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Rationes Seminales and Life Transformation

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I. The Four Categories of Understanding Life Transformation (Changes in Life)

In examining the word “evolution,” “entwicklung,” “évolution,” and “jinhwa” (進化) without the due consideration of its etymology, its usage should be examined with two major categories in mind, especially when it is applied to the studies in biology. One of the divisions pertains to the question as to whether or not the aim of change exists and if it does happen, then the inquiry includes the pattern of progress in attaining the objective of change; and the other refers to the question of whether the change on the attribute of the existence is more fundamental than the change brought on by the flow of electrons. Here, these two categories are expanded: the former division comprises two parts and thus becomes the theory of internalism and externalism; the latter becomes the theory of stabilism and dynamism. Thereafter, the theory of stabilism and dynamism divides into two groups: one becomes the internal stabilism and dynamism of the individual and the other, the stabilism and dynamism within the order of nature. Internal

stabilism and dynamism of the individual subdivides, and (it is noteworthy to add that) the ramification is contingent on the individual's stability, that is, whether the stability is everlasting or is undergoing a transformation or modification.

Among the Western thinkers, stabilism theorists believed modification and the transformation of all living entities occur within the physical body of the “being” and within the boundary where the stability of the order in nature is left undisturbed, because they viewed the modification and the transformation, not as the actual transformation of the “being” but rather, as a transitory state or as modification and transformation that occur within

the confines of the attributes of the living being; and they had arrived at this perspective by placing the focal point on stability of being of the being when confronted with the question of the being. Conversely, what regulates the existence of all living beings, according to the individual dynamism theorists, is not the “being,” but rather, the phenomena of the living being, and in effect, what sets the limitation of the transformation is, again, not externally regulated, but internally regulated by the states of living entities. According to the natural dynamism theorists, not only do individuals change but the order of nature changes and transforms dynamically as well. Thus the order of nature is viewed as dynamic in as much as dynamism is in individual dynamism. Based on how the motive of transformation of a living being is viewed, and how it is hypothesized as either an intrinsic attribute, or an external drive, determines internality and externality. In the history of western philosophy, one can find philosophers who represent these categories: it was Plato who asserted the theory of external stability; Aristotle who claimed the dynamism of the internal individual; Lamarck for the dynamism of internal nature; and, Darwin the dynamism of external nature.

Plato regarded idea (form) as not only an invariable substance (Οὐσία) of nature but being itself (αὐτό τό प्राγμα) as the genuine existence, and looked at it as the archetype (εἶδος) of the substance of existence. The means of existence for an idea is unlike that of nature; it does not exist in the reality of time and space (*res extensa*) for it is non-time-spatial, but appears to the mind, though not in the reality of consciousness (*res cogitans*) but rather, as the universal truth of existence itself and, therefore, is changeless. For these reasons, he called idea the “being of beings” (ὄντως ὄν). This “idea” has a relationship with nature by taking the other side of all the beings (ἐπέκειντα τῆς οὐσίας) and externally provides them with goal and purpose (τέλος) and the basis (παρουσία) of existence. Such a relationship is delineated as safe and secure in *Timaeus*, where it also claims that the strata in the hierarchy of Demiurge’s creation from the first creation world-soul to the ensuing — gods and human beings, animals and plants, and inanimate objects — will never change either. Plato perceived that all forms of life naturally adhere to security and stability of their own accord making neither any intrinsic changes in the internal nor any in the strata of hierarchy in the external.

Certainly, Plato was fully aware of the changes that occur in the

developmental stages of all living beings from infancy to adulthood, such as metamorphosis, but he saw such progress as being achieved within the frame granted by the form that is separate from the being undergoing development. Any transformation that is irrelevant to growth-related changes, if it takes place at all in the living entities then it is merely a temporal phenomenon and is not a permanent transformation of its kind that is transmitted to future generations. For instance, organism A is called A, due to the form that regulates A's attributes and external shape, but just because organism A has a temporal transformation, its form should not be speculated as having transformed as well. Consequently, Plato claims that as long as the external form of A does not change, ontological transformation of A cannot exist whatsoever; therefore, it is conclusive to say that A can exist only with the attributes endowed to A by its external form and within the stable construct of nature.

Aristotle can only be categorized as an internal individual dynamist and not an internal nature dynamist for the reason that change in the orderly ontological relationship of individuals, namely natural order, is not found in his system. The individual's transformation has nothing to do with natural transformation. It is the completion of individual existence, which is the purpose of internalized existence. The system of nature in *History of Animal* (*Historia Animalium*) Volume IV includes lifeless beings, plants, and animals and classifies them qualitatively and quantitatively; and in the following volume, the categorization is reorganized into *Ladder of Nature* (*Scala Natura*).

Nature proceeds little by little from things lifeless to animal life in such a way that it is impossible to determine the exact line of demarcation not on which side thereof an intermediate form should lie. Thus, next after lifeless things in the upward scale comes the plants, and of plants one will differ from another as to its amount of apparent vitality; and, in a word, the whole genus of plants whilst it is devoid of life as compared with an animal, is endowed with life as compared with other corporeal entities. Indeed, as we just remarked, there is observed in plants a continuous scale of ascent towards the animal. (Aristotle, *Historia Animalium* 635)

The living beings that exist in the *Ladder* of this kind are produced identically every time by nature (Plato, *Physica* II 8, 199b 25) Such a finely

and densely knit ladder includes everything from the nonliving to human beings in stable balance and harmony; and within the ladder, change of the order cannot exist because the existence of every one of the existing beings depends on that substance of true nature. Aristotle elucidates the role of true substance with the illustration of a seed of a tree. A seed is able to grow into a big tree, Aristotle explains, due to the attribute of its substance that makes it possible for latent frames of seeds to transform into the reality of a tree. Hence, seed cannot become a giraffe for the reason that the attribute of the substance of the seed is not of an animal but of plant life.

That substance of an existing being cannot be separated, according to Aristotle in *Metaphysics*; yet contrary to his claim, he also mentions that it is identical with the very substance referred to in Plato's *Phaidon* (Plato *Physica* II, 8, 199b 25). From the aspect of the being of beings, which is able to maintain its own identity, Plato is right. However, for the being of beings to free itself from the infinite regression of reasoning (regressus in infinitum) he concluded that it has to be not external but internal (Plato *Physica* I, 6-9). The internal substance is an intrinsic quality that exists in the internal individual in its latent frame. That substance impels the individual to exercise and to transform and by doing so becomes the motive of the internal individual. However, that in any measure cannot be the dynamism of nature but a phenomenon that happens within the internal individual. The modern definition of evolution, namely, the frame of the systematic theory on the dynamic change of the living body and its intellectual property has been instructed by Lamarck. One can find references (H. Diels & W. Kranz 59A42, 59A113, and 59A117; Magner Ch. 8) to the change of living form dating back to the ancient Greek philosophers before Plato, but Darwin in his work *The Origin of Species by Means of Natural Selection, or, the Preservation of Favored Races in the Struggle for Life* referred to them at large as having no meaning worthwhile other than for its historic nature (Mayr Ch. 7). To follow Lamarck's thoughts would mean that individuals themselves would change the shape and trait with the passing of time (Lamarck 3). Such category of change and transformation, in his view, includes not only the individual but also nature in its entirety. He even criticized the concept of species as no more than grouping together similar individuals (ibid. 3) and bearing no unique character that distinguishes them from others, and concluded that the individual is not deduced by its own existence but the existence induced by the individual; this claim is in

effect contrary to the commendation that biological classification of living beings had received for facilitating the process of classifying organisms under categories such as class-order-species.

Lamarck recognized that there are four kinds of regulations in ontogeny in the forefront of species in *Philosophy of Zoology*. First, the internal strength of living beings is the cause of maturity and advancement. Second, living beings try to make biological adjustments in order to adapt to the changed environment. Third, when a part of the organism is continuously used then that part is bound to develop. Fourth, that advanced part becomes hereditarily transmitted. Lamarck stated that environment has an influence on the external form of animals and their organization (Lamarck 224), and the beginning of the change is sparked not within the animal themselves but comes from their environment. If the environment changes and continues to change, then the organism continuously conducts its regular behavior in order to adapt to its environment and change appears in its habit, and if the change continues then the body of the organism begins to transform (ibid). If the animal, for instance, has an external stimulation and an internal need then its neurological chemistry gathers in that specific area and generates the growth of a new physical organ: this is an analogy of the concept of setting forth the neurological chemistry as the premise for the evolution of physique. Neurological chemistry moves away from the part of no-need to the area in need and that which is employed continues to develop and the other undergoes atrophy (Larson 52). Accordingly, giraffes and others alike have undergone variation by continually using their body part, for instance, their neck to reach their feed on higher plains, and where the fixed activity continues the neurological chemistry gathers around and strengthens in concentration and eventually elongates the neck or part. The transformed form such as the elongated neck, according to Lamarck, continues to its posterity. Lamarck is viewed as a dynamist of internal nature for the emphasis he placed on the dynamism of organisms, whose subject is evidently the inner strength that the organism possesses and with which it crosses over the category to which it has been classified, despite the fact that the momentum of dynamism can be accredited to the external environment. The dynamism of an organism is not only indicative of the variation of the individual but it also imparts dynamism to nature and supplements the individual and its relationship with others.

Lamarck's dynamism began to have friction with stabilism. Cuvier, who

laid the foundation on stabilism, criticized Lamarck's dynamism. Cuvier argued that there is no geological evidence of the variation in animals and above all, unless the whole body changes not one part can change under any circumstance and therefore such arguments of Lamarck lack persuasiveness (Cuvier 36). Cuvier's criticism on Lamarck adheres to the typical Platonic standpoint of stabilism, where the entire organisms are viewed as achieving an utterly organic anatomical structure with all the parts functioning in perfect harmony and mutually reacting to one another. Furthermore, regarding animals individually—one individual itself as one well-balanced system, owing to its exceedingly secure anatomical structure that permits this equilibrium: to such, if unstable change occurs within and interrupts this physical structure, it will then also obstruct its own existence. For these very reasons, he rejected Lamarck's giraffe-analogy, which illustrates the change of one body part or organ within the individual, for that change itself is an unstable variation that places the stability of the individual in jeopardy.

Distinct from Aristotle who spoke on the stability of nature and differing from Cuvier agreeing with Plato's stabilism, Lamarck placed keen interest on dynamism and the historicity of nature and insisted on individual dynamism. It was Cuvier's dynamistic reasoning that Charles Darwin adopted and developed in succession. Darwin went beyond Cuvier's stabilism to prove dynamism and sought its evidence in natural history (Eiseley 193-99), and stated thus on the first page of his work *The Origin of Species by Means of Natural Selection, or, the Preservation of Favored Races in the Struggle for Life* that this dynamism exists under four conditions:

1. Variations within the same species are present due to the distinct characteristics in every individual, though they are of the same species.
2. The individuals that possess the characteristics that allow advanced adaptivity to the natural conditions also have the advantage to survive.
3. One part of the characteristic traits becomes hereditary.
4. Within the natural condition, the individual with the more advanced adaptive trait is able to bear more offspring than the one with the less developed trait.

Darwin saw the variation itself as an attribute of the being, and if the modification is suitable to the natural environment then it is also fit to become the prototype of another being. The specific change that came about from a particular attribute of an individual is apt to be more adaptive to its environment and has an advantage in survival as well as procreation; there are a very few special cases, though, where it is the environment that instigates variation in the individual but that is, again, an exception. All changes are not individual variations related to evolution. Only the form and quality that are hereditary can be related to evolution. Darwin rejected Lamarck's conceptualization of being and its change due to continuous need and effort, exactly for the reason that such modification is not hereditary and thus, more importantly, cannot become a prototype (ibid. 200). Furthermore, individual variation, which is one of the traits of the existence of a living being, is not the result or the manifestation of the living being's internal strength (unlike Lamarck's assertion) but, is, rather, that which has been filtered through the natural selection that surrounds the externality of the being, and is also what arbitrates the life span of the living being. Furthermore, this very idea is found in Darwin's theory of evolution in which nature is expressed as the great filtering net that serves as the main principle of variation and dynamism; and variation and dynamism is the basis on which living beings determine their self-identity.

Darwin's external dynamism soon caused discord with stabilism and stirred up uproarious dissension and disputation especially with religious stabilism. First, Darwin's theory of evolution placed the method of existence of living beings in the hands of external natural selection, which excludes the all surpassing provision of God. Secondly, in *The Descent of Man*, Darwin proposed, human beings originate from a "lower animal" (Darwin 2004, 46) and not of God, which is contrary to the traditional theological view of the human soul as in the image of God (Imago Dei). Lastly, the biological world narrowed down and eliminated the history of God's creation. Although theory of evolution stirred many a stormy opposition, Darwin did not leave any writing on religion or theology in attempt to rebut. Darwin only wrote to prove the progress of the variation of living beings.

II. Augustine's Theory of Seminal Reason

Understanding Augustine's Creation

We shall look into the thoughts of Augustine, specifically his theological interpretation of the creation story in oral tradition that appears exclusively on his commentary on Genesis, as an endeavor to carefully examine the understanding of stabilism and dynamism in the system of living beings and their internal and external motives. Much like the philosophical works by Plato, Lamarck, and Darwin whose interpretation of the system of living beings had set the precedents for many thinkers, the subject matter of the phenomena of life that Augustine examined philosophically and theologically and again expounded on in his system of thought had developed into the "theory of seminal reason" and, also, became a model and the source of guidance for understanding life for western philosophers.

When Augustine read the "In the beginning," the principle (*principium*) of the book of Genesis, chapter one verse one, he saw two meanings. One, as is literally phrased, "In the beginning" marks the beginning of time, and the other indicates the biblical typology for "Your Son" (in *filio tuo*) and "in the wisdom of you (God)" (*tua sapientia*). Creation began with the Son of God out of whom time also came into existence. The fact that he simultaneously saw time and the Creator in the phrase, "In the beginning," evinces that creation did not take place within the frame of time, but rather, that the phenomena of creation that took place within the Son of God and concurrently means that time was started by the phenomena of creation, which was also done by the Son of God. It was the Son who began the work of creation. It was also He who created time and ordained it to manifest itself through the changes in nature as well as the movement of the creatures (Augustine, *De civ. Dei* XI, 6). The event of creation and the movement of living beings and the beginning of time?all happened at the same time.

"...without the creatures that stir some movements that induces transformation, who can be oblivious of the fact that time could not exist?" (*ibid.* XI, 8)

In the story of the six days of creation, Augustine asserts that the six days

must be construed not in the literal sense of expression but in the figurative (Augustine, *Gn. litt.* 4, 33, 52). The creation in Genesis, he claims, is not a record of events that took place (one at a time) in the linear flow of time, but it is rather a record of events which took place simultaneously in the time of creation, for the very reason that God was never under the subjugation of the physical time and by this reason, it took place within the Son which was also when time began. Augustine's belief was, more importantly, confirmed when he saw that it had agreed (*ibid*) with the verse he read in Ecclesiasticus 18:1 "God created everything simultaneously (*creavit omnia simul*)."

The things that were created by the Son of God were heaven (*caelum*) and earth (*terra*), which are construed as carrying figurative meanings. The firmament implies spiritual (*intellectuale*) creatures like angels, and earth represents the formless primary matter (*materia informis*). This formless primary matter was described in the literal sense as a "dark abyss (*abyssi tenebrosae*)" (Augustine *Gn. litt.* V, v, 13) in *The Literal Meaning of Genesis*; and plainly depicted as "invisible and formless ground" (*terra invisibilis et incomposita*) in *The Confessions*; and "invisible and order-less ground (*terra autem erat invisibilis et incomposita*)" (Augustine *Gn. adu. Man.* I, v, 12) (not indicated in the work site) in *On Genesis against the Manichees*. These depictions all indicate an absolutely formless state of matter, which is a state that is neither a whole nature of being (*omino esse*) nor a state of nonexistence (*omnino non esse*), (Augustine, *Conf.* VII, xi, 17) but, certainly, one that is nearly nothing (*prope nihil*). God "simply created the primary matter, and created the shapes of this world out of the primary matter. God created form and the primary matter [all] at one time; although form follows primary matter [in procession], there was no time difference [between the two]" (*materiem quidem de omnino nihilo, mundi autem speciem de informi materia, simul tatem utrumque fecisti, ut materiam forma nulla morae intercapedine sequeretur*). As sound does not precede its melody, but just as melody is composed of different sounds (Augustine, *Conf.* XII, xxix, 40) the world we see before us was not in the time of primary matter but, came to being wholly upon its very foundation.

Chapter One states the account of "heaven" and "earth" and the "firmament" (in verses 6-10); and this must be read, not by itself but, along with Empedocles and his doctrine of the four elements. (Augustine, *Gn. litt.* II, i, 1- II, v, 9) If this verse: "Let there be a firmament in the midst of the

waters ... and divided the waters which were under the firmament from the waters which were above the firmament” were read in sync with Augustine’s works, then the water in the firmament existed in light and pure form from above, which is a description that is scientifically sound. Picture them from the cosmos to the depth of the earth arranged by weight, the lightest of them — the stars, pure light from fire cohered and arrayed high above the firmament, then the likes of mars that plays the role of a cooling star by circumvolving the universe in great orbital speed, and then the next heavy in weight is the vapor form of water and far below is soil. To recapture this scene in other words: above water and soil is air, and water like seawater in between, and the heaviest at the bottom which is soil.

In such a way, the world was created in the beginning—all the physical properties that constitute this world were completed all at once. Such a concept of time as “at once” (*simul*) is the theory of creation on momentary-ness, which brings a very safe view of the world and is logically static. That everything was created in a single moment can only mean that the fundamental transformation and variation becomes impossible, because they were completed and perfected in the very moment of creation. However the world that Augustine saw was not maintained alone by the surpassing arrangement of the stability in the will of God. Although his view firmly stands on God’s omniscience and omnipotence, he did not look at this world as that which adheres only to stability. He understood this world as being dynamic and probed into the compatibility between that dynamism and God. This was his endeavor disclosed in his theory of *Seminole Reason* (*rationes seminales*, *rationes causales*).

Creation of Life and Seminal Reason (*Rationes Seminales*)

Augustine looked at the life of the living as incomplete yet as being in the state of progress towards completion, which was contrary to the way he saw the material universe, which was whole from the start. That the living being is in the state of progress towards completeness connotes two different meanings. One, the living has dynamism on the basis of it being alive. That is the dynamic attribute of life; he clearly knew that the living beings in this world are not inert but active, changing rather than being fixed, are always developing and growing, and are not isolated to themselves but in a reciprocal relationship with their environment. The other meaning is in

regards to the move “towards completion,” referring to the nature of having a goal. The point of aim, which Augustine saw, in the dynamism of life, is always clear; that is, the living move toward the goal set by the Creator. If so, how do the two coexist, when one is a mere being who innately possesses natural dynamism and the other is the all-surpassing Creator, who presents goals to all the living beings depending on the strength of their own will, whether weak or strong? In addition, how does the Bible corroborate the compatibility of both sides? The answers to these questions are found in Augustine’s theory of seminal reason (*rationes seminales*).

Augustine divides living beings into three forms: one, being that eternally exists in God; second, life that exists as a shape that fully matures; third, life that exists as a form of possibility in this world (Ibid. VI, x, 17). The first form of life is a spiritual being like an angel; the second form of life includes all the living creatures we see. If just these two types of form are examined, then Augustine’s understanding of life can be explained by assigning them to the category of Plato’s theory of external stabilism. However, Augustine wanted to go beyond the theory of external stabilism by means of the third form of life. He calls the third life *rationes seminales*. “*Rationes seminales*,” which is translated as seed, hidden seed or seminal reasons (to mention a few), mainly appear in *The Literal Meaning of Genesis* and *On the Trinity*. If these examples that illustrate the concept of seminal reason were examined, then new definitions would be discovered from the quest.

First, *rationes seminales* is expressed with similes such as *rationes* or *causales rationes*, as if God had sprinkled them like seeds into every primary matter.

The movement, which can be measured with the progress of time, with which every creature fulfills their respective role, that which can be seen in the creature, is what was born of the seed, which God had sprinkled in the moment of creation.

ut hoc quod nunc videmus temporalibus intercallis ea moveri ad peragenda quae suo cuique generi competunt, ex illis insitis rationibus veniat, quas tanquam seminaliter sparsit Deus in ictu condendi. (Augustine, *Gn. litt.* V, xxxiii, 51)

And he asked “how was casuales rationes that was given to this world created at the time when everything was created simultaneously?” (ibid. VI, xiv, 25)

Creation in the beginning was indeed an event in which everything was accomplished at the same time, but the created were not in perfected forms, because God had sprinkled rationale seminales like seeds with its potential in latency at that time. If not in a complete form then what kind of attribute does causales rationes possess in this world?

Second, the trait of rationes seminales granted to the primary matter is in the state of incompleteness, because it was intended for the form of possibility and not the actual shape. He enumerates the six days of creation in order—firmament, light, stars, earth, sea and more—and refers to them as complete creation, but Augustine excludes plants and animals as made in the form of possibility unlike the rest.

Plants and trees exist in possible form on this land. ...They [water and air]... represent (or reveal) fish and birds. ...These [land animals] were also made in the possible form.

... atque in terra potentialiter, ut ita dicam, natura herbarum atque lignorum. ... haec potentialiter ... exsererentur (terrestria similiter animalia) nihillominus potentialiter. (ibid. V, v, 14)

Like the other creatures, the human being was made only in potential form.

Human beings are created with invisible potential within the seed that will be complete in the future, they are not actualized now.

Invisibiliter, potentialiter, causaliter, quomodo fiunt futura non facta (ibid.)

The biological system came to being in this world in actualized form at

the moment of creation, but the living exists in potential form. Augustine's potential form carries all attributes and aspects of an organism in an invisible form, and has the force to turn this around into a realized form. However, before this potential form came to exist in this world through the material that embodies it, it actually existed only in a potential life form. Much like Aristotle, Augustine pointed out the potential form in an organism, not as a being that actually exists in this world but as one that does not become actualized but, instead, remains to exist potentially, which was exactly like the way his predecessor recognized the discrepancy between actual form and potential form and respectively divided them into actualized realistic being (ἐνεργεία ον) and unrealized potential being (δυνάμει ον). Potentiality moving towards actualized organism is an instance of, none other than, the feature of seminal reason.

Third, organisms that exist in potential form cannot develop their potential on their own in this world. Although seminal reason has the strength to germinate, it is able to become an actual form only when it is in a relationship with the biological system that surrounds it. It is able to reach the actual form when earth, water, and air are properly combined to the extent where one another's properties are able to harmonize to nurture the growth of the living being to break out of its potentiality.

Every primordial seed from which all vegetation and organisms originated retains moisture and as a result of this grows.

omnia quippe primordia seminum, sive unde omnis caro, sive unde omnia fruteta gignuntur, humida sunt, et ex humore conrescunt. (ibid. V, v, 19)

Moreover, until the invisible rationes seminales, which exists only in potential form, grows into an actualized life form that is visible to the eye, it requires an adequate amount of time. Augustine affirmed that already created existences receive methods of conduct and existence in an appropriate point in time for them to mature out of their previous dormant and hidden and invisible rationes to enter into their new visible form with traits (ibid. VI, x, 17).

Human beings, for instance, came to exist in actualized form when the seed of man and the environment, which surrounds the seed, are combined

together. As a result, the realized form of man is made; and the human being is made up of materials like soil and air—the essential elements of his surrounding. Augustine described the body of mankind using the constituent elements of the world, and all parts of the body is composed of the soil elements, the lung is filled with air, and the liver contains the warm energy of fire and the power of light (ibid. VII, 13, 20).

To put these thoughts into order, *rationes seminales* holds all the attributes and aspects like a tiny seed in an invisible potential frame. When God created heaven and earth, he sprinkled these seeds onto the formless primary matters and after the end of the creation of the world, they continue to exist in the form of seed, then at the appropriate time and in a favorable surrounding where germination is encouraged, then with the help of rain, these seeds bind themselves to materials and germinate into animals or plants. Augustine saw all organisms as originating from seeds, which also contain all their attribute and aspect. Therefore, *rationes seminales* is called “the rational seed of life,” which is the primitive origin of the realized organism. Although this rational seed of life does not exist in the realized form of an organism, and even though it is nothing more than a seed with potential, it is nevertheless the source of life, for it possesses all primitive nature of life and the generic character of all existence with life. It is for this reason that in the absence of this seed, no life can exist—whatsoever.

That life exists in the invisible latent seed and that that has spread out in this world to attain the realized form of life is a theory under whose root is the presence of the ancient Greek thinkers, such as, Anaxagoras, Democritus, and Aristotle since notions similar to “rational seed of life” are found in their thoughts. However, every scholar has his own view of the theory, when it comes to the direct relation to the thought. Joseph Moreau asserts that Augustine’s *rationes seminales* was a direct application of the Stoic’s (Moreau 169), and Boyer claims that the concept came directly from Plontinus (Boyer 130). On the contrary, O’Toole claims, Augustine and the Stoic school are not directly related at all, if they are at all related, he acculturated the thoughts of Plontinus to a great extent before incorporating them into his own. Whilst, Duhem expresses the possibility of the influence of Plontinus in Augustine’s works in that he may have interpreted Plontinus in respect to the perspective of Christianity before accepting them (Duhem 446).

From this author’s perspective, there is no apparent error in tracing the original form of Augustine’s *rationes seminales* to λόγοι σπερματικοί λόγοι

σπερματικοί of the Stoic school can be conceived of as the permanent strength that promotes maturity in the material like the spermatozoon of animals. Stoics saw that there is a substance of immortality (λογος) inside every seed (σπερματικο) that determines the attribute and aspect of life (Arnim 1074). According to Plontinus, λογος carries the activity and attribute of all the existence and performs to ensure so that objects exist as objects (Peters 38). From this viewpoint, λογος σπερματικοί and rationes seminales in general hold such meanings in common. λογος σπερματικοί appears as the prototype of rational seed of life, because the explanation of both concepts — the activity and transformation of organism and the origin of life—analogue. However, Augustine could not accept λογος σπερματικοί as it is in two reasons. The Stoic' λογος σπερματικοί is a thing of immortality that continues to exist within the universal rotation and becomes the sustaining power of the universe (Arnim 717), whereas Augustine's rationes seminales is not of immortality but is, instead, of finite being which is bound to perish. The critical difference between the two is in Augustine, that he was conceived of the doctrine of "creation out of nothing (creatio ex nihilo)." The authority of God's transcendence is, undoubtedly, in eternity: and, the basis of eternity is the attribute of God of the existing being who exists by itself. Accordingly, all the beings that exist by the will of God's creation, including rationes seminales, can be called the being of accidentality, whose end of existence is inevitable. Unlike Stoic's λογος σπερματικοί Augustine contended for the sole eternity of (none other than) God, and rejected the possibility of the continuous existence of rationes seminales.

In addition, Augustine could not accept the idea of the purpose of nature that was represented by the Stoics. According to the Stoics, the potential form of life moves toward advancement by the purposefulness, which resides internally on its own, for the existence to advance toward its aim. To the contrary, Augustine claimed that the being cannot by its own accord have a purpose of its own but, instead, the purpose of the being and the direction of its aim are determined by and through the relationship with God and when it is in accordance with His will (voluntas rerum necessitas est) (Augustine, *Gn. litt.* 6, 15, 26).

Why did Augustine introduce rationes seminales as the primitive form of life which set apart the living beings from the non-living creations, which came into existence in complete form unlike its counterpart, which is made

only in potential form to progress toward the form of actualized potential. There are two reasons most closely tied to this matter.

First, the most substantial reason is found in the nature of analytical study of the Bible. When comparing the verses on creation, the original Latin translation of Ecclesiasticus states that it was “created all at once (creavit omnia simul)” when Genesis One narrates that plants and animals were created one after the other. Augustine resolved this contradiction between the two texts by combining the integral part of each, which had been the cause of friction, and maintained that the creation of all living things did, indeed, all come to exist at once as stated in Ecclesiasticus in their respective forms whether in potential or complete form. However, it was done in the order of creation as stated in Genesis—starting with plants, then fish, then birds, and then animals, then finally mankind, which progressed into completion in a smooth, gradual, orderly, fashion and the more complex the creature the more time it took to proceed to change—from potential to completed form.

Secondly, Augustine explained the creation of potential form to explain the emergence of new organisms. Insects, for instance, after Augustine had observed and conducted experiments on them, concluded that insects come into existence from either the carcass or the excrement (Augustine, *Qu. An.* 62; *Gn. Litt.* 3, 14, 23). Augustine had come up with such speculation due to the sudden appearance of insects where none had been before; they appeared to him as if they had come into existence on their own. Supposing that the origin of an organism emerged from a creature that had been created previously it would contradict his theology that all existing beings were founded upon the will of God. To settle such a problem, Augustine applied the concept of rational seed of life as an endeavor to explain the condition of invisible, living beings: that they, too, were created in the moment of creation but had not actualized yet, that they had been existing only in the form of potential, and that they appeared as if they did not exist at all when they did in fact exist.

By settling these directly related issues, Augustine’s theory of rational seed of life allows us to understand life under a new light. First, his theory of rational seed of life indicates that attributes and aspects of life are neither static nor fixed and that the change and dynamism of the organism are not a one time phenomenon that happens by chance, but they are, rather, the most essential phenomena. The rational seed of life resides in a material in a

form of potential; it sprouts and matures into life when it is in a correlated relationship with the material. Theory of rational seed of life shows that the core of existence of life is not in mere rigidity and fixedness but in dynamism and change, such as, from potential form to real form, from invisible existence to visible form, from existing without material in a seed of dormant form, then coming to life through material, and together with material changes and transforms into a completed organism that physically exists; this concept is distinguished from the understanding of existence by Plato and Descartes.

Transformation from potentiality to reality is not simply indicative of the change in shape. Rather, that is the ontological change and transformation of substance. Examples of such can be found in Augustine's understanding of human nature, where he writes, "the body of a person is composed of flesh and soul (*ex anima et corpore nos esse compositos*)" (Augustine, *Mor.* I, 4, 6) but "it is the soul that administers the flesh (*per ea quae (lucem aerem) spiritui similiora sunt corpus administrat*)" (Augustine, *ibid.* VII, 19, 25; VII 20, 26). Here, "administer" (*administrat*) means to unite the body organs and to keep and maintain body balance to give life to the body, and to give form to shape the body in order to bestow human attributes. (Augustine, *Imm. an.* XIII, 20) However, body and soul are not the same, although they are bound together. There is an essential difference on both sides. Only when body and soul unite into one does it become a human being (Augustine *Mor.* I, 4, 6). Namely, the potential form of an organism possesses all the attributes of a realized form, yet the discrepancy between both forms — potentiality and actuality — lies in the essence of the existence, and the change from one state to the next is called the essential and substantial variation.

Second, Augustine's theory of the rational seed of life states that dynamism of life comes from God but attributes its development to its reciprocal relationship with nature. A universal truth that the foundation of every being boils down to God is a theme, found in most of his works. Facts such as these do not mean that complete activeness of God develops to be set forth as a premise for the complete passiveness of nature. Rational seed of life came into being by God's freewill alone, but what acculturated and made it sprout and nurture it into maturity — all that work was done by nature and only through the mutual relationship that life has with nature — could life reach maturity to enter into life. The mutual relationship between

the seed life and nature in regards to the individual life, according to understanding life, must be understood in the line of connection in relation to God, rational seed of life and nature.

There is a line of scholars who try to understand Augustine's theory of rational seed of life in terms of dynamism, and the most prominent figure among them is C. Dorlodot. He analyzes Augustine's rational seed of life in *Darwinism and Catholic Thought* and elucidates it in the light of Darwinism and dynamism (Dorlodot 65-87). Augustine viewed the advancement—from the rational seed of life to the complete organism—as a phenomenon that happens on its own in the natural world without another divine intervention. The appearance of various plants and animals in different regions of the world is brought on by the natural world partaking in the progress of advancement for organisms that take on another course of furtherance: such dynamic attributes of organisms are brought on by the natural world and not by divine intervention. Hence, Dorlodot saw Augustine's theory of rational seed of life to be identical with Darwin's concept of evolution. In the aforementioned second thought, the condition of nature is the pith of the beginning of life in seminal reason. The beginning of life was possible when the requirements of nature were fulfilled. Therefore, Dorlodot alleged that the life that Augustine had conceived was, precisely, brought on by the natural condition. However, Dorlodot's conclusion is unacceptable due to ineffective reasoning. The first reason provided was contradictory to the theory of seminal reason. One of the reasons Augustine insisted on the theory of rational seed of life was to explain the emergence of a new organism based on the premise of God's superiority, because the appearance of a new organism in nature seemed to be contradictory to the all surpassing purpose of God. What appeared to be the delayed appearance of a new creature was another created organism that was not physically present in the moment of creation: this was, simply, due to the time it needed to transform from potentiality to actuality, only such a concept of variation of creation from one form to the next could agree with the all surpassing purpose of God and coincide with the Truth that all came from Him out of nothing at the moment of creation. Such explanation of the delayed appearance of creatures was excluded in Dorlodot's interpretation, even though it is an integral part in the rational seed of life. Dorlodot's claim that the beginning of life and the appearance of organisms were done wholly by nature is a contradiction to the method of superior

purpose of God that accompanies the theory of the seed. The reason, which he adduced in support of his claim on the production of life in the condition of nature, which served as the second reason, was the result of overanalyzing only one side of Augustine's theory. It is correct that natural conditions had transformed the rational seed of life into a complete organism, yet that is not enough ground to accredit the whole genesis of life to the one role nature had in the phenomenon of creation. According to Darwin's dynamism, it was natural selection that determined the organism's attribute, whereas in Augustine's theory, it was God who endowed the rational seed of life to contain the attributes of an organism and it was God who sprinkled them like seed. Thus the two cannot agree.

III. The Dynamism of Life and the Rational Seed of Life

Augustine's theory of the rational seed of life carries a distinct philosophical meaning within the four types of theories examined thus far. The theory of the rational seed of life is clearly different from Plato's theory of external stabilism. In regards to the existence of beings (in terms of Plato's understanding of existence), the being of being, namely the form which makes beings being goes outside of the presence of the world and the beings within the world become inferior. Moreover, the transformation and variation of the existences in the world that also includes life was, basically, looked upon as an auxiliary method of existence of the being and regarded the coincidental transformation as an inferior mode of existence for the being. The substantial transformation of organisms just cannot happen, but if variation does take place, it is merely a temporal phenomenon. Augustine's rational seed of life is bound to undergo an intrinsic transformation from potentiality to reality, if it makes contact with material and if the material is in an adequate condition to induce change. In regards to stability in the biological system, it follows Plato's theory, yet in view of the unstable mode of existence of the living being, it diverges away from that of Plato, because Plato believes in stabilism in all aspects. The concept of life is not found in the conceptual division of existence and material, but rather, in the combination of both. Therefore, it arrives at a conclusion that is contrary to that of Plato's understanding of existence. Whereas from Plato's standpoint, the essential substance of being is non-materially rational

and mental, Augustine affirms that the essence of life is the actualized potentiality through matter.

The dynamism of nature views the variation and transformation of a living being as not only an individual's necessary mode of existence, but is also a method of existence that operates without discrimination for all forms of life in the biological system. Along with Lamarck and Darwin, Augustine asserted that the dynamism of an individual is the motive of dynamism, which resides in the rational seed of life that is in the internal individual. Ultimately, the discrepancy between the two thinkers and Augustine in their understanding the dynamism of life is clearly evident, and the difference is found in Augustine's understanding of existence. Unlike the two thinkers, Augustine could not have thought of the dynamism that includes the entire nature, because he saw that the substance of an existing being belonged to the categories: ideal form (*specio*), limit (*modus*) and order (*ordo*). Therefore, Augustine could not have entertained an idea of dynamism that includes the entire nature (Gilson 74). That something exists means that it exists by the ideal method of existence—form, limit, order—designed by the creator in the structure of the created world. Form makes existence possible to exist (*omne igitur quod est, sine aliqua specie non est*, Augustine *Diu. qu.* 6); limit materializes it in a given space; such an existing being under limits has the order of ranks and in that hierarchy, has its own position, as it does in Neo-Platonism. Order enables all the existing beings in the world to have harmony without friction, to collide with other beings and encourages the sustenance of a pertinent relationship, but if an existence breaks out of order it can no longer exist (Augustine, *Ord.* I, iii, 9), by doing so means to be non-orderly and becomes a non-existent inevitably (Augustine, *Mor.* I, iii, 5). All matter within the world can only exist by maintaining its position, the dynamism that is falls out of this given order is ineffective. Therefore, Augustine could not have accepted the idea of natural dynamism among organisms, as conceived by Lamarck and Darwin.

Lastly, Aristotle shows a pattern of understanding on the transformation of life that bears a close image to that of Augustine but from a broader perspective. Aristotle and Augustine, both, claimed that the transformation of life begins from within the individual and the motive of such change is also inherent in every individual. They both saw that transformation cannot take place in the order of nature. As a result, we can identify Augustine's understanding of life transformation as the dynamism of an internal

individual.

IV. Conclusion

The philosophical analysis on the development of life is classified under these categories: external stabilism, dynamism of the internal individual, dynamism of the internal nature, and dynamism of the external nature. The theory of external stabilism claims that organisms and nature cannot, without exception, have fundamental transformation but can only have transformation that happens only temporally and just incidentally. The substance of the existing being is a universal nature from the exterior viewpoint of the being, because it is of the mind. Internal individual dynamists viewed that life is active and it is their activity that instigates an intrinsic change in the organism. However, such transformation has no impact on the order of nature to bear change. For the reason being that the subject, which brings about transformation in the living being, exists within the living being under the stipulation that that living being must also exist within nature's vast frame. In the view of internal nature dynamism, a living being's transformation has an impact in the nature to bring about change in the natural order, because it is the living being that determines the function of the order of nature. The internal strength that brings about transformation in the living being is, also, strong enough to bring transformation onto the order of nature in the environment of the organism. In the concept of dynamism of external nature, it is the energy in nature that brings change in the living being, rather than the inner strength of the organism itself, and such change also brings about transformation in nature as well.

On the one hand, Augustine sets for the transcendence of God as the premise of the theory of rational seed of life, while showing the intention to hold onto the dynamism of life within nature in the theory as indispensable. Although his understanding of life views the transformation of life as a result of an intrinsic quality of life and, in addition, states that such variation of life begins from the relationship life has with the rest of the entire nature: such thought appears to be nature-centered, however such claims are done in full acknowledgement of the transcendence of God, where all life, creation and their activities cannot escape. His omnipresence,

omniscience, and the all surpassing will of God and such complementing correlations are found in the theory of rational seed of life.

An essential transformation of substance is only evident in the transformation of the rational seed of life, as it changes into the form of reality by means of matter. However, such transformation of the living being cannot bring any change whatsoever to the order of nature. The cause of that is in the stipulation for the being to exist, that is, only when the existent remains within the order endowed by God, is their subsistence made possible. The order of the universe is rational and is also stable. Thus, within this order, all living beings stir, change, and transform dynamically—the very central idea of *rationes seminales*. By asserting the dynamism of the internal individual, Augustine reveals a pattern of thought that is parallel to that of Aristotle; hence, it is right to classify his understanding of life under the category: the dynamism of the internal individual. When juxtaposing the dynamism of the internal individual of Augustine and that of Aristotle, both reveal a pattern of thought that is parallel to each other. Hence, it is correct to classify his understanding of life under the category of the dynamism of the internal individual.

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Abstract

The purpose of this article is to examine the meaning of the theory of Seminal Reason (rationes seminales) by extracting the most fundamental thoughts from the understanding of the phenomena of life transformation and with them form four categories, viz.: “Stabilism,” “Dynamism,” “Internalism,” and “Externalism,”—under which the rest of the body of understanding is to be classified. As an endeavor, this article will first, introduce four basic thoughts on the philosophical analysis of the phenomena of life alteration; second, expound on Augustine’s Theory of Creation in which understanding of life appears and where seminal reason offers a comprehensive explanation for the four categories of understanding life changes; lastly, examine the meaning of the theory of Seminal Reason illuminated in four different interpretations of understanding life.

Keywords: Rationes Seminales, Augustine, Life Transformation, De Genesi ad Litteram

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