## The Eyes as the Mirror of the Soul

It has been mentioned above that the use of visual perception is dependent upon opening the eyes and turning them toward the desired direction; that is to say, upon the involvement of the observer’s *will*. However, deeper analysis reveals that the will’s involvement is immeasurably greater; *the observer’s will is intrinsic in his gaze.*

Atom exploration at the beginning of the last century confronted physicists with the fact that in principle, the world that lies beyond observation cannot be visualized. This realization became clear in the wake of findings whose concrete meaning continues to be controversial to this day. According to the prevailing view among the majority of physicists, the sub-atomic realm in itself exists as a potential realm; that is, as a dimension whose building blocks are not concrete entities bound by the familiar space-time, but are probabilistic or tendencies of some unknown substance. However, the opening of the observer’s eyes suffices to cause those in his visual field to collapse and turn into elementary particles that are bound in space-time (“the collapse of the wave function”); that is, into the well-defined building blocks of which our tangible world is built. Thus, the state of the world that appears in cognition at any given moment is the *result* of the interaction between the observer’s consciousness and the object of his observing, and not the state of the world before it was observed. The nature of the world and that of its operating principles changes completely in the presence of an observer.

How far this goes can be deduced from the quandaries of John Archibald Wheeler: “…Ask as we do now, if no universe at all could come into being unless it were guaranteed to produce life, consciousness, and observership somewhere and for some little length of time in its history-to-be? …Could it be that the *observership* [italics in the original] of quantum mechanics is the ultimate underpinning of the laws of physics—and therefore of the laws of time and space themselves? Is observership the ‘electricity’ that [retroactively] powers genesis?”[[1]](#footnote-1) The starting point for these rhetorical quandaries is the position known in physics as “the Copenhagen Interpretation” of quantum mechanics, and despite our immediate inclination to reject it out of hand on account of the strange conclusions to which it leads, it is the most commonly taught [interpretation of quantum mechanics](https://en.wikipedia.org/wiki/Interpretations_of_quantum_mechanics).[[2]](#footnote-2)

The findings that led physicists to this interpretation are irrelevant to us at this point. What should be considered is that this stand is equivalent to the claim that as opposed to the “passive” auditory perception where the audial information travels in one direction, from the external environment to the listener, the direction of the “active” visual perception’s spreading is two-way, circular. On the macroscopic level, visual information, like audial information, also moves inward from the external environment to the observer. However, on the sub-atomic level, the spreading direction is the opposite—from the observer to the external environment. By this we mean to say that the claim of the Copenhagen Interpretation that the very act of observation creates the observed phenomenon—that is, the elementary particles that are bound by space-time—can be explained to some extent only when it is combined with the assumption that at the moment of observation the will of the observer is extraverted toward the sub-atomic level.[[3]](#footnote-3)

If person’s will spreads at this level and acts upon it while it is being observed by him,[[4]](#footnote-4) it means that *the will of the observer is intrinsic in his gaze.* In this context it should be noted that among all mental traits, free will is the main one that bestows upon the human mind its unique nature, which is utterly different from the nature of the minds of all other creatures, and therefore is equal to the mind in its totality.[[5]](#footnote-5) The equivalence of the will to the totality of the mind’s traits finds expression in the fact that both in its contingent state and in its free state, all mental traits are equal in their degree of affinity to it. As contingent will it serves as a power of execution available to each of them equally, and as free will it can turn things around and harness each one of them to its service. Moreover, as free will it can even sacrifice all of them when its self-actualization requires it. The human will is, therefore, not a trait that stands in the same line with one’s other mental traits, but rather it is a meta-trait in the sense that they all relate to it. The claim that the will of the observer is intrinsic in his gaze, spreads and acts through it, is therefore equivalent to the claim that his *mind* is intrinsic in it, spreads and acts through it.

These claims may seem strange, but on second thought it seems that they provide the basis for the well-known fact that serves us frequently in our daily life—the fact that the eyes are considered to be “the mirror of the soul.” For during a face-to-face conversation with another person, we focus more on his eyes than on the rest of his face. Why is this so? Because focusing on them is likely to open a window to his mood, to the musings of his heart, and sometimes even to the will or intent underlying his words. Moreover, the expression of the other person’s eyes is also likely to provide us with valuable information about his personality. True, the mark of one’s character traits are impressed on other facial features to some degree or other, as well. For example, the height of a person’s forehead indicates whether or not he is wise, and the shape of his lips reveals whether or not he is greedy, and the like. The eyes, however, are different from other facial organs in the sense that *only in them is the listing of all of one’s character traits imbedded.* Not only is one’s intelligence or its absence likely to be reflected in them, but other traits as well, e.g., kindness, integrity, fearlessness, and the like. This is actually the meaning of the idiom, “The eyes are the mirror of the soul.” Therefore, for example, when a newspaper wishes to conceal the identity of a person appearing in a photograph, all it does is cover his eyes; this suffices to prevent the possibility of identification.

But what is so special about the eye’s morphology that uniquely qualifies it to reflect all of a person’s character features? After all, we have already seen that the ears also play a major role in the development of the personality.

In the course of the discussion of ethics, we noted that a human being is distinguished from all other creatures in that his mind is comprised of contradictory dimensions: one is the dimension of needs that are common to all forms of life, and the other is the dimension of ethical values that is unique to humans. This situation, combined with the fact that an infant is born without a defined personality, opens before the adult two developmental channels that are utterly different from each other. One channel, to allow his needs—and therefore his conditioning—to shape his personality; a second channel, to actualize himself as a free creature by entrusting the selection and timing of the needs that will be actualized to the universal scale of ethical values underlying the depths of his being. In the first case the ethical dimension will continue to be present within him without finding any practical expression.[[6]](#footnote-6) In the second case, by contrast, the intervention of free will is likely to lead to the situation that the contradictory dimensions, which exclude each other, will *complement* each other. How so? *By harnessing the dimension of needs to actualize the dimension of values.* Now it is amazing to discover that as the mirror of the soul the eye is characterized by this itself, that these mental polar dimensions are represented in its tissues, and moreover, that its role in the visual process is made possible specifically due to the unity that prevails among them.

The findings of embryology[[7]](#footnote-7) indicate that the cornea and lens are transparent skin tissue, whereas the retina is an “*externalized portion of the brain*.”[[8]](#footnote-8) The refraction and convergence of light rays to focus on the retina takes place in the cornea and lens. These tissues originate in the embryonic tissue (surface ectoderm) from which the external skin layer (epidermis) develops that mediates between the body and its external environment. Due to the direct contact of this tissue with the outside world, all of our activities occur through it, and therefore it is responsible for the association created in our consciousness between cause and effect and therefore also for the application of the principle of causality to the whole of nature. For based on the facts that throwing a sheet of paper into fire always leads to its burning, that throwing stones at the glass of the window always leads to its breakage etc., we drift and assume that every occurrence in nature is also due to a specific reason preceding it. On the other hand, the task of capturing the data that reaches us by way of light rays falls upon the retina. This tissue develops, as mentioned, as brain tissue (originating from the neuroectoderm), and we saw in the previous chapter that the brain is the only bodily organ whose relationship with the functions that it allows totally ignores the principle of causality, something that is experienced as the freedom to do as one pleases.

At this point, we should note that the fact that the retina is an externalized portion of the organ that serves as the seat of free will, adds the missing datum to the argument presented above, that assuming the “Copenhagen Interpretation” is equivalent to assuming the idea that at the moment of observation the observer’s will spreads at the sub-atomic level. If so, some tissue must be found in the eyes that shares the will’s unique nature as an unconditional will and therefore can serve as its springboard to beyond the body, and *as brain tissue*the retina meets this requirement perfectly. For just as the freedom to choose one thing or another is oblivious to the principle of causality, so too the types of information that are assimilated and processed in the retinal nerve cells, like those processed in the cerebral nerve cells, are oblivious to it. There is no logical, causal correlation between the shapes of the retinal nerve cells and the diversity of perceptual data that are assimilated and processed by them.[[9]](#footnote-9)

Hence, the unique feature of the will, its freedom, imprints its mark not only on the cerebral cells’ functions, but also on those of the retinal cells. Indeed, the embryonic brain tissues from which the retina develops are the very tissues of the forebrain (neuroectoderm of the forebrain), that will allow the person to exercise free will when he reaches maturity. However, unlike the will’s affinity to these cerebral tissues, the will’s affinity to the neural retina is the affinity of the inner will,[[10]](#footnote-10) which one is unaware of, and its practical effects are discernable only on the sub-atomic level.

Aside from the retina there are other ocular tissues that justify spreading the will specifically through the eyes. In the course of this chapter, we noted that the only situation in which free will can be actualized is when the polar opposition between needs (which are usually satisfied by our conditioned will) and ethical values (which can only be actualized through free will) is expressed as a practical moral dilemma. In this context it should be noted once again that unlike the retina, which is an extension of the brain tissue, the lens and the external layer of the cornea are formed from tissue consisting of cells that covers the skin. Therefore, it is this tissue that enables us to act in nature and even to control some of its phenomena; reliance upon it leads us to apply the principle of causality to all natural phenomena. Thus, the inner will’s affinity to the eye is its affinity to an organ whose tissues represent the two mental poles which take part in its actualization as free will: On the observed, epistemological level, the cornea and the lens on the one hand and the retina on the other; and at the level of things-in-themselves, which is the ontological level, specific drives on the one hand and universal values on the other. The spreading of one’s will beyond his body is carried out then exclusively through the eyes mainly due to the fact that the *diametrical opposites* between those mental dimensions, which allows it to be actualized as free will by choosing to obey the values dimension while ignoring the constraints of its conditioning, is reflected only in the ocular tissues.

While this line of thinking clarifies why the observer’s mind expands into external reality specifically through his eyes, it does not explain what unique morphological features of the eye allow only it, and none of the other sensory organs, to express the character features of the mind that spreads through it. The fact that the retina is brain tissue does not account for this uniqueness, as it is not observable; the retina is concealed within the eyeball.

The explanation for this lies in the combination of the following two facts: First, not only the rear inner tissue of the eyeball, the retina, is an offshoot of the brain, but also the sclera that envelops the whole eyeball and whose visible part is more familiar to us as the white of the eye. The difference between the two is just that the retina is an offshoot of the cerebral tissues themselves, whereas the sclera is an external offshoot of the thick membrane (dura mater) that envelops it and the spinal cord. The ocular tissues that are exposed to the outside world when the eye is open include then a portion of the tissue that envelops the organ that all consider to be the seat of all personality features—the brain.

This datum in itself may be significant but not sufficient. As a matter of fact, even when we gaze at the exposed human brain—and not just at the external offshoot of its envelope, at the white of the eyes—we will not find any hint in it that its tissues serve any consciousness or mind in one way or another, and therefore we will also not find any hint in it of the unique character of one’s mind. But how is this to be understood? Why does contemplation of another person’s eyes provide us with some idea of the mind expanding through them, while contemplation of the seat of the mind, the brain, does not? Because, contrary to the prevailing reductionist approach, it is not the brain that wants, thinks or feels, but rather the person, as noted the philosopher Jacob Bronowski (1908-1974).[[11]](#footnote-11) And what is the person? He is not his brain, his heart or any other vital organ in his body—and not even his consciousness or his soul; *a person is the oneness of all the contradictions between his components and traits.*Clearly, then, what allows our eyes to express our character, the musings of our hearts, and to some extent also our will, is not just the fact that one of their exposed tissues is an offshoot of the brain’s envelope. And at this point we come to the second datum, which is the icing on the cake.

When we gaze at another person’s eyes what appears in our cognition is not just their whiteness (the sclera), but also the iris, which gives the eye its brown, blue or green color, and the pupil. The eye components that are exposed to others when open are therefore the sclera, the iris, the pupil, the sequence between them, and the contrasts between the colors of the sclera, the iris and the blackness of the pupil. The relationship of these components to the topic at hand—“the eyes are the mirror of the soul”—will be clarified once they have been described accurately, which will enable us to search the ontological, mental traits that are present beyond them.[[12]](#footnote-12)

The pupil is nothing but a hole located in the center of the iris and as such represents in the human eye—namely, in the microcosm—the nature of matter in its pure state as nothingness, as we saw in the previous chapter in our discussion of black holes.[[13]](#footnote-13) As for its black color, the fact is that it is not color, but on the contrary, its absence. For in order to perceive any color while we are awake, wavelengths of electromagnetic radiation in the range of visible light must enter our eyes and stimulate the cone cells[[14]](#footnote-14) in the retina. The sensation of “the color black,” by contrast, is caused when among these cells there are those that are not stimulated by any of those wavelengths. Thus, for example, when it seems to us that we are looking at a black object surrounded by a bright area, what is translated in our cognition as the blackness of the object is that central area in the visual input that did not receive any information. A black object is an object whose surface absorbs all of the wavelengths that reach it, reflecting nothing back to us and it is this *absence* of visual data that is experienced by us as black. *Black appearance is therefore not a state of vision, but rather a state of non-vision.*In contrast, when an object is perceived as “white” this means that its surface absorbs none of the wavelengths reaching it, but rather reflects them all back to the observer. Their absorption by the cone cells in the retina initiates a process that ends as the experience of the color white. This color then is the sensation that we experience when the entire spectrum of visible light is returned to our eyes and assimilated into them as a whole. These data, which are of course epistemological, can only exist as the reflection of the ontological traits beyond them:

1. As stated, from the philosophical perspective matter in it pure state is essentially “nothing,” empty space. The world is perceived then as physical not because this is its nature but because we look at it through our conditioning, as previously established. Now, among the countless layers in our mind, which of them is contingent on specific factors? That which takes place in the external layer of the mind; the one of which we are conscious. And how is our conditional consciousness to be defined *vis-à-vis* the wholeness of the unconditional being latent in its depths? Well, relative to infinity, even the largest number is equal to zero and therefore, relative to the infinite quantity of information stored in the depths of our being, even the most learned consciousness is equal to zero—to nothingness.[[15]](#footnote-15) Hence, when we turn to external reality for the acquisition of knowledge without the guidance of the unconditional Torah laws that constitute the depths of our being—an approach that is the cause of all our conditioning—the knowledge that is acquired and stored in our consciousness relates to that which constitutes the depths of our being as “nothing” relates to “existence.”[[16]](#footnote-16) Thus, in terms of the eyes of another person, the empty space in that person’s mind—i.e., his conditional consciousness, within which and as a result of which reality-in-itself seems physical to him—is perceived as the holes that are open in the centers of the irises; as the pupils of his eyes.
2. On the epistemological level, the pupils are seen as black because among the light rays penetrating them there is not even one reflected back to the observer; all of them are absorbed by the retinal photoreceptors. This “color” reflects then the nature of his consciousness—which represents, as stated, that emptiness in his mind that appears to us as the hole in the center of his iris—*as an entity that benefits from the world but gives back nothing in return.*By this we mean to say, that since the *direct* access to the all-inclusive information that constitutes the depths of our being is blocked to us and since the information that is required for our basic survival[[17]](#footnote-17) and for preserving our mental balance[[18]](#footnote-18) we draw from the world not in accordance with the Torah’s guidelines, not only do we not grant the world that which is vital to it,[[19]](#footnote-19) but just the opposite.[[20]](#footnote-20) The very existence of human consciousness is marked then by one-sided dependence on the world. Hence, alongside the fact that the pupil hole of another person reflects the nil value of his consciousness *vis-à-vis* the totality of the mind from which it is derived, it black appearance reflects its contingent status in the world; that is, the status of his consciousness as a consumer of information from the world without being able to give it something in return.[[21]](#footnote-21)
3. The sclera of the eye is perceived as white, as it does not contain the pigmentations that grant cells their color by selectively swallowing and reflecting the light waves that strike them. Their absence in the sclera cells is therefore responsible for the fact that all the wavelengths that strike them are reflected back to external reality—which is experienced in the observer's cognition as its white color. Beyond this epistemological data must be found, as was noted, its ontological counterpart. What can it be? In other words, which of the components in the psyche of the other are those viewed as the sclera and blackness in his eyes? The answer will be found once we consider that the sclera is an external extension of the meninges that envelope the seat of all personality traits, including the unconscious ones intrinsic in its depths. Combining this fact with our central argument in this essay that what constitutes the depths of being is the same divine values that underlie everything that exists leads to the conclusion that what is revealed by the opening of the eyelids and is seen as an external extension of the cerebral envelope is the external, practical expression of these values. For in order for them to be realized, they must come into contact with the external reality, the realm of action. Therefore, the exposure of the meninges reflects the exposure of their practical aspect.[[22]](#footnote-22) As for the whiteness of the sclera, it reflects the all-inclusive nature of these values. At the epistemological level, this color results from the fact that the sclera reflects back to external reality all the wavelengths that strike it without deriving any benefit from them; and on the ontological level, its whiteness reflects the divine nature of those values, which take nothing from the world and even more, that their implementation is what provides the world with its own right to be.[[23]](#footnote-23)

The polar opposition in the mental dimensions that must take part in the process of the actualization of the will as free will, also finds *external*expression—in the diametrically opposed colors and components of the eye on the one hand, and in the unity between them on the other.

Hence, the uniqueness of the eye as the only organ capable of expressing the full range of a person’s character traits in general, and the nature of his will in particular, stems from the fact that the types of tissues it consists of, its components and the polar contrasts of its colors, reflect the contrasting mental dimensions that are necessary for actualizing a person’s uniqueness: his ability to exist free of conditioning. His spirituality and physicality, his freedom and his conditioning, are reflected in the components of his eye that are set one against the other—the retina, the sclera and its whiteness on the one hand; the cornea, the lens, the pupil and its blackness on the other—and *ipso facto* when as a single unit of action they provide the morphological conditions necessary for vision. This remarkable *unity of opposites* is the eye[[24]](#footnote-24) and therefore from among all the bodily organs it alone reflects the totality of a person’s mind; that is, the contrasting mental dimensions on the one hand, and the unity between them on the other. In short, *among the facial organs, the eye alone serves as “the mirror of the soul,” for only in its tissues are the two poles of a person’s existence represented.*This is wonderfully and strikingly illustrated by the polar contrast in the colors of the eye that has no parallel in any other organ of the body.

Comparing the human eye to those of nonhuman primates—i.e., to the eyes of the creatures whose morphology is closest to ours—completes this line of thinking. At the end of chapter one we saw that the fact that eyes whose perception is contingent upon involvement of the will are positioned in nonhuman primates above the ears that do not require this—similar to the positioning of human eyes—does not indicate that they too are capable of transforming their will into free will. As a matter of fact, these creatures lack the frontal brain lobes that would allow them self-control and, therefore, free will. From here it might be deduced that the difference between the nature of human will and that of nonhuman primates is summed up in the mark that this difference imprints upon their brains, but this is not the case. This difference also finds expression in, among other things, the significant differences between the human eye and that of nonhuman primates.

When we compare the different types of eyes that primates have, we will notice that human eyes are characterized by exceptional morphological features, as noted by researchers: 1) The opening of human eyes exposes a larger proportion of the sclera compared to that which is exposed, if at all, with the opening of nonhuman primates’ eyes; 2) The human sclera has no pigmentation and therefore looks white, whereas the pigmentation found in the sclera of all other primates gives it a dark, usually brown, appearance.[[25]](#footnote-25) Thus, among the primates the greatest color contrast—the contrast between white on the one hand and black on the other—finds striking expression only in human eyes, as shown in the pictures below.



The fact that the human eye has more pronounced morphological outlines than do the eyes of all other primates demands explanaition, as the lack of pigmentation in the human eye sclera offers no advantage for survival. The loss of pigmentation in human sclera is therefore incompatible with the theory of evolution, according to which each phase of the emerging complexity of the development of the various visual organs should only be understood on the basis of the improvement in survival that this developmental stage confers on the organism.

This problem has been presented in scientific journals by researchers from various universities, including by H. Kobayashi and S. Kohshima from the Tokyo Institute of Technology, who proposed the “Cooperative Eye Hypothesis” as resolution. According to their hypothesis, this loss of pigmentation has a distinctly adaptive advantage, not on the individual level but on the societal level: It allows others to evaluate the mental state of the person facing them and his intentions by focusing on the direction of his gaze. In this context they quote J. J. Gibson and A. D. Pick that “recognizing others’ gaze direction is one of the important cognitive bases for communication in humans.” Kobayashi and Kohshima suggest therefore that,

The uniqueness of human eye morphology among primates, illustrates the remarkable difference between human and other primates in the ability to communicate using gaze signals… Comparison of eye coloration and facial coloration around the eye suggested that the dark coloration of exposed sclera of nonhuman primates is an adaptation to camouflage the gaze direction against other individuals and/or predators, and that the white sclera of humans is an adaptation to enhance the gaze signal.[[26]](#footnote-26)

In other words, in contrast to the pigmentation found in nonhuman primates’ sclera that allows them to hide their gaze direction from other animals, the whiteness of the human sclera which stands out in sharp contrast to the color of the iris, the black of the pupil and the dark surrounding facial skin around the eye, evolved according to these researchers, in order to easily detect another person’s gaze direction and, thus, to use it during communication as a clue to his mood states, inclinations, interests, intentions, and the like. Hence, the human’s eye serves not only as a means to see, but also as a means through which *he can be seen.*

However, the assumption that the developmental process discarded the pigmentation that characterize the sclera of all other primates from the human sclera not for his personal benefit, but for the benefit of those who communicate with him, seems quite ridiculous. After all, even some of those who espouse the theory of evolution have recognized that there is no escaping the conclusion that “the function to be accomplished determines the structure of the cell that accomplishes it,” as Nobel laureate, microbiologist Salvador Edward Luria (1912–1991) wrote.[[27]](#footnote-27) Yet, according to Kobayashi and Kohshima in this case, “the function to be accomplished” will not be accomplished in the sclera cells themselves, but rather in an external frame of reference—that of the consciousness of occasional interlocutors.

A more realistic approach would address the differences of the sclera colors from an ontological perspective rather than from an epistemological one. We should approach the whiteness of the sclera in a manner similar to all natural phenomena whose physical appearance is not found in themselves but rather is created entirely in the consciousness of the observer. This color in itself must therefore be completely different from the way it looks and the same is true of the contrast between it and the dark color in the eyes of nonhuman primate. This physical contrast must be explained exclusively *from within* *itself,* i.e., from within a parallel contrast in the type of mental configurations that it serves, otherwise the recognition of its existence would not have been imposed upon all of us.

As was stated, the essential difference between the human mind and that of nonhuman primates is expressed in the fact that the former is comprised of oppositedimensions—that of ethical values on the one hand andthat of specific, local needs on the other—while the latter is not. The emergence of humans is therefore first and foremost the emergence of awareness of ethical values, and, as we have already seen, only those documented in the Torah as its laws deserve to be considered “ethical values,” thanks to their divine, unconditional nature. Now, if these values are meant to be expressed in man`s behavior we should not be surprised to find that as the mirror of the soul, human eyes also emerged in the cosmic scenario with the visible portion (the sclera) of the membranes that cover the seat of his mind, the brain, lacking the pigmentation found in that of nonhuman primates and, thus, excelling in its whiteness. For similar to those ethical values that need nothing from the outside world but rather, radiate all of their light toward it, so too a body that is perceived as white is a body that absorbs none of the wavelengths reaching it, but rather reflects them all back to us. Thus, the fact that only the sclera of humans is white, unlike that of all other primates, merely expresses through his body the fact that mankind’s emergence is actually the emergence of awareness of ethics.

The polar contrast in the colors of the human eye therefore reflects man’s uniqueness as a creature graced with the freedom to choose between two opposite ways of life: between submission to his selfish needs, on the one hand, and striving to achieve absolute control over them, on the other. In the first case, the ethical dimension serves man as a way to rationalize his actions and glorify their destructive power by formulating an ideology that presents them as moral. In the second case, the dimension of needs serves man as a way to actualize his spiritual values, his freedom. Man’s eyes, which reflect his mind through their gaze, reflect then the two poles of his spiritual structure.

So much for humans. For, as a microcosm, man alone is capable of knowing the universal ethical values that constitute all that exist, including the depths of his being, and reflecting them in his behavioral patterns. Nonhuman primates, on the other hand, were not created as a microcosm. The very existence of the universal, ethical dimension ​​is irrelevant to their existence and therefore they are not aware of it. Now, if these values cannot be reflected in their behavior, there is no reason why the color of the exposed portion (the sclera) of the membranes that envelop the brain, the seat of their mind, located in their eyes should be white. Hence, the fact that their mind is not comprised of opposite dimensions is itself the ontological reason for the absence of contrast in the colors of their ocular tissues.

It follows from the aforementioned that the intimate affinity between the visual sense and a person’s will is not restricted to the fact that using this sense is dependent upon issuing deliberate orders to the muscles that control the eyelids and eye movements. *The observer’s will is intrinsic in his gaze, and the contrasting mental dimensions* *that are required as a condition for its actualization as free will are represented by the contrasting components of his eyes.* Hence, the function that the eye fulfills in our lives is immeasurably more significant than the specific, local functions attributed to it—the assimilation of visual data and its initial processing:

1. At the macroscopic level, opening the eyes brings one’s potential freedom into conflict with its opposite; the world of phenomena that is subject to the principle of local causality. This world, which invades the observer’s consciousness mostly through his pupils, becomes naturalized in it, while threatening to turn it as well into an insignificant link in the chain of cause and effect in nature. Thus, the polar contrast between the world of phenomena and the observer’s potential freedom finds its practical expression, providing him with the opportunity to actualize his freedom.
2. At the sub-atomic level, opening the eyes allows one’s innermost will to expand beyond his body. This expansion leads to the collapse of the variety of probabilities in his field of vision and thus, to the formation of the elementary particles that constitute our tangible world.[[28]](#footnote-28)

This, therefore, is the answer to the question raised above, why of all the sensory organs is it precisely the eye that is sensitive to the quality of one’s will. That is to say, as the *highest* in the hierarchical ranking of the sensory organs, the fabric of the eye alone reflects the opposing mental dimensions that must come into conflict so that a person’s *primary* feature, his free will, can be actualized. The view of reality that the eyes allow is therefore contingent on the quality of the will. At the present, our will is not one, but rather fragmented into local, specific desires, whose number depends on its conditioning and therefore the layer of reality that is accessible to our visual perception is also the external, macroscopic layer, whose components are separated from each other in space-time. Perceiving the fundamental layer of reality—the indivisible layer latent in its totality in each of its components—is possible only for a person for whom the totality of his mind, his free will, is also latent in each of his actions.

So far for the visual sense. The auditory sense, by contrast, is tuned to the frequency of the passive layer of the mind. Hearing is not contingent on the will of the listener as seeing is contingent onthe will of the observer; the fact is that auditory information makes it way to the cerebral cortex even against the listener’s will. Thus, freeing ourselves from the shackles of our conditioning is not a prerequisite for the actualization of the full potential of the auditory sense. On the contrary, the situation tailored to the traits of this sense is found precisely when we are still in the stages of searching for the scale of ethical values that might free us from our conditioning, or when we are still in the stages of studying it, and therefore our status in the world is like the status of students at school. The first condition for the acquisition of knowledge is the student’s openness to the information found in his instructor’s possession; a state of mind that can be defined as a *passive* state. The student does not represent the authority in possession of the knowledge; on the contrary, he is attentive to the information imparted by the lecturer precisely because he is aware of his ignorance. However, attention alone does not suffice. As mentioned above, in contrast to visual information, audial information makes it way to the cerebral cortex constantly, *even when it is to our own dissatisfaction.* This fact is an *indication* woven into the fabric of our body that we must allow the information about our purpose in the world—that is, the unconditional voice of pure reason—free and constant access to our consciousness even when it seems that obeying it would undermine our very existence.

This basic component of *positive*, constructivepassivity that is necessary in the process of acquiring knowledge is reflected not only on the physiological level but also on the anatomical level: Relative to the eyes that are rich in muscle tissue, there is almost no muscle tissue in the ears. It is also reflected in the fact that in contrast to the eye which is positioned outside the skull, the inner ear containing the auditory organ is entrenched within the skull. This difference in location between the eye and the inner ear follows from the difference in the nature of the layers of the mind that receive the different types of perceptual data that reach us through them. The formation of the auditory organ inside the skull, and not outside it as in the case of the eye, indicates that the mental layer that receives the audial information is not the active one whose nature is to explore the outside world, to spread through it and act upon it, as in the case of visual information, but rather the passive, non-voluntary layer, which is entirely confined within its own boundaries. *Form, as was stated, follows function.* Hence, in our present situation as conditional creatures, it is precisely the fact that the auditory sense is tuned to the frequency of that passive mental layer which knows nothing of *our uniqueness* as creatures endowed with free will that might allow us unbiased access to reality.

How would reality appear to a person who succeeded in actualizing his full potential? The truth is that we have no idea. Nevertheless, it is also clear that pure perception of reality is possible; otherwise our facial fabric would not be shaped in accordance with the hierarchical structure of nature; that is, our eyes would not be positioned above our ears. Moreover, according to the Torah, there were times when reality was indeed perceived by man as it is in-itself, and this perception will once again become our natural perception.

**Adam’s visual perception**

Two events stand out as central among those that have occurred from the creation to our days: The creation of man and the giving of the Torah. The centrality of man’s creation is expressed by the fact that of all creatures, man alone is able to grasp the world’s complexity and dimensions, and thereby the premise that the entire world exists separately from man’s consciousness of its existence is meaningless.[[29]](#footnote-29) At the same time, man’s appearance in this world would be meaningless were it not for the Torah. His creation is essentially the creation of the capacity of free choice, and we have already seen that this capacity can only be actualized under the guidance of the Torah’s laws. These events were characterized by the fact that in these events reality was revealed in its ontological identity. Both the handiwork of the Creator, Adam before he sinned, and the Jewish nation at the time of the Revelation, saw reality-in-itself with their own eyes.

The Torah divides the span of Adam’s life into two eras: Before and after the sin. After he was created, he was placed in the Garden of Eden, from which he was banished consequent to his sin. But here the questions arise with respect to the nature of the Garden of Eden and its location.

We do not find any hint in the Torah as to the Garden of Eden’s location, although it is described there as the point of origin of the rivers which flowed from it, and as a place where a garden of fruit trees was planted on its eastern side. Does this indicate that Eden and the garden within it are physical places? The answer must be in the negative, otherwise we would be able to locate them somewhere on the planet. Although there are many beautiful corners of the Earth, such as Maui in Hawaii, St. Thomas in the Caribbean or Capri Island in Italy, which are described in travel brochures as “the Garden of Eden on Earth,” it is reasonable to assume that the Torah is not referring to these or to any such place. It is sufficient to note that when someone consoles themselves with the idea that a loved one’s soul has relocated to the Garden of Eden after his death, one would not entertain the absurd notion that it moved to one of the beautiful corners of the planet.

Indeed, according to Judaism, the Garden of Eden in which Adam was placed after he was created is the spiritual dimension in which the souls of the righteous are gathered after their death. What is more, according to Ramchal, the Garden of Eden is the “inner world,” and its relationship to the world is like the soul’s relationship to the body.[[30]](#footnote-30) Eden, and the garden contained therein, do not occupy a specific place in our world; on the contrary, it is actually they that confer a place on our world, by representing its nature, raison d'être and telos. However, how can the opinion that views the Garden of Eden as a spiritual dimension be reconciled with those biblical verses which describe it as a dimension which encompasses physical items such as rivers, trees and metals?

The answer lies in the ensemble of facts and arguments presented above, which indicates that when a person’s will is receptive to local stimuli because of its being calibrated to the frequency of pure reason, the picture of reality which will appear in his consciousness will be entirely different than that which appears in our consciousness. The one which will appear in his consciousness will faithfully reflect the non-physical data carried toward him in the rays of light in themselves. That is to say, **the very ones which appear physical to us because they are being viewed through the specific nature of our conditioning, will appear as they are in themselves—as spiritual—to one who views them through their unconditioned nature, due to the laws of the Torah by which he shaped his personality.** Before Adam abrogated his Maker’s command—that is, before his will was conditioned by local influences—nothing stood between his will and that of his Maker and therefore nothing stood between his consciousness and reality-in-itself. The Garden of Eden which he experienced before the sin was not part of our world which is perceived as delineated in time-space, rather it was the spiritual reality stretching beyond and parallel to it; at present, this can only be revealed to the eye of reason.[[31]](#footnote-31)

Therefore, the biblical reference to rivers, trees in the Garden of Eden and the like, actually refer to their essence, which are the very things which share the reference plane beyond time-space with light-in-itself. This train of thought is consistent with the statement of Rabbi Elazar and Rabbi Judah bar Simon: “The light which the Holy One, blessed be He, created on the first day, Adam could see thereby from one end of the world to the other…[[32]](#footnote-32) and where did He store it? In the Garden of Eden for the righteous.”[[33]](#footnote-33) In the eyes of those who espouse the theory of evolution,[[34]](#footnote-34) according to which man evolved from monkeys as a result of countless random and blind mutations,[[35]](#footnote-35) reference to Adam and his sin might seem like a return to the Stone Age. However, despite the fact that this theory has found its way into the hearts of the majority of thinkers and scientists, it seems unnecessary to relate directly to its claims. First, this has already been done in numerous works.[[36]](#footnote-36) Secondly, anyhow the ensemble of facts and arguments presented in this work pull the rug out from under it. They demand a comprehensive conclusion that underlying each natural phenomenon there is a spiritual essence which is self-aware, which generates it and also represents its telos. Nonetheless, some response is needed.

It was noted in chapter two that if the scientific descriptions of natural phenomena are not the phenomena in themselves, then the reasons which scientists give for them are also not the reasons in themselves. This is true with respect to the scientific description of phenomena that can be observed in the present, and it applies sevenfold when the issue at hand is a theory which pretends to explain the formation of the animal kingdom a result of a process in the distant past which no human eye has observed. This theory is fundamentally erroneous, inter alia, not only because of the fact that the probability of the random processes which it proposes occurring is zero,[[37]](#footnote-37) but also and especially because of the fundamental reason that it completely ignores the distinction between epistemology and ontology. It presents a process whose components and stages are all borrowed from epistemology as an ontological process. **When the masses and the majority of scientists see the scientific method as a method capable of leading to the recognition of nature in itself and to understanding the reasons for its phenomena, it is reasonable to expect that this disastrous error will recur in their attempt to uncover the factors responsible for the development of the animal kingdom.**

The issue of visual perception discussed in these chapters also has something to say about the theory of evolution. This theory is unable to offer even a shred of an idea capable of explaining the inexplicable transformation that occurs in the nature of the visual information when it appears in the consciousness of the observer: From information concerning data that is not within the dimensions of familiar space-time to information concerning data which is contained within them. But what can one expect from a theory whose proponents are incapable of grasping that the causes which they present as being responsible for the development of the animal kingdom—causes entirely borrowed from the fields of epistemology— will never take the place of its ontological causes? On the other hand, when this issue is approached from the ontological perspective of mental phenomena—in this case, from the perspective of Adam’s sin—the transformation in the nature of the visual information suddenly turns out to be inevitable.

As was mentioned above, in order for the transcendent nature of the information about these data to be preserved even in the final stage of the process of perception—when the visual information is grasped by consciousness—it is necessary that this also be the nature of the consciousness in which it is perceived. The problem is that since Adam’s sin, each one of us is born with his practical will fully subservient to the principle of causality. Therefore, as long as we have not succeeded in conducting our lives in accordance with the universal scale of values which is encoded in the depths of our being, the nontranscendent nature of our consciousness will only intensify over time. If this is the nature of that which is observing, then perforce it will also be nature of that which is observed. The very perception of the visual information by a consciousness which is conditional requires the equating of their natures, which blocks the observer from any access to the transcendent nature of visual data in themselves. The cause of the transformation which takes place concerning the visual information is not to be found in the mechanism of perception itself, but rather in the nontranscendent, conditional nature of the observer’s personality. The boundaries of human consciousness can only be clarified against the backdrop of Adam's sin and this understanding removes an additional stumbling block from our path—the mystery of the "unconscious." Ever since the publication of the writings of Sigmund Freud (1856-1939), there is a consensus among thinkers that the human mind is like a glacier, only a small part of which is visible. The visible portion of the mind is known while beneath its hidden depths teem. Beyond the boundaries of our consciousness stretch not only the world-in-itself, but also the depths of the mind which are unknown to us. That is to say, our consciousness is not only restricted on the horizontal level, but also and especially on the vertical plane.

However, why is our mind divided in half? How does the theory of evolution deal with this mystery? Why did man develop in such a way that his consciousness is only attuned to the extrenal layer of his mind? What prevents consciousness from bursting beyond its current boundaries and spreading out through its depths such as, for example, the totality of memories contained therein. The attempt to find refuge in reductionism according to which the phenomena of consciousness in particular and mental phenomena in general are no more than electro-chemical processes in the brain does not lead to solving the mystery. On the contrary, it only leads to illustrating the difficulty of trying to solve it, as we shall see presently.

When the disconnect between our visual perception and reality-in-itself—that is the disconnect on the horizontal plane —was discussed, we saw that its cause was not found at the biological level. Were the matter contingent on the mechanism of visual perception exclusively, the appearance of reality would certainly reflect the transcendent one which is encrypted in light-in-itself. As was mentioned, the eyes are characterized by the fact that they alone of all of the sense organs are calibrated to the frequency of pure energy; i.e., to the frequency of substance which is not delineated in the familiar time-space. On the other hand, relegating the question of cause to the mental level led to a solution: The localized nature of our conditioning by means of which we relate to the world prevents us from perceiving the transcendent nature of the information carried by light-in-itself. So far so good, but what about the issue of the disconnect which exists in the vertical plane between consciousness and its depths?

Therefore, it seems that in terms of this issue, as well, one aught not to seek the solution at the biological level, in this case in the brain. It is appropriate to note here again that according to the reductionist approach popular in science, everything that happens in the mind must be represented in the brain, and this includes events that occur in the subconscious. In light of this, we would have expected to discover some fingerprints in the brain indicating that the mental phenomena encoded in its tissue activity belong to opposing departments —conscious and unconscious; but this is not at all the case. There is not even one tissue which indicates that its electrical activity is translated into states of consciousness and therefore there is no reason to expect that scientific research will ever discover why it occurs in such a small portion of them. On the contrary, since the electrical pulses which spread through the cortical nerve cells are exactly the same as those spreading in the depths of the brain, if the former can be experienced as states of consciousness, the latter should have been able to be experienced this way, as well.

As we have stated, similar to the reason for the limits of consciousness on the horizontal level, the reason for its limitations on the vertical plane can only be found on the mental level. This argument is strengthened by the philosophical rule known as “Ockham's razor.”[[38]](#footnote-38) According to this rule, of two equal explanations for the same phenomenon, the explanation based on a smaller number of assumptions should be preferred. This rule also applies when we are seeking an explanation for a number of phenomena. One premise which will explain the limits of consciousness both on the horizontal level and on the vertical plane —including the very division of the mind into two —is preferable to multiple premises explaining these phenomena, all the more so when these assumptions do not seem likely to ever appear over the horizon.

It was noted above that in contrast to the macroscopic level that obeys the Newtonian logic which is causal, the sub-atomic level is fundamentally oblivious to it. The macrocosm (universe) and microcosm (man) are fundamentally one, as we posited, and therefore it it stands to reason that **the same is true of the division of the mind.** In other words, contrary to our consciousness, which operates according to the principle of causality, the unconscious events occurring in its depths are not subject to it. We will see below that other logical arguments, as well as findings from psychoanalysis, confirm this assumption. That is to say, the element of causality that penetrated Adam's mind when he sinned only took root in its outer edges, not its depths. The external surface of his mind thereby lost its noncontingent nature, a loss which led to its disconnect from its inner levels. **Man’s being born with a divided mind can only be understood against the backdrop of Adam’s sin.** In other words, his will being contingent on various factors—the consequence of this sin—is the very source of the barrier between our consciousness and its unconscious roots in the depths of the mind. We can infer the positive from the negative: The absolute liberation of the will from its ensemble of conditionings needs to be expressed from within itself, by means of the restoration of the primordial unity that existed between the two poles of the mind.

An additional aspect of the riddle of the boundaries of human consciousness which is clarified by this train of thought is the superiority of animals over mankind in the sense that the map of the world is encoded in their consciousness but not in ours. So, for example, a child in his early years will not hesitate to reach for fire, unless he has already been burned. The other mammals, by contrast, know to avoid fire from the moment they are born. However, how can we account for the fact that of all creatures, only man comes into the world in such need of guidance in order to survive?

The inferiority of our innate consciousness relative to the innate recognition of all other beings is particularly evident regarding everything relating to the sense of orientation. This sense allows them, but not us, **to navigate in areas where they have never visited before.** In this regard, the most outstanding creatures are birds such as carrier pigeons or storks and marine animals such as sea turtles or salmon. These creatures can transverse hundreds, even thousands, of kilometers, traveling to unfamiliar places. How can we explain the fact that the final product of “the evolutionary process” is not calibrated to the frequency of reality while less developed life forms are? How can the inferiority of a man's innate recognition relative to the innate recognition of other creatures be reconciled with the fact that in other areas he exhibits clear superiority over them?

The key to solving this mystery is the understanding that the fact that the depths of the mind are not known to us in no way indicates that they are also unknown in and of themselves. This is indicated by the fact noted above, that the electrical pulses which spread through the external brain tissues that serve as the seat of consciousness are exactly identical to those spreading in the internal tissues. Therefore, if the former are experienced as states of consciousness, the same should be true of the latter. Logic also dictates that the depths of the mind must be aware of themselves and the information stored in them and moreover, this awareness even incomparably surpasses that which resides in their outer edges in terms of quality, as we will see in chapter seven. As to quantity of knowledge, since apart from the difference in order of magnitude, the world and man are fundamentally one, all of the information stored in the former aught to also be stored in the latter. One can find echoes of this argument in the words of the Nobel laureate, the physicist Eugene P. Wigner (1902-1995), who wrote in reference to the theory of quantum mechanics, after he pointed to the relationship between the physicist's prior knowledge and the results of the measurement:

The acquisition of our original and most crude knowledge of the innumerable laws of behavior of our surroundings—is shrouded in mystery. It is probably not only cotemporaneous with, but also part of, the awakening of our consciousness, the most mysterious process of all… This original knowledge was probably not acquired by us in the active sense, most of it must have been given to us in the same mysterious way as, and probably as part of, our consciousness.[[39]](#footnote-39)

This understanding, shared by other thinkers,[[40]](#footnote-40) brings us back to the words of Ramchal cited above, that the potential spiritual dimension in man was designed as a paradigm, based on which the world was created.

The knowledge that is in the world must therefore first and foremost be attuned to the depths of human existence, otherwise there would be no room for the laws of nature.

A newborn’s lack of consciousness—a consequence of Adam’s sin— belongs to the external layer of his mind alone. However, when it comes to the depths of existence in his mind, the situation must be completely different; the quantity and quality of knowledge concerning reality which is encoded in these depths must immeasurably surpass the quantity and quality of knowledge encoded in the minds of all other creatures. This is the only assumption which is consistent with his unquestionable superiority over them in other areas. It turns out that the inferiority of our inborn consciousness relative to the inborn consciousness of all other creatures is not the consequence of any inferiority of our minds relative to their minds, but rather of the fact that our consciousness is detached from its depths. For this very reason, before Adam’s sin—that is, before the consciousness which constituted and established the external layer of his mind was detached from its interior—he would “see from one end of the world to the other,” in the words of the Midrash which we cited above. For just as our as our self-consciousness at any given moment is consciousness formed as awareness of a specific idea, feeling or perception, Adam’s self-consciousness was consciousness which was formed as awareness both of macroscopic and microscopic phenomena and of their laws. As mentioned above, the blueprint of the world was established based on the spiritual blueprint in the depths of his mind.

It turns out that even if our consciousness comes into existance devoid of knowledge about the world,[[41]](#footnote-41) and even if human knowledge by virtue of its very nature will always amount to “infinite ignorance,”[[42]](#footnote-42) the knowledge concerning reality which is attuned to the depths of his existence and which, in principle, can be known and experienced, is infinite by contrast. Every coin has always had two sides.

All that stands in opposition to the theory of evolution is the description of creation as recorded in the Torah, including the description of the gradual creation of the animal kingdom which reached its zenith with the creation of man in the divine image. The concept of “the divine image” requires an in-depth discussion, which appears in chapter seven. At this point we will allow ourselves to emphasize that all of the metaphysical explanations for anatomical and physiological anatomy in the human body in this work are based on the Kabbalists’ interpretation of this concept.[[43]](#footnote-43) The synthesis of the unimaginable complexity of the concept of “the divine image”[[44]](#footnote-44) on the one hand, and of its embodying the structure of the Divine presence in nature in which the finite and infinite, the quantitative and spiritual, unite on the other hand, hoards within it an inexhaustible explanatory force. Studying the process of the development of the human body from the perspective of its creation in the divine image may lead to a revolutionary breakthrough concerning everything related to the understanding of the factors bringing about its development. The full weight of this breakthrough is clearly evident in light of biology’s absolute inability to explain the process of the development of the fetus based on the structure of DNA.[[45]](#footnote-45)

It is clear from all of this that according to the Torah, the physical appearance of the world stems from the fact that Adam’s sin constituted a deviation from his Creator’s will. As was mentioned, the divine will was present and reigned not only in the vastness of the universe but also in the depths of man's mind. Therefore, any deviation from it—that is, from its laws—is by definition a deviation from man’s unique transcendent nature; his freedom. Yet, since the cause of perceiving the spiritual world as material is the negative transformation which took place in Adam’s mind, when man reconstitutes his personality such that it suits his mind’s transcendent nature—that is, when he once again becomes free—then his visual perception will also return to its state prior to his sin. As was mentioned, all of the facts indicate that he is intended for such, and nothing less.

**The Revelation**

It was noted above that aside from Adam before he sinned, there was an additional point in time when man experienced reality-in-itself. This occurred when the Jewish nation was introduced to the system of laws which allow a person to regain his freedom. A study of the verses which describe the Revelation indicates that the acceptance of the Torah did not occur merely on the intellectual level. The veracity of the Torah as a hierarchal structure of spiritual and ethical norms, upon which the natural phenomena are exclusively based, even exerted its domination on the sensory perception of the Jewish people. At the Revelation, the Jewish people saw with their own eyes that the laws which they were required to obey were the very same laws which the phenomena of nature obey.

The verse which is most immediately apparent in this context is: “And the entire nation **saw** the voices and flames…”[[46]](#footnote-46) In what sense can voices be seen? A glance at the Torah commentators yields a wide range of interpretations. However, these interpretations on their own are not as relevant to our topic as is the fact noted earlier in this chapter that listening to another’s voice, or more accurately his words, allows the listener to conclude with certainty that he is self-aware. Any conversation which we conduct with someone else, even on the most superficial level, allows us to determine with certainty that, despite its material appearance, the body we are talking to is aware of itself and of the message emanating from it. How would we react were we to **see with our own eyes** that the voice speaking to us was not emanating from another’s mouth, but rather from every corner of the vastness of the universe, as occurred in the Revelation?[[47]](#footnote-47)

And so, when it suddenly became clear to us that, like the physical appearance of another person, the physical appearance of the entirety of reality only eclipses a self-aware reality within it, we almost certainly were overcome by fear and trembling. This sensory awareness would overwhelm us with such tremendous force that the pen would become weary describing it. It would have taught us that each of us actually exists at the very heart of a divine existence which embraces everything and permeates everything. Moreover, at this event we **saw** with our own eyes that the divine reality in which we exist and within which we act is not at all apathetic to our ethical level. On the contrary, its very revelation is as the laws of the Torah which we are obligated in, as it is they that establish all of reality and enables our existence.

It is clear in any case from this phenomenon of seeing the voices that awareness of the existence of the non-physical essence extending beyond that which appears as physical—which presently can be inferred on the philosophical level by means of wisdom calibrated to the frequency of the sense of hearing[[48]](#footnote-48)—became possible on **the sensory level** at the time of the giving of the Torah through the first sense in the sensory hierarchy—the sense of sight.[[49]](#footnote-49) In this event, the Jewish people were able **to see** that the natural phenomena-in-themselves are merely those spiritual interactions between the forces of nature that are all based on Torah law.[[50]](#footnote-50) That is to say, they are merely the concrete expression of the actions of the divine forces contained in the Hebrew letters, from which is woven the Decalogue and its derivatives, the 613 commandments.[[51]](#footnote-51) Rabbi Chaim of Volozhin writes concerning this:

“And the entire nation **saw** the voices…” That is to say, their physical abilities were nullified and their perception was refined to such a degree that the entire tangible, materialistic existence which they previously perceived sensorially, was now invisible to their perception… so that, for example, if someone wanted to explain tangible, materialistic objects to them, he would have to inform them—audially—of their existence. And those spiritual matters which previously would require explaining audially of their existence, now were perceived by means of their sense of sight and their wonderous perception.[[52]](#footnote-52)

At Sinai, the Jewish people experienced reality in its pure form; that is, **to see tangibly** that the will of the Creator which is stored in the letters of the Torah and its laws is what establishes all of reality. This lofty spiritual comprehension was instantly lost and, in the future, when man and the world reach their telos, it will again be our natural perception, as R. Chaim of Volozhin goes on to write:

… Currently our eyes are blind, being eyes of flesh, as to how and in what way [the Creator’s] speech permeated [the creation]. Concerning the future it is written: “And the glory of the Lord will be revealed, and all flesh **will see** together that the mouth of the Lord has spoken.”[[53]](#footnote-53) Meaning, our perception will be refined to the point where we will be able to perceive and see, even with an eye of flesh, [the Creator’s] speech permeating everything in the world. Similar to the perception that already existed at the time of the Revelation…[[54]](#footnote-54)

The main purpose of the train of thought presented in this chapter was to explain why the world appears to us as physical, whereas the knowledge about it which is perceived by the organ located at the top of the sensory organs is not. However, a number of questions raised at the beginning of the chapter remain unanswered. In the following chapter we will see how this train of thought deals with these questions, as well as others.

1. John Archibald Wheeler, “*Genesis and Observership*,” in At Home in the Universe, 1994, pp 35-39. [↑](#footnote-ref-1)
2. Among the various interpretations of quantum mechanics, “the Copenhagen Interpretation" is, in our opinion, the closest to the profound understanding of Judaism. [↑](#footnote-ref-2)
3. According to the physicist Eugene Wigner and others, wave function collapses only in the presence of human consciousness. Contrary to the consciousness of other creatures, human consciousness has the unique capability of self-determination—that is, free will—and this capability allows it to determine also the state of the fundamental level of external reality. See below Chapter 7. [↑](#footnote-ref-3)
4. Wolfgang Pauli (1900-1958; Nobel Laureate in Physics) and Carl Gustav Jung, a disciple of Freud (1875-1961), jointly published a book in 1955 which stated that, “From an inner center the psyche seems to move outward, in the sense of an extraversion into the physical world” (cited by G. Zukav, *The Dancing Wu Li Masters*, 1979, p. 56). At this point it should be clarified that it is fundamentally impossible that this outward movement should be represented in the visual cerebral cortex: 1) The expansion of the observer’s will into the *external* world cannot be represented as neurological processes—as processes that take place in the cerebral cortex—for such representation would *ipso facto* be self-contradictory. Attempting to argue that this must not be the case is like attempting to argue that the color white can mix with black while still maintaining its whiteness (in chapter 10 this argument is discussed in greater detail in the context of the visual perceptual data of “outside” or “there”). 2) The phenomena studied in the framework of Neuropsychology are but macroscopic phenomena. In contrast, the expansion of a person’s inner will beyond his body in the moment of observation takes place beneath the surface—at the sub-atomic level. In this context it should be remembered that the brain and the free will that it allows represent the microcosmic equivalent of the sub-atomic level of the macrocosm, as we saw in the previous chapter, and this is valid also with respect to the retina, the external offshoot from the brain (see below in the text). It can be argued that the range of probabilities that constitutes the basis of a physical phenomenon is what extends toward the observer’s brain and collapses in it, rather than the observer’s will expanding toward it. However, this argument fails to take into account a basic fact: Science’s attitude toward the brain is like its attitude to other natural phenomena. The totality of probabilities underlying the elementary particles that constitute the nerve cells of the cerebral cortex—including the will that relates to these cells in one way or another—can, therefore, spread beyond the area in space occupied by its macroscopic components, just as the totality of probabilities underlying the elementary particles that constitutes any other natural phenomena is capable of doing so. [↑](#footnote-ref-4)
5. In Hebrew “will” (*ratzon*) and “Mind” (*nefesh*) are synonyms. On the verse, “If it be your Mind (*nafshekhem*)”(Genesis 23:8), Rabbi Shlomo Yitzchaki (Rashi, 1040-1105), one of the foremost commentators to the Bible and Talmud, writes: “‘*Nafshekhem*’ (lit., ‘your Mind’)—*Retzonkhem* (‘your will’).” [↑](#footnote-ref-5)
6. It should be stressed once again: We are referring not to the ethical dimension in the common, misleading sense, but to the absolute one that constitutes reality-in-itself—that is, the Torah laws. [↑](#footnote-ref-6)
7. “Embryology” is the branch of biology that specializes in the study of the developmental processes of the fetus from conception to birth. [↑](#footnote-ref-7)
8. “The eye is an externalized portion of the brain. The neural retina is, in fact, a derivative of and an extension of the diencephalon. The optic nerve, which connects the retina with higher visual centers, is structurally and functionally a tract of the central nervous system, rather than a peripheral nerve…” Adolph I. Cohen, “*The retina*,” in Robert A. Moses & William M. Hart Jr. (eds.), *Adler’s Physiology of the Eye, Clinical Application,* 1987, p. 458. Compare this description to that of Ramchal: “…The eye is composed of pure secretions extended from the brain. For the soul has an image [“צלם”], which is its garb, and it[s shape] comes closest to the body[’s shape]. And some constituents that make up the end of this image [that is, its external layer] descend into the eye sockets extending with them from the brain the most appropriate constituents... These constituents [the retinal nerve cells] are the very essence of the eye and this essence is fit for the light to spread in it” (Ramchal, *Adir baMarom* Vol. I, pp. 276-277). [↑](#footnote-ref-8)
9. Complex processing takes place in the retinal nerve cells, as indicated by the fact that the visual data captured by about 130,000,000 cells is transmitted to the visual cortex through only about the 1,000,000 fibers that make up the optic nerve. Hence, similar to the cerebral nerve cells whose form gives no hint whatsoever to the functions that they allow and to the profound differences between them, so too the retinal nerve cells display no resemblance to the data processed through them, e.g., the information concerning straight lines at different angles, squares, circles, movement, colors and spatial relations. [↑](#footnote-ref-9)
10. From a physiological perspective, there is no basis for the claim of the existence of an affinity between the retina and a person’s inner will. Although the retina is comprised of brain tissue, to the best of scientific knowledge, the role of its photoreceptors amounts to the assimilation of visual data and its initial processing, and nothing more. A detailed solution to this remark requires many prefaces, some of which will be presented later in this work. Generally speaking, the key to understanding the claim for the existence of this affinity is once again the distinction between epistemology and ontology; in other words, between the scientific methodology that can relate only to our knowledge about reality and the reality-in-itself. The conventional opinion that the role of the retina amounts to assimilating and processing visual data is therefore valid only when we ignore this fundamental distinction and relate to the observed light, the retina and its functions as systems that exist as such also in themselves. However, we have already established that observed light should not be confused with light itself, and now we will add that in itself is nothing but the supreme revelation of the Creator's will in nature, as we will see in the following chapters. It is clear then, that beyond the epistemological role of the retinal nerve cells as “photoreceptors” (beyond which there must also be different, ontological organizational forms), there must be a completely different role, an ontological role: perceiving the supreme revelation of the Creator’s will in nature (“light”) through the highest sense of man. [↑](#footnote-ref-10)
11. Jacob Bronowski, *The Origins of Knowledge and Imagination*, 1978, p. 84 (Hebrew translation). [↑](#footnote-ref-11)
12. At this time, we find it appropriate to ignore the role of the iris in order to facilitate this presentation. See note 84, which briefly discusses the ontological role of the iris and its tissues. [↑](#footnote-ref-12)
13. This assertion does not seem to accord with what we said at the end of chapter 2, i.e. that the empty space or the black hole (macrocosm) that consists of matter in its pure state is expressed, to one degree or another, in each of the sensory organs of a person (microcosm) except in the eye. The answer is that what is not represented in the eye is the empty space in its actual state, as it has already been noted that the eyeball is not empty but filled with vitreous material, but in its potential state it is definitely represented in it. Moreover, when the subject in question is the pupil and not the eyeball as a whole, it is clear that in itself it is not a “thing” but rather it is as it appears—a black hole. [↑](#footnote-ref-13)
14. In contrast to “rod cells” in the retina that are responsible for vision in twilight, “cone cells” are photoreceptors that are active most of the day and are responsible for seeing light and detecting color. [↑](#footnote-ref-14)
15. The philosopher of science, Sir Karl Raymond Popper (1902-1994), summarizes the current scientific knowledge and that which will be reached in the future as follows: “The more we learn about the world, and the deeper our learning, the more conscious, specific, and articulate will be our knowledge of what we don`t know, our knowledge of our ignorance. For this, indeed, is the main source of our ignorance—the fact that our knowledge can be only finite, while our ignorance must necessarily be infinite” (K. R. Popper, *Conjectures and Refutations*, 1965, p. 28). [↑](#footnote-ref-15)
16. This is valid only with respect to our conditional consciousness—that is, only with respect to the consciousness whose determination of the type of information acquired by it at any given moment is entrusted to the specific, local factors which exist in it and in external reality—and not in relation to the consciousness of a person who is wise enough to entrust the Torah with the selection of the type of information that will satisfy his thirst for knowledge. Contrary to the information that we acquire in the present that manifests itself in our minds as nothingness, the nature of the contents of the consciousness of this person will equal the perfect, unconditional nature of the contents of the Torah in the depths of his being. [↑](#footnote-ref-16)
17. Like the senses that are used to absorb information, nutrition is essentially intended to absorb the *information* intrinsic to food products. This assertion is based in part on the words of Schrödinger that aroused considerable interest in the scientific community, and in part on the argument presented below. According to Schrödinger, the phenomenon of existence is contingent upon food not only for the energy stored within it, but also and especially because of the high degree of organization of its components. Assimilating these forms of organization in the body allows it to be spared its tissues’ inclination towards the gradual erosion of its level of order, a process that is liable to lead to its untimely death. According to him, the benefit derived from the constant exchange of cells during the metabolic process, is a function of the fact that in the course of this process the components that are assimilated into the body have a higher degree of order—that is, of information—than those that are removed from it. In his words: “The device by which an organism maintains itself stationary at a fairly high level of orderliness (= fairly low level of entropy) really consists in continually sucking orderliness from its environment” (E. Schrödinger, *What is Life? Mind and Matter*, 1944, p. 79). Moreover, it should be remembered that in the frame of reference of the energy-in-itself one does not find the space-time coordinates that bind its properties, nor those that bind the matter crystalized from it. Energy-in-itself is spiritual, not physical, and this assertion is valid also for its countless crystalized states—the *food-in-itself* that nourish us (see above, note??). [↑](#footnote-ref-17)
18. Psychological findings show that when a person is denied sensory information, even for no more than ten minutes, he is liable to suffer hallucinations and be overcome by a sense of paranoia. This state of sensory deprivation is notoriously used as a method to extract confessions during interrogations. In extreme conditions of physical sensory deprivation over the course of about ten hours, only one in ten volunteers succeeded in withstanding the test. [↑](#footnote-ref-18)
19. In Chapter 12 it will proved conclusively that a person who fulfills the laws of the Torah in their entirety retroactively gives the world that which is most precious to it: the laws by which it is created and develops. These are the words of the Torah sages in this context mentioned above (note??): “The Holy One, Blessed be He, established a condition with the Creation, and said to it: If Israel accepts the Torah… you will exist; and if they do not accept it, I will return you to the primordial state of chaos and disorder” (Babylonian Talmud, *Shabat* 88a). We find a Similar statement in the Prophets: “Thus says the Lord, [were if not for] My Covenant day and night, I would not have established the laws of heaven and earth” (Jeremiah 33:25). That is to say, the very existence of the laws of nature (“the laws of heaven and earth”) is contingent upon our constant observance of the Torah laws. Therefore, were there a person who satisfied all his worldly needs exclusively in accordance with the directives of its intrinsic Torah laws, he would give the world its laws, that is, the logical basis for its very existence. Indeed, God’s command to Adam to eat from the fruits of the trees in the Garden of Eden (Genesis 2:16) which was directed to him prior to his sin—that is, before his will was conditioned on specific, local factors—was given in order to upgrade the fruits’ status when their extract crystallizes as the seat of his personality, as his body. Then these fruits would have been rooted in the Torah laws that have been naturalized in his personality, and as a result, the world as a whole from which they were taken would be rooted in those laws as well. (The same purpose applies to God’s command to the priests to eat consecrated foods. See Rabbi Menachem Azariah of Fano [1548-1620], *Asarah Maamarot*, *Hikur Din*, II, chap. 17). At this point, it should be added that in the wake of the development of QM most physicists have come to realize that just as man’s existence is contingent upon the world, so too the world’s existence is contingent upon man (see above footnote??). This dependence of the world upon man results in devastating consequences for the world (see the next note), but man can turn it into a vitally constructive dependency. As may be recalled, the creation of man is first and foremost the creation of a creature endowed with free will. Consequently, when a person uses his free will and turns to the Torah laws within himself in order to guide him in each of his moral dilemmas, including in the deprivation of certain elements of the determination of what will constitute his body, how it will be done and under what conditions, it thus stabilizes and intensifies the order between his bodily components and consequently in the world as a whole; that is, in disabling the second law of thermodynamics. The body of this person turns then from a body whose existence is contingent upon local factors into a body whose existence is contingent upon nothing but the wholeness of his very being. At the same time, the very fact that this non-conditional body exists as an integral part of the world also turns the world in its totality into a body whose cause of existence is latent in itself; that is, in the person who resides in it. In short, at the superficial level of existence the purpose of man’s consumption from the outside world is, without a doubt, exclusively his own continued existence; however, under the surface its goal is the opposite: bestowing an intrinsic right of existence upon the world, based on the fact that among its components there are some that were promoted when they were assimilated into a man and turned him into a free man (for a more expanded discussion see Rabbi Shlomo Elyashiv [1926-1840], *Leshem Shevo veAhlama*, *Sefer haDeah*, *Derushe Olam haTohu, II,* 3, 18). From here it follows that to the degree that more traits in our personalities become immunized against the influence of specific, local factors, more cross-sections of our bodies will be liberated from their dependence upon external reality, and simultaneously the existence of the world will become more contingent upon our own existence. Thus, for example, the Talmud asserts that the entire world is sustained for the sake of Hanina ben Dosa (1st century CE), and this is precisely because he satisfied himself with just a kav of carobs from one weekend to the next (Babylonian Talmud, *Berakhot* 17b) as indicated in the tractate *Avoth* (6:4): “This is the way [to toil in] Torah: eat bread with salt and drink a small amount of water…”) [↑](#footnote-ref-19)
20. As a result of the tremendous technological advances, scientists warn day and night that its increased use is leading to a breach of the delicate balance of the ecosystem. And this is not the end of the story; the damage that humanity causes to nature is immeasurably greater. In chapter 10 it will be explained that the quality of the observer’s will as conditional will is what determines the collapse of the wave function as a factor that introduces into nature the factor of randomness, which over time leads to a gradual erosion in the degree of its order (the second law of thermodynamics) to the point where all activity in the universe will be suspended and therefore, to the point that all the laws of nature will be nullified. [↑](#footnote-ref-20)
21. From here it could be deduced that were there to exist a man who lives as “God’s Image”—that is, as a person for whom all of his behavioral patterns without exception reflect the Torah laws intrinsic in the depths of his being—the pupils of his eyes would not be black, but white. Moreover, they would then shine like sunlight. Indeed, this was Adam’s condition prior to his sin, about which the Rabbis said: “The buldge of his heel outshone the globe of the sun. If thus the buldge of his heel, his physiognomy all the more so” (*Leviticus Rabbah*, 20). As for our state at the End of Days, it says: “And they who are wise shall shine like the brightness of the firmament” (Daniel 12:3), and the *Zohar* writes: “‘Shall shine’—these are the eyes, about which it is stated [in the Sabbath Morning Prayer]: ‘And our eyes shine like the sun and the moon…’” (*Tikune Zohar*, 12, 2). This is what the Admor of Sochatchov, Rabbi Shmuel Bornsztain (1855-1926), writes: “When Israel down below will be refined to the point that the divine light penetrates them, their faces will shine like the sun and the moon, as [the Sages], of blessed memory, said (*Leviticus Rabbah* 21, 12): ‘When the Holy Spirit would rest on Pinehas, his face would burn like torches.’ And about our master, Moses, peace be upon him, [it is stated]: ‘…behold, the skin of his face sent forth beams…’ (Exodus 34:30). [The verse] ‘Arise, shine; for thy light is come, and the glory of the Lord is risen upon thee… And nations shall walk at thy light, and kings at the brightness of thy rising’ (Isaiah 60:1-3) should be understood literally, and we need not turn it into a mere metaphor” (*Shem MiShmuel*, *Tazria*, *Nissan*). This state will, as stated, be achieved only at the End of Days, for about our current state, it says: “…there is not a righteous man upon earth, that doeth good, and sinneth not” (Ecclesiastes 7:20). To this it should be added that the entire Jewish people are considered guarantors for one another (Babylonian Talmud, Shavuot39a). These facts are therefore the reasons why in the present, even the pupils of the eyes of those unique individuals who devote themselves exclusively to the Torah study and to the fulfillment of its laws are black. [↑](#footnote-ref-21)
22. From a physiological point of view, there is no basis for the claim that there is any connection between sclera and any mental activity. As far as science knows, the role of the brain's membranes is primarily brain defense. This issue has already been discussed above in note 72 regarding the claim that our unconscious will spreads to external reality through the retina. The answer given there is also valid for the relation between sclera and some mental activity. [↑](#footnote-ref-22)
23. See footnote 81. [↑](#footnote-ref-23)
24. It can be shown that other eye tissues as well reflect the polar contrast between the two mental dimensions and the unity between them, but this would involve additional prefaces and their presentation would go beyond the scope of our discussion. It may be noted briefly that the mental mechanism that unites the two poles of the mind is reflected in the contrasting forms of organization of the muscle tissues of the iris that are in charge of pupil constriction (*diurnal* vision) and dilation (*nocturnal* vision). The location of these tissues in the iris, which bridges *between the whiteness* of the sclera *and the blackness* of the pupil, also reflects the nature of their role. Finally, the fact that the iris is never black or white, but always one of the *intermediate* colors—brown, blue, green or gray—indicates as well that the ontological, mental mechanism that is present beyond it is in charge of uniting the opposites. See the beginning of chapter 4 where we present the opposing mental patterns which parallel the opposing forms of organization of the muscle tissues of the iris, and also the different pathways of the nerves that stimulate them. [↑](#footnote-ref-24)
25. The human eye is endowed with additional unique structural features: Its contours are extraordinarily elongated along the horizontal plane. Nonetheless, for the sake of simplicity only those which features which can be easily explained in the context of our discussion—“the eye as the mirror of the soul”—on the basis of what we have said so far without recourse to additional prefaces have been noted. [↑](#footnote-ref-25)
26. Kobayashi H. & S. Kohshima, “*Unique Morphology of the Human Eye and its Adaptive Meaning: Comparative Studies on External Morphology of the Primate Eye*,” in *Journal of Human Evolution* (J, 2001), Vol. 40 Issue 5, pp. 419-435. [↑](#footnote-ref-26)
27. S. E. Luria 1973, *Life—The Unfinished Experiment* (Hebrew translation), p. 77. [↑](#footnote-ref-27)
28. In practice, things go beyond this. As explained in chapter 10, the quality of the observer’s will as conditional or free determines the collapse of the wave function as a factor that introduces randomness into nature, which leads over time to the gradual erosion of its level of order (the second law of thermodynamics), or as a factor that stabilizes that order or even strengthens it. That is to say, the very fact that the opening of the eyelids provides the observer with the opportunity to actualize himself *as a person* might lead to the situation in which the delayed waves in his field of vision will collapse not in a random manner, but in a manner that fits in with the amazing order in nature, or even strengthens it. [↑](#footnote-ref-28)
29. Add to this that which was noted above in note 80. [↑](#footnote-ref-29)
30. Ramchal, *Adir Bamarom*, p. 43; *Daat Tevunot* I, pp. 113-114. See in greater detail Rabbi Shlomo Elyashiv, *Leshem Shevo veAhlama*, *Sefer haDeah*, *Derushe Olam haTohu, II,* 3, beginning §18. [↑](#footnote-ref-30)
31. R. Eliyahu Dessler, *Michtav MeEliyahu* I pp. 293-294; III p. 210. [↑](#footnote-ref-31)
32. Babylonian Talmud, Hagigah 12a. [↑](#footnote-ref-32)
33. Midrash Tanhuma, Shemini, 9. [↑](#footnote-ref-33)
34. The theory of evolution claims that the program which is encoded in the genetic material which typifies a species is the result of the mechanism of biological evolution; countless random genetic mutations, of which only those genes most fit to deal with the ravages of nature survived. [↑](#footnote-ref-34)
35. ‘Mutation’ is a term which describes random change in an organism’s genetic composition. [↑](#footnote-ref-35)
36. See, e.g. --. [↑](#footnote-ref-36)
37. E. P. Wigner 1979, **Symmetries and Reflections**, pp. 200-208. John Wheeler writes: “Oftentimes people adopt the view that the development of life is random and unimportant in the scheme of things. However, it is interesting to read old formulations about the spontaneous creation of life: ‘Take a glass jar, fill it half way with seeds, seal the mouth of the jar with a dirty rag, place it in the corner of a room for 21 days, life will develop in it in the form of a mouse!’ Compare this historical and naive recommendation to the current formulation regarding ‘life as happenstance: ‘Take a world, fill it with 1080 particles, allow it to run for 1010 years, and life will develop on its own!’ Is it possible to imagine that this prescription for life has any more basis than the old prescription? (John Archibald Wheeler, “Genesis and Observership,” **Pensées** p. 88, July1985). [↑](#footnote-ref-37)
38. William of Ockham (1287-1349) was an English philosopher who established a principle, which

    over time became a fundamental guiding principle in science, that "Entities should not be multiplied unnecessarily." [↑](#footnote-ref-38)
39. E. P. Wigner [1967] 1979, **Symmetries and Reflections**, p. 197 [↑](#footnote-ref-39)
40. So, for example, writes Karl Popper: “I am going much further than Kant. I think that, say, 99 per cent of the knowledge of all organisms is inborn and incorporated in our biochemical constitution. And I think that 99 per cent of the knowledge taken by Kant to be a posteriori and to be data that are given to us through our senses is, in fact, not a posteriori, but a priori. For senses can serve us (as Kant himself saw) only with yes-and-no answers to our questions; questions that we conceive, and ask, a priori… Moreover, even the yes-and-no answers of the senses have to be interpreted by us—interpreted in the light of our priori preconceived ideas.” (K. R. Popper 1990, A World of Propensities, pp. 46-47). [↑](#footnote-ref-40)
41. In contrast to his predecessors, Plato and Descartes, the philosopher John Locke (1632-1704) argued that a newborn’s consciousness is like a “blank slate” (tabula rasa) in the sense that it doesn’t contain any knowledge about the world. [↑](#footnote-ref-41)
42. See above, nt. 72. [↑](#footnote-ref-42)
43. “Kabbalistic wisdom,” also known as “secret wisdom” or “esoteric wisdom,” is an integral part of the Oral Law which deals with the inner Torah and its relationship to its external expression; the biblical text and the Halacha on the one hand, and natural and historical phenomena on the other. [↑](#footnote-ref-43)
44. A study of the Kabbalistic writings, especially the writings of R. Isaac Luria Ashkenazi (the “Ari,” 1534-1574) and R. Solomon Mizrahi Sharabi (the “Rashash,” (1720-1777), might perhaps provide a glimpse of the magnitude of this complexity. [↑](#footnote-ref-44)
45. See below, chap. five. [↑](#footnote-ref-45)
46. Exodus 20:15. [↑](#footnote-ref-46)
47. Tikunei Zohar, 22. [↑](#footnote-ref-47)
48. In this case, the intent, of course, is recognition of the very existence of consciousness in the observed body of the other. [↑](#footnote-ref-48)
49. The phenomenon of seeing the voices which occurred at the time of the Revelation was entirely different, even on a superficial level, from what is called synesthesia in neurological texts; meaning, seeing sounds, tasting shapes, smelling colors or hearing odors. The difference is expressed in the fact that in the Revelation, the entire nation experienced the seeing of voices. The cause of this unnatural relationship between the senses was not a local occurrence, as occurs in synesthesia—such as abnormal crossing of specific neural pathways in a certain person’s brain—but rather, a supernatural universal event which forced itself on all of those present. [↑](#footnote-ref-49)
50. The Gerrer Rebbe, R. Judah Aryeh Alter (1847-1905) writes: “[Our Sages said that] the Holy One, blessed be He, created the world by means of the Torah (see above, nt. 59). It follows that the inner life of all creatures is the primal force which derives from the Torah… as is written: “He told the force of His actions to His people…” (Tehillim 111:28). For the Torah is the force of the creation… and on the day of the Revelation, this was revealed and everything was affixed to its root, And this is the meaning of that which is written: “The Lord Spoke with you face to face…” (Deuteronomy 5:4), for at that time it was revealed that the force of the Torah gives life to everything and rules over everything… for the Holy One, blessed be He, “His glory fills the entire world” (*Sefat Emet*, Numbers, Shavuot 5631, s.v. “*u’veyom habikurim*”). R. Tzadok HaKohen of Lublin writes similarly: And this is the meaning of “bending the mountain like a barrel” (Babylonian Talmud, Shabbat 88a). That is to say that by virtue of the intensity of the revelation of the divine light which they experienced then, they understood that if they did not accept the Torah then they would be buried there, for they have no [independent] vitality at all. For they **saw tangibly** that the vitalityof all creatures derives from the Torah and based on this [the Jewish people] accepted [the Torah].” (*Likutei Maamarim*, 4). [↑](#footnote-ref-50)
51. Rashi writes on the verse “… And I will the stone tablets and the Torah and the commandments which I wrote to instruct them” (Shemot 24:12): “All of the 613 commandments are encompassed in the Decalogue, And Rabbeinu Saadia Gaon (882-942), in the *Azharot* which he composed, explained which of the commandments are encompassed in each statement of the Decalogue. [↑](#footnote-ref-51)
52. R. Chaim of Volozhin, *Nefesh Hachaim* III:12, nt. The verse which is cited below also indicates that the presence of God’s speech in nature was clarified even on the level of the people’s visual perception: “You were shown, that you may know, that the Lord is God, there is no other.” (Deuteronomy 4:35). Rashi writes: “… When the Holy One, blessed be He, gave the Torah, he opened the seven heavens for them, and just as he rent the upper domains, so too he rent the lower ones, **and they saw** that he was singular. Therefore, it says, “You were shown, that you may know…” R. Chaim of Volozhin explains: This is meant literally. There is absolutely nothing else other than Him, in any aspect or particular point in all of the worlds, upper and lower, and all of the creatures, there is only His simple unity… and this is implicit in the words of [our Sages] of blessed memory, that He is the “place of the world, and the world is not His place” (Bereshit Rabbah 68:9). Meaning, even in the case of the places which are perceived by the senses in reality, the places are not innate, but rather He is the place of all of the places. For with respect to Him, they are all considered as if they do not exist at all in reality even now as before the creation” (*Nefesh Hachaim* III:3). [↑](#footnote-ref-52)
53. Isaiah 40:5. [↑](#footnote-ref-53)
54. R. Chaim of Volozhin, *Nefesh Hachaim* III:11. Ramchal writes in a similar vein: “The fourth state is that the Holy One, blessed be He, will be revealed to all of His creations by means of knowledge and perception; not by means of proofs, but rather that they will see His glory and perceive it through an abundance of knowledge and wisdom. As it says, “For the land shall be filled with knowledge of the Lord As water covers the sea” (Isaiah 11:9), and it is written, “For **every eye** shall behold the Lord’s return to Zion. And the glory of the Lord will be revealed, and all flesh **will see** together that the mouth of the Lord has spoken.” (ibid. 52:8). For then there will be no need for signs and wonders to validate faith, rather it will be achieved through knowledge and perception, like all of the prophets and all of the angels who recognize God by means of their perception. And this is clear knowledge… based on vision and perception, leaving no room for doubt (*Daat Tevunot* I pp. 136-154). [↑](#footnote-ref-54)