



TRANSREAL QUANTUM ETHICS- SOME REMARKS

Prof. PhD. Walter GOMIDE,
Federal University of Mato Grosso, UFMT,
Department of Philosophy Cuiabá,
BRAZIL
Email: waltergomide@yahoo.com

ABSTRACT

This article consists of a brief presentation of Transreal Quantum Ethics, a new attempt to understand the foundations of moral action. Basically, the notions of phenomenal subject, phenomenal world, and imaginal world are presented here, the latter being of fundamental importance to support the idea that morally significant action must be free. A 'mathematical-symbolic' presentation of imaginal space-time is also provided.

Keywords: Phenomenal World; Imaginal World; Transreal Numbers; Real Numbers; Quantum - Ethics;

INTRODUCTION

The Phenomenal World and Its Mathematics - Real Numbers and Measurements

Sciences in general (and especially Physics) operate under the postulate that the language of Nature, a Nature that reveals itself through measurements, is structured with Mathematics. As a consequence, everything we can know about natural processes (and even, under some restrictions, about social and human phenomena) ultimately reduces to measurements. Hence the somewhat playful version of the Cartesian cogito: *mensuro, ergo est*.

Thus, everything that surrounds an observer, someone willing to measure, is full of numbers, numbers used in a sense that ultimately converges on measurements. Even a mathematical theory about Nature, no matter how extravagant it is, if considered scientific, must collapse this extravagance into actual measurement processes. And thus, we can affirm that the structure of real numbers, the language of measurements, organize the world that surrounds us in an abstract way; let us call this "surrounding abstract empiric organized by real numbers" the phenomenological world.

1. WHY ARE REAL NUMBERS THE NUMBERS OF MEASUREMENTS?

Measuring a quantity, in an intuitive way, is comparing it to some established standard. In this sense, measuring a quantity is determining whether it is greater than, less than, or equal to the chosen standard.

Let us consider any phenomenological quantity; let us call it **A**. This quantity (which can be temperature, energy, wealth, blood glucose level, or even a morally significant action—yes, we can measure moral actions—one of the postulates of transreal quantum ethics) is compared with a given standard that we will call **u**—the unit of measurement.

It is expected that three mutually exclusive situations can occur, namely:

- 1- **A** is greater than **u**;
- 2- **A** is equals with **u**;
- 3- **A** is less than **u**.



It is clear that measuring, therefore, is an act carried out based on the thesis that measurable quantities can be expressed as numbers, as amounts. But not just any numbers, only those in which trichotomy is defined, that is, for any different numbers x and y , we have that:

$$x < y \text{ or } x = y \text{ or } y < x.$$

in which " $<$ " is the non-strict order relation. The real numbers (the symbol for real numbers is \mathbb{R}), since it is a well ordered field, satisfies trichotomy¹

In addition to providing the expected trichotomy in the measurement of quantities, real numbers also offer suitable tools for measuring discrete quantities as well as continuous quantities. Discrete quantities are measured using the subset of real numbers that are the integers, and continuous quantities are measured with rational or irrational numbers². Thus, any quantity in the phenomenal world finds arithmetic or mathematical 'custody' in the universe of real numbers.

2. THE ONE WHO MEASURES: THE OBSERVER OF THE PHENOMENAL WORLD

Every measurement process presupposes the one who measures: the observer who evaluates the phenomenal *empiria*.

This "measurer" is the subject who "interprets" the phenomenal world. And the interpretations that arise are the theories or theses about the phenomenal world.

Such theories or theses can relate to History, Psychology, Sociology, etc. In the case of these theories or theses being classified within the framework of the human sciences, we then have a typical hermeneutic interpreter of Nature, a Nature closer to being explained by the so-called Sciences of the Spirit³. In this case, the process of mathematizing the World of phenomena is very complex, and even so, at some point, the interpreter of the Sciences of the Spirit must confront their theories with some type of measurement: statistical data, reports with percentages, graphs, and ratios between magnitudes that express human activity in some sector always appear in the process of legitimizing theories involving the human sciences.

Much closer to the semantics of the word "measuring," this interpreter of the phenomenal world can be associated with the observer of the so-called Natural Sciences. This observer has a dual role: they develop theories about Nature that are more easily mathematizable than those developed by the "Scientist of the Spirit," and by means of these theories, the observer relate his/her ideas more directly to the phenomenal data through measurements: here, real numbers appear as the result displayed on the "indicator" of a given measuring apparatus.

The observer of the Natural Sciences deals with the mathematization of phenomena in a much more direct way than the interpreter of the Sciences of the Spirit. In any case, one fact is established:

¹ The real numbers are a complete ordered field. Essentially, in addition to trichotomy, the real numbers have the property that any non-empty subset of the reals has a supremum, that is, an element that is greater or equal than all the elements of that subset and such element is the lesser of this type and not necessarily belongs to that subset

² The integers, symbolized as \mathbb{Z} , are numbers that belong to the set $\{\dots, -2, -1, 0, 1, 2, \dots\}$. By its turn, rational numbers, represented by \mathbb{Q} , are numbers that belong to the set $\{\frac{p}{q} / p, q \text{ belonging to } \mathbb{Z} \text{ and } q \neq 0\}$. Irrational numbers, symbolized by \mathbb{I} , are real numbers that cannot be expressed by means of the form $\frac{p}{q}$; they are non-rational numbers. The real numbers can be presented as the union of the rationals and irrationals. In other words: $\mathbb{R} = \mathbb{Q} \cup \mathbb{I}$

³ The term "sciences of the spirit", in its modern sense, was systematized and developed by the German thinker Wilhelm Dilthey in his 1883 work entitled *Einleitung in die Geisteswissenschaften* (Introduction to Sciences of Spirit)



the interpreter of the Sciences of the Spirit and the observer of Natural Sciences deal with theories that, ultimately, reveal the mathematization of "empiria": the former, perhaps in a more qualitative way⁴, and the latter, in a more quantitative manner.

Both the interpreter of the Sciences of the Spirit and the observer of the Natural Sciences can be referred to as *phenomenal subjects*; and this subject who interprets the phenomenal world, whether as an interpreter who navigates by means of Hermeneutics or as one who mathematically theorizes about Nature and arrives at the effective measurements of what was theorized (the observer of the Natural Sciences), has a position in the 'phenomenal world itself': their space-time coordinates of a origin linked to their interpretation of the surrounding 'empiria'.

This origin from which the phenomenal subject weaves their discourse can be, in the case of the interpreter of the Sciences of the Spirit, their position in historical space and time, and this position delineates what the interpreter can see in relation to the phenomena of the Science of the Spirit. For example, the socio-geopolitical origin, together with their period of flourishing, are the space-time coordinates of a historian or a sociologist.

For the natural scientist, this origin, while that natural scientist is a theorist, can also be associated with coordinates of a socio-geopolitical nature (natural scientists also theorize based on certain cultural or philosophical trends belonging to the "worldviews" of the culture to which they belong, or according to the "fashions" of the time) or, while the natural scientist is a "measurer," it can be directly associated with a mathematical abstraction: the quadruple $\langle 0,0,0,0 \rangle$ in a Riemann space⁵, where the first three zeros indicate the spatial coordinates in a generic system of reference, and the last one indicate the temporal coordinate in the same system of reference.

Thus, we can represent a phenomenal subject with the following mathematical symbolism:

$$S_0 = \langle \Sigma_0, T_0 \rangle$$

In the symbolism above, the subscript "0" indicates the origin, in a broad sense, as described earlier, of the phenomenal subject—that represented by S_0 .

The *amplified phenomenal* space-time neighborhood of S_0 (a space-time that could belong to Science of Spirit or could belong to Natural Sciences) is the ordered pair $\langle \Sigma, T \rangle$, in which Σ and T are sets of real numbers that express the spatiality and temporality of what is being interpreted by the phenomenal subject; and when this spatiality and temporality are effectively determined, according to a given phenomenal theory, a measurement is made in relation to $\langle \Sigma, T \rangle$.

This measurement can effectively be carried out by a Spirit Scientist (percentages, statistics, etc.) or by a Natural Scientist (the result that appears on some 'display' of a measuring device)

⁴ By "more qualitative use of mathematics," I mean that mathematical concepts are employed not so much with the concern of generating theories that are, at some point, directly tested through measurements, but, on the contrary, present more structural and "fundamental" relationships. More generally, one could say that the qualitative use of mathematics is not so concerned with transforming concepts into measurable processes, but primarily seeks to "show" the similarities and regularities of phenomena in a synthetic or compact way. Obviously, the qualitative use of mathematics also occurs in the natural sciences, but with a much more prominent commitment to measurements than that present in the human sciences.

An example of the qualitative use of Mathematics in the so-called 'Sciences of Spirit' is Levi-Strauss analysis of the concept of Myths. See Levi-Strauss [1955]

⁵ Informally, Riemann space (named in honor of the proposer of this type of space, the German mathematician Bernhard Riemann) is a generalization of Euclidean space. Essentially, Riemann space is allowed to be globally curved, although locally, or at the scale of infinitesimal distances relative to its points, it can be treated as if it were Euclidean.



Let us call $\langle \Sigma, T \rangle$ the *phenomenal world* of S_0 , and represent it as:

$$Ph_0 = \langle \Pi\Sigma_0, \Theta T_0 \rangle.$$

in which $\Pi\Sigma_0$ and ΘT_0 are, respectively, the set of all possible spatial and temporal positions available to be *interpreted*, in a broadest sense of the emphasized term, by the observer S_0

3. THE DETERMINISM OF THE PHENOMENAL WORLD: THE ABSENCE OF FREEDOM

The phenomenal world, presumably, is a logical-mathematical structure in which any observed change is the result of some phenomenal law: everything that happens occurs through the action of deterministic laws. And such deterministic laws could rise from the phenomenal world seen by the Science of Spirit or seen by the Natural Scientist. In the first case, the logical-mathematical expression of these laws is a much more complex task, notwithstanding it is a consequence of the thesis that everything that occurs in the phenomenal world, including any observable action, happens without the involvement of freedom.

So the assumption of deterministic changes, of strict causation, occurs not only with natural phenomena, but also with human action, since the transition from one phenomenal state to another also happens in a deterministic manner, although the determinism involved is not immediately apparent in the observation or measurement of the phenomena.

Let us consider an observer positioned in the phenomenal world. As seen before, this observer is represented by $S_0 = \langle \Sigma_0, T_0 \rangle$.

At the *amplified instant 0* (a *physical instant* or a historical time), the observer S_0 observes in his/her phenomenal world $Ph_0 = \langle \Pi\Sigma_0, \Theta T_0 \rangle$ another phenomenal observer B . This observer makes an action that could be morally evaluated; let call such action as $A(B)$, and this action occupies a amplified space-time position in Ph_0 . Let's represent this *state of affairs* by means of the following symbolism:

$$Ph_0 [A(B)] = \langle A(B)^0_{\Sigma}, A(B)^0_T \rangle$$

In the considerations that follow, the phenomenal subject is no longer problematized as an interpreter of the Sciences of the Spirit or as a Natural Scientist: *all we need to consider is the phenomenal subject morally evaluating, based on the aforementioned trichotomy of real numbers, the actions of other phenomenal subjects who are within their phenomenal field or world, this being the structure Ph_0* . This thesis, emphasized in italics in the previous passage, is the cornerstone that allows the introduction of Transreal Quantum Ethics, which will later be presented in its entirety through specific developments of the consequences of this cornerstone.

Let's rewrite $Ph_0 [A(B)]$ by $\langle A(B) \rangle_{\Sigma, T, 0}$. So we have the state of affairs described above in the following way:

$$Ph_0 [A(B)] = \langle A(B) \rangle_{\Sigma, T, 0}.$$

Let us now consider that the subject S_0 intends to morally evaluate B 's action A . To do so, he/she has a 'ruler,' which is basically the interpretation, within a theoretical framework, that reveals



the subject's inner perspective or worldview regarding action A carried out by B (if A were a physical quantity, such as a displacement performed by B under certain conditions, then the 'ruler' would be a measurement made according to some physical-mathematical theory).

Let's call this interpretation or "moral ruler" of S_0 by R_0 . This ruler, just like a functional operator, is applied on the act $\langle A(B) \rangle_{\Sigma, T, 0}$ and generates a real number $R_0 [\langle A(B) \rangle]$ which, by the trichotomy of real numbers, satisfies one of the following inequalities:

- 1- $R_0 [\langle A(B) \rangle_{\Sigma, T, 0}] < 0$;
- 2- $R_0 [\langle A(B) \rangle_{\Sigma, T, 0}] = 0$;
- 3- $R_0 [\langle A(B) \rangle_{\Sigma, T, 0}] > 0$

If 1 is the case, then S_0 will morally disapprove of B 's action⁶; if 2 is the case, then the action $A(B)$ is morally indifferent to S_0 ; and if, finally, 3 is the case, then $A(B)$ will be evaluated as morally appropriate or legitimate according to S_0

Since S_0 evaluates B 's action from a moral point of view, it is essential that B acts free from any phenomenal determinism: it is necessary that B be free to act A . But this is impossible, since everything that happens in the 'phenomenal field' $Ph_0 = \langle \Pi\Sigma_0, \Theta T_0 \rangle$ occurs under some causal determination which, in its hidden or not so hidden dimension, ultimately ends up being reduced to some sort of exemplification of a law or set of laws of a mathematical nature.

To give the perspective of freedom to the actions assessed by S_0 in the phenomenal world, it becomes necessary to leave the world of phenomena and enter into a world where phenomenal determinism ceases; the imaginal world then comes into play

4. The Imaginal World and the Imaginal Observer

The imaginal world is a recurring concept in the Islamic tradition and became known in the Western world through the work of the French philosopher Henri Corbin⁷.

The imaginal world is an intermediary world between the physical world and the world of properly spiritual realities. It is a world with its own space-time to which we have access through imaginative activity; it is a world where archetypal images or symbols 'reside.' Thus, it should not be confused with the physical world; therefore, in imaginal landscapes, the causal structure of the phenomenal world does not apply.

Let us now consider that an observer S is situated in the imaginal world. As in the case of the phenomenal observer, he/she has an origin in the imaginal space and time; but this origin is no longer the pair $\langle \Sigma_0, T_0 \rangle$, but rather $\langle \Sigma_\Phi, T_\Phi \rangle$. The subindex Φ is a transreal number (a numerical system that extends real numbers and in which division by zero is possible without contradictions) called "nullity" and represents a non-place in the phenomenal world, and any arithmetic operation performed with nullity returns to nullity⁸.

In other words, the position of S in the Imaginal World is:

$$S_\Phi = \langle \Sigma_\Phi, T_\Phi \rangle$$

⁶ It is interesting to note here that the association of a real number with an action carried out by an agent is not limited to moral actions: we could assume that the action carried out by B and evaluated by S_0 is of an artistic nature, and the resulting real number r would be the expression of the fact that S_0 'approved' the artwork ($r > 0$), 'disapproved' ($r < 0$), or was indifferent ($r = 0$)

⁷ Ver CORBIN [1964].

⁸ On Transreal numbers, see ANDERSON, J & DOS REIS, T. S. [2021]



The surrounding space-time of S_{Φ} is not really the same type as that experienced by a phenomenal observer: while the latter is surrounded by a space-time "calibrated" with real numbers, which allows the measurement of phenomenal quantities, the mathematics of the imaginal world, beyond the origin, is based on the imaginary part of complex numbers and, therefore, neither the imaginal space nor time are ordered trichotomically. That is, for any position x_i (where i is the imaginary unit in such way that $i^2 = -1$) of the imaginal world, and for any instant a_i , the following relations hold:

- 1 - $\neg(x_i > 0 \vee x_i = 0 \vee x_i < 0)$
- 2 - $\neg(a_i > 0 \vee a_i = 0 \vee a_i < 0)$

Equivalently:

- 1- $x_i \not> 0 \wedge x_i \neq 0 \wedge x_i \not< 0;$
- 2- $a_i \not> 0 \wedge a_i \neq 0 \wedge a_i \not< 0;$

More precisely, the observer S_{Φ} occupies a position in the imaginal world where he/she experiences the purest freedom: everything for him/her is in *state of superposition*, in a state of potentiality, and no phenomenal causal law affects him/her⁹.

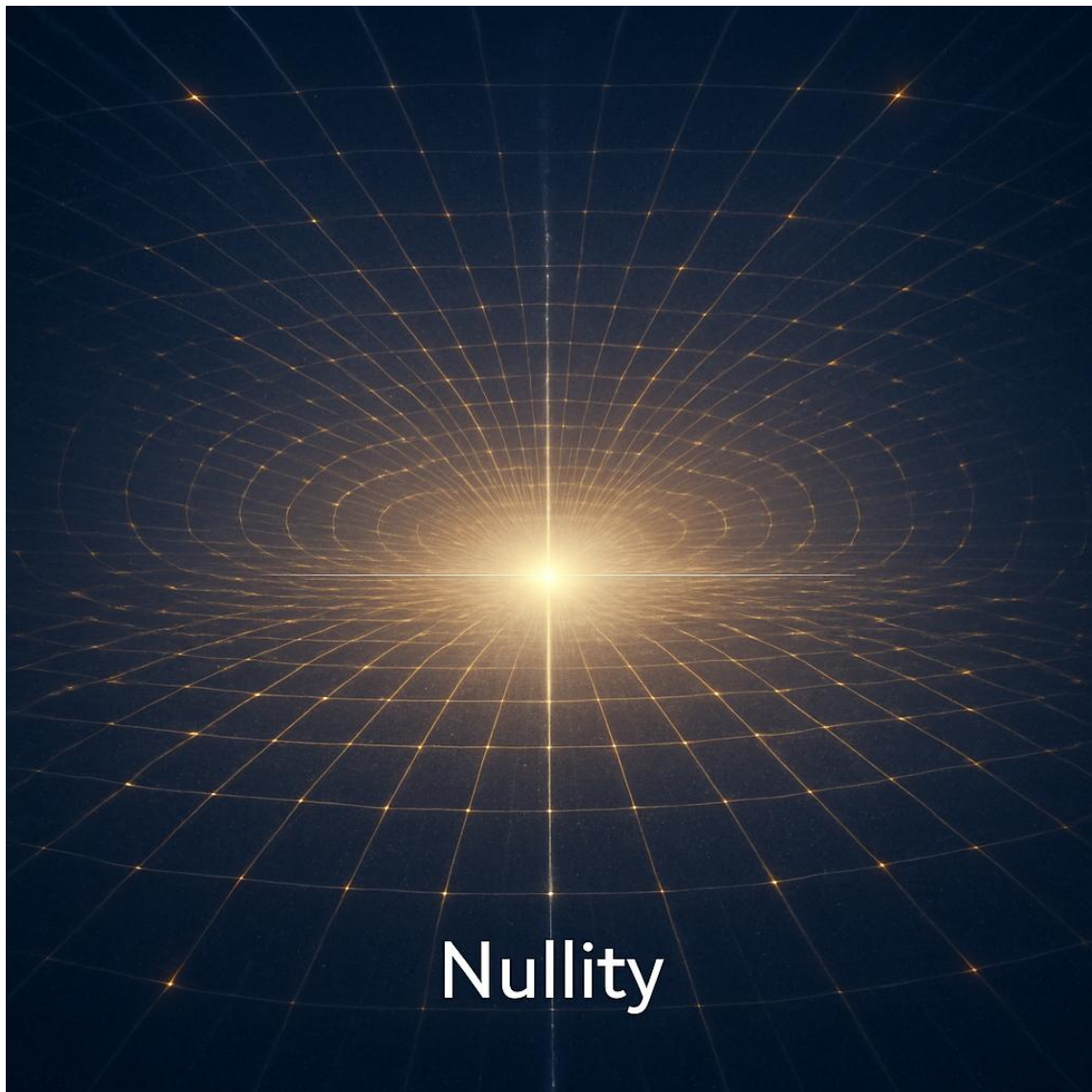
From this imaginal place, the observer can freely 'stroll' through the surrounding environment without experiencing the ordering of space and time: nothing is causally determined, and there are no sequences of positions in the experience of space or time; no before or after, nor this or that: everything is far and near at the same time; everything occurs simultaneously; and this space-time that surrounds S_{Φ} is a space composed solely of purely imaginary numbers.

Let's call that surrounding space of by $Ph_{\Phi} = \langle \Pi\Sigma\phi_i, \Theta_{T\phi_i} \rangle$, where $Ph_{\Phi} = \langle \Pi\Sigma\phi_i, \Theta_{T\phi_i} \rangle$ gives to us all possible imaginaries position and times that some object occupies related to S_{Φ} . That one sees any object moving or acting before him/her with total freedom, that is, without the interference of a phenomenal law.

Let's call $Ph_{\Phi} = \langle \Pi\Sigma\phi_i, \Theta_{T\phi_i} \rangle$ the imaginal world of S_{Φ}

Through AI, we can visualize the 'mathematical structure' of the imaginal world (a two-dimensional figure). Here is the result:

⁹ The imaginal world does not obey the causal laws of the physical world and, in this sense, any observer placed in the imaginal world is "free," since they are not under physical-causal causality. But the imaginal world has its laws—its own structure of a "dreamlike" and symbolic nature. From this perspective, "imaginal" action does not occur independently of this structure. Thus, to be free is to act away from physical causalities, but close to symbolism and its "determinations."



In the image above, the bright center is the position in $\langle \Sigma_{\Phi}, T_{\Phi} \rangle$: the place from which everything is seen in potentiality, in superposition. The circular surfaces that emanate from the point $\langle \Sigma_{\Phi}, T_{\Phi} \rangle$, with their *non-Euclidean* radii, so to speak, are the purely imaginary coordinates that open up to the imaginal field of S_{Φ}

5. TRANSREAL QUANTUM ETHICS AND THE IMAGINAL WORLD

Let's consider again the following trichotomy:

- 1- $R_{\theta} [\langle A(B) \rangle_{\Sigma, T, \theta}] < 0$;
- 2- $R_{\theta} [\langle A(B) \rangle_{\Sigma, T, \theta}] = 0$;
- 3- $R_{\theta} [\langle A(B) \rangle_{\Sigma, T, \theta}] > 0$

As seen before, these three expressions reveal how action A , carried out by B within the framework of the phenomenal world, can be received by a phenomenal subject S_{θ} , noting that both this subject and agent B do not enjoy the freedom to act, since they are situated in the phenomenal



world. But it is a presupposition of Ethics that an action, in order to be morally evaluated, must be carried out by a free agent and also evaluated by a subject, an interpreter, who is free in their assessment. It is here, properly speaking, that Transreal Quantum Ethics begins.

In the terms presented so far, the postulate of the freedom of both the agent and the evaluator of the action is equivalent to determining, to a certain extent, the coordinates in the imaginal space-time of agent B in relation to the imaginal subject S_Φ when B performs A . In other words, what is sought here is to evaluate the “imaginal coordinates”

$$Ph_\Phi [A(B)] = \langle A(B) \rangle_{\Sigma_i, T_i, \Phi}$$

But, to assess this imaginal coordinate, what we have is the phenomenological evaluation of $A(B)$; the phenomenal subject, with their “evaluation ruler,” judges trichotomically the action A of B , and it is by means of this evaluation that the imaginal coordinate is determined from a “measurement” – hence the analogy with Quantum Mechanics and the idea that, before being measured, the physical states of a particle are in superposition, and upon a “measurement” of this state, the physical state is determined. Here, we can consider that the “position of an agent B in the imaginal world” Ph_Φ is only determined when some action of B is phenomenologically evaluated; before such evaluation, the position of B is in a state of superposition in Ph_Φ

The determination of agent B 's position, based on action A , in S 's imaginal world is not through the presentation of pure imaginary numbers that are greater than, equal to, or less than zero. As seen before, this trichotomy, typical of domains calibrated with real numbers and where typically phenomenal causality holds, does not apply in the imaginal world, where the type of causality mentioned above fades away. What is determined, based on the phenomenal interpreter's ruler, is whether, in the symbolic or affective dimension, by performing A , B "approaches" the imaginal worldview that S has at $\langle \Sigma_\Phi, T_\Phi \rangle$, or "distances" from S , or remains at rest.

These three options can symbolically be presented as follows:

- 1) B approaches S_Φ by means the action $A \equiv_{df} [B \uparrow S_\Phi]_A$
- 2) B moves away from S_Φ by means the action $A \equiv_{df} [B \downarrow S_\Phi]_A$
- 3) B remains at rest in relation to S_Φ by means the action $A \equiv_{df} [B \mid S_\Phi]$

Then we have three ways to go from phenomenal world to imaginal world related to the agent B and her/his action A . Namely:

- 1') - If $R_0 [\langle A(B) \rangle_{\Sigma, T, 0}] > 0$, then $[B \uparrow S_\Phi]_A$;
- 2') - If $R_0 [\langle A(B) \rangle_{\Sigma, T, 0}] < 0$, then $[B \downarrow S_\Phi]_A$;
- 3')- If $R_0 [\langle A(B) \rangle_{\Sigma, T, 0}] = 0$, then $[B \mid S_\Phi]_A$

For each situation in the trichotomy of phenomenal evaluations, there is a corresponding 'imaginal event.' These events occur in the typical mathematical symbolism of the imaginal world, where there are not exactly quantities or relations based on the order structure of real numbers; it is a world without causality based on space-time linearity: there are no prior, subsequent, or simultaneous events, at least not in the same way as these terms (based on the trichotomy of the real numbers) appear in the phenomenal world

But we can try to "visualize" the imagined situations corresponding to the terms of the trichotomy from a "symbolic topology" of the affects that A 's action done by B provokes in the



imaginal subject S_{Φ} . From this "topology of affects" and the representation of the imaginal space-time made by the AI and shown previously, a description of the imaginal events related to what is phenomenologically evaluated becomes possible. Let's see how.

Fisrt case:

$[B \uparrow S_{\Phi}]_A$ (if $R_0 [<A(B)>_{\Sigma, T, \theta} > 0]$):

In this case, starting from action A , B approaches the original position of S_{Φ} : in the imaginary space-time diagram presented before, this means that B is "walking" towards S_{Φ} , to the "heart" of this space-time, at its origin $<\Sigma_{\Phi}, T_{\Phi}>$; B is approaching to what S has that is more loving, generating by this path a closeness with his/her most fundamental archetypes¹⁰

Second Case:

$[B \downarrow S_{\Phi}]_A$ (if $R_0 [<A(B)>_{\Sigma, T, \theta}] < 0$):

Now B is moving away from S 's archetypes through the action A : B is in radial motion that takes it away from the *heart* of S positioned at the origin $<\Sigma_{\Phi}, T_{\Phi}>$; B , by *freely performing A*, causes its repulsion from S 's affections centered at the origin of his/her imaginal world.

Third case – the last one

$[B \mid S_{\Phi}]_A$ (If $R_0 [<A(B)>_{\Sigma, T, \theta}] = 0$):

In this last case, B is "stuck" in S 's affections: neither approaching nor distancing from S 's heart – everything is indifferent regarding the dynamics of feelings. Regardless of where B is in $Ph_{\Phi} = <\Pi\Sigma_{\Phi i}, \Theta_{T_{\Phi} i}>$, B is "inert," motionless: he/she is just a "point" in S 's imaginal world.

CONCLUSION

Final considerations: an ethics based on phenomena and freedom

Transreal quantum ethics¹¹ (a new conception of ethics that is in its embryonic stage) assumes that any moral assessment of an action must presuppose that this action has been observed in the world of phenomena and evaluated as a strictly personal measure; and this measure, an interpretation made by a phenomenal subject—here lies the analogy with quantum mechanics—takes the evaluated out of a state of indeterminacy, of superposition in the imaginal world of the evaluator, and inserts it into a determined state in that one; and it is in this imaginal world that both the evaluator and the evaluated enjoy freedom, a freedom that is impossible to acquire in the "deterministic fields" of the world of phenomena.

Therefore, transreal quantum ethics assumes that subjectivity is divided into two complementary fields: phenomenal subjectivity, indicated in this article by S_0 , and imaginal subjectivity (represented by S_{Φ}).

S_0 evaluates actions based on what is phenomenal and, therefore, based on what presents itself to him/her as something arranged in linear space-time; S_{Φ} evaluates actions within the polarity

¹⁰ Here, a similarity with the notion of archetype proposed by C. Jung is assumed, but thi will not be developed at this moment. In general terms, Jung's archetype is a formal structure that is instantiated by symbols. The former, in the interpretation of the imaginal space-time that I intend here, could supposedly be in the 'heart of the imaginal space-time,' in Nullity; and the symbols, associated with these archetypes, would be positioned in the purely imaginary structure o the imaginal space-time. But these relationships, for now, are merely speculative and, therefore, should be further better substantiated. For the notion of archetype in Jung, see JUNG [1954].

¹¹ On Transreal Quantum Ethics, see GUERRA, W & GOMIDE, W. [2025]



subject-object and, in this process of evaluation, identifies with his/her conscious discourses about reality. In doing so, S_0 judges in a manner prescribed by his/her discourse, by his/her "evaluative habits": all the interpretive ruler does is legitimize an interpretation of the world. But S_0 is not free in doing this: he/she simply judges according to his/her consciousness, a consciousness that is also determined, non-free, since it is also a phenomenal data.

But what is phenomenally evaluated by S indicates what S would assess or judge if he/she were free and acted according to his fullest and free subjectivity. Here enters the imaginal subject S_Φ . In his/her imaginal world, S does not evaluate according to causal chains that act like gears in the fabric of linear space-time: as seen before, there is no such linear space-time fabric in the imaginal world. - everything happens freely for the imaginal-subject, and now we can talk about the "affections" of S , metaphorized as a space-time with pure imaginary coordinates and with the "heart" (its origin) at the point $\langle \Sigma_\Phi, T_\Phi \rangle$

Thus, we can state that transreal quantum ethics operates with the passage from phenomenon to freedom and, once accessed, this freedom 'reveals itself' through a poetic-mathematical language based on transreal numbers and pure imaginary numbers.

REFERENCES

- [1.] ANDERSON, J & DOS REIS, T. *Construction of the Transreal Numbers from Rational Numbers via Dedekind Cut*. IN: Engineering Letters, 29:2, EL_29_2_17, [2021];
- [2.] CORBIN, H. *Mundus Imaginalis, ou l'Imaginaire et l'Imaginal*. IN: *Cahiers Internationaux de Symbolisme*, n.º 6, [1964];
- [3.] DILTHEY, W. *Introdução às Ciências Humanas*. Traduzido por Marco Antonio Casanova. Editora Forense Universitária Ltda, Rio de Janeiro, [2010]. Translated from the Original German: *Einleitung in die Geisteswissenschaften*, [1883];
- [4.] GUERRA, W & GOMIDE, W. *A Brief Presentation of Transreal Quantum Ethics*. In: ACADEMIA.EDU, [2025];
- [5.] JUNG, C. *Os arquétipos e o Inconsciente Coletivo*. Traduzido por Maria Luiza Appy, Dora Mariana R. Ferreira da Silva. Editora Vozes, 11. Ed, Petrópolis, RJ, [2023]. Translated from the Original German: *Die Archetypen und das Kollektive Unbewusste* [1954].
- [6.] LEVI-STRAUSS, C. *The Structural Study of Myth*. IN: *Journal of American Folklore*, vol. 68, n.º 270, [1955];



International Journal of Theology, Philosophy and Science

IJTPS- ISSN 2601-1697 online; ISSN 2601-1689 print| <https://doi.org/10.26520/ijtps>
Frequency: 2 issues/year, with possible supplementary issues.

About IFIASA

Ideas Forum International Academic and Scientific Association (IFIASA) is a cultural-educational organization of distinguished members engaged in academic and scientific research. IFIASA is a publisher, open access journals since its establishment in 2015.

IFIASA Publishing House
Târgoviște, Dâmbovița,
Romania
<https://www.ifiasa.com/>
Email: ifiasa@yahoo.com

About IJTPS

International Journal of Theology, Philosophy and Science (IJTPS) is an international, scholarly, double-blind, peer-reviewed journal. It publishes high-quality articles of interest to scholars in the field of philosophy and serves the global philosophical community.

<https://www.ifiasa.com/ijtps>
Email:
ijtps_journal@yahoo.com

Abstract & Index

ERIHPLUS;
Ceeol;
CrossRef; Doi;
Ezb; WorldCat;
Google Scholar;
Philpapers;
Scilit; PubMed;
OpenAlex; Fact;
Sudoc; Ifiasa-Red;

PHILOSOPHER'S INDEX;

Copyright information:



This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).



Publisher: IFIASA® Ideas Forum International Academic and Scientific Association