

# **Phenomenological Method Applied to Quantity and Quality as Framed by Heidegger's Existentialism and the Neuro-Physiological Necessity of Non-Linear Existentialism**

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Without exception, the concepts of Quality and Quantity are applied to everything that is perceived to exist. When an observer becomes aware of an object, it is said to exist for them. If the observer has previous contact or knowledge of the object, then the observer has categorized the various aspects of the object based on these experiences. In situations where observer has no knowledge or experience with the object, then the observer will base their understanding of the new object on what they believe they understand, and put this new object within that context. In either case, the observer would have assigned certain quantities and qualities to the object. However, what does it mean for an object to have quantity and quality?

## **Part 1) Introduction to Phenomenological Method to determine Quantity and Quality**

The accepted definition of Quantity appears to be that which can be measured, and or, defined. If an observer is given a box of a certain weight, colour and size, they would then use standards to describe the box. In this case, the standards are pre-specified values by which other objects can be compared. For example, if the box is weighed, it would have a specific weight based on a specific scale, which could be pounds or kilograms. If the box's spatial dimensions are measured, then the box would have specific values of length depending on the scale used, which could be inches or centimetres. In either case, the measuring scale or standard has already been determined which is then applied to the object in question.

Unlike the concept of Quantity, Quality can not be commonly measured and or is not well-defined. The phrase 'can not be commonly' has been applied to 'measured' because experience implies quality does not have an agreed upon standard by which the object can be readily compared to. If the same box previously mentioned is presented to two different observers and each is asked to characterize it, or assign a quality statement, the observers, based on their own inclinations and personal history with these types of boxes may characterize the box in different ways even though the boxes may be quantifiably the same. The idea then, is that quality's standards are set by the observer and not an external, commonly agreed upon set-value. Or in other words, the variability of the standard is due to the variability of the observer.

Based on this brief analysis of quantity and quality it appears that these words are assigned to two diametrically opposed concepts. Quantity is defined as a concept in which the object is measured by a set standard, whereas, Quality is measured by a standard that is variable. While this conclusion is true based on the analysis, this does not mean that the two concepts are not linked. In fact, if it were possible to find an underlying relationship between the concepts of standards and the creation of variability in these standards, then it could be posited that quality and quantity are intrinsically interconnected ideas.

Thus far, the design of this investigation has been to define quantity and quality without referring to any superfluous aspects. By removing abstract or secondary traits, the truer state can be revealed. This type of study is referred to the Phenomenology Method. Nevertheless, the depth of this method is not in itself standardized. For some researchers, they study the observable, or that which is open to the senses, or the phenomena, and make their conclusion on this information. For others, such as Martin Heidegger, his subject matter is that which is unique to that object. Instead of focusing on so called declarative data, he contends that only by finding what the object is and of itself, even if such information is not readily at hand, can the conclusion have true meaning. For these reason, this paper will employ Heidegger's methodology of emphasising the truth inherent in the object and not the misperceptions of the observer.

## **Part 2) Unifying Definition of Quantity and Quality**

As offered in Part 1 of this paper, the crucial element used to define the concepts of quantity and quality has been the standards that are used to measure them. What appears to resolve itself when they are compared, is quantity can be readily measured while quality can not. Even if you allow for the idea that there is subjective bias, such as the previous example with the box which can eschew the measurement, there are many other phenomena which appear to be inherently hard to measure. Perhaps the difficulty in measuring an object with more quality than quantity occurs because the inability to measure or standardize the object is due to aspects of the object that are internalized and are not linked to externally displayed cues that can be readily measured.

It could be offered that the concepts of Quantity and Quality are related to one another by how unique or internalized the defining aspects of the object are. To the outside measuring device, such internalization could show itself as variance. This variance would not be an absolute state, but one that is in reference to the viewpoint of the external event or observer. In respect to sensory input that enters an organism through the nervous system, a feasible way to generate variance is by continuously changing the energy state of the input in such a way that it does not corrupt the input, but is still able to modify it. To maintain sensory fidelity, the variance needs to occur after the decoding of the input, taking place in the 'Processing' region of the organism. Given this hypothesis, it may be possible to propose that variance as manifested in the observer's unique and personal qualitative description of the object is due to an internally driven change in the energy state of the sensory input, a change that is not caused by changes in the sensory input.

The next part of this paper will be to discuss and define the 'Processing' of the observer, and how it can conceivably change the energy state of the system in a manner not generated by the sensory inputs. In the previous paragraph, the term 'Processing' was used to describe the part of the Central Nervous System (CNS) of the organism that undergoes the variance. By viewing and defining a person's ability to sense and process information in terms of quality and quantity in respect to the energy states and variances of these energy states in their own CNSs, reduces either concept to its most fundamental level, free from abstractions, thereby following the requirements of the Phenomenological Method.

In review, against the backdrop of Quantity, Quality can be manifested in three different ways: either as a result of the nature of the object or as a result of the nature of the observed or both. In Scenario 1, there is an object that is in an unstable energy state. The observer tries to measure this state, but is unable to. The subsequent data occurs over a wide range which does not give the phenomena a specific quantitative state. In Scenario 2, there is an object that is in a stable energy state; however due to the observer's energy state in their own their own 'Processing Apparatus' so that it is, is itself, not stable, and therefore, becomes the source of the variance. This causes the object to have more quality that it actually has. In Scenario 3, there are fluctuations in the energy states of both the object and the observer. Due to the high amount of additive variance, the object would appear to have the highest amount of uncertainty.

### **Part 3) Non-Linear Existentialism and Variability**

Most, if not all philosophers, including Heidegger, begin their treatment of the mind by considering its possible actions, and not the source of these actions. Therefore, even though it will be argued in Part 4 that the various energy states which are proposed to be created by the theoretical neurological mechanism, as described in Part 3 of this paper are intimately correlated to a Being and Existence, I would submit that due to not seeing beyond the scope of pure reasoning, all if not all philosophers have handicapped themselves by believing the effect (philosophical states) are actually the cause (energy states) of Being and Existence. In affect, they have overlooked the evolutionary importance of the environment, and forgot to couch their theories within a realistic framework that can also resolve the issues of basic survival. Without such considerations, their theories lack the necessary substance needed to conform to the Phenomenological Method. Their truths only survive in the scope of the situations they describe, but not beyond them.

The primary object of Non-Linear Existentialism is to provide a feasible neurophysiological model for the phenomena of Being and Existence. In the paper *On the Significance of Amplified Macroscopic Probability in the Optimization of Learning* (based on the Treatise: *Impetus of Thought*), and the subsequent YouTube Presentations the methodology employed also confined the theories to fundamental principles. The starting point of these endeavours was grounded in the limitations of the central nervous systems to adapt to environmental forces. The treatment's goal was to determine if the various stages of evolution in the organism and its societies could be produced based on these fundamental principles.

As is required by the present *ad hoc* definitions for Quantity and Quality, Non-Linear Existentialism consists of a biological model with varying levels of variance. To begin, since this model depends on decoding external neurochemical signals into meaningful patterns, the impulses enter areas of the central nervous system with energy states that have low amount of variability. In other words the fidelity of the signal is high. This is important so that there is minimal distortion in what is being presented to the individual's perception. At this point, the neurochemical signal is more quantity than quality, which is to say the standard upon which the signal is defined is external to the nervous system that is experiencing it.

Through evolutionary pressures to increase the probability of survival of the host organism, the number of sensory channels experienced by the organism has increased, to allow for the organism to experience a greater number of environments. In simpler organisms, the input could remain temporally synchronized by containing the information in pre-determined pathways. However, without a means to actively overcome the differences in the time of presentation (as caused by the development of complex patterns) in sensory rich systems, the organism would become overwhelmed. It was offered by Non-Linear Existentialism that sensory acclimation could occur by having an active, buffering signal. After the impulse stream has entered the CNS, temporal variances which are a by-product of the complexity of the information can be offset by an electrical phenomenon that is generated by the CNS and is non-linear to the stream it affects.

Through the addition of this internal signal, which regulates the timing of the stream it affects, the input is bound and the organism can continue to experience and process complex inputs. Another way of describing this effect as an energy state is that the central nervous system is then brought into a Synchronous Ground State (SGS). In the context of electrical phenomenon this phenomena would be referred to as Frequency Modulation. It is referred to as a 'ground state' since only a minor amount of energy is required for synchronized temporal regulation, and therefore the signal only adds a sub-threshold level of excitation. It does not alter the quantity of the signal because the affected neuronal processes are not fired by the stimulation from the excitatory stimulation of the independent population of neurons.

The phenomenon of Quality is only brought into prominence with further evolution of the aforementioned neuronal substrate. Based on cyto-architecture and other neurological principles, I have posited that the Spindle/Fusiform neuronal processes in the Layer VIb of the Cerebral Cortex are continuously firing at 40HZ, which according to electromagnetic theory produces a magnetic field. This magnetic field causes the surrounding neurons to be stimulated at a sub-threshold level of excitation, producing the SGS.

However, the magnetic field is trophic, and causes the neuronal processes surrounding the primary axons to grow. This secondary growth alters the strength of the electrical signal which passes through the primary axon. Since this signal represents the decoded input from external sensory organs, this process is a form of Amplitude Modulation, and as such, changes the signal. The consequence of this event, is not only are a wider range of outputs made available to the input due to its modified strength, the pattern has an indeterminate level of Residual Incongruency added to it. The Residual Incongruency of such impulses with other energy states in the central nervous system is referred to as Quality.

In keeping with referring to the 'synchronizing' aspect of the FM input, the quality affect produced by the amplitude modulation will be defined as an Activated Variable Synchronous Non-Ground State (AVSNGS). The term 'non' is applied to 'ground state' because this state occurs when the system is 'activated' by external input, occurring when sub-threshold stimulation becomes threshold. The term 'variable' speaks directly to the changes to the amplitude as brought about by the magnetic field.

Therefore, the addition of the non-linear electrical simulation creates both frequency and amplitude modulation of the decoded sensory input. Moderately evolved central nervous systems with divergent sensory inputs require the temporal binding of this information. This can be accomplished through frequency modulation. More advanced systems, such as the Human Central Nervous System, evolving as a result of receiving more input from the environment, have caused the neuronal substrate to increase the continuous frequency in the V1b layer to an upper boundary of 40HZ, creating, for want of a better term, the Quality of Humanness. In terms of Part 2 of this paper, the 40HZ frequency 'Processes' the input, or in other words internalizes the standard, while the 'Processing Apparatus' is defined as the Cortical Layer V1b and the surrounding neurons that are affected.

#### **Part 4) Heidegger Philosophy's and Variability**

Now that a neurological explanation for Quantity and Quality has been offered, the next step is to determine if such descriptions can be applied to Philosophy. While there are many styles of philosophy available to be used as a template, I will reference Existentialism. The reason for choosing Existentialism is that the focus in this form of study is on the individual for the development of themselves which is closer to the scientific method of physiology, whereas many other philosophies tend toward employing various levels of mysticism as reason for personal development. And as soon as a study does not show proper cause and effect, it makes it very difficult to try to link it to the relatively mechanistic properties of the human body.

By reason of his methodology, and his ability to dissect the issue, Heidegger's *Being and Time*<sup>1</sup> will be the work of Existentialism used as a correlative tool to the preceding neurobiological explanation of quantity and quality. Before attempting to venture further, it is necessary to limit the scope of this investigation. Given the size and scope of *Being and Time*, and the number of terms that Heidegger uses and creates in order to explain himself, the task would be too difficult.

What I would like to do is to focus on what I believe are the three key terms of this work: Daesin, Anxiety and Falling. To clearly show how each term relates not only to quality and quantity, but to the neurobiology of the central nervous system, each term will also be defined as a specific energy state being emitted by a specific neurological structure.

##### 1. Daesin

Heidegger's *Being and Time* is built upon the phenomena of Daesin and how its quality differentiates humans from all other entities in the world. During his introduction, Heidegger confronts the issue of how elusive humanness is, and even if such a concept exists. Finally, he concludes that to be human, is to have the quality of humanness, or having Daesin, and that is what needs to be defined. During this process he makes the following statement in Section 43:

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<sup>1</sup> Heidegger, Martin. *Sein und Zeit*. Trans. John Macquarrie and Edward Robinson. New York: Harper and Row, 1962.

This cannot mean, however, that “Daesin” is to be construed in terms of some concrete possible idea of existence. On the outset of our analysis it is particularly important that Daesin should not be interpreted with the differentiated character of some definite way of existing, but should be uncovered in the undifferentiated character which it has proximally and for the most part. This undifferentiated character of Dasein's everydayness is not nothing, but a positive phenomenal characteristic of this entity.

The key aspect of this passage is that Humanness or Daesin is described as a phenomenon that imbues humans with qualities by virtue of it having a non-specific characteristic. Therefore, in the context of an energy state generated by a neurological substrate, Daesin would be the central nervous system's achievement of the Qua Activated Variable Synchronous Non-Ground State (QAVSNGS), producing the necessary amount of variance in the processed input stream, to generate self-awareness in the central nervous system though modulating the amplitude of the input.

The entity is able to differentiate themselves from their environment and become an individual. Moreover, the apparent nothingness, or that which can not be defined of Daesin can be attributed to the source of its generation, namely the magnetic field produced by Cortical Layer VIb. The force only becomes ‘something’ or ‘definite’ when quantified patterns have been encountered and altered in their amplitudes. Once Qua or Daesin has been reached, it is permanently affixed to the quantity of the system. In comparison, SGS and AVSNGS are energy states within systems that have not or cannot achieve Daesin.

## 2. Anxiety

To Heidegger, Anxiety is a basic state of mind that is constantly experienced by Daesin. Heidegger views anxiety as a mood that is linked to a person's response to experiencing uncertainty (paragraph 188):

Anxiety is not only anxiety in the face of something, but, as a state-of-mind, it is also anxiety about something. That which anxiety is profoundly anxious about is not a definite kind of Daesin or a definite possibility for it. Indeed the threat itself is indefinite.

Based on this comment, anxiety occurs due to a lack of connection with definite states, or quantities in themselves or the environment. Anxiety could also be interpreted as a separation between the quantity of the outside and the quality of the inside. Heidegger gives the following description in paragraph 189:

As we have said earlier, a state-of-mind makes manifest ‘how one is’. In anxiety one feels ‘uncanny’. Here the particular indefiniteness of that which Daesin finds itself alongside in anxiety, comes proximally to expression: the “nothing and nowhere”. But “uncanniness” also means “not-being-at-home” . . . Yet the everydayness of the fleeing shows phenomenally that anxiety, as a basic state-of-mind belongs to Dasein's essential state of Being-in-the-world, as one that is existential, is never present-at-hand but is itself always in a mode of factual Being-there.

Present-at-hand is a term used by Heidegger to mean that which one can encounter in the world/environment and understand, therefore, anxiety is a phenomena generated by the person.

Expressing anxiety as an energy state, it would be equal to a Qua Range of Activated Variable Synchronous Non-Ground State (QRAVSNGS), having both an upper and lower energy limit. The upper limit of the range is the point at which the sustainable energy capacity of the nervous system is reached, and if sustained would lead to overstimulation and damage to the nervous system. Anxiety can be seen as the suppression of energy occurring due to a change in amplitude of the signal, causing it to be out of phase with other cortical-electrical events. The extra stimulation the neurons receive may then cause them to fire differently than they have in the past, causing their frequency to be out of phase with other neurons.

It is important to note that the lower limit of this range is not equal to AVSNGS, implying that if the minimum energy state is not reached the person would cease to be a person because the necessary energy to form Daesin would not occur. Due to the previous formation of patterns within the stable portions of the CNS that have been imbued with the individual's quality, or Qua or Humanness, even when the global cerebral energy state is below the lower limit of the range, the person still exists. Put another way, once the minimum quality is reached, the quantity of energy entering the central nervous system does not affect it, it only changes how strongly the Qua of the system is evident in the person's thoughts and behaviours.

The Psychological and Philosophical ideations of Anxiety are a by-product of amplitude modulation. Anxiety can cause unrest (see Falling) in the individual because most amplitude modulation results in an instantaneous reduction of cortical energy and the production of Residual Incongruency. And as postulated in the series of YouTube presentations concerning the 8 Developmental Stages of the Self-Line Function (Existence<sup>2</sup>), the fundamental goal of the person is not food, water or any such abstraction, but the removal of Residual Incongruency from the central nervous system. This is not to infer that food, water and shelter are not necessary for life, what is being postulated, and in keeping with this present paper, since the nervous system is a data collection system whose primary goal is to maintain a sustainable energy level of energy within QRAVSNGS; food, water and shelter are secondary goals of maintaining this energy state.

### 3. Falling

In keeping with the idea of separation, Falling is a fundamental state that occurs when the person who has achieved Daesin attempts to escape anxiety. With anxiety being a fundamental internal state that causes unease with oneself, it results in the person seeking the company of others in the environment or the 'they, to find ways to abate the sensation of anxiety. Heidegger describes this process in the following selections:

In falling, Daesin turns away from itself. (Section 186)

Thus the turning-away of falling is not a fleeing that is founded upon a fear of entities within-in the world. . . The turning-away of falling is grounded rather in anxiety, which in turn is what first makes fear possible . . . Dasein's absorption in the "they" and its absorption in the 'world' of it's concern, make manifest something like a fleeing of Daesin in the face of itself. (Section 184)

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<sup>2</sup> The process of becoming or Being is equal to pathway taken by the Self-Line Function.

Electro-physiologically, the Falling, or movement away from what is conceptualized as the Self, is outlined in the temporal evolution of the Self-Line Function. In the early stages of the function the addition of quality (or anxiety) to the central nervous system, as a result of amplitude modulation, leads to the development of the individual (Dasein). The mounting level of variance causes the evolving person (Being<sup>3</sup>) to experience a decrease in the energy levels in the CNS as incongruencies, causing the forming individual to go (flee) into their environment to look for a means to resolve this conflict.

Through the course of this interaction, and further development of the person, new patterns and behaviours are created by this variance in the form of Thought. Thought or thinking is a process whereby the continually developing neuronal pairings between input and outputs are weighed and acted upon based on the disposition of the patterns stored in the central nervous system (memories, including conditioned and unconditioned responses) to modify neuronal inputs. The linearity of these input-output pairings is based on how much amplitude modulation has occurred. The greater this processing, the more non-linear the pairings may become, and therefore the more abstracted the output will be in comparison to original input.

This process results in the central nervous system and its energy states becoming more self-referential as it and the individual it reflects turns back to itself to resolve the inconsistencies which are unique to the biological entity and not for the inconsistencies which are unique to the environment. Through this process, aspects of the society that are impressed upon, processed and retained by the individual are managed so that the individual's socially based uniqueness is optimized to reduce the individual's anxiety, as well as, sustaining cerebral stimulation within that environment. In conclusion, while environmental stimulation is responsible for the development of the primary patterns and their correlations, the ultimate shape of these patterns is due to the ability of the person's uniqueness to fit within this context.

### **Part 5) Concluding Remark on Humanness**

To be human, is to have a physical form that allows the sensory processing systems that inhabit this form to maximize interactions with the immediate environment so that survival of the form in that environment is optimized. Amongst our most human of physical attributes is our upright bipedal stance and centralization of our many senses and inputs into the caudal regions of the human body. These are Human Quantities, or measurable aspects of our bodies. Both of these aspects have increased the amount of sensory input entering the nervous system, forcing the evolving central nervous system to adapt by first modulating the frequency and then the amplitude of this building stream of electrical impulses; creating binding and then thought. The first adaption was by necessity, the second as a side-affect of the process. Therefore, Humanness is the result of the quantity of being Human. Existentialism speaks to the quality of the experience, while Non-Linear Existentialism formalizes the process.

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<sup>3</sup> Being is an evolving state that continues to change and become or in other words it is the present state of Dasein in its environment. This would be equal to the instantaneous position of the Self-Line Function