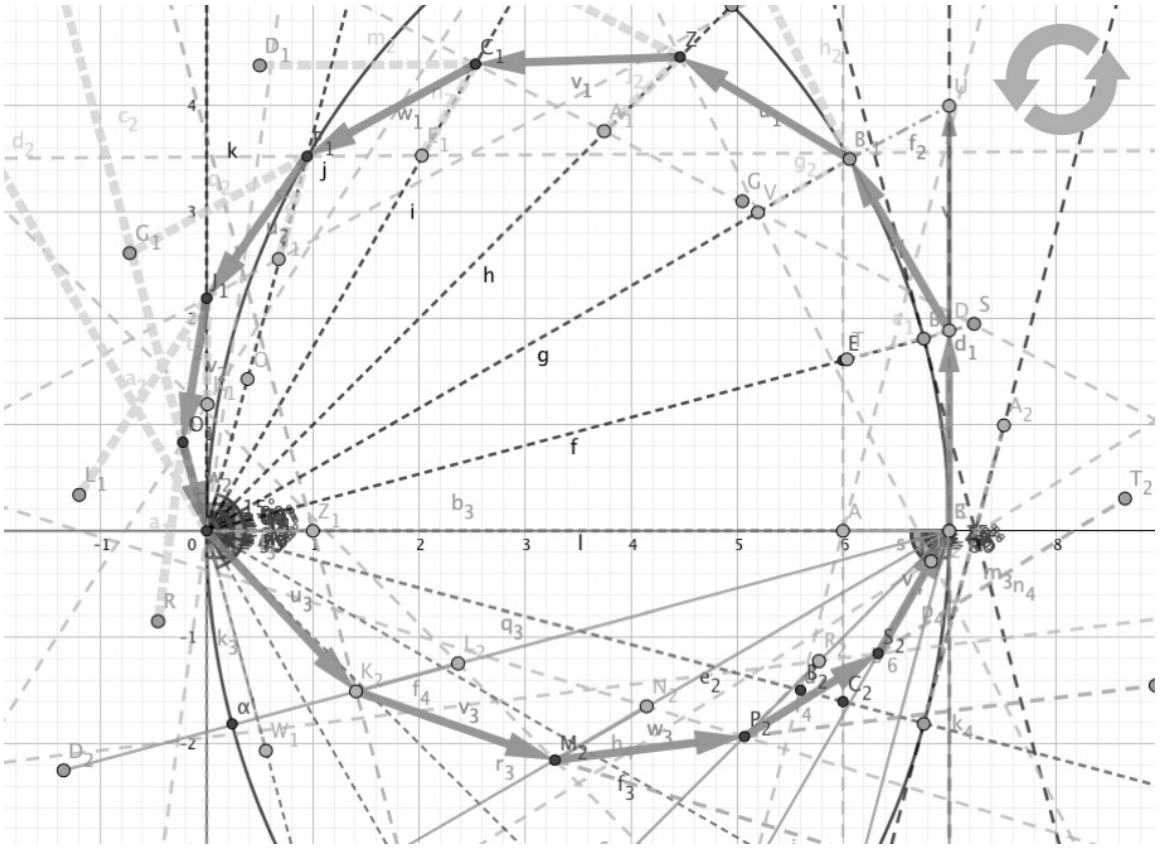

ASIMETRÍA HORIZONTAL
SIMETRÍA VERTICAL
Línea de enlazamiento continuo (trayectoria de enlace)
(ESTROBOSCÓPICO)
Punto de enlace positivo
lemniscata
$\frac{x^2}{a^2}+\frac{y^2}{b^2}=1$
$(x^2+y^2)=2a^2(x^2-y^2)$

fig.10 y 11





figs.12 y 13

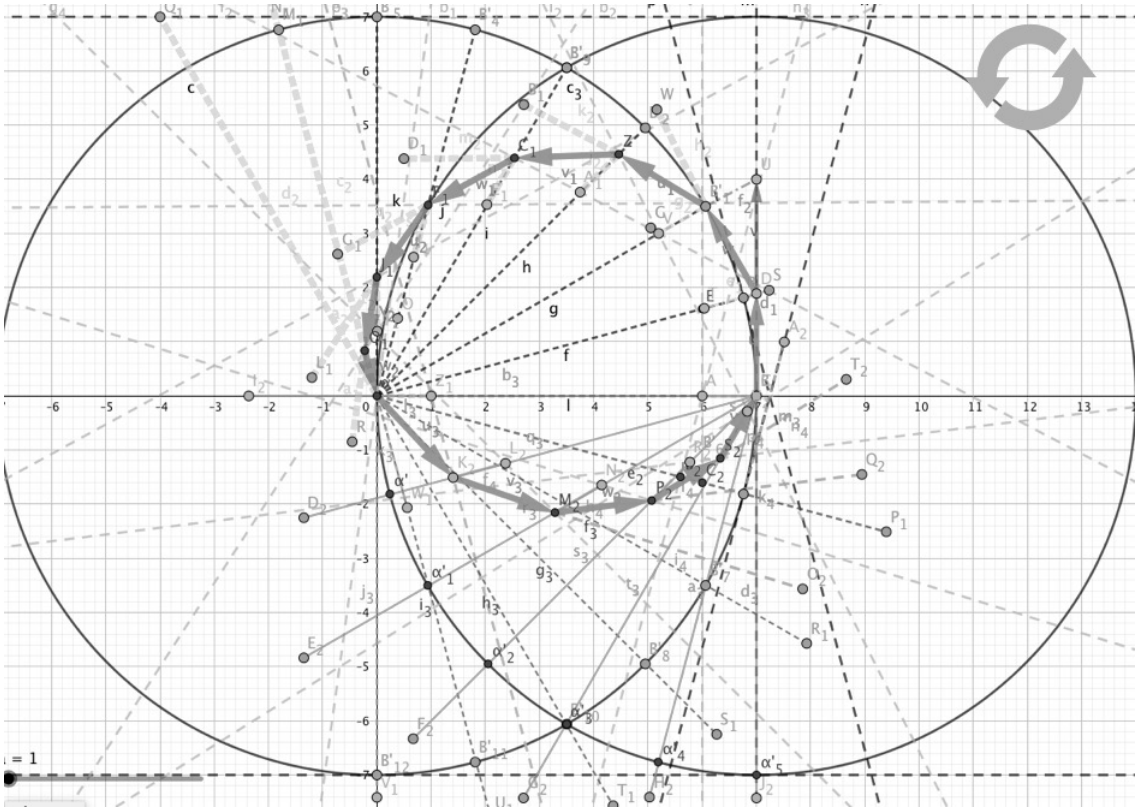


fig.14

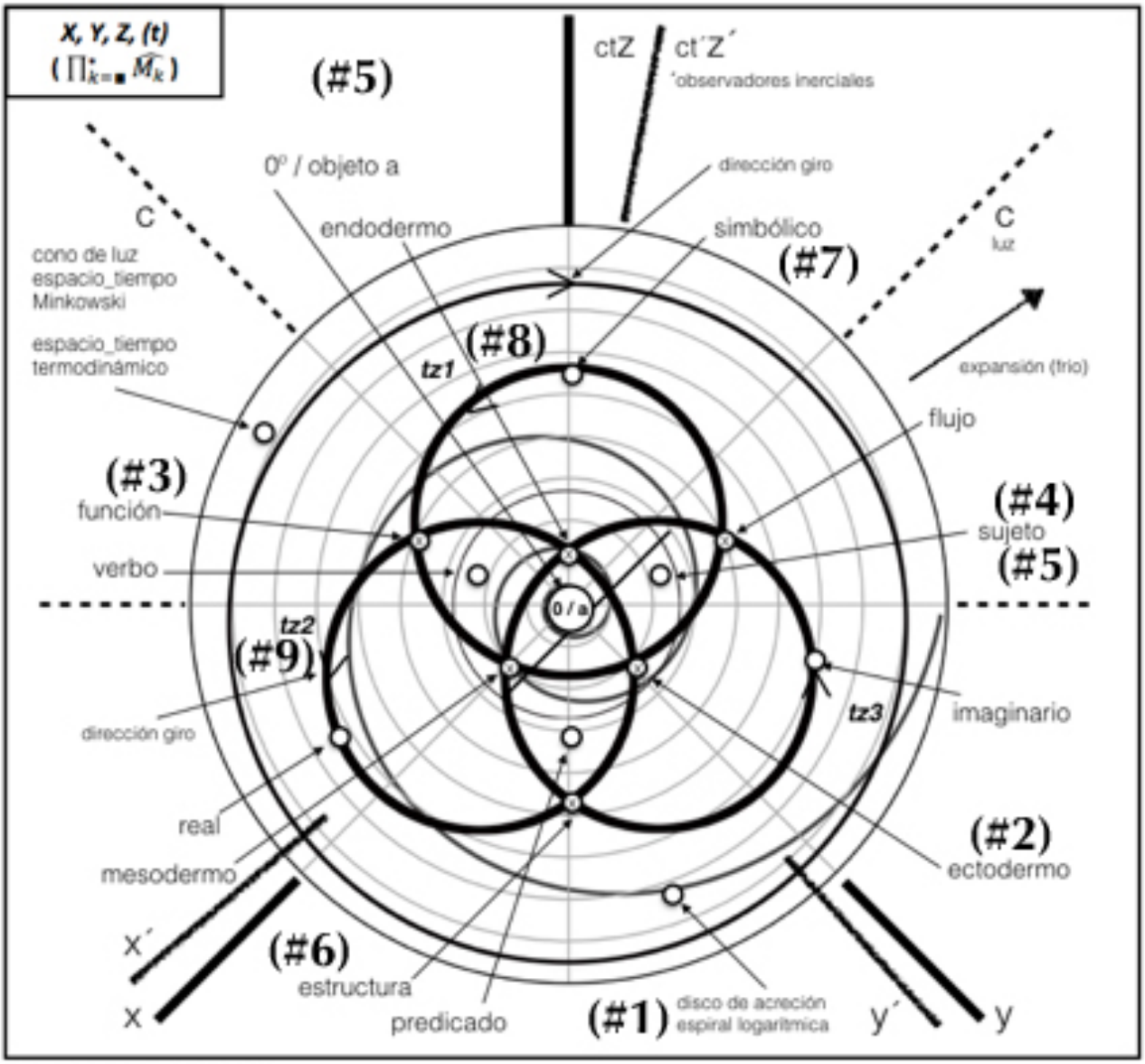


DIAGRAMA DE LA MÁQUINA

DONDE LOS DIFERENTES ELEMENTOS QUE LA COMPONEN SON MOSTRADOS EN RELACIÓN UNOS CON OTROS. LA MAQUINA ES UN MODELO TENTATIVO EN DESARROLLO DE TROPOLOGÍA RADIANTE.

SE PUEDE VER LA MÁQUINA EN FUNCIONAMIENTO EN LAS SIGUIENTES DIRECCIONES WEB:

http://josemaldonado.edu.umh.es/indeterminacion/la-maquina/

https://vimeo.com/124839833