# Understanding the Mystical Writings of Jacob Boehme through Modern Physics

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### Abstract

For the renowned German mystic Jacob Boehme (1575 - 1624), the principle of love or divine harmony is the triumphant result of a Cosmic process whose building blocks originate in desire, will, pain, and anguish. Boehme's cosmology begins with the *Ungrund* or "Bottomless Nothingness" which desires and wills to become something but suffers anguish and frustration when there is no outflow to bring about this harmony. This is Boehme's First Principle of the Divine Essence, or Light, a principle which he calls "wrath" or "fiery anger," which can be related to disorder.

Boehme's Second Principle of Light arises where he sees a spark igniting and transforming the fiery anguish into harmony and light; be it in the microcosm of one's own spiritual seeking, or in the macrocosm of an expanding universe. Boehme's "spark" is shown here to be in accordance with Big Bang cosmology and the Second Law of Thermodynamics.

Boehme's Third Principle of the Divine Essence sees the visible world as a dynamic interplay of these two opposing principles. Boehme is clear, the divine Christ light is available to all, regardless of outer religious affiliation.

Keywords: *Mysticism, Jacob Boehme, Science, Nature, 2<sup>nd</sup> Law of Thermodynamics, The Big Bang, Dissipative Adaptation of Matter.* 

# Comprendre les écrits mystiques de Jacob Boehme à travers la physique moderne

#### **Christopher Eriksson PhD**

#### Résumé

Pour le célèbre mystique allemand Jacob Boehme (1575-1624), le principe de l'amour ou harmonie divine, est le résultat triomphant d'un processus cosmique dont les éléments constitutifs trouvent leur origine dans le désir, la volonté, la douleur et l'angoisse. La cosmologie de Boehme commence avec l'*Ungrund* ou "néant sans fond", qui désire et veut devenir quelque chose, mais souffre d'angoisse et de frustration lorsqu'il n'y a pas de sortie pour réaliser cette harmonie. Il s'agit du premier Principe d'Essence divine, ou de Lumière, de Boehme, un principe qu'il appelle "colère" ou "colère ardente", qui peut être lié au désordre.

Le Second Principe de Lumière de Boehme, apparaît là où il voit une étincelle s'allumer et transformer l'angoisse ardente en harmonie et en lumière, que ce soit dans le microcosme de sa

propre recherche spirituelle, ou dans le macrocosme d'un univers en expansion. L'"étincelle" de Boehme est montrée ici comme étant en accord avec la cosmologie du Big Bang et avec la Deuxième Loi de la Thermodynamique.

Le Troisième Principe d'Essence divine de Boehme, voit le monde visible comme une interaction dynamique de ces deux principes opposés. Boehme explique clairement que la lumière divine du Christ est disponible pour tous, quelle que soit leur affiliation religieuse extérieure.

Mots-clés : Mysticisme, Jacob Boehme, Science, Nature, Deuxième Loi de la Thermodynamique, Big Bang, Adaptation dissipative de la matière.

# Comprendiendo los Escritos Místicos de Jacob Boehme a través de la Física Moderna

# **Christopher Eriksson, PhD**

# Resumen

Para el renombrado místico alemán Jacob Boehme (1575-1624), el principio del amor o armonía divina es el resultado triunfante de un proceso cósmico cuyos bloques de construcción se originan en el deseo, la voluntad, el dolor y la angustia. La cosmología de Boehme comienza con el Ungrund o "Nada Sin Fondo" que desea y quiere convertirse en algo, pero sufre angustia y frustración cuando no hay salida para lograr esta armonía. Este es el Primer Principio de la Esencia Divina, o Luz, de Boehme, un principio que él llama "ira" o "ira ardiente", que puede ser relacionado con el desorden.

El Segundo Principio de la Luz de Boehme surge donde él ve una chispa que se enciende y transforma la angustia ardiente en armonía y luz; ya sea en el microcosmos de nuestra propia búsqueda espiritual, o en el macrocosmos de un universo en expansión. Aquí se muestra que la "chispa" de Boehme está de acuerdo con la cosmología de la Gran Explosión (Big Bang) y la Segunda Ley de la Termodinámica.

El Tercer Principio de la Esencia Divina de Boehme ve el mundo visible como una interacción dinámica de estos dos principios opuestos. Boehme es claro, la luz del Cristo divino está disponible para todos, independientemente de la afiliación religiosa externa.

Palabras clave: Misticismo, Jacob Boehme, Ciencia, Naturaleza, 2ª Ley de la Termodinámica, La Gran Explosión (Big Bang), Adaptación Disipativa de la Materia.

# Entendendo os Escritos Místicos de Jacob Boehme por meio da Física Moderna

# **Christopher Eriksson PhD**

# Resumo

Para o renomado místico alemão Jacob Boehme (1575-1624), o princípio do amor ou harmonia divina é o resultado triunfante de um processo cósmico cujos blocos de construção se originam no desejo, vontade, dor e angústia. A cosmologia de Boehme inicia com o *Ungrund* ou "Sem-

fundo", que anseia e aspira se tornar algo, mas sofre de angústia e frustração quando não há fluxo para provocar essa harmonia. Este é o Primeiro Princípio da Essência Divina de Boehme, ou Luz, um princípio que ele chama de "ira" ou "raiva ardente", que pode estar relacionado à desordem.

O Segundo Princípio de Luz de Boehme surge onde ele enxerga uma centelha acendendo e transformando a angústia ardente em harmonia e luz; seja no microcosmo da própria busca espiritual, ou no macrocosmo de um universo em expansão. A "faísca" de Boehme é mostrada aqui em acordo com a cosmologia do Big Bang e a Segunda Lei da Termodinâmica.

O Terceiro Princípio da Essência Divina de Boehme entende o mundo visível como uma interação dinâmica desses dois princípios opostos. Boehme é claro, a luz divina de Cristo está disponível para todos, independentemente da afiliação religiosa externa.

Palavras-chave: Misticismo, Jacob Boehme, Ciência, Natureza, 2ª Lei da Termodinâmica, O Big Bang, Adaptação Dissipativa da Matéria.

# Die Schriften von Jakob Böhme mittels der modernen Physik verstehen

# **Christopher Eriksson PhD**

#### Zusammenfassung

Jakob Böhme (1575-1624), ein bekannter deutschen Mystiker, beschreibt die Qualität bzw. das Prinzip der Liebe oder die göttliche Harmonie als das Ergebnis eines kosmischen Prozesses, deren ursprünglichen Bausteinen dem Begehren, dem Wollen, dem Schmerz und der Qual entspringen. Die Kosmologie von Böhme beginnt bei dem Ungrund oder "dem Nichts und dem Alles". Er verlangt und will etwas werden aber leidet unter Qualen und Frust, wenn der Ausfluss keine Harmonie herbeibringt. Dies ist gemäß Böhm das erste Prinzip der göttlichen Essenz bzw. Licht, er nennt es "Wut" oder "Zornfeuer" bzw. Unordnung.

Gemäß Böhme entsteht die zweite Qualität bzw. das zweite Prinzip des Lichts wenn eine Zündung und Transformation des Zornfeuers in Harmonie und Licht stattfindet. Dies gilt sowohl im Mikrokosmos des Einzelnen als auch im Makrokosmos eines expandierenden Universums. In diesem Sinne soll hier die Zündung von Böhme mit dem Big Bang und dem zweiten Gesetz der Thermodynamik übereinstimmen.

Die dritte Qualität bzw. das dritte Prinzip der göttlichen Essenz sieht Böhme als die dynamische Interaktion dieser zwei gegensätzlichen Prinzipien in der sichtbaren Welt. Für Böhme ist es eindeutig, dass das göttliche Licht Christi für alle bestimmt ist, welcher Religion man auch angehören soll.

Schlüsselworte: Mystik, Jacob Böhme, Wissenschaft, Natur, das 2. Gesetz der Thermodynamik, der Urknall, dissipative Anpassung der Materie

#### Introduction

Jacob Boehme (1575 - 1624) was married with four children and initially worked as a shoemaker. Later, Boehme became a merchant to give himself more time to study and write down his newfound mystical understanding. He was a seeker of divine truth, in which he had absolute trust and faith. He became a mystic after his first experience in 1600 at the age of 25 described below:

Sitting one day in his room his eyes fell upon a burnished pewter dish, which reflected the sunshine with such marvelous splendor that he fell into an inward ecstasy, and it seemed to him as if he could now look into the principles and deepest foundations of things. He believed that it was only a fancy, and in order to banish it from his mind, he went out upon the green. But here he remarked that he gazed into the very heart of things, the very herbs and grass, and that actual nature harmonized with what he had inwardly seen. He said nothing of this to anyone but praised and thanked the Divine in silence. (Chwalko 2020)

Boehme's philosophical approach was akin to that of Plotinus, who held that to perfect knowledge of something, the subject and the object had to be joined together. In other words, the intelligent individual and the thing to be understood could not be apart, they must somehow resonate or be in harmony with each other. We know this was true for Boehme because from his mystical experience he tells us that he not only knew that he was in the Divine's wrath or anger, but that he was that anger or state of irritation. He knew that he could not escape from himself, yet he trusted implicitly that there was a means of escape (Barker 1920, 11). Brought up as a Lutheran, Boehme was likely aware of Martin Luther's understanding that the divine works by opposites or contraries, so that people feel themselves to be lost in the very moment when they are on the point of being saved; in effect a divine psychology of use, as the darkness prepares the way for the light of the dawn. This is what Boehme himself experienced as he was enlightened with new knowledge in response to not giving up during his Obscure Night after suffering several initial repulses (Barker 1920, 8).

Boehme was not a scientist nor a theologian. He said that he did not have a formal education and had never wished to study science. Nevertheless, Boehme came under the influence of the Mayor of Görlitz, Bartholomaus Schultz, who supported him, and who was a trained mathematician. Schultz was a friend of the Danish astronomer Tycho Brahe (1546 - 1601), and a leading member of a local circle of Paracelsians that included his friends, Tobias Kober, Abraham Walther (a well-known chemist), and Michael Kurtz, a prominent physician (Herd 2003, 2). The famous astronomer Johannes Kepler (1571 - 1630) had also visited Görlitz in 1607 having corresponded with Mayor Schultz. The importance of these influences from alchemists and Copernicans cannot be dismissed since Boehme had his supporters right from the beginning, including the Mayor of Görlitz who defended him against the attacks of the local Lutheran pastor Gregory Richter. He was supported, copied, and promoted by the local nobles and intelligentsia, and esteemed later on by the famous that included notables such as John Milton (1608 - 1674), Robert Boyle (1627 - 1691), Isaac Newton (1642 - 1727), William Blake (1757 - 1827), Wolfgang von Goethe (1749 - 1832), Louis-Claude de Saint-Martin (1743 - 1803), Ralph Waldo Emerson (1803 - 1882), Helena Blavatsky (1831 - 1891), and Rudolph Steiner (1861 - 1882).

1925) (Kraus 2010). The French nobleman, Louis-Claude de Saint-Martin, decided to learn German in his late forties so as to be able to read Boehme's writings as Boehme had written them. He then translated them into French (Bucke 2011, 227).

Boehme's obscure writings were aggressively condemned by Richter, the Lutheran pastor in Görlitz (Chwalko 2020). This may have been because as a simple shoemaker, Boehme was seen as having no business writing on theological matters since he lacked education and the appropriate training. The pastor may also have not understood Boehme's writings, as they were at the time, and remain today, not widely studied, being usually seen as obscure.

Boehme mentions that after the spirit of the Divine left him, he could not understand his own mystical writings (Barker 1920, 16). So, he studied books other than the Bible as he battled to explain in human terms the knowledge that he had somehow acquired through what he saw as divine grace. Boehme recognized that there was no way that he could have climbed up into the Divine Essence. But, in his own words, "the Divine Essence had somehow climbed up into me." In modern scientific terms, this would be seen as coming into resonance; in mystical Rosicrucian terms, it would be called a process of attunement.

Unlike previous Christian writings, Boehme's Divinity has good and evil aspects within Itself that are consistent with the Hebrew Bible in Isaiah 45:7: "I form light, I create darkness; I make well-being, I create woe; I, Adonai [the Divine], do all these things."

When his first book, *Aurora*, was published in 1612, it created significant interest, since the idea that the Christian Divine had good and evil aspects within Its own nature, and not arising from a fallen outer world, was something entirely new to European theology and philosophy (Chwalko 2020).

Opposites, such as dark and light, good and evil were understood by Boehme to be part of the Divine's nature itself, and not moral (Owens 2014; Chwalko 2020). Boehme understood that the shadows only come to aspiring mystics when the Divine Light shines on them, the shadows being an opposite, a forerunner to the dawn or "aurora" of the Greater Light. For Boehme, humankind must be as free to choose as the Divine. Everything in Boehme's ontology has its own opposite, including the willpower to go with it, as can be seen in human nature. To a modern scientific reader, these opposites and polarity may be viewed in the context of positive and negative electric charges, north and south poles on a magnet, compressions and rarefactions of the air as a sound wave passes by, and indeed matter and anti-matter that are always created together and destroyed together (Greene 2005). Furthermore, the manifestations of polarity as the male and female throughout Nature can be observed.

Understood by Boehme as being metaphysical and not moral, Boehme's good and evil are better understood as a building up into harmony and order, and a tearing down. This tension allows for evolution and change, including the evolution of Boehme's creator Divinity as he reminds us. Speaking to this process in the natural world in the three principles of the Divine Essence, Boehme wrote: "This outer world is like a vapor or smoke of the Spirit Fire and the Water Spirit" (Boehme 1772, 26) – a clash of two dynamic opposites.

#### The Original Adam, the Two Falls, the Divine Sophia and the Cosmic Christ

According to Boehme, the first human lived in harmony with the Divine Creator and was a perfect being, an androgyne with male and female physical aspects (Chwalko 2020). In this state, "playfulness" was the norm, since it allowed for the fullness of life to express itself freely, as can be seen in happy children at play.

For Boehme, we fell in consciousness when seriousness took over from playfulness and our focus narrowed. The original intent of the Cosmic Being was for us humans to represent the All in this material world and realize Its divine attributes and abilities. Boehme wrote that we wanted to do it all by ourselves. We succumbed to pride and so created the idea of "selfhood," a false "I" with self-absorbing appetites that were insatiable (Chwalko 2020). Boehme calls these appetites "an anxious and dry hunger that frantically tries to mirror and view itself in being" (Bourgeault 1997, 31).

Cynthia Bourgeault (1997, 31) reveals Boehme's examples of this pride in his Fourth Treatise: "We see true examples of what self does when it receives external light as its own property so that it is able to enter into its own dominion in reason. One also sees this in learned men when they get the light of eternal nature as their own possession, nothing results but pride."

In effect, during this narrowing in consciousness we fell asleep, having lost our access to Divine Knowledge, waking up not to eternity, but to a world of time and space and to an earthly Adam and Eve. We had split into two. This is Boehme's First Fall in Consciousness where Sophia, the Divine Wisdom, accompanied us into matter, but we were unaware of this split. Boehme says that Sophia had abandoned us. This was followed by a Second Fall as recorded in the Hebrew Bible where even bliss was not enough if accompanied by ignorance. We wanted to know about evil so that we could fight against it (Chwalko 2016). The divine playground had become a battlefield. Boehme witnessed this firsthand in his outer life as religious tension broke out into all-out war with the Thirty Years' War in Central Europe in 1618.

In Boehme's view, the Creator Divinity's fate is linked to that of humanity. Tragically, Boehme said, the Divine is waiting for humanity to choose between the goods and riches offered by this world, and the work necessary to redeem the Divine within and reclaim our divine status. Accordingly, Boehme was emphatic that the world cannot become a good world without human participation.

Boehme saw Sophia, the Divine Wisdom, in a new redemptive role for humankind as the welcoming Virgin Mother of All, the Divine Mother, the Mother of the World, whose divine child, the Cosmic Christ, is available to all, regardless of our outer religious affiliation (Chwalko 2016).



Figure 1. Mother of The World, by Nicholas Roerich (1937).

Boehme said the following on what constitutes a Christian (Bucke 2011, 228): "A Christian is one in whom the Christ exists and lives, a person in whom the Christ has been raised out of the wasted flesh of Adam."

# **Boehme's First Principle of the Divine Essence – A State of Fiery Anger**

To Jacob Boehme, the universe and everything in it had its beginnings in the Ungrund, understood by him to be like a Bottomless Nothingness, utterly transcendent, and yet somehow akin to a motherly, pluripotential well-spring of all possibilities that wants to fill and become something (Bourgeault 1997, 33; Kraus 2016). In its intention and process, this immaterial nothingness that transcends everything, may be likened to an architect's virtual drawing, replete with concepts and plans in imagined form, that is just waiting for the process to begin. When the process is activated, however, the Ungrund's compression of Its will leads to a state of resistance that creates agitation and frustration, with no desired outflow or movement. This is Boehme's divine state of fiery anger and constitutes Boehme's First Principle of the Divine Essence: an agitated, frustrated state of fiery energy, but nevertheless an integral system of the Creative Divine which can now experience feeling. Boehme wrote that the Cosmic Being endures this state which is felt as pain and anguish since Its will seems to have been thwarted (Chwalko 2020).

In the context of modern scientific cosmology, Boehme's divine state of fiery anger and stress may be viewed objectively as relating to the initial period immediately after the Big Bang, and to the fiery, hot, dark, ionized, plasma-like state of the universe up to about 380,000 years after the Big Bang. Immediately after the Big Bang, not only was it exceedingly hot but very dense, a source of high order. Modern cosmology tells us that the cooling ionized plasma then allowed neutral atoms to form with the release of light into an expanding space. With the formation of

neutral matter and the release of light, atoms now existed in a sea of energetic radiation that was literally shining on them (Greene 2005).

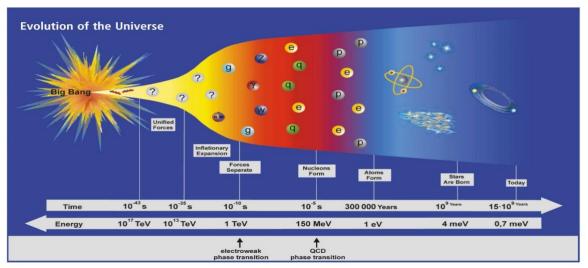


Figure 2. A diagram of the evolution of the universe after the Big Bang. Image taken from ResearchGate via a Creative Commons license.

# Boehme's Second Principle of Light - Transformation of the Fiery Disorganized Anger

According to Boehme, before anything can come into being there must be some movement or an outflow. For him, this flow came about through creating an unequal pressure in the divine will through the concentration of desire. This is indicative of the creation of structure and the generation of harmonic resonances as in musical instruments or the human vocal tract when air is forced from the lungs.

Boehme wrote on the generation and cosmic feeling of this newly found harmony that comes out of anguish (Bourgeault 1997, 34; Palmer 1920): "I am an instrument of the Divine's Spirit, wherein It makes melody with Itself. We are all strings in the concert of the Divine joy." This is consistent with the Rosicrucian viewpoint expressed by H. Spencer Lewis on the "Symphony of Life" (Lewis 1931, 692):

The Symphony of Life is the rhythm of the Divine's Consciousness surging through, and it knows no limitations of thought or doctrine. Attune yourself and join the Cosmic Choir. Time will make you a master musician in the Great Orchestra and you will find Health, Happiness, and Cosmic Power flowing into your being as your song flows outwardly into the Infinite Space of Universal Consciousness.

In Boehme's language, this fiery anger is transformed when the friction or anguished striving reaches a point that somehow generates "a spark" that ignites or brings about order, harmony, light, and life. The modern dissipation-driven adaptation of matter theory speaks to the process behind this spark.

# Light and the Second Law of Thermodynamics Driving Matter to Adapt and Evolve

According to physicist Jeremy England's recent dissipation-driven adaptation of matter theory, the energetic radiation and light shining on this atomic matter drives matter to increasingly organize through resonance and acquire life-like properties. England states:

The key point will be to realize that, just as living things have specialized properties determined by their genes that they have inherited from their ancestors, so, too, do collections of physically interacting particles have specialized properties that come from the past shapes into which they've been assembled. By continually getting pushed and knocked around by patterns presented in the environment, matter can undergo a continual exploration of the space of possible shapes whose rhythm and form become matched to those patterns in ways that look an awful lot like living. (England 2020, 4)

England also put it another way: "You start with a random clump of atoms, and if you shine light on it for long enough it should not be so surprising that you get a plant" (Wolchover 2014, 286). England maintains that these open systems are strongly driven by an external energy source such as an electromagnetic wave, and that they can dump heat efficiently into a surrounding bath:

Particles tend to dissipate more energy when they resonate with a driving force, or move in the direction it is pushing them, and they are more likely to move in that direction than any other at any given moment. This means clumps of atoms surrounded by a bath at some temperature, like the atmosphere or the ocean, should tend over time to arrange themselves to resonate better and better with the sources of mechanical, electromagnetic, or chemical work in their environments.... A great way of dissipating more energy is to make more copies of yourself. (England 2020)

The overwhelming drive towards disorder as described by the second law of thermodynamics (when energy is exchanged or converted some is lost) does not mean that orderly structures like stars and planets, or orderly life forms like plants and animals cannot form. They can, and they clearly do. What the second law of thermodynamics entails is that in the formation of order there is generally a more than compensating generation of disorder (Greene 2005, 173).

Since this process is common to things considered alive, there clearly must be a mechanism that favors this happening, as England has advocated. This can be seen in inanimate matter such as sand dunes which can develop a wave-like striated structure in response to the driving force of the wind, and in the formation of a snowflake which forms a distinct lattice structure in response to the driving forces of condensation. It has also been observed in turbulent waters when vortices spontaneously replicate themselves in response to absorbing energy from shear forces in a surrounding liquid (England 2020).

England developed his dissipation-driven adaptation of matter theory to be the principle behind the development and appearance of these lifelike structures, citing the second law of thermodynamics as favoring the adaptation of matter to being pushed by some driving environmental force into organized, resonating structures that self-replicate or reproduce. Living systems require constant energy input to maintain their highly ordered state. Cells are highly ordered and have low entropy. In the process of maintaining this order, energy is lost or dissipated to the surroundings. So, whilst cells are highly ordered, the processes performed to maintain this order result in an increase in entropy in the cell's surroundings as occurs in the process of photosynthesis. This transfer of energy causes the entropy in the universe to increase in accordance with the second law of thermodynamics. The result is the emergence of lifelike structures via the efficient dumping of thermal energy into an open environment and an increase in overall entropy (England 2020). England illustrated his understanding with a quote from the Hebrew Bible: "He [the Divine] said, 'Throw it on the ground!' and he threw it on the ground. It turned into a snake, and Moshe [Moses] recoiled from it" (Exodus 4:3).

Thermodynamics is the study of laws having to do with heat (*thermo*) and energy exchange or conversion. Whereas the first law of thermodynamics explains the conservation of energy and the second, the increase in the entropy or energy loss of the universe, the theory of the dissipation-driven adaptation of matter is described here as it offers a scientific frame of reference for understanding the stages that Boehme describes that unfold from the Ungrund that lead to the creation of the universe and to life and humankind as we know it. It is an explanation of how the laws of thermodynamics help to explain the origin of living things.

#### **Boehme's Third Principle of the Divine Essence**.

The universe and the outer physical world of Nature is made up of these first two principles operating together: a dynamic clash of two opposites, a structured harmonious building up and a tearing down that allows for evolution. This is Boehme's Third Principle of the Divine Essence. Speaking to this concept in *The Three Principles of The Divine Essence*, Boehme wrote: "This outer world is like a vapor or smoke of the Spirit Fire and the Water Spirit" (Boehme 1772, 26) – a clash of two dynamic opposites. Everything we see in nature is manifested truth; only we are not able to recognize it unless truth is manifested within ourselves (Kraus 2016; Chwalko 2020).

#### **Boehme's Wheels within Wheels**

In his first book, *Aurora* (1612), Boehme described his vision and understanding of wheels within wheels:

To describe God (the Divine) further, picture a wheel standing before you with seven other wheels, one wheel is made within the other one, so it could stand on all ends on all sides. Remember the seven wheels are the seven spirits of the divine. They are reborn, renewed, one within the other, and are as if you take one wheel, and within it are seven wheels all existing within each other and all have spherical rims like a round ball. (Owens trans. 2014, 3)

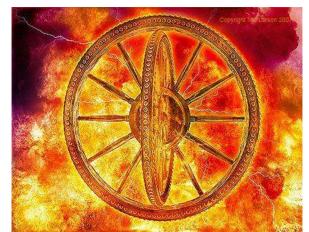


Figure 3. A depiction of Boehme's wheels within wheels, a Cherubim Wheel. Image from inutoneko.info.



Figure 4. Johann Georg Gichtel's 1682 illustration of the *Aurora* with the Cosmic wheels within wheels for *The Complete Works of Jacob Böhmens*. https://www.pbagalleries.com.

Boehme's description is suggestive of the holographic theory of the universe whereby the universe is theorized to operate in a manner analogous to a hologram (see Figures 5 and 6).



Figures 5 and 6. Illustrations of holographic projections, from the Resonance Science Foundation and Neweb Labs.

In this theory, the laws of physics operate as the laser light which projects the information that is in 2-D in the above examples to a higher three-dimensional world, the quantum laws of physics being the same in all worlds. This means that our familiar 3-D space-time formulation of the laws of physics is not fundamental. There are other formulations and other worlds (Greene 2005, 482).

Boehme's seven wheels within each other suggests a series of cosmic octaves of higher and higher frequencies that interact and resonate in harmony with each other as on a piano keyboard. In accordance with quantum theory, the highest frequencies and octaves that carry the most energy will be the smallest in size and will drive, rejuvenate, and renew (in Boehme's language) the lower octaves through harmonic resonance.

Modern string theory speaks to this notion since each elementary "particle" is seen as nothing but a really taut string executing a particular vibrational pattern. This includes the photon of light and the graviton particle of gravity.

Greene writes:

Just as the different vibrational patterns of a violin string give rise to different musical notes, the different vibrational patterns of a fundamental string give rise to different masses and force charges. What appear to be different elementary particles are actually different "notes" on a fundamental string. The universe – being composed of an enormous number of these vibrating strings – is akin to a cosmic symphony. (Greene 2005, 143-146)



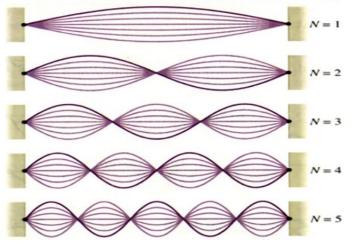


Figure 7. String harmonics visualized. Rachel Mollison-Read, 2015. <u>https://calgarychildrenschoir.com/math-and-science-in-music-harmonics/.</u>

The musical resonances playing in the cosmos are not sounding out acoustic phrases and notes as on a violin string that we can hear with our ears. Rather, through their resonance patterns, they are demonstrating how, beginning at the ultra-microscopic quantum level, the same musical harmonies organize and build to make up the cosmic laws of physics that run the universe and facilitate evolution.

Albert Einstein is quoted as saying: "Look into nature and you will understand everything better" (Isaacson 2018). He looked and studied, and through his violin playing and his knowledge of mathematics and physics, he understood.

Jacob Boehme wrote: "Everything we see in nature is manifested truth, only we are not able to recognize it unless truth is manifest within ourselves" (Barker 1920; Owens 2014). He saw with his opened heart, and he understood.

#### Conclusion

Having no scientific training to help him when he tried to write down his mystical experience, Boehme had to rely upon his understanding from the Bible which was close to his heart. So, he used symbolic language like fire and anger to describe what he gleaned from his three mystical experiences.

With a knowledge of modern cosmology such as the Big Bang Theory, the Principles of Holography, and the recent dissipation-driven adaptation of matter theory, an attempt has been made to illustrate the fact that modern science can provide a practical and meaningful framework for understanding Boehme's mystical writings on cosmology and the Divine Essence.

# **Conflict of Interest**

The author declares no conflict of interest.

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