The Analogical Model of Cognitive Principles and Its Significance for the Dialogue between Science and Theology

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Abstract: Analogical models in science enable us to understand unobservable theoretical entities. We need this basic understanding, even in the case of mental phenomena, where multiple cognitive principles are involved. In this article, we suggest an analogical model of cognition that incorporates basic insights from the philosophies of science and theology, which could serve as a point of contact for the dialogue between science and theology. For this purpose, we presuppose six stages of understanding and the existence of six different theoretical cognitive principles that have their own characteristics, which coincide with some Biblical characters, theological reflections and scientific approaches to finding the truth. The choice of the analogical model and the cognitive principles is justified with their ability to organize, structure and make sense of different segments of scientific and theological knowledge, which otherwise seem confused, unrelated and without structure. The analogical model gives us a big picture of their relations and confirms the ability of the observable macroworld and phenomenological experience to assist us in understanding the realities that, at first sight, seem incomprehensible.

Keywords: analogical model; cognitive principles; stages of understanding; reason; intellect; dialogue; science; theology

1. Introduction

The American Federation of Teachers (8 August 2014) defined cognitive science as "an interdisciplinary field of researchers from linguistics, psychology, neuroscience, philosophy, computer science, and anthropology that seek to understand the mind". In this article, which consists of the model of cognitive principles and its theoretical explanation, we want to show that theology, which is missing in this definition, is a key factor for correct understanding of the mind.

Johnson-Laird, in his 1983 book, writes about the importance of models for cognition: "Human beings, of course, do not apprehend the world directly; they possess only an internal representation of it, because perception is the construction of a model of the world" (Johnson-Laird 1983, p. 156). It is true that human reasoning depends on mental models of abstract entities, which are formed by perceptions. However, perception is of course much more than the construction of models, through which we can grasp principal and theoretical meaning of the world. Alister McGrath states that the process of perception "involves thinking about (or "knowing"), affective responding to, and enactive interaction with the world" (McGrath 2008, p. 221).

Modern science tells us about the importance of models, as its success is partly based on the use of different models. The purpose of a scientific model is to (1) visualize an unobservable object or system, (2) explain and (3) predict the behavior of real objects or systems (*Encyclopædia Britannica* 2012, s.v. "Scientific modeling").

In this article, we will (1) visualize the unobservable cognitive principles with the help of some metaphoric Biblical models because they have many characteristics in common. We could even say that Biblical characters are some kind of symbols of corresponding cognitive principles. Our second task will be (2) to explain the cognitive process with

two analogical models: with the analogy for the way we experience the difficulty of meaning perception (when thinking about or knowing) and with the analogy for the way we experience the nature of the perceived meaning (when affective responding to). A mountain is a convenient analogue for a way we experience the difficulty of meaning perception because a new meaning is just as difficult to perceive as it is difficult to conquer a particular mountain peak or dive into the depths of the sea. The proof for this is the very theoretical meaning of this theoretical explanation, which is—as with any theoretical meaning—difficult to perceive and requires a lot of effort and time. The body, however, is an analogue for the way we experience the nature of perceived meaning.

The mountain analogue consists of the symmetrical mirror image of the mountain with three differently high peaks (Figure 1) because climbing a mountain and conquering its peaks is an appropriate analogue for cognition or understanding that requires a lot of effort. This applies to both the mental world of reasoning and its symmetrical counterpart, namely the speculative world of thoughts. At the same time, we compare our experience of perceived meaning to the human body, since meaning can be phenomenologically experienced either as skin, flesh, the skeleton or heart. This model is based on lifeworld experience as will be explained below.
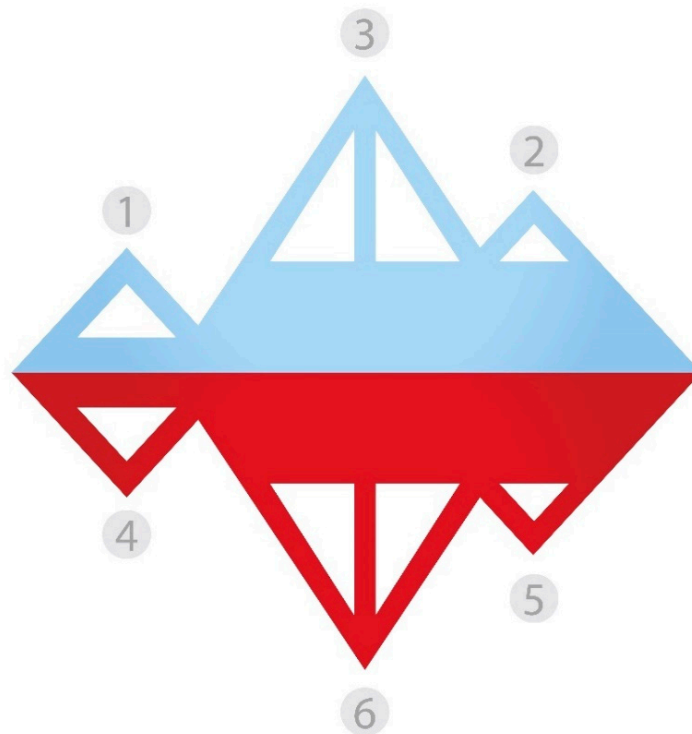
Figure 1. According to the model, there are six different stages of understanding. 1. Basic, principal stage (A) enables grasping of the principal meaning (quality of the world). The body analogue is skin. 2. High, essential stage (B) enables grasping of the essences of world phenomena (quiddity). The body analogue is flesh. 3. The highest, causal stage enables understanding causality (why). The body analogue is lungs and the skeleton. 4. An in-depth theoretical stage (C) enables understanding theoretical sense (how). The body analogue is the right atrium of the heart. 5. Profound, expert stage (D) enables understanding of professional identity (who). The body analogue is the left atrium of the heart. 6. The deepest, purposive stage enables understanding of purposiveness. The body analogues are the left and right ventricles of the heart.

The mountain analogically represents the mental world or worldly reasoning, which has three dimensions: material (1st peak), social (cultural; 2nd peak) and spiritual (3rd peak). As water is an appropriate metaphor for words (we say that words flow), the clouds of water vapor that surround its peaks symbolize making sense or perception, i.e., the

process of selecting, organizing, and interpreting world phenomena. Water is present just in the form of clouds because, in the mental world, dynamic thoughts are subdued to the dominant role of static metaphoric models and isolated facts.

This mountain of reasoning has its own symmetrical mirror image, which is submerged in the sea of thoughts, i.e., the intellectual world of thoughts, which describe and explain the inner life of the material, social (cultural) and spiritual world. In the world of thoughts, static analogical models are subdued to the dominant role of dynamic and creative thoughts, into which we can immerse ourselves completely while theorizing, performing professional work or contemplating the transcendent reality.

The product of mental reasoning as well as intellectual activity is a certain stage of understanding. In our analogical model, each stage is represented by one mountain peak, which, at the same time, represents one of the body part analogues (Figure 1). We adhere to these stages of understanding in this paper as well, for its structure resembles the proposed analogical model. Therefore, in each of the theoretically assumed cognitive principles (Pure Reason, Intellectual Reason, Rational Common Sense, Pure Intellect, Reasonable Intellect and Intellectual Common Sense), we state its (A) character (metaphoric model), (B) essential feature, (C) nature of its method and (D) its task.

The intended meaning of the term "Intellect" is equivalent to the Greek philosophical notion of Nous or medieval scholastic notion of Intellectus. In the same manner, the intended meaning of the term "Reason" is equivalent to the Greek philosophical notion of Logos and medieval scholastic notion of Ratio. However, we interpreted these two terms from the perspective of the postpositivistic philosophy of science, which, according to our interpretation, clearly separates between theory and facts and thus, between two distinct ways of thought processes, namely rational reasoning and intellectual comprehending.

These stages of understandings presuppose the existence of six different types of meaning: principal, essential, causal, theoretical (sensical), original and purposive meaning. The germ of each type of meaning can be found in the world of the text or in the physical world, but is fulfilled as an event by its actualization in the reader or observer. As Stanley Fish says, "the reader's response is not *to* the meaning; it *is* the meaning, or at least the medium in which what I wanted to call the meaning comes into being" (Fish 1980, p. 3). The worldly matter of perception is, according to Merleau-Ponty, "pregnant with its form" (Merleau-Ponty 1964, p. 15). However, this meaning develops "in a dynamic relationship with the reader's expectations, projections, conclusions, judgments, and assumptions" (Fish 1980, p. 2), which means that the reader or observer is "given joint responsibility for the production of meaning, that was itself redefined as an event rather than an entity" (p. 3). The meaning, present in the world as an embryo, is born in the consciousness of the reader or observer as an event. In this article, we claim there are six different events of meaning, which are experienced differently or they have different "tastes".

As a metaphoric model for each of the cognitive principles, we took some Biblical persons because their character traits are in many ways similar to the characteristics of cognitive principles. We justify the selection of these theoretically assumed cognitive principles by their ability to organize, structure and make sense of different segments of scientific and theological knowledge.

In writing this article, we have been inspired by the postpositivist philosophy of science, which is a critique of positivist thinking. Logical positivists wanted to discover a universal scientific method that would be the same for all disciplines and for all times. One of their proposed possibilities was the hypothetico-deductive method, which is based on neutral observation and inductive logic. The critic of logical positivism, Karl Popper, also advocated the thesis of a single method and proposed the method of falsification (Sankey 2008, pp. 248–57). It has turned out that logical postpositivism presents several problems. First, theory and observation are not independent, which makes truly objective observation impossible (*theory-ladenness* of observation). This was argued by philosophers such as Wittgenstein, Sellars, Quine, and Hanson (Bem and Jong 2006, p. 63). Analysis of the history of science has demonstrated that in practice, scientists use more than one

method. Sankey writes: "Philosophers who embrace such a pluralist conception of method typically hold that the scientific method does not consist of some single method, such as the hypothetico-deductive or falsificationist method. Rather, the method consists of a plurality of rules which may be employed in the evaluation of scientific theories or in the certification of empirical results." (Sankey 2008, p. 255).

2. Methods

The principal method used in this article was the phenomenological method. We asked ourselves "what is it like" to experience the perceived meaning of different types of phenomena; for example, what it is like to experience material phenomena, invisible causes, scientific theories, etc. Is there any difference in the quality of these experiences? The lifeworld experience allows us to have direct contact with the world, and phenomenological analysis allows us to extract the essence or quiddity of this experience. The task of phenomenology is to "investigate the essential structures characterizing our experience, their correlates, and the connection between the two" (Zahavi 2019, p. 44). This essence can be expressed in an analogous way because it can resemble some of the world's phenomena. For example, for the description of the essence of the phenomenon of perception, we can use the analog "to bite with the teeth" because to perceive the meaning of phenomena in a conscious act is analogous to biting into a piece of food. For just as every bite into a piece of food leaves us with a certain taste, so does the perception of meaning. In analyzing the lifeworld experience of perceived meaning, we found that there are six different "tastes" of meaning, which have their body part analogue. For example, to perceive the cause of some troublesome phenomenon is like "to start breathing freely with the lungs" as knowing the cause makes our lives easier and more bearable.

Each type of meaning presupposes a specific cognitive tool which perceives it. The analysis of the rich epistemological vocabulary of the Slovene language, which indicates the existence of different types of perception of meaning, was of great help in finding them. The Slovenian language has, e.g., different terms for grasping the principal meaning and grasping the essential meaning. Analysis of their use in the Bible was also of great help, as these terms are now rarely used in everyday language, and some are even considered obsolete.

The very naming of cognitive principles—for example, Reasonable Intellect—is not accidental, but expresses its essence, which is grounded not only in the insights of the philosophy of science but also in theology, as conceptual connections in the name express the relationship between certain holy persons crucial to theology. The reasonableness of Intellect, for example, expresses the obedience that the Son of God has to his Father, for the filial Intellect must also observe the Father's rational principles. The intellectual character of Reason expresses the essential connection of the Heavenly Father with his Son, for the Father also bears the traits of his Son.

In this article, we want to show that science and theology are not competitors but collaborators in the search for truth. This is in accordance with the Catholic tradition, for "there has always been a need to combine (supernatural) revelation with a philosophical (or natural) understanding of reality" (Klun 2019, p. 377). Interdisciplinarity is the essential feature of theology: "As a humanistic science theology does not retreat beyond its limits, but in communication opens up to other scientific disciplines and creates interdisciplinary knowledge" (Petkovšek 2019, p. 25).

All characteristics of cognitive principles are going to be short and simple because it is not the intention of this article to give their exhaustive explanation, but only to give a general representation of the analogical model of cognition, which would enable the reader to grasp the principal meaning of cognition.

3. Cognitive Principles and Their Characteristics

3.1. Pure Reason

This enables us to reach the 1st stage of understanding, i.e., to conquer the lowest peak of the mountain of understanding, to grasp the quality of the world and its phenomena. Pure Reason allows us to have indirect contact with the world, which, on the outside as the material world, appears as lifeless, mechanical, and still. The possible analogue for the perception of principal meaning is touching the skin of the body, which can be observed as a pure exteriority from the outside and can be experienced as dry, cold and bare, without any depth—hollow. This experience of hollowness is depicted on the diagram (Figure 1) as the white triangle on the 1st peak of the mountain of understanding. This peak is the easiest to conquer, but it offers the least quality food for the soul that feeds on meaning.

(A)   The Principle's Character: Elder Brother

The Biblical character, which corresponds to Pure Reason, is Elder Brother. Biblical elder brothers are closely connected with the earth—that is, with the most fundamental, inanimate, inhuman, hard and difficult to cultivate, but which, at the same time, is the most fundamental source of survival. Cain cultivated the land (Gen. 4: 2), as did the Elder Son of the Merciful Father (Luke 15: 25). Esau was born "red, and his whole body was like a hairy garment" (Gen. 25: 25), which indicates his earthly, rude character. Esau was a "skillful hunter, a man of the open country" (Gen. 25: 27).

Elder brothers have a restless spirit, just like a discursive reason. Due to his crime, the murder of his brother Abel, Cain fled and wandered the earth (Gen. 4: 12). Thomas Aquinas compares a restless spirit of reason and a calm intellect as follows: "Reasoning, therefore, is compared to understanding, as movement is to rest, or acquisition to possession; of which one belongs to the perfect, the other to the imperfect." (Aquinas 1920a, Summa theologica, I, q. 79, a. 8). In these words of Aquinas, we can easily discern the two Biblical characters: the restless hunter Esau and peaceful Jacob, a man, living in tents (Gen. 25: 27).

At the same time, the elder brothers are presented as somewhat stupid, for Pure Reason alone does not have the capacity to solve life problems. Cain's crime against his brother was immediately discovered (Gen. 4: 10). Esau's folly is manifested in the fact that Jacob easily deceived him twice: first he took away his birthright from him, and then he received the father's blessing in his place (Gen. 27: 1–40).

(B)   The Essential Feature: Rationality

The essential feature or the cognitive virtue of Pure Reason is its rationality, which is manifested primarily in the capacity to grasp the principal meaning, i.e., quality of phenomena in the form of natural regularities, which can be expressed in the language of logic and mathematics. Rationality is also reflected in the rigid structures of scientific metaphorical models, which make abstract phenomena tangible to the human mind, such as, for example, our metaphoric models of cognitive principles. A metaphor carries a shared quality or characteristic across two distinct things. The most convenient metaphor for love is a rose because love is beautiful but also painful. The popular metaphor for DNA is a spiral staircase because the molecular structure of DNA has the same form as a spiral staircase.

Rationality is also reflected in the grasped rational logical rules of rational expression, which is characteristic of scientific language. Scientific language is primarily rational language. The discipline of Logic is also the science of the forms of the rational language for it tries to discover the necessary formal conditions, which every rational language must meet (Uršič and Markič 2009, p. 4). We can identify at least seven principles of rational thinking: (1) Axioms of logic—according to Aristotle: the principle of identity, of non-contradiction, and of excluded middle, from which the whole deductive logic gradually developed, logic as a theory of reasoning in the narrow sense. (2) The Principle of Sufficient Reason. (3) Rational language should be clear and distinct, (4) have systematicity (for example, the grammar is a systematic representation of the structure of language), (5)

simplicity, (6) justification of inductive generalization and (7) consistency with the facts (Uršič 2010).

The terms that indicate the rationality of thinking are also firmness, durability, eternity, universality, compliance with the state of affairs, verifiability, repeatability, deductive reasoning, validity of reasoning. To be rational also means to stick to the accepted rules or algorithms. The use of metaphorical models in science and religion is also a rational practice because fixed, static models are the best starting point for thinking about the world.

(C)   The Nature of the Method: Critical Rationalism

In the parable of the Merciful Father, the Elder Brother is presented as a rationalist. He is industrious and blindly obedient to rational principles and rules, but also critical, which is especially manifested by his angry reaction to the feast his father prepared for his Younger Brother, who had returned home after wasting all his inheritance. He replied angrily to the Father: "Look! All these years I've been slaving for you and never disobeyed your orders. Yet you never gave me even a young goat so I could celebrate with my friends. But when this son of yours who has squandered your property with prostitutes comes home, you kill the fattened calf for him!" (Luke 15: 29).

Just as the Elder Brother is critical, so is the rational scientific method. According to Karl Popper, critical rationalism is a fundamental way to achieve scientific knowledge. Science should accept only those theories that successfully oppose critics and that have proven to be the best approach to a particular problem. The rational character of science, then, lies in the detection and elimination of errors. In Karl Popper's words: "I equate the rational attitude and the critical attitude. The point is that, whenever we propose a solution to a problem, we ought to try as hard as we can to overthrow our solution, rather than defend it. Few of us, unfortunately, practice this precept; but other people, fortunately, will supply the criticism for us if we fail to supply it ourselves." (Popper [1935] 2005, p. xix).

The scientist is, therefore, not looking for support in favor of the theory, but is looking for evidence to refute it (van Huyssteen 1989, p. 31). This method of falsification, which is based on deductive reasoning and empirical observation, is today generally accepted as the ideal way to justify scientific knowledge.

(D)   The Task: Describing the Exterior of the World

The worldly matter of perception is, according to Merleau-Ponty, "pregnant with its form" (Merleau-Ponty 1964, p. 15). Principal meaning has Gestalt features. The given in perception is not atomistic, but is already meaningful (albeit primitively) as it is given. Elements in the phenomenal field present themselves as already *gestaltet*, as having some kind of rudimentary structure and organization of their own (Dillon 1988, p. 31). This principal meaning can be observed and grasped or apprehended with Pure Reason, to form true statements about the material world, including that of logic. Additionally, these statements are descriptions of the exterior, materialistic superficial texture or quality of the world.

The ideal language of Pure Reason to describe the quality of the world is mathematical language. In science, Regularity Theory states that the Laws of Nature are statements of the uniformities or regularities in the world and they are mere descriptions of the way the world is (*The Internet Encyclopedia of Philosophy* 2021b, s.v. "Laws of Nature").

Pure Reason also describes the world by enumerating the bare atomic facts that result from rational analysis. The decomposition of language and the world into atomic elements was a significant feature of the work of the classical empiricists Locke, Berkeley, and Hume (*Encyclopædia Britannica* 2017, s.v. "Analytic philosophy"). This position of logical atomism was also advocated by logical positivism of the early 20th century, in which rationalism reached its peak. Even today, a lot of people still imagine science as an accumulation of unrelated facts about the world.

3.2. Intellectual Reason

This enables us to reach the 2nd stage of understanding, to conquer the middle peak of the mountain of understanding (Figure 1). Intellectual Reason allow us to have direct contact with the world through perception of the essential meaning or quiddity of phenomena. The possible analogue for the perception of essential meaning is tasting the "flesh", for the living phenomenological flesh of the world has a taste and can be tasted through phenomenological perception. However, this flesh is quite lean for it resembles the meat of a fish. It lacks the rich flavors of lamb meat. This lack of flavor is illustrated in the diagram (Figure 1) by the white triangle on the second top of the mountain of understanding.

(A)　The Principle's Character: Merciful Father

The image of the Merciful Father is King David, who, like Intellectual Reason, is socially oriented. Besides, as an intelligent man, in contrast to the man using Pure Reason, he is resourceful and merciful.

David, as the Father of the nation, built a strong state by defending the land from invaders (2 Sam. 5: 17–25; 8: 1–14; 10; 12: 26–31; 21: 15–22), by successfully resolving the internal problems and by choosing Jerusalem as the capital city, which became the administrative center of the organized state (2 Sam. 5: 6–16). King David was a sensible man who was making reasonable decisions that were not certain, but were reliable. David was not like Esau (who did not care for society), but sacrificed himself and his life for the welfare of the nation.

As the youngest son, David is intelligent, which is reflected in his ability to successfully solve life's problems, both personal and national. There were plenty of occasions in his life when he could have lost his life, but he always survived thanks to his own ingenuity (cf. 1 Sam 23: 19–28). In addition, David is also merciful. King Saul repeatedly wanted to kill David, but David always managed to escape him and even spared Saul's life twice by not killing him, even though he had the opportunity (1 Sam. 24: 26). He did not even want the death of his rebel son Absalom, who tried to usurp his throne (2 Sam 15). David can be merciful because his Intellectual Reason has the ability to penetrate to the essence of a man and thus, can perceive his woundedness and weaknesses. At the same time, he himself has the experience of his own weaknesses, for he is constantly being criticized by the prophet Samuel because of his sinful life (1 Sam 12: 1–15). Bathsheba, for example, becomes David's wife after he sees her bathing and has her husband Uriah killed (1 Sam 11). His whole life was full of uncertainties from the very beginning to the end. As a shepherd, he was attacked by lions and bears (1 Sam 17: 34–35); he fought the giant Goliath (1 Sam 17); he was persecuted by King Saul (1 Sam 19: 8–17; 23: 19–28) and as king, he was constantly at war with the Philistines (2 Sam 5: 17–25; 10: 1–19).

(B)　The Essential Feature: Reasonableness

Intellectual Reason is Practical Reason. David made many sensible decisions that were for the good of the people, such as, e.g., that he chose Jerusalem as the capital of his state (1 Sam 5: 6–16), and brought in the ark of the covenant (1 Sam 5: 6). This is in accordance with the essential characteristic of Intellectual Reason, namely "reasonableness", which has a social dimension: "The reasonable . . . characterizes the decision itself, the fact that it is acceptable or not by public opinion, that its consequences are socially useful or harmful, that it is felt to be equitable or biased" (Perelman 1979, p. 32). It is reasonable for a king to act mercifully because by doing so, he becomes popular and esteemed among the people and because, most importantly, such conduct has beneficial consequences for society.

In the Age of Enlightenment, discovery of inductive reasoning produced a new conception of "reasonableness", which developed in tandem with early forms of probability theory. Previous models of rationality wanted to base reasonable belief on demonstratively certain grounds. Inductive reasoning did not have such high demands. "Reason per se demanded demonstration, but reasonableness was content with probabilities, or rather, with expectations" (Daston 1988, p. 59).

Postpositivism especially stressed that the best we can do is to respond as reasonably as possible to our mixed and uncertain empirical evidence about the nature of things. Thus, philosopher of science Thomas Kuhn in his essay *Reflections on my Critics* claims that in theory, choice recourse is not to proof, as in mathematics or logic, but to persuasion. The conversion that persuasion is intended to induce is subject to the possession of good reasons such as accuracy, simplicity, scope, fruitfulness, etc. (Kuhn 1970, pp. 260–61). He wrote: "I am, however, insisting that such reasons constitute values to be used in making a choice rather than rules of choice. Scientists who share them may nevertheless make different choices in the same concrete situation." (p. 262). Kuhn wants to say there is a lack of a rational algorithm for theory choice. All we can do is rely on good reason and value judgment.

(C) The Nature of the Method: The Path of Uncertainty

The reasonableness of decision-making refers to the use of the technique of inductive argumentation. The phenomenological method is also a kind of inductive technique, as is pointed out by Merleau-Ponty in *Phenomenology of Perception* (Merleau-Ponty 2002, p. 73). There is, however, the well-known Hume problem of induction, which states that despite the fact that multiple observations have confirmed a particular hypothesis, there is still a theoretical possibility that the next observation will refute it (Bem and Jong 2006, p. 72).

The method of Inference to the Best Explanation used in science as well as in everyday life is the method of justifying hypotheses or the procedure of choosing the hypothesis or theory that best explains the available data. McGrath acknowledges that the approach is susceptible to criticism because it does not set clear criteria for determining which of a set of explanations is "best" (McGrath 2008, p. 235). He points out that there is an important debate in the philosophical literature about which criteria to use in choosing the best explanation. Is the best explanation the one that is the simplest, the most elegant, or the most fertile? (McGrath 2012, p. 85).

In his books, McGrath describes how, as a scientist, he had to come to terms with living in uncertainty. He came to the conclusion that in science, "we need to cope with uncertainty. And that is challenging, both intellectually and existentially." (McGrath 2015, p. 52). Reason cannot give us certainty. Only the Reasonable Intellect can provide it.

(D) The Task: Describing the Inner Essence of the World

Besides the principal materialistic meaning of the world and its elements, there is also a social or cultural (phenomenological, experiential) meaning because the world also has a social, cultural or phenomenological (experiential) dimension. Things in the world have a unique feature: not just that we can observe them, but that we can also experience them, in the sense of living through or performing them and grasping their essence or quiddity with the help of Intellectual Reason. Therefore, things not only have a bare exterior, but also an essential fleshy core, which is accessible by the phenomenological method. For Merleau-Ponty ([1948] 1968), essences belong to the "flesh of the world".

This essence of worldly things is actually the intention for which we use a particular thing. In perception, "we are primarily aware of things as they figure in our culturally specific practical lives". We do not experience things just as possessing certain "objective" characteristics such as shape and size, but we have a meaningful experience of things, which is a more fundamental phenomenon (Smith 2016, p. 82). In *Being and Time*, Heidegger claims that in everyday experience, we are aware primarily of equipment, rather than occurrent entities. The fundamental character of our being-in-the-world is the practical way in which we dwell in an environment. Equipment, which is an environmental thing, is that which shows itself as that which is for something (Heidegger 2010, Ch. 15).

To grasp the essence of an object, therefore, means knowing the intention of its use, which also applies to tools used in various crafts. Intellectual Reason allows us to grasp the meaning of a tool and its practical application. The craftsman must have technical knowledge (Greek: *techne*), which is knowledge of the meaning of the tools, namely for what intention they are used. A craftsman's knowledge is tacit knowledge.

3.3. Reasonable Common Sense

This enables us to reach the 3rd or the highest stage of understanding, that is, to conquer the highest peak of the mountain of understanding. Common Sense is also a part of the philosophical tradition. Here, we call it reasonable because we have good reason to believe the common sensical judgement about the existence of invisible causes.

Thomas Henry Huxley (1825–1895), an English biologist and anthropologist known as "Darwin's Bulldog" for his advocacy of Charles Darwin's theory of evolution, wrote that science was "nothing but trained and organized common sense" (Huxley 1870, p. 77).

Common sense was defined by Scottish Common Sense realism philosopher James Beattie (1735–1803) as follows: "A power of the mind which perceives truth, not by progressive argumentation, but by an instinctive and instantaneous impulse; . . . and acting in the same manner upon all mankind; and, therefore, properly called common sense, the ultimate judge of truth" (Beattie 1810, p. 26).

Pragmatist Charles Sanders Peirce, who called himself a critical common-sensist, defended fallibilism of all judgements made by Common Sense, including of metaphysical claims. For him, the principles taken as bedrock for practical purposes are only provisional, where one must "find confirmations or else shift its footing. [. . .] It still is not standing upon the bedrock of fact. It is walking upon a bog, and can only say, this ground seems to hold for the present. Here I will stay till it begins to give way." (Peirce 1974, vol. 5, §589).

(A)　The Principle's Character: Smart Queen

An example of Reasonable Common Sense, which reveals hidden causes, is Queen Esther (the smart component of theprinciple), who, with the help of her relative, Mordecai (the rational component), helped the Persian king Artaxerxes discover the cause of the problem and eliminate it. Both were from Benjamin's tribe, and Benjamin was the youngest of Jacob's sons (EstG 3: 15–19). First, Mordecai and Esther discovered the conspiracy of the king's eunuchs against the king and exposed the murderers who were the potential cause of the king's death. Mordecai learned of the conspiracy and told this to Esther, who in turn cleverly revealed the conspiracy to the king. Artaxerxes believed her and took action (EstG 3: 21–23).

Second, Mordecai and Esther together found and eliminated the potential cause of the extermination of the Jewish nation planned by the senior royal officer, Haman. Esther is smart because, like Rebekah, she has a good historical memory based on which she predicts people's behavior and the course of events in the future. Esther uses her Common Sense to look far into the future. Esther knew the wisdom of the Persian king, for she had in mind his reasonable decisions, so she dared to take risks. She foresaw that the king would overlook her unannounced arrival before him and that he would let himself be convinced that the law decreeing the extermination of the Jews, promulgated by the intriguing Haman, was unjust. It really happened just as she planned (EstG A-F).

(B)　The Essential Feature: Smartness, which is the Queen of Cognitive Virtues

An essential feature or the cognitive virtue of Reasonable Common Sense is smartness, which is manifested in the ability to discover invisible hidden causes and to intuitively know what to do to remove the potentially harmful ones. A smart person sees what the situation is like, recognizes it, and intuitively knows what they have to do. They simply know what to do in a certain situation to eliminate the cause of the problem.

Smartness is also the ability to express oneself in understandable, simple language. Scientific findings do not help us at all if they are inaccessible to people due to the complexity of the words, which makes all the effort in vain, as it does not reach the target audience. If the words of queen Esther were complicated, then she would not convince the king despite having weighty arguments. The king listened to her word and removed the potential cause. However, it was actually Queen Esther who was responsible for the removal of the harmful cause. Smartness is the queen of cognitive virtues. Smart people also have a good memory.

(C)　The Nature of the Method: The Path of Faith (Greek: *pistis*)

The problem of lack of self-evidentness, which is characteristic of the causes, was apparent already to David Hume. The causal skeptic interpretation of Hume holds that since we never directly experience causal power, all causal claims certainly appear susceptible to the Problem of Induction, which means we have no knowledge of inductive causal claims, as they would necessarily lack proper justification. Belief in causation is, thus, epistemologically unjustifiable (*The Internet Encyclopedia of Philosophy* 2021a, s.v. "David Hume: Causation"). Hume was well aware that we cannot prove existence of unobservable causes such as gravity, but he "did not refrain from giving serious consideration to any hypothesis about unobservables. Like any good natural philosopher, he did take them as *bona fide* candidates for expressing knowledge" (Chibeni 2018, p. 138).

Hume came to the realization that a leap of faith was required to accept the directly unobservable cause as existent. The same is true of the religious truths that give us the knowledge of the first causes through revelation. The Catholic definition of faith states: "Believing is an act of the intellect assenting to the divine truth by command of the will moved by God through grace" (Catechism of The Catholic Church CCC, §155). Even the religious spiritual truths, however, can be supported by arguments (evidence and good reasons) and thus, made rational and reasonable. Alister McGrath says the rationality and reasonableness of the Christian faith can be demonstrated in two different though clearly complementary ways: 1. "By showing there is good argumentative or evidential base for the core beliefs of Christianity." (e.g., with arguments for the existence of God or with historical arguments for the resurrection of Jesus of Nazareth). 2. "By showing that if the Christian faith is true, it makes more sense of reality than its alternatives. Christianity fits our observations and experiences more plausibly than its alternatives" (McGrath 2012, p. 72).

(D)   The Task: To Make the World Understandable

The traditional view of understanding holds that understanding derives from knowledge of the causes. In Posterior Analytics, Aristotle defined proper knowledge as follows: "We think we have knowledge of something *simpliciter* (and not in the sophistical way, incidentally), when we think we know of the cause" (Aristotle 1993, *Analytica Posteriora*, 71 b 9–11). Even today, "a prominent view about scientific understanding is that one understands a phenomenon if and only if one has knowledge of its cause(s)" (Verreault-Julien 2019).

We can talk about rational principles, a reasonable person, or an understandable world. The world becomes understandable to us when we understand (discover) the causes behind its surprising phenomena. Reasonable Common Sense thus allows us to discover and gain insight into invisible causes and affirm their realities. However, this is not the end of our exploration. Despite the fact that the world becomes understandable to us by the knowledge of these causes, we are not satisfied, as we would like to know if the world is also intelligible. The answer to this question can only be given by Pure Intellect, which enables the next stage of understanding. As philosopher of science Ernan McMullin says, stating the cause is just the first step because the triumph of modern science is theoretical explanations, which enable intelligibility of the world (McMullin 1978, pp. 143–45).

When Reasonable Common Sense perceives the causal meaning of invisible causes, we have experience of climbing a hill and breathing freely there, for the knowledge of the harmful causes allows us to fight their harmful consequences. The knowledge of the causes, therefore, makes life easier and more bearable, which means we can breathe easier and therefore, experience relief. This experience is depicted on the diagram (Figure 1) as two white triangles, which represent human lungs—the respiratory organ.

Principal Causes can also be analogically represented by the skeleton because they represent the rigid structure of the world. The analogy of the skeleton of the causal structure is quite a new one and is used in inferring causal relations from purely observational data, known as the task of causal discovery, that has nowadays drawn much attention in several fields, e.g., computer science, economics, and neuroscience (Zhang et al. 2017, p. 1347).

3.4. Pure Intellect

This is what enables us to enter the water of thoughts and reach the 4th or an in-depth stage of understanding—that is, to sink to the first peak of the submerged mountain of understanding. Thus far, we have dealt with the rational "mental world", and from now on, we will be dealing with the intellectual "world of thoughts".

The possible analogue for the way we experience the perceived theoretical sense is the right atrium of the heart, which receives deoxygenated blood from the systemic circulation and pumps it over to the right ventricle. The blood in this case is the analogue for the flow of thoughts. Just as blood did its job when it gave off oxygen in tissues, became deoxygenated and thus old, and by entering the heart embarked on the path of renewal, new theories are constantly being created by Pure Intellect's abductive reasoning from old thoughts, which were pondered by thinking, and new theoretical meaning is being created and perceived. These new theories give the thought processes a new impetus, a new power, energy—a new life. Thought progress is only possible if new theories invigorate the flow of thought and propel it forward towards ever-increasing perfection, which is the purpose of all mental endeavors. The right atrium of the heart is represented on the diagram (Figure 1) by the white triangle on the 4th peak of the mountain of understanding.

The perception of new theoretical meaning (sense) creates the experience of excitement, which can be analogically described as a heartbeat which propels blood through the veins forward and invigorates us. Theorizing is an exciting thing to do since Pure Intellect constantly produces new ideas, and theoretical meaning is an ever-changing form of meaning. However, these new theories are not yet ready for general application in science because they have yet to be developed and tested, which is quite a lengthy process. The absence of oxygen in the blood is a good metaphor for the missing corroboration of theories because they lack something important, namely the status of truth.

(A)　The Principle's Character: Younger Brother

The Younger Brother is intelligent and resourceful, as he knows how to solve his life problems well. The Old Testament Jacob found a way to claim from his brother Esau the right of the firstborn, namely by offering him food in return so that he would not die of hunger (Gen. 25: 29–34). He also found a way to gain great wealth from his uncle Laban through cunning selection in his choice of sheep, maidens, servants, camels, and donkeys (Gen. 30: 25–43). Jacob also found his way to approach his brother Esau and be reconciled with him, although he was very afraid because he was not sure if Esau had forgiven him for his deception. His courage paid off, for Esau received him with open arms in Canaan (Gen. 33: 1–20). In fact, Jacob successfully resolved all his life's problems.

Jacob, however, failed in observance of tradition, as he violated the rule of tradition and acquired the rights of the firstborn, including the blessing of the father (Gen. 27: 1–40). He also wanted to marry the youngest of his uncle Laban's daughters, which was another violation of tradition (Gen. 29: 15–19). By his violations of tradition, Jacob took a lot of risks, as he set out on unknown terrain, but this courage later paid off. In science, too, new theories sometimes violate tradition, but they are necessary for the advancement of science, as paradigmatic shifts are sometimes also needed to solve problems. These paradigmatic shifts turn tradition upside down and introduce a new tradition, which is better at solving problems than the old one.

(B)　The Essential Feature: Understanding as Making Sense of Surprising Facts

The essential feature or the cognitive virtue of Pure Intellect is theoretical understanding —that is, the ability to theoretically make sense of problematic surprising facts and thus, eliminate problems. The perception of this kind of meaning is accompanied by the experience of joy, which indicates that we are on the right path to truth.

There can be multiple reasons why a theoretical explanation is sensible. It can be sensible because it successfully solves a theoretical problem, which results in experiencing freedom; the reason may be the empirical fit of the theory with observations, when the theory makes sense of incomprehensible, surprising facts (Darwin's theory of evolution, for

example, made sense of rudimentary organs); the reason may also be the great explanatory power of the theory, its consonance with the rest of the system of knowledge, etc. (McMullin 1996, pp. 26–27).

Pure Intellect uncritically produces many explanations of one phenomenon, and is naive in the sense that it is quickly satisfied with every explanation because every explanation can make sense for one of the reasons just described. However, it is necessary to use Intellectual Reason and its inductive technique of value judgment or inference to the best explanation to determine which of the multitude of explanations is the best. "Science— and therefore all scientific knowledge—is in fact always based on value judgments" (van Huyssteen 1999, p. 141).

(C)　The Nature of the Method: The Path of Innovativeness and Lavishness

The Younger Brother in the parable of the Merciful Father reveals to us how the Pure Intellect functions. First of all, he knows how to find an innovative solution to life's problems. The Younger Brother got into trouble abroad to such an extent that he even had to herd pigs in order to survive (Luke 15:15). However, he did not give up, but struggled with himself and finally found the solution to the problem, namely that he would return to his Father and ask him if he would take him on as one of his hired servants (Luke 15: 18–19).

New theories are created by innovative abductive reasoning, which is not systematic and regulated by rules, but creative and containing even an element of guesswork. We come to a new solution or idea without even expecting and planning it. In Charles Sanders Peirce's words, abduction "is the only logical operation which introduces any new idea" (Peirce 1974, vol. 5, §172).

The nature of the Younger Brother's conduct is not only innovative but also wasteful and lavish. In a distant land, the prodigal son squandered his inherited property in wild living, leaving him with absolutely nothing left (Luke 15:13). Just as the prodigal son wasted all his money, Pure Intellect is wasteful and lavish in terms of producing lots of theories which they recklessly throw out and do not even check which of these explanations is best, but cling to the first one that comes to mind. It lacks the virtue of prudence possessed by Reasonable Intellect, which requires a scientist to be skeptical of a theory until it is accepted by the scientific community.

The Prodigal Son's life in the foreign land is wild, at first sight completely without order. However, this is just an appearance. Just as running water has its own molecular structure, which is invisible to the naked eye but can be uncovered by science, so too does a theory have a stable pattern of theoretical (sensical) meaning that is preserved despite the large number of possible forms that a theoretical explanation can take.

(D)　The Task: To Make Observations Intelligible

The first task of Pure Intellect is to make sense by explanation of the surprising facts (observations) which call for a theoretical explanation and are, therefore, a source (principle) of surprise, as they are unexpected on the basis of what we know. As an example, rudimentary organs become a meaningful phenomenon only in light of the theory of evolution, which explains how they came into being.

Abductive reasoning, which makes surprising observations intelligible, differs significantly from rational reasoning, which relies on algorithms and rules. As described by Charles Sanders Peirce, it is quite creative: "The abductive suggestion comes to us like a flash. It is an act of insight, although extremely fallible insight. It is true that the different elements of the hypothesis were in our minds before; but it is the idea of putting together what we had never before dreamed of putting together which flashes the new suggestion before our contemplation" (Peirce 1988, p. 227).

This unexpected, surprising enlightenment was also experienced by Charles Darwin, who later described it as follows: "In October 1838, that is fifteen months after I had begun my systematic enquiry, I happened to read for amusement Malthus on Population, and being well prepared to appreciate the struggle for existence which everywhere goes on

from long-continued observation of the habits of animals and plants, *it at once struck me* that under these circumstances favourable variations would tend to be preserved, and unfavourable ones to be destroyed. The result of this would be the formation of a new species. Here, then, I had at last got a theory by which to work...." (Charles Darwin, The Autobiography of Charles Darwin, pp. 119–21).

3.5. Reasonable Intellect

This enables us to reach the 5th or the profound stage of understanding, which means that we reach the deeply submerged middle peak of the mountain of understanding. The best analogue for the way we experience the perceived original meaning is the left atrium of the heart, which receives oxygen-rich blood from the lungs and pumps it into the left ventricle. The blood in this case is the analogue for flow of thoughts with original meaning (Greek: *arche*). This original meaning that we perceive is (1) practical use or application of theories that have been painstakingly developed in a coherent way and have been tested and selected by a scientific community as the best explanations; (2) one's professional identity; and (3) paradigms as basic perspectives in light of which theories are selected and made sensible and quiddity of the world is interpreted. The left atrium of the heart is represented on the diagram (Figure 1) by the white triangle on the 5th peak of the mountain of understanding.

Oxygenated blood is a convenient analogue for original meaning because it is filled with oxygen and ready to do its work by delivering this molecule to the tissues, for oxygen is crucial for energy metabolism. The same is with theories (which were developed and tested and started being used in practice) and discovered professional identities (everyone must discover, which is their field of expertise), which are now ready to start doing the work for which they were originally created. Theories are now corroborated and have the status of scientific truth, so that they are perfected. However, this is possible only in light of the right paradigm or the right perspective that, like the sun of truth, illuminates all that is true, namely the essences or quiddity of things and the theories that make sense of surprising facts.

Same as in the theoretical meaning, the perception of original meaning gives to the thought processes a new impetus, a new power, a new energy—that is why its proper analogue is the left atrium of the heart, which pumps blood. The thoughts now flow downwards to be enriched by purposive meaning, which gives the energy for the strongest push to the thought process. If the perception of theoretical meaning produces the experience of joy, the perception of original meaning gives the experience of delight. For example, because "what we do" is closely tied to "who we are", discovering one's professional identity means finding oneself, and this fact is the origin of delight, which is a deeper experience than joy.

(A) The Principle's Character: Beloved Son

The Biblical character presenting the prudent Beloved Son is Joseph of Egypt, the son of Jacob and Rachel (Gen. 37–50). In contrast to the character of the Younger Brother, Jacob, who lied and cheated, the character of the Prudent Son, the Reasonable Intellect, is characterized by a flawlessly righteous life. The Son was born as the youngest Brother (Joseph was the youngest beloved Son of Jacob for a long time), but he is a morally flawless person because he obeys tradition and authority. The righteous life of the Son is an example to all and, therefore, represents a moral ideal.

Another characteristic of the Beloved Son is also his ingenuity and practical wisdom, as he knows how to find, on the basis of reflection, the best practical solution to social problems, which serves not only himself, but the entire community. Egyptian Joseph, with his Reasonable Intellect, understood which was the best interpretation of dreams and the most practical solution to prevent the famine foretold by those dreams. However, he gave this explanation to others for judgment, so Pharaoh and his sages had the last word on whether or not his advice was wise.

If Pure Intellect tries to find theoretical solutions that solve misunderstandings of natural phenomena, Reasonable Intellect tries to find practical solutions to social problems. As practical problems have a social dimension, they are observable in the world and anyone who successfully solves them is easily recognized by others as prudent or the one who possesses practical wisdom. Theoretical solutions are purely subjective, which means that they are visible only from the perspective of the one who understands on the basis of theory, whereas practical solutions are also objective, i.e., observable in the world, so people can notice them through their observable effects, i.e., because their life becomes more certain.

(B)　The Essential Feature: Prudence (Practical Wisdom)

An essential feature or the cognitive virtue of the Reasonable Intellect is prudence—Practical Wisdom (Greek: *phronesis*). One way to define prudence would be to define it as a "capacity to approach the unavoidable uncertainties of practice in a thoughtful and reflective way", that develops through experience (Kemmis 2012, p. 147).

Prudence is a characteristic of experts who have a thorough understanding of the fundamental principles that are involved, based on lengthy experience and often on extensive training. Through their familiarity with the domain, their training, and their experiences in solving problems within that domain, experts develop heuristics, or rules of thumb (Prerau et al. 1992, p. 137). Experts at work gain experience of themselves because they learn what they did wrong, what they should not do anymore and what they have to work on; therefore, their decisions become more and more reliable or prudent.

Experts, however, are not individualists, but listen to the voice of the community of experts. An expert knows that they cannot determine by themself alone whether the theory is true or not. They are aware that the theory must also pass the test of time and judgment by the community of experts. "The history of science is replete with theories that only became accepted by the scientific community after a long and protracted uphill battle" (Wolinsky 2008, p. 416).

(C)　The Nature of the Method: The Way of the Cross

Testing theories or finding the best explanation with a value judgment is a time-consuming and tedious process, as all theories are imperfect and have anomalies. Sometimes, some theories have to be abandoned with a pain in the heart and a scientist has to adopt a better theory that has fewer anomalies. It is frustrating for a scientist to have to abandon a theory or even a paradigm on which months or even years of their research was based, and to adopt a new, better explanation. According to the falsification method, scientists should abandon the theory immediately if they find that their observations do not agree with the predictions. However, in practice, scientists stick to their theory despite the anomaly and hope that, in the end, it will indeed turn out to be true. In real science, therefore, falsification is a rare phenomenon (Bem and Jong 2006, p. 75).

As in the spiritual life, the scientist must know how to die themselves, for abandoning a theory or a paradigm resembles abandoning a part of oneself. This could be compared to Jesus' crucifixion, with which he completed his mission. Jesus was also a theorist, and in the Gospels, we have numerous parables that explain the inner life of the Kingdom of God. We can be sure that Jesus put a lot of effort into inventing parables and testing them in public during his three years of teaching. Jesus was not just an ordinary theorist, but an expert in his field, as he tested his theories in practice and developed them. His obedience to his Heavenly Father can be interpreted to mean that his Intellect is "reasonable", meaning that he obeys the demands of reason and tests his theories in practice and with the help of the community.

If one wants to become an expert, one must first walk the way of the cross, which consists of searching of his or her mission in this world—of learning, education, practical engagement. On this path, one has many ups and downs, successes and failures, sideways. Only with perseverance and great effort does someone discover his or her mission in the world, prepare for it and do it well.

(D)   The Task: It Allows One to Carry Out His or Her Mission in the World and to Comprehend the World and Life in the Right Way

Philosopher of science Thomas Kuhn claimed that normal science can succeed in making progress only if there is a strong commitment by the relevant scientific community to their shared theoretical beliefs, values, instruments and techniques, and even metaphysics. This constellation of shared commitments Kuhn calls a disciplinary matrix or paradigm (*The Stanford Encyclopedia of Philosophy* 2018, s.v. "Thomas Kuhn"). Additionally, Reasonable Intellect enables us to comprehend the paradigm in light of which we can carry out our expert work, choose the right essences (quiddity) of things and the right theoretical explanations of world phenomena. Contrary to theory, the paradigm is inextricably linked to our identity, as what we look for in the world and how we see it depends on who we are or which identity we chose. People consider themselves Christians or atheists, Aristotelians or Copernicans, Democrats or Republicans, etc., which means that we have different paradigmatic glasses with which to interpret the world and life. Changing paradigms is quite different from abandoning theory, as it requires a change of identity and thus, a conversion.

With the help of Reasonable Intellect and the right paradigm, the community of experts achieves certainty as to which explanation is best or which has proved best in practice. In science, we have many theories that we accept as facts in this regard. Evolutionary biologist Jerry Coyne, for example, says of evolution: "Evolution, then, is a fact in the scientific sense, something Steve Gould defines as an observation "confirmed to such a degree that it would be perverse to withhold provisional assent." Indeed, the only real "proofs" beyond revision are those found in mathematics and logic" (Coyne 2015, p. 31).

Our identity is inextricably linked to our profession and the expert field we master. Auxier et al. (2003, pp. 25–38) equate professional identity with the therapeutic self, which is a combination of professional (roles, decisions, ethics) and personal selves (values, morals, perceptions), meaning that "who we are" is tied to "what we do". To know what to do, we need first to comprehend the original meaning of our field of expertise. Without the comprehension of the original meaning by Reasonable Intellect, one cannot do their work properly and cannot explain it. Additionally, without scientific professional identity and expertise, one cannot comprehend the way the science works and thus, cannot give the explanation of its essential features. This applies to all areas of expertise. To be able to find the true essences of things and the right explanations for natural phenomena, we need to be an expert who advocates the right paradigm.

In his book *Faith vs. Facts* (Ch. 2), Jerry Coyne very clearly stated the essential properties of science and described them, such as falsifiability via experiments or observations, doubt and criticality, replication and quality control, parsimony, living with uncertainty and collectivity. By reading the text, one can feel that his description of the essences of science is imbued with his experience, i.e., that he is not writing as an ignoramus, but that he is an expert in his field with extensive experience. He writes not only about what science is, but about who a scientist is, what their qualities are, how a scientist's work is conducted. It is clear that he identifies himself with this scientist whom he describes, or it could be that in this case, he is actually describing himself as a scientist. Without comprehending who a scientist is, he would not be able to write about what science is. The scientific identity gave him access to the essence of science.

3.6. Intellectual Common Sense

This enables us to reach the 6th or the deepest level of understanding—that is, to attain the deepest submerged peak of the mountain of understanding. Intellectual Common Sense, which is the spiritual component of the cognitive apparatus, enables us to reach the deepest or final stage of understanding of phenomena which exists in the form of perceived purposes. This stage of understanding is the most difficult to reach, as we have to put the most intellectual effort into it.

The best analogue for the way we experience the perceived purposive meaning are the right and left ventricles of the heart, which receive blood from the right and left atriums.

The right ventricle passes the blood on to the lungs to pick up oxygen. The left ventricle pumps the oxygen-rich blood to the body through a large network of arteries. The left ventricle is the strongest of the four chambers, and its contractions create blood pressure in the body. Due to this, they are a convenient analogue for the way we experience the perceived purposive meaning because the perceived purposive meaning gives us the experience of awe and wonder which stem from the perceived goodness, beauty and truth of theories, from the complexity, majesty and perfection of the discovered structures of the world and from the perceived vision of the Kingdom of God we are trying to build with our expert work. This experience gives the thought processes the strongest impetus and drives scientists to continue their research for new discoveries. The best answer to the question "Why do we practice science?" is the explanation of its purpose. Without purpose there would be no science and it is the task of Intellectual Common Sense to find and perceive it.

Both ventricles are represented on the diagram (Figure 1) as two white triangles on the deepest submerged peak of the mountain of understanding.

(A)   The Principle's Character: Wise Mother

Biblical mothers are full of hope and trust—strength and steadfastness. Many of them, for example, Rachel (Gen. 29–35), Hannah (1 Samuel 1–2), Elizabeth (Luke 1), were brokenhearted by the fact that they could not bear a child, but they trusted in the Lord, prayed for years, and finally conceived a baby by God's grace. The Biblical mothers are also courageous. Moses' mother Jochebed (Exodus 1–2) and Mary (Matthew 1, Luke 1–2) both risked their lives to save the life of their son.

Biblical mothers intuitively know how to act wisely so that the life of the family goes on and does not die out. They act on maternal intuition because they have an insight into God's wise plan of salvation that has existed for eternity. They are wise precisely because they are working according to this plan, which has proven effective in the past. Biblical mothers learn from past experiences, and on this basis, they intuitively know how to act wisely. Practical wisdom is the inner essence of smartness. Queen Esther was smart because she discovered the harmful causes and intuitively knew what to do to remove them effectively. Rebekah's mother, however, was wise because she discovered God's plan of salvation and intuitively acted in accordance with it.

Rebekah, the mother of Esau and Jacob, deliberately deceived Isaac and Esau to secure the patriarchal blessing for Jacob (Gen. 27: 5–29). While Queen Esther sees far into the future of world events, Rebekah sees far into the future of life. Her far-sighted Intellectual Common Sense told her that Esau would not be able to guide the life of the family forward if he did not already know how to take care of himself—and because nothing was sacred to him, not even life. She saw the solution for the lineage in the youngest, Jacob, so she broke her husband's rational tradition, according to which the heir is the eldest son, and thus, allowed Jacob to obtain his father's blessing. The natural law that Rebekah discovered through historical experience says that the heir must be the youngest son because only he is intelligent enough to carry the lineage forward.

(B)   The Essential Feature: Wisdom

An essential feature or the cognitive virtue of Intellectual Common Sense is wisdom, which lies in discovering God's wise plan of salvation and acting according to it. This plan advises us how to achieve eternal life and eternal happiness by living according to the natural law. The Book of Wisdom speaks about how rulers should seek wisdom and warn them: " . . . if you don't act according to God's plan, then he'll fall upon you very suddenly and very terribly" (Wisdom 6: 4–5). Wisdom is gained through life experience and is stored in tradition, which we inherit from our ancestors.

The best example of this learning from tradition is Rebekah, who gained insight into this divine plan of salvation—that is, into its mechanism—which proposes, namely that the heir is the youngest son who is also intelligent. The wisdom of this plan of God is revealed by historical experience. The first example of twin brothers in the Bible are Cain

and Abel. Like Esau, Cain was jealous, hot-blooded, and violent. Out of jealousy, because God accepted Abel's offering, not his, he treacherously killed his brother. Their mother Eve had no past experience of twin brothers, so she could not prevent this tragedy (Gen. 4). It was different with Sarah, Abraham's wife. When the elder Son Ishmael mocked Isaac, Sarah commanded Abraham to send Ishmael and his mother away. We can conclude that based on the well-known story of Cain and Abel, she concluded that Ishmael would want to appropriate all his inheritance and that, like Cain, he would threaten his brother's life (Gen. 21, 9–21).

Rebekah had both stories in her memory and also predicted that Esau would do the same as Cain, especially after she was told his words that he had decided to do so. She protected Jacob by secretly sending him to her brother Laban in Haran and advising him to wait there until Esau's wrath subsided. It really happened the way Rebekah had predicted. When Jacob returned to the land of Canaan many years later, to his surprise, his brother accepted him with open arms as his brother (Gen. 33: 1–17). The wisdom of Rebekah's decision paid off even later, when Jacob's son Joseph, as governor of Egypt, saved his family from death by starvation by selling them grain (Gen. 37–50). Wisdom knows the laws of life and acts in accordance with them.

(C)   The Nature of the Method: The Path of Contemplation.

Science is contemplating the mysteries of life and the universe and gives us the experience of awe and wonder. Richard Feynman (1918–1988), an American theoretical physicist who received the Nobel Prize in Physics in 1965, wrote in a 1958 essay titled "The Value of Science": "The same thrill, the same awe and mystery, come again and again when we look at any problem deeply enough. With more knowledge comes deeper, more wonderful mystery, luring one on to penetrate deeper still. Never concerned that the answer may prove disappointing, but with pleasure and confidence we turn over each new stone to find unimagined strangeness leading on to more wonderful questions and mysteries—certainly a grand adventure!"

However, contemplation of the mysteries is also the heart of Christian theology and spirituality. The way to know spiritual truths is to meditate on God's words, which is one of the main characteristics of Mary, the mother of Jesus: "But Mary treasured up all these things and pondered them in her heart" (Luke 2: 19). For Thomas Aquinas, "contemplation is the end of the whole human life" (Aquinas 1920b, *Summa theologica*, II-II, q. 180, a. 4).

Both scientific theories about natural causes, such as gravity, and theological theories about first causes speak about the inner life of natural and spiritual phenomena. As with any movement, this life cannot be grasped in the way principles are grasped, but can only be contemplated with wonder. Mystical theology, for example, describes how the inner life between the three persons of God of Love takes place, and this dynamic relationship is part of God's identity. This is not an ordinary theory because its meaning is purposive and thus, makes sense of life itself. It is not only necessary to make sense of the world but also to make sense of life, and this is precisely the task of purposive meaning. People in the depths of their hearts long for a purposive meaning. Life is worth living only if life has a purpose. Our life cannot have a purpose if we do not live according to God's plan, which is summarized in The Greatest Commandment: "Love the Lord your God with all your heart and with all your soul and with all your mind and with all your strength. The second is this: 'Love your neighbor as yourself" (Marc 12, 30–31).

(D)   The Task: To Find and Contemplate the World's Purpose

The last fifty years have seen a new surge of scientific interest in the phenomena of complexity and self-organization. Innovations in mathematics have revealed the existence of order in systems that had previously seemed intractably complex or "chaotic". These innovations have led to the formation of a new subfield of applied mathematics called dynamic systems theory, which focuses on so-called "non-linear" systems that resist decomposition into independent parts (Brender 2012, p. 57).

In his introduction to the book *Evidence of Purpose*, John Marks Templeton wrote these meaningful words about the phenomenon of self-organization and about the perceived purposiveness of the universe: "There is here no knockdown argument for design and purpose, but certainly there are strong hints of ultimate realities beyond the cosmos . . . One of the strongest hints, in our opinion, relates to the new understanding of the creativity of the cosmos, its capacity for so-called self-organization . . . current science leads us to look for a new paradigm, a universe fraught with creativity in the direction of cooperative and organizational processes. The gradual growth of complexity has been noted throughout the history of science . . . there appears to be a continuity of organization into novel and increasingly complex structures and relationships throughout the spectrum of transitions from stardust to thinking man . . . From a theological perspective it is indeed tempting to see this remarkable self-organizing tendency as an expression of the intimate nature of the Creator's activity and identification with our universe." (Templeton 1994, pp. 11–12).

The new paradigm of self-organization was already anticipated by Thomas Aquinas who wrote about the existence of purpose in nature using metaphorical language: "Hence, it is clear that nature is nothing but a certain kind of art, i.e., the divine art, impressed upon things, by which these things are moved to a determinate end. It is as if the shipbuilder were able to give to timbers that by which they would move themselves to take the form of a ship" (Aquinas 2003, *Commentary on Aristotle's Physics*, 199 a 20).

These words of Templeton and Aquinas are an example of words that arouse attractive purposive meaning in the reader, which is manifested by the experience of awe and wonder. These words speak about something big, majestic, mysterious, beautiful, transcendent, which cannot be grasped by reason but can only be contemplated with the help of intellectual imagination. As Stanley Fish said, "the reader's response is not *to* the meaning: it *is* the meaning" (Fish 1980, p. 3). This awe and wonder *is* the purposive meaning as the event, which is happening in front of the text or in front of nature, which we contemplate.

Ludwig Wittgenstein in his *Tractatus* speaks about the mystic experience (*das Mystische*) of the world that is inexpressible because judgements describe the world's facts but the world as a totality of facts is not the facts about the world. However, he is nevertheless convinced that the world can be "shown" (Charlesworth 2011, p. 208). In the same manner, we can say that the purposive language of Intellectual Common Sense is a sort of language game whose main purpose is to "show" what is inexpressible and what needs to be passed over in silence.

As a metaphor of these movements of the material world from imperfection to perfection, we can take the Prodigal Son. The Catechism teaches: "But with infinite wisdom and goodness God freely willed to create a world 'in a state of journeying' towards its ultimate perfection" (Catechism of The Catholic Church CCC, §310). In the same way as we can observe the gradual inner development and growth of the Prodigal Son who wants to get rid of his misery and live a full life in his Father's house, science also allows us to observe the same process in the development of the universe, which started its life in chaos and darkness. Using teleological language, we can say that both the Prodigal Son and Creation are attracted by the perfection of the Heavenly Kingdom, which comes from God.

For Aristotle, the prime mover or Final Cause is the ultimate reason and final goal of movement or change. It is like the magnet that attracts iron objects towards it. In his book, *Metaphysics*, Aristotle associates the prime mover with God (Mayled et al. 2015, p. 35). When we contemplate the God of Love, the Final Cause, the prime mover, we encounter the real Beauty, Goodness and Truth, which attract us. Thomas Aquinas is convinced that faith has the ability to attract: "But because not only does exterior or objective revelation have the power to attract, but also the interior instinct, which impells us and moves us to believe. [Sed quia non solum revelatio exterior, vel obiectum, virtutem attrahendi habet, sed etiam interior instinctus impellens et movens ad credendum]" (Aquinas n.d., *Super Evangelium S. Ioannis*, lectura 6, lectio 5) (my translation). For Thomas, the object of faith is "God, Who is the first beginning and last end of all things" (Aquinas 1920b, *Summa theologica*, I-II, q. 62, a. 1). To reach this supernatural end, we need faith, hope and charity.

Through faith, we receive spiritual truths. Hope directs our will to this end and makes us believe, it is "something attainable". Finally, charity enables "spiritual union, whereby the will is, so to speak, transformed into that end" (Aquinas 1920b, *Summa theologica*, I-II, q. 62, a. 3).

The same is true for the scientific theories which fascinate scientists and draw them to continue searching for the truth, which is hidden in the cosmos. The most famous atheist and evolutionary biologist scientist, Richard Dawkins, expressed this fact with these words: "I am passionate about the truth. Passion is very different from fundamentalism." Albert Einstein said: "Science can only be created by those who are thoroughly imbued with the aspiration towards truth and understanding." This fascination with science stems from its ability to disclose Beauty, Goodness and Truth and to perceive them with Intellectual Common Sense.

However, theologians and scientists are not alone in having a concrete purpose of their activity, namely finding fascinating discoveries that are beautiful, good and true. Every expert needs to perceive the purpose of their work, which gives them the motivation for further activity. We need to perceive purpose even in our strivings to reach moral perfection. In doing this, we are attracted by the image of the Merciful Father who forgives his Prodigal Son's sins and accepts him with open arms. While Reasonable Common Sense sterilely presents God as the First Cause, characterized by omnipotence, omniscience, and moral perfection, Intellectual Common Sense has the knowledge of God as Merciful Love. Based on Intellectual Common Sense, we can perceive the meaning of the truth that God is Love. The source of this spiritual truth is revelation, and Intellectual Common Sense has the power of insight into this truth, as it can explain the dynamics of the loving relationship between three persons of God within the Holy Trinity. If the laws of nature are grounded in Christ, the natural law is grounded in the Merciful Father. Being wise means following the natural law, because that is the surest way to achieve eternal happiness in the house of the Merciful Father, which is the ultimate purpose of our efforts to live according to God's will.

4. Discussion

In this discussion, we would like to highlight an important fact that guided us in writing this article and on which it depends whether this article will achieve its purpose, i.e., to convey many years of experience in dealing with the issue of understanding. In writing this article, we have been inspired by the analytical postpositivist philosophy of science, especially by its distinction between intellectual theory and rational facts. In what follows, we will try to explain our understanding of the postpositivist view of facts, paradigms, theories, and making sense of the world, because we believe this explanation is needed for proper understanding of the results of our phenomenological analysis.

In his famous work *Patterns of Discovery* (1958), Norwood Russell Hanson highlighted the theoretical underpinnings of observation, that all seeing is necessarily "seeing as" or "seeing that", which means that there is more to something than meets the eye. We see a pile of bricks as a house and not just as a pile of bricks. If we go to Greece, we can see in a pile of worked stones the remains of a theater or a temple and not just a pile of worked stones. In the pile of cells, we can recognize the heart muscle tissue. In the pile of letters, we can recognize the well-known story of Mark Twain, *The Prince and the Pauper*. Yet, what do we see in the pile of epistemological concepts that we use in science, philosophy, theology, and in everyday life? In this article, we argue that, in this pile, we can see a pattern of a mountain with three peaks that connects individual segments of human knowledge into a meaningful whole and thus, makes sense of our world.

The present discussion relates to the contemporary problem of the Western crisis of meaning because the man of the West does not see a meaningful connection between the different segments of the world in which he lives. Further to this, the world is inextricably linked to language and knowledge because, as Wittgenstein says in the opening in the *Tractatus* (1921): "The world is the totality of facts, not things". This crisis of meaning is the result of a flood of information, which creates confusion in people's heads. Scientific

disciplines are being divided into ever new ones, becoming more and more specialized, and thus, moving away from each other, just as individual points of space are moving away from each other as the universe expands. The problem of the fragmentation and disconnection of science, philosophy, theology, and phenomenology is due to the absence of meaning that would connect them into a meaningful whole. Additionally, because of the connection between knowledge and the world, meaningless human knowledge means a meaningless world.

Of course, this meaningful pattern is not a rational, self-evident principle, such as, e.g., the principle of non-contradiction, weather conditions or the well-known experience of suffering, and is, therefore, not an objective fact that can be easily grasped or perceived. When we talk about the principle of non-contradiction, about weather conditions and about suffering, every person can easily grasp the meaning of the words and an explanation is not even necessary because we are talking about objective, easily graspable facts. However, comprehending the meaning of the theoretical explanation that makes sense of the world is something completely different. The proposed theoretical pattern of the mountain, however, has the nature of theoretical meaning (sense), which—as with any other theoretical meaning—can be comprehended only with much intellectual effort. According to postpositivist philosophy, theories are not facts but make sense of facts. Things are made even more difficult because the theoretical explanation itself is sensible only in light of the right paradigm, which gives it the status of meaningfulness, and the paradigm can only be understood on the basis of the experience from which the paradigm draws its meaning. Therefore, to comprehend the theoretical meaning of any explanation, we need to put a lot of effort into the process of understanding. Additionally, only with this perceived meaning can we make sense of the world.

The theoretical explanation we present in this article is thus sensible only in light of the paradigm that there is a fundamental interconnectedness between different segments of human knowledge. Without faith in this fundamental interconnectedness, our theory, which is based on the analogy of the mountain, cannot be sensible. However, without prior experience of this fundamental interconnectedness of different segments of knowledge, it is not possible to comprehend the words of our paradigmatic assumptions.

It is also not possible to comprehend the theoretical analogy of a mountain if we have not previously experienced and grasped what mountaineering is, as our understanding of the analogy is conditioned by the perception of the phenomenon from which the analogy draws its meaning. Only if we know what it means to climb a mountain or dive into water can we comprehend a theory of understanding based on an analogous model of a mountain.

Therefore, we can see that the comprehension of our theory of understanding is conditioned by our previous experience, which makes it difficult to fulfill the purpose of this article, namely to give a proposal of how to make sense of fragmented segments of human knowledge. Without experience, it is not possible to know how individual segments of knowledge are related to each other. Facts can be understood very quickly, so we humans love facts because they do not require much intellectual effort. The condition for comprehending the meaning of these theoretical words, however, is that we embark on the path of hypothetical reasons that slowly lead us to the point where we can behold the sense of the theory and start to experience how everything is meaningfully interconnected. This, however, may or may not happen despite the effort we put into it, because a theoretical explanation does not give us facts, but a meaning that makes sense of those facts.

Additionally, the propositions of this theoretical explanation may, at first sight, seem senseless, because we can see no meaningful pattern in them. Ludwig Wittgenstein claimed that the characteristic of being senseless or having no sense applies not only to the propositions of logic but also to mathematics. Beyond, or aside from, senseless propositions, Wittgenstein also identified the nonsensical (German: *unsinnig*) propositions, which cannot carry sense. Nonsense, as opposed to senselessness, is encountered when a proposition is even more radically devoid of meaning—when it transcends the bounds of sense. Since

only what is "in" the world can be described, anything that is "higher" is excluded. For this reason, traditional metaphysics, and the propositions of ethics and aesthetics, which try to capture the world as a whole, are, according to Wittgenstein, also excluded (*The Stanford Encyclopedia of Philosophy* 2020, s.v. Ludwig Wittgenstein). However, we want to show in this article that, with the help of analogical models, philosophical propositions are also capable of becoming sensible, for the mountain analogue for cognition is the theoretical sense, a map that makes sense of abstract philosophical concepts and propositions about cognition.

Finally, we want to explain how hypothetical reasons show us or lead us to the theoretical meaning that makes sense of the world. We claim that the reason hypotheses of philosophical explanation such as ours, at first sight, seem to be devoid of sense is because their purpose is to show the sense they are pointing at. Only if we behold the sense that these hypotheses point to do the latter become meaningful, which means that we can see the sense in their background. The sense of this theoretical explanation cannot be said, but can only be shown, because the sense of the theory is not the fact, but because it makes sense of the facts. As Wittgenstein says: "what can be shown cannot be said"; that is, what cannot be formulated in sayable (sensical) propositions can only be shown. We cannot convey the sense of the theory in one single proposition as is possible in the case of facts, but we must seek the help of multiple hypotheses, which point to this sense.

This is similar to the world and its phenomena. The world is not one of the objects among other objects but is their enabling condition. We can perceive an object because it is manifested in light of the world. Similarly, the meaning of a theoretical explanation is not a fact that could be stated and simply grasped because it makes sense of the facts of the world. All we can do is to point to this meaning through a theoretical explanation. However, when we manage to see the meaning of the theory, we can abandon the explanation and its hypothetical reasons because they have done their job, namely to enable us to see the sense they are pointing to. "He who understands me," says Wittgenstein, "finally recognizes [my propositions] as senseless, when he has climbed out through them, on them, over them. (He must so to speak throw away the ladder, after he has climbed up on it) . . . then he sees the world rightly" (Wittgenstein 1922, §6.54).

The purpose of the present theory of understanding was to offer a ladder to achieve a theoretical seeing of meaning—that is, the meaningful interconnectedness of human knowledge. If the purpose has been achieved, then the explanation becomes superfluous; once a person sees the meaning, he no longer needs an explanation because he now comprehends the meaning of the explanation and of the paradigm.

However, we allow for the possibility that the seen theoretical meaning is only an illusory product of theory-ladenness. This is exactly why we need the help of the scientific community to verify the truth of the theory, as we also pointed out in this article. For this reason, scientists publish scientific articles in public journals because the scientific community and time have the final say on the truth of the theory. For now, however, we accept this theory as a good heuristic tool for making sense of observations, experiences, and philosophic propositions.

We believe, however, that it is a naive notion of science to progress on the basis of certainty and in the absence of imagination. Theories are created by abductive reasoning, which also contains elements of guesswork and imagination, ensuring that the path of hypothetical reasons we walk along is not boring, but aesthetically appealing and thus, exciting. The discussed theory of understanding and its models seem exciting to us and we feel as if it is pushing blood through our veins. Of course, this blood is still without oxygen, so it is missing something, and that is the status of truth.

5. Conclusions

In this article, we presented an analogical model of cognitive principles that perform specific cognitive functions. As an analogue for the way we experience the nature of meaning, we took the human body (skin, flesh, the skeleton and heart) and in the same

manner, we took, as an analogue for the way we experience the difficulty of meaning perception, a symmetrical double mountain with three peaks, which symbolize different stages of understanding. This model clearly distinguishes six stages of understanding, three of which are tied to reason and three to intellect. We can see that each of the assumed cognitive principles can be connected to some Biblical character, which is in a further substantial continuity with the principle's essential characteristics, with the nature of its method, and with its main task. We can see that our model and its assumed cognitive principles organize, structure and make sense of different segments of our scientific and theological knowledge, which otherwise seem confused, unrelated and without structure. This model can, thus, provide basic understanding of the cognition and of the relationship between science and theology.

Throughout the article, we can see the interweaving of science and theology, which suggests that we need both factors for appropriate understanding of cognition, i.e., the factual mental world and the world of thoughts.

Funding: This research received no external funding.

Conflicts of Interest: The author declares no conflict of interest.

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