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THE 5D THINKING NEWSLETTER

A UNIQUE APPROACH TO READ THE UNIVERSE

Special read: *Part II of an Interview with Dr Mustafa Tuna on Seeking God with Certainty through Science and Analogical Thinking*

SNEAK PEAK OF WHAT'S INSIDE:

- *How do our eyes work?*
- *"5 Days of Learning and Unlearning" by Dr Sheikh Javaid Ayub*

Featured Article:

"Autonomous Factories and the Cell"
by
Dr Yunus Cengel

Welcome to the fifth edition of

The 5D Thinking Newsletter!

Dear Subscriber,

Welcome to the fifth edition of the 5D Thinking newsletter!

In this edition, you can learn about the 5D Thinking Approach to the *Human Eyes* and read Dr Yunus Cengel's new article "Autonomous Factories and the Cell". This issue also contains a summary of Dr Sheikh Javaid Ayub's participation in our Teacher Training program and Part II of Dr Mustafa Tuna's captivating interview on seeking God through Science and Analogical Thinking.

Remember, you can unsubscribe at any time by clicking on the link at the bottom of the newsletter. We hope to continue to inspire you with the Five Dimensional (5D) Thinking Approach to education.

On behalf of the 5D Thinking Team,

Nadine Kamal

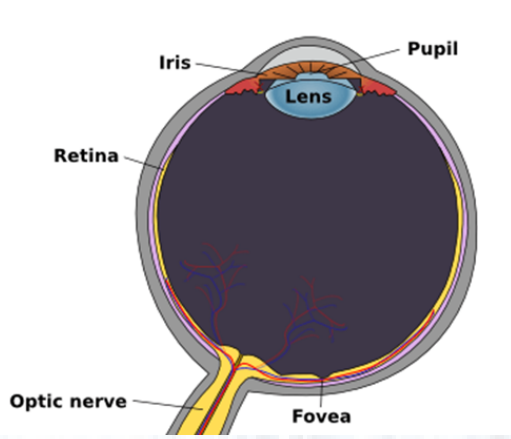
5D Thinking on the Human Eyes

"The eye is like a mirror, and the visible object is like the thing reflected in the mirror."-- Avicenna, early 11th century

Close your eyes and think about what life would be like without vision. You are in absolute darkness now. How do you feel?

We depend on our eyes to see, to read and to navigate our way around. Have you ever wondered how your eyes work? In this unit, we take a multi-dimensional journey into the amazing eyes.

In the **first** dimension, Analytical Thinking, we explore parts of the eyes that are equipped with the capacity for vision using existing scientific knowledge. Next, in the **second** dimension, Analogical Thinking, we compare the functional features of a digital camera with the various components of the eyes and discover some fascinating facts about how our eyes help us navigate our way in the world.



Then, in the **third** dimension, Critical Thinking, we reflect on the invention of the bionic eye and on how our eyes are much more sophisticated and complex than any digital camera or bionic eye. In the **fourth** dimension, Meditative Thinking, we explore the hidden message in the phenomenon known as vision and come to the conclusion that the eyes can only be the work of The One who has the knowledge, wisdom, power and will to create perfection in every living thing. Finally, in the **fifth** dimension, Moral Thinking, we ponder the value of eyes and discover how our life would be affected if we did not have the ability to see. Lastly, we learn how to show appreciation to the Generous Creator of our eyes through remembrance, reflection and gratitude.

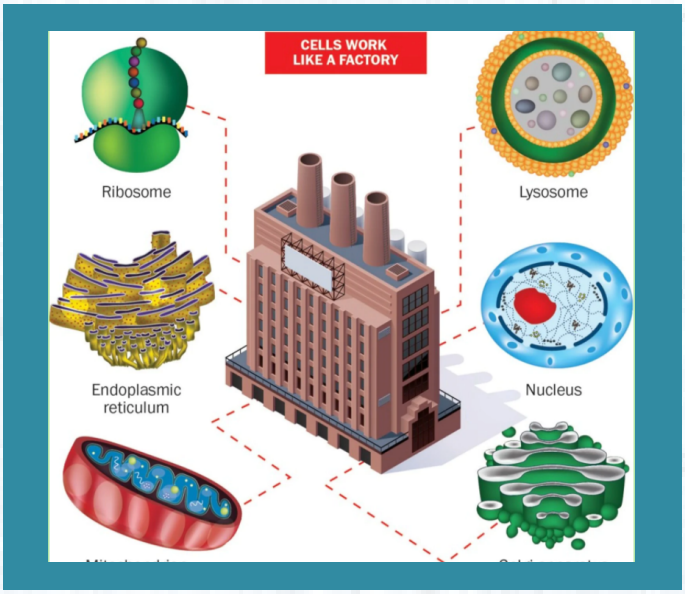
For a free download of "The Human Eyes", please click here.
To test your knowledge about the human eye, take this quiz by clicking here.

Autonomous Factories and the Cell

by Dr Yunus Cengel

Dr Yunus Cengel *is Professor Emeritus at the University of Nevada and the author of several well-known college textbooks in Engineering.*

To develop a better perspective of living and non-living cells and a better understanding of life, consider a fully automated modern factory manned entirely with industrial robots and equipped with smart machines, with no human beings on the production floor. The facility utilizes the internet of things (IoT) and big data, and there is continual real-time communication and information flow among all machinery and equipment, including robot-to-robot, machine-to-machine and robot-to-machine communications. All operations are fully automated. When the amount of a supplies drops below a certain level, a gate opens, and forklifts bring the needed materials in. A conveyor belt transports the waste material to the trash bin to be picked up by trucks. All finished goods are moved out of the factory floor through another gate, and the goods are loaded onto trailer trucks for delivery to the market. Now imagine Henry Ford is suddenly resurrected and enters such a modern automotive manufacturing facility. Try to guess Ford's reaction—with his knowledge and understanding of the world in the 1940s—a time where there were no electronics or data centers, no software, no computer-controlled machines, no internet, no machine vision, no robots working in full coordination and no digitization of knowledge. Can you imagine his amazement? He would probably think he was dreaming and pinch himself to return to the reality of 1940s, when hundreds of living, intelligent, conscious, sentient, seeing, speaking, hearing, thinking, trained workers understood what they are doing and their roles on the production floor.



After the initial shock, Henry Ford would probably begin to watch the operation closely to make some sense of it, since there are no people around to ask questions. He would quickly realize that the production machinery is similar to the ones in his factory, performing similar tasks, except that there are no human operators to run the machines. He would also realize that the robots that perform various tasks from welding to painting are also made of parts and are not alive. Supplies like steel, plastics, aluminum, and paint (and also electricity and fuel for energy) enter from one end of the factory while assembled cars leave from the other end, all done by eyeless, earless, lifeless and thoughtless machines, which are themselves bolted assemblies of material parts, working in harmony. Now suppose that while desperately trying to solve the puzzle of this mysterious operation, Ford discovers an instructions manual that describes all the operations in the factory in full detail.

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He checks and confirms that everything in the factory runs as instructed in the book. At first, he thinks he solved the puzzle of this wondrous unmanned car factory. But his excitement diminishes quickly as he realizes that the book is nothing more than ink on paper like all other printed books, and this instructions manual is no more capable of running this operation than a recipe book being capable of preparing meals. This is because the instructions manual is not even aware of itself, since it has no life and consciousness of its own, and it has no power to order things around. The curiosity of Henry Ford would probably be satisfied when he walks into a control room of the factory upstairs, meets the technical team, and receives a crash course on the marvelous technological developments of this information and communication age. He would probably immerse himself in the knowledge of these new technologies at work. He would realize that it is the life, consciousness, intelligence, knowledge, purpose, willpower and the communicative ability of the technical team in the control room upstairs, in addition to the electromagnetic waves that occupy no space and are practically everywhere, that makes the machinery in the production facility act like it possesses these attributes. A current-age industrialist visiting this futuristic factory, on the other hand, would immediately express his high praise and admiration for the technical team before even meeting with them since the intriguing activities in the production facility are reflections of their abilities.

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A current-age industrialist visiting this futuristic factory, on the other hand, would immediately express his high praise and admiration for the technical team before even meeting with them since the intriguing activities in the production facility are reflections of their abilities. All the intelligent acts the lifeless and unconscious devices perform on the factory floor stem from the intelligent and conscious people in full control of all the equipment and machinery. If the robots and machinery were let loose by disabling the central software and stopping the communications with the central control room, the production facility would turn into ruins in no time. The functioning of a cell is not much different than the modern factory described above. The cell also receives supplies and delivers finished goods while all the parts in the cell work in complete harmony as “one.” But this unified operation requires a powerful command center that knows everything, sees everything, and firmly rules over everything in the cell authoritatively. Yet, there is no such apparent center within a cell. The DNA molecule is not a candidate for such a position since it is simply an unconscious instructions book written with atoms instead of letters that has no ability to even comprehend what its inscriptions are, let alone to impose the instructions on billions of other independent agents in the cell. Therefore, there must be an invisible, immaterial command center or “spirit” with the attribute of life that has full control over the cell.

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An Interview with Dr. Mustafa Tuna

Associate Professor at Duke University

Seeking God with Certainty through Science & Analogical Thinking

(Part II)

with Dr. Necati Aydin

NA: Have the scholars of Islam used analogical reasoning?
MT: Yes and no. One of the wisdoms in the frequent references of the Qur'an to cosmic phenomena from mosquitoes to constellations and its repeated call to human beings to reflect upon such phenomena may be related to the broad utility of analogical reasoning. However, scholars of dialectical theology in the later generations (approximately after 4th century of Islam) have generally avoided it because of problems that they perceived in the ability of analogical reasoning to yield certain logical demonstration. This relates to what logicians have called the "problem of induction." In inductive inference, we observe a phenomenon's particulars and generalize our conclusions from those particulars to the phenomenon itself. For example, we taste a ripe date fruit from a specific date tree and find it to be sweet. Then we taste another, then another, and after, say, ten dates we presume that all ripe dates picked from this tree will be analogous to the ones we have already tasted, and therefore they will be sweet too. However, can we have enough certainty about this conclusion to bet our lives on it? Most reasonable people would say "No," because our reasoning still involves presumption. It is not certain. Perhaps a previously unknown virus that does not affect the look and smell of a date but alters its taste has infected one of the dates on this tree… Thus, scholars of jurisprudence who leave room for presumptive judgment have accepted analogical reasoning as a valid source of judgment under certain circumstances, but dialectical theologians who are concerned with matters of faith and therefore require certainty in their judgments have tended to stay away from it.

This tendency is justified from the point of view of the high stakes that matters of faith involve. True belief is required for entry into Paradise, after all, and false belief leads to hellfire. However, the theologians' reluctance to investigate the possibilities of analogical reasoning has a cost too. It deprives theological discourse from 1) addressing many aspects of faith in depth, 2)being a means for elevating convictions to the higher level that mimicking experience in imagination makes possible, and 3) fulfilling the Qur'an's injunctions about reflecting on signs of creation in the universe and following them to their logical conclusions. We can find examples of such reflections in Sufi discourse, but reflections based on analogical reasoning have generally been excluded from the domain of rational argumentation.

NA: This sounds like a very high cost to pay. Is there a way out?
MT: Bediuzzaman Said Nursi highlights a form of analogical reasoning that he calls "qiyās tamthīlī." This form of analogical reasoning relies on deductive as opposed to inductive inference. Deductive inference means reasoning from a universal to its particulars. When done right, it does not involve presumption, and therefore, offers certain demonstration.

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(Continued)

MT (continues): For instance, if I know that a specific date tree belongs to Adam, I can safely infer that each date fruit on that tree belongs to Adam. This, however, is not an analogy yet. Let us push the example further and say that Adam has an orchard of date trees, he never lies, and he has a foolproof system to assess the quality of his dates. His best quality dates have a unique taste called "Adam sweet." He sells these best quality dates in special boxes that protect them from spoiling until the expiration date. I purchase one of these boxes, read the above information about Adam's dates on it, and since I know that Adam does not lie, I believe this information. I also verify that the box has not expired. Then I open the box and eat five dates. By savoring the taste shared among these five dates, I grasp what "Adam sweet" means. Then, I safely conclude that since Adam never lies, the sixth date fruit I take from the box will also be Adam sweet. The rationale for my conclusion is not that the sixth date fruit is analogous to the first five in its looks, smell, etc. but that it is analogous in being packed in this box. My experience of tasting was to grasp what Adam sweet means and not to establish similarities between the dates in the box. By reading the box and tasting five dates, I identified a general principle: "All dates in this box are Adam sweet." This is a universal proposition that applies to all of its particulars. Now, I can safely bet that all dates in this box taste Adam sweet.

We can also relate this line of thinking to the five universals (or predicables) of Aristotelian logic. That is, we identify a case as an individual member of a species and one or some of its properties as the differentia – the distinguishing common property – of all individual members of that species. Once we identify this differentia and grasp its meaning by observing the specific case that is in hand, we can safely expect to observe the same differentia on other individual members of the same species too. Since we have moved beyond theoretical speculation and identified the differentia in a concrete example and since we are reasoning from the species to the individual member – i.e. from the universal to the particular, this is a sound deductive inference. Sound intellect accepts it without hesitation or objection.

NA: You said that Nursi calls this method "qiyās tamthīlī." Could you explain what that means?

MT: The word "analogy" is used to translate a set of Arabic terms with close but different meanings. One of them is "tashbīh." It means comparing two particular individuals, finding an aspect of similarity between them, and treating them as likes because of this similarity. If this is done in jurisprudence (fiqh) to establish the ruling of a case based on its similarity to a prior case the ruling for which is already known, it is called "qiyās" and translated as "legal analogy." In logic, however, "qiyās" means "syllogism," and syllogism is a specific way of formulating arguments so that when certain assumptions are made, something other than what is already stated in those assumptions necessarily follows. The deductive inference about Adam sweet dates we made above is a syllogism for instance. Then, there is "tamthīl." It means considering a particular individual either as a representative sample of the species that it belongs to or as a manifestation or reflected similitude of something.

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(Continued)

MT (continues): For instance, an individual human being is a representative sample of the humankind, and the sun's reflection on the face of the ocean is a similitude of the sun. Tashbīh is considered to be problematic because of the difficulty of establishing the aspect of similarity between two likes. This is why later dialectical theologians hesitated about using analogy. Tamthīl, on the other hand, refers us to the differentia for the aspect of similarity, and therefore it is safer. Furthermore, if a tamthīl analogy is formulated in the form of a deductive syllogism, it becomes more readily accessible to the intellect and acquires further certainty. Thus, we can think of "qiyās tamthīlī" as a tamthīl analogy that is formulated deductively in the form of a syllogism.

NA: Is this a new method?

MT: No, it is Qur'anic, as we saw in the example of the verse about resurrection. Imam Ghazali called it "al-tamaththuk bi al-ʿumūm" (reference to the general). "Qiyās" originally meant "syllogism." Imam Ghazali and other scholars formulated legal analogy in syllogistic form using reference to the general. That is how "qiyās" came to denote "legal analogy." But jurists did not limit legal analogy to Imam Ghazali's reference to the general. They continued to use "tashbīh" as well. On the other hand, neither Imam Ghazali nor other scholars employed "reference to the general" systematically in discussions of dialectical theology. This is what Nursi did. He used it to address the intellect and the imagination simultanously in his arguments. As a result, his works both satisfy the intellect and make a transformative impact on the heart and the lower soul. I can also look at some pictures or videos of unfortunate people agonizing from the pain of fire. My imagination becomes activated as a result of these experiences. With the help of my intellect, I imagine that putting my hand into fire would be several times more painful than holding that hot cup. The memory of my earlier observations gives me ques about how the experience of pain contorts faces and bodies. And all of this helps me mimic the fear and pain of the experience of burning in my imagination to some extent. Even though I do not put my hand into fire, the involvement of my imagination carries my certitude about the fact that fire hurts to a level above what pure intellect can make possible.

NA: How does the human mind process analogical reasoning? Does the concept of "ana" that we see in Nursi's works have a role in this?

MT: Yes, indeed, "ana," or the "human I," is central to analogical reasoning. As we already established, knowing God is not only an intellectual – i.e. theoretical and abstract –matter. In order to perceive the blessings that surround us as manifestations of God's generosity, for instance, we first need to experience or taste those blessings. This relates to the nature or quiddity of the human being that Nursi often refers to as the "human I." God has equipped the human I with senses and faculties that are capable of perceiving the manifestations of His names (asmāʾ), attributes (ṣifāt), and conducts (shuʿūnat) as they reflect on created beings. The intellect relates those perceptions to God with consciousness.

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(Continued)

MT (continues): Otherwise, when a cow eats grass, it partakes of the blessings that manifest God's generosity too. Its appetite for the grass and the pleasure it derives from eating the grass are forms of gratitude. However, the cow does not relate its pleasure to God with the level of consciousness that a human being has. Moreover, the broad reach of human intellect and imagination expand the human being's needs and concerns in an unlimited way. As a result of this broad reach, the human being samples a much more comprehensive set of God's blessings and other manifestations of His names, attributes, and conducts.

Therefore, with the senses and the faculties of the human I, we perceive the properties of created beings as the differentia that relate them to universal manifestations of God's names, attributes, and conducts. A pre-installed knowledge in the human I (which may be included in the meaning of the verse:

وَعَلَّمَ آدَمَ الأَسْمَاء كُلَّهَا

"And He [God] taught Adam the names… (Qur'an, 30: 50)"

processes the information that our observations produce and affirms them as signs of creation. This is how our intellect grasps and relates manifestations of divine names, attributes, and conducts in the creation to the Creator. When we grasp these manifestations through analogical reasoning, the imagination intensifies the experience of our internal affirmation to a higher degree that is transformative for the heart and the lower soul too. Therefore, analogical reasoning or thinking has a significant pedagogical relevance. It addresses the total human being and serves to both convince and transform him

NA: How would you link the analogical thinking to Nursi's concept of reading the universe like a book through "mana-i harfî" (other-indicative) approach?

MT: Nursi introduces the concept of "other-indicative meaning" to refer to the aspects of phenomena that manifest God's names, attributes, and conducts and charges us with the duty to read the universe like a book to see and reflect upon those meanings. Instead of the physical substance and limited worldly function of a thing, we focus on how that thing points to its creator. In other words, we look at created beings to see the signs of creation manifest on them. This is precisely what analogical reasoning or thinking, as we have described here, enables us to do. It is the method of deciphering the other-indicative meanings of phenomena in the universe.

NA: How can scientific knowledge help us know more about God if we employ "analogical thinking"?

MT: God encourages us to reflect upon His signs of creation in the universe. Analogical thinking gives us a method to do this systematically. Science expands the horizons of our perception. It helps us see more of the universe. Therefore, if scientific knowledge is not prejudiced by the rejection of a higher reality beyond the visible realm or if we can transcend the distortions of that prejudice, scientific knowledge becomes a treasury of the signs of creation.

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(Continued)

MT (continues): The more of it we have, the richer our understanding of our Lord becomes. However, the key here is not science itself. It is how we interpret the findings of science. Analogical reasoning is the method with which we relate the raw observations of science to our Lord as variations in the manifestation of His names, attributes, and conducts. Without that connection, the more knowledge of the world we attain, the more we may get bogged down in it and fail to notice the signs of creation.

Let me conclude this with a small example from Nursi's works. One day, a few high school students visit him and complain about their teachers not teaching them about God at school. He responds that even if their teachers do not inform them about God, the sciences they study do, and therefore, they should listen to that information. By studying machine science, for instance, we grasp what it takes to build and operate a textile factory producing many different types of fabrics from a single material. Then, we reflect upon the Earth as a tremendous factory where every summer, each tree weaves thousands of leaves that are like living fabrics. Using our knowledge of machine science as a measure, we compare the factory of the Earth to human factories, and thus, we attain an understanding of the beauty, majesty, and perfection of the attributes of the Owner and Disposer of the Earth to the extent that the factory of the Earth is bigger and more perfect than human factories. Machine science teaches us about God, provided that we are willing and able to listen to it. And analogical thinking, or qiyās tamthīlī, offers a method that enables us to listen to it.

Five Days of Learning and Unlearning:
A Brief Summary of my Participation in an Online Five Day Teacher Training Program

By Dr. Sheikh Javaid Ayub

A five day International Teacher Training Program was organized by Government Degree College Kilam Kulgam in collaboration with Nursi Society in Turkey. The main theme of the program is captioned in its title which reads as 'Strong Belief and Sound Character through Science and Islam: 5D Thinking Approach.' The program started on December 11, 2021 at 11 am and concluded on January 15, 2021 at 5:30 pm.

Broadly speaking, we were given two substantial worldviews to understand and interpret the cosmic world and phenomenology. Using the words of Said Nursi these were: The secular worldview (Mana-e- Ismi) and the Tawhīdi worldview (Mana e Harfi). In the secular worldview, phenomena and reality are pursued according to the perceptions and consciousness of an individual, but the reality of what consciousness really is, how it works, and what it is composed of, are the questions whose answers are still pending. Furthermore, the secular worldview explains the 'what' and 'how' of reality (i.e. the factual truths) but does not go beyond them to trace the transcendental ones by asking the 'why' questions.

The appearances are therefore, the be all and end all of this worldview, and these appearances are experienced by the individual self. The secular phenomenology puts the human self at the center of our understanding, but the understanding through the 'self' needs to be preceded by the understanding of the 'self' itself (Aydin, 2019: p.91). If phenomenology is all about experiencing through the 'self', this means that all experienced knowledge will depend on the perception of the 'self'. If the 'self' is perceived wrongly, as the secular worldview in fact perceives it, we will have a skewed experience, hence an incomplete understanding of reality. Humans are the crown of creation, created in the best mould and bestowed with the best potentialities to lead a meaningful and purposeful life. Meaninglessness occurs through the objectification of everything including humans themselves. When humans are objectified, their purpose of life, their being and their existence is completely lost, life goes astray and is clutched in the whirlpool of meaninglessness and nihilism. Humans start looking at their selves and the cosmos through objectified lenses, hence cannot possibly reach the transcendental truth.

Five Days of Learning and Unlearning: A Brief Summary of my Participation in an Online Five Day Teacher Training Program

By Dr. Sheikh Javaid Ayub

In contrast to the secular worldview, a Tawhīdī worldview places God at the center, therefore, locates the dominicality of Allah beyond every cosmological phenomenon. The Tawhīdī worldview does not stop at knowing the physical realm but moves beyond the factual truths to reach the transcendental ones. Humans are not just physical beings but spiritual, emotional and psychological beings also. The objectification of humans has rendered them physical beings only. Instead, when the cosmic world is read through the Mana-e- Harfi approach, God manifests everywhere as the Quran mentions All that is in the heavens and all that is in the earth extols Allah's Glory (Quran 59:1; 61:1;62:1;64:1).

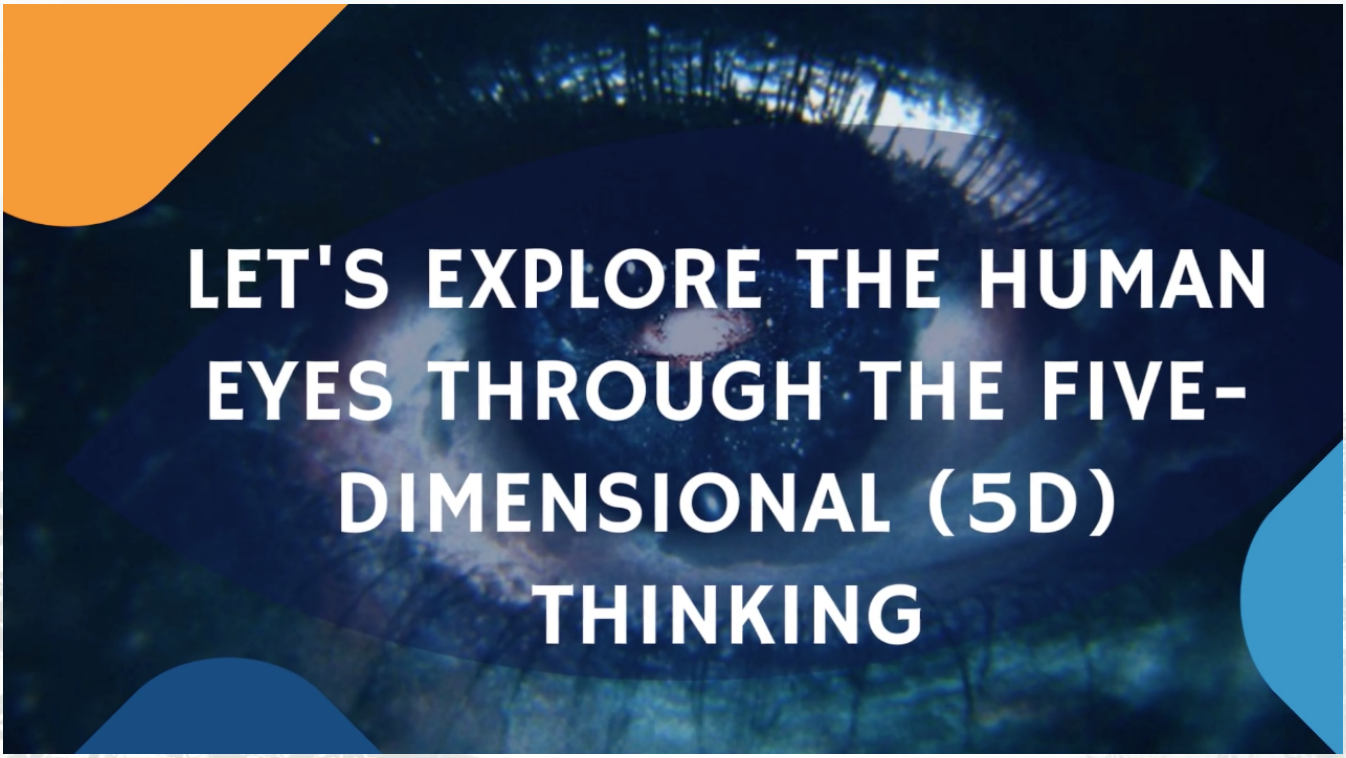
Nursi places a huge emphasis on knowing the Creator through His creation. So, any attempt to understand the created world must be an attempt to reach to the Creator. Nursi did not see any incompatibility in Islam and pure science. Instead, he believed the field of scientific discovery uncovers the working of the cosmos, hence is an excellent guide to understand the signs of Allah. For him, pure science is a genuine effort to reach for the truth and truth is the word of God, so inching towards the truth is simply an act of marching towards God. But Nursi, whilst allowing science, did not approve scientism or secular sciences, as they, he believed, corrupt the human mind and do not represent the actual Truth. Scientism and the Mana-e-Ismi approach deform Truth by associating it with the physical realm only.

Based on this Nursian understanding of Science, a Five-Dimensional Approach (5D) was designed by Nursi Society, Turkey. The model assumes that God speaks through His words in various revelations and through His works in His creative acts in the universe. It aims to derive God's character lessons embedded in scientific studies of the universe. The 5D approach aims to link Divine acts manifested in the universe to the various Divine names and attributes.

The five day program was designed to train teachers on how to use the 5D thinking approach as a novel epistemological and pedagogical method in teaching science to read the book of
the universe. Simply stated, the Five-Dimensional Thinking Approach aims to sacralize the treasure of scientific knowledge which is truly the need of the hour.

For the full version of the article above, click here.

Click on the image below to view the YouTube clip on the fourth topic of the 5D Thinking approach.



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