

16) Ludwig Boltzmann



Mea culpa, no other or institution is accountable for this student work. Boltzmann constant, Medium of relation, conveys quantum, measured relation of hot to cold and wet to dry. What say ye Socrates? ... AYE!

32. O SON OF THE SUPREME!

Thave made death a messenger of joy to thee.
Wherefore dost thou grieve? I made the light to
shed on thee its splendor. Why dost thou veil
thyself therefrom?

33. O SON OF SPIRIT!

With the joyful tidings of light I hail thee: rejoice!
To the court of holiness I summon thee; abide
therein that thou mayest live in peace for
evermore. ~Bahá'u'lláh

His profound expression of individual independent investigation for essential understanding as truth was demonstrated by his willed life, thoughts, deeds, and death. The pressures from people, as with particles, to be, move, and think as they do is apparent. It is a foundational law of human

interaction and physics manifest and violated by the BEC (Beck Einstein Condensate) whose gravity defying behavior, at lowest temperature range, can be disturbing. It appears to be unnatural, but is very interesting and attractive as a question. It conveys the beauty of Boltzmann's virtues, apparent and subtle.

<https://youtu.be/2Z6UJbwxBZI?feature=shared>

As a human being opens their mind to understand, personal views decrease. Boltzmann practiced with an open mind. Persons, as are particles, are interacting and are therefore vulnerable in relation to others, even persuadable by others when the relational energy is increased. Inquire to those who are "known as famous" to others. Less relational spin or motion compared to individual or essential spin or motion allows stability. Extended time in nature (physics) opens the mind and ironically the heart is also open to those relations not present in outer self.

Attraction, cohesion, love is a foundational law. Love of self balanced to and by love of others. We feel the pull to see through the eye of another. Essential individualism, unity with one's self is a more basic law than relational unity. This is evidenced by Boltzmann spirit, intension of intention, brilliance, and perspective of oneness of that entropy and his physics constant, $K \downarrow B$, conveys. Boltzmann's constant is born of inertia, essential spin, personal existence.

`Abdu'l-Bahá clarifies the permeability of love as as evidence of Primal Will $\Rightarrow$ Primal Cause:

Know thou of a certainty that Love is the secret of God's holy Dispensation, the manifestation of the All-Merciful, the fountain of spiritual outpourings. Love is heaven's kindly light, the Holy Spirit's eternal breath that vivifieth the human soul. Love is the cause of God's revelation unto man, the vital bond inherent, in accordance with the divine creation, in the realities of things. Love is the one means that ensureth true felicity both in this world and the next. Love is the light that guideth in darkness, the living link that uniteth God with man, that assureth the progress of every illumined soul. Love is the most great law that ruleth this mighty and heavenly cycle, the unique power that bindeth together the divers elements of this material world, the supreme magnetic force that directeth the movements of the spheres in the celestial realms. Love revealeth with unfailing and limitless power the mysteries latent in the universe. Love is the spirit of life unto the adorned body of mankind, the establisher of true

civilization in this mortal world, and the shedder of imperishable glory upon every high-aiming race and nation.

How ever, if we do or do not follow ritual as Confucius advised there is or is not community as a higher level of being or of composition of particles or individuals. Particles follow natural law, natural ritual. There is a hierarchy of physic law. That is what constants, limits, sequence teach us. Without the divine teachings of the Manifestation, we are vulnerable. Without the hierarchy of physical law, creation would be without order. As human society advanced with the high velocity information shared in this age, we must have a more precise source of meaning and purpose or we shall spin off into collective confusion. As human science advanced with the high velocity information shared, we must have a more precise source of meaning and purpose or we shall spin off into quantitative rather than qualitative examinations and experiments, like cloning Ludwig Boltzmann so we can study his access to his miraculous insight to system correlation and self effacement that allowed such an open mental perspective. As human religion advanced with the high velocity information and perspectives shared, we must have a more pre-cise (cut to match the time of the age we are in) Source of meaning and purpose or we shall spin off into collective denial as we are so doing.

Be anxiously concerned with the needs of the age ye live in, and center your deliberations on its exigencies and requirements.

~Bahá'u'lláh

Without the hierarchy of physical law, which manifests spiritual law, creation would be without order.

Do we get our values and meaning from society or from the Manifestation of our Creator? If we have a meaning-value vacuum then society or other will fill it. Physics, science, and Boltzmann are clear on this. If science has a value-meaning vacuum, crowd sourcing will fill it. Beware! Science needs religion.

This Day, O Shaykh, hath never been, nor is it now, the Day whereon man-made arts and sciences can be regarded as a true standard for men, since it hath been recognized that He Who was wholly unversed in any of them hath ascended the throne of purest gold, and occupied the seat of honor in the council of knowledge, whilst the acknowledged exponent and repository of these arts and sciences remained utterly deprived. By "arts and sciences" is meant those which begin with words and end with words. Such arts and

sciences, however, as are productive of good results, and bring forth their fruit, and are conducive to the well-being and tranquility of men have been, and will remain, acceptable before God. ~Bahá'u'lláh

Essential spin as cause of inertia, both particular and personal, individuation and is anterior, more basic than relational spin in the physics of subatomic, atomic, and sensible realm and in human individual psychological, social, religious spiritual realm. Boltzmann broke with one relational community as social and joined another community as rational, science community. The mass energy of his essential spin, evidenced by determination to maintain his course, is manifest.

As rational science and mystical religion breaks bonds with the source of values and meaning, the Manifestations as a Singular Reality, in an effort to understand, science becomes vulnerable as does religions. Manifestations are the source of personal reason and collective faith, religion and science. The truth is absolute our understanding is relative. To see, know, or understand the ONE requires those who claim to be Representative and are sent by the One and demonstrate visible deeds and accurate words as one, and thereby manifest the One. This is true science and true religion.

As the temperature lowers to nearly 0° kelvin the relational spin of particles becomes diminished. BEC solution breaks with gravitational attraction from relational spin but is still bound to another by surface tension. So at lower temperatures, -271K HE₂ (and HE₃) gravitational bonds are less significant. The relational spin or motion of the atom, as the gravitational attraction, is less influential than the essential spin (sub-atomic motion) attraction. Relational gravity is less so essential inertia is dominant. By essential spin as inertia common to the atoms and "see" other atoms as themselves and act as a singularity. At the lower energy state they are more the same, more alike. This is physics. Some would say the attraction occurs at a lower quantum state. Most of humanity does not know or speak quantum as a language, accept when trying to remain mystical, uncertain, or more intelligent.

This, how ever, is evidenced by the increased relative effect of attraction to other atoms evidence by the relative increase of "surface tension" a collection of particles attracted to their "own kind". So the solution atom sees the container atom more as itself with the relational spin diminished. Attraction to know or connect to itself as the BEC film demonstrates.

Human behavior is a reflection of natural behavior. The purpose of physic is to know the One. To know the One we will know ourselves. Nature is a refection of the One. By physics we can know ourselves.

He that hath known his own self, hath known God. Alí and Bahá'u'lláh (Mirzá Husayn Alí)

If the individual person or particle does not manifest itself, its uniqueness, by some system, in time, then what is the point, meaning, purpose of existence? The energy of relational spin of a particle or person, which distinguishes a person or particles by location in time in this world from other particles or persons has limits, boundaries. If relational spin energy which relates one particle or person to another, then that energy or expression lowers to relative quantified specified level, quanta limit, the residual energy must be translated, or exposed by, to bonding energy attractive energy of a particle or person to its essential aspect shared by all persons or particles ... we are all Created by the One Creator. At the deepest level, a person (or a particle) sees in another person (or particle) its own self. Selflessness, e.g. Golden Rule, redefines relational spin in terms of essential spin thus results in cohesion and a anterior, more basic level, as does surface tension of the BEC.

Social anger, heat as conflict is similar to entropy. Individualism must be preserved at all cost of inter relational. That is evident in these times as collection of 8 billion and the desperate measures for individualism is manifest. Ludwig Boltzmann's declaration of independent investigation of truth, as an inviolable principle of the human soul, was demonstrated by his deeds and words. Others of humanity, at this time follow a path they know not where. The Báb, sourced from *Gate of the Heart*, Nader Saeedi, indicates Ludwig Boltzmann's words and deeds were perfect given his station and his understanding.

Careful examination of Boltzmann's constant exposes the ancient question of the relationship of wet to dry related cold to hot. It is his constant principal relation that the ancients were trying to understand. His constant shows the mathematical equivalence of that relation. Socrates, referred to this relationship and a correlation to recognize the field of "corrupt to pure", that is to recognize the field of purity is a relationship of intention, purpose, and that can be related to other fields in time. Boltzmann purity of intention applied by examination as to the relations of hot to cold and to dry to hot yeilded his constant of mind. The closer alignment of one's purpose with selflessness, 0, allows for alignment with the law of nature, Primal

Will. This will determine progress, evolution, alignment, of ones work. Our intention is not quantifiable. The Primal Will is not quantifiable. Measure alignment of these two fields by the Words of the selfless Manifestation, 0), bounded by our contingency of choice to selflessly understand, 0), Rather than quantifiable, it be qualifiable by comparison to the Manifestation's selfless word to selfless deeds allows zero to zero alignment, thereby our words to deeds can be associated to Theirs, 0²). The reason is to establish location in the field of meaning related to purpose because that's "where" we will be when we leave the realm of time and space relationship.

There is a relationship between One and mathematics, that is One creates the reality of mathematics. And all of mathematics reflects the One back. Seeing the parallels, correlation, in Unity that is examined in the concept of equations, that is one side is one with the other side in equations, given the contingency or relationship, is based on the Emerald Tablet. Isaac newton understood this. Isaac newton translated the Emerald Tablet. Do you think he as you did not reflect on its and Deeper Meaning? When you read the Emerald Tablet and you look at it with the eye of a mathematician, with a perspective of oneness, you see incredible beauty. But then someone asks "Well, what is the mathematical relationship between mother and moon?" If you dig deep enough you'll see it's like the relationship between energy and mass, correlation heat to particular motion. Not apparent on the surface, but if you wish to understand, these things will be unfolded to you. Ask Pythagoras, Newton, Planck, Einstein, or Boltzmann to show how to desire to understand. Boltzmann did answer the ancient Greek question of cold $\rightleftharpoons$ hot to moist $\rightleftharpoons$ dry relations.

Consider as things heat up the relational spin can not contain the energy so it is translated to linear spin (vibratory or translational), diffusion as entropy. So the interaction between the active force and the recipient produces heat, linear spin. So the principle Boltzmann, as all persons, and particulars struggle with is the balance of relational existence and individual existence.

The driving force, the animation, of physics is not entropy. Entropy, as inertia, is half an understanding of balance. It is half of the foundational law of love. Individual, particular, attraction to self is half of the relation. Love self and love other as self. That is the balance.

The other more basic component is attraction to other as self, and is anterior to the event, the interaction, motion. How to perceive the other as

self is the transmutation, the equation, the physics of change of perception. Energy is Mass by light upon light contingency. Self is other by knowledge upon knowledge. Boltzmann is not with us in time and space, but by meaning in purpose. We will be with him soon enough.

As is the Primal Will as and is time with the recipient as particular of and in space. Time to space is a relation of ----- the Primal Will to Itself. This is the source of symmetry. It is easier to say Primal Will as time as a universal container is anterior as Primal Cause to a particular in space. Permeability in time is anterior to permittivity in space.

Analysis of reality offers us to understand the hierarchy of reality itself. Two aspects of reality containment as boundary and vector as will as vehicle. Particular elements of the physical universe are vehicle for presence of human body. Body contains particles. Human body vehicle for ego. All experiences of body contained as ego. Ego as vehicle for soul. Values and virtues contain soul. Soul as vehicle for Divine Word. Divine Word contain soul's values and virtues. Divine Word as

vehicle for reality of Manifestation. Manifestation contains Divine Word as deeds. Manifestation as vehicle for Primal Will. Primal Will contains Manifestation by pre-existence.

Intrinsic spin = relational spin + essential spin.

Soul spin = social relations + internal change

Entropy is merely what remains after purpose is fulfilled, dust of particles. The electron emits light, returns as positron to whence it came, as dust. Purpose, not entropy, not dust, is active cause. And yet we hold reverence for the dust of the Manifestation as bidden. By this equation we also hold reverence for Boltzmann's work, the Good of him, as good dust as service to humanity. His purpose fulfilled. His constant remains as his constancy to truth cemented our understanding of our world to his.

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