

Unified Theory

Abstract

The Unified Theory of Everything consists of a fundamental logos that we are a geometrical form that Sources consciousness from reason and the development of Harmony, Peace, and Balance. This is achieved by a state of Order; -two negatives are always made positive. A state of Order is Whole, Absolute; thus a state of 0. When there is no-action, no-self, no-existence, and the Hollow Awareness, the relationship to synchronized harmonized states of Order occurs within the framework of Evolution. Thus, Evolution is a disordered (chaos) states becoming Ordered, - in which Order constitutes a development of Reason and Divinity.

Definitions.

Disorder: positive matter; matter, information, energy

Order: negative matter; antimatter,

Singularity: a black hole having an epicentre, when reaching a state of one (infinity); through the reverse and forward equilibrium of the event horizon; eventually collapses creating a star. The black hole is always collapsing within itself creating a larger black hole of order.

A star: a mass of positive matter; disorder which is spread throughout space and time by light due to gravity.

Gravity : the *attractor* placed upon all atoms; the pull is based upon a reference of how far away from a singular point(mass) due to time which in essence is distance.

Density: the shape of a molecule within the ether, the probability of shape is as infinite as time allows it, each shape has the possibility and potential of everything.

Time: a relative measurement from a single point of reference; time and distance are

one, as time is the distance in which disorder (atom or strings) have travelled.

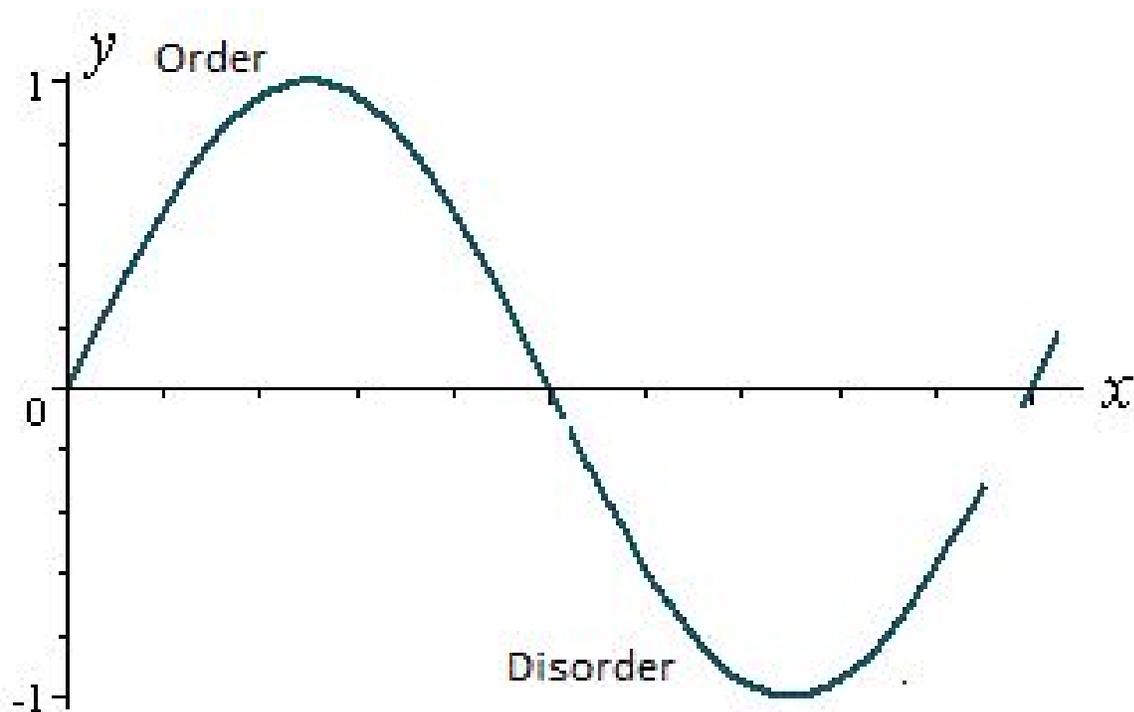
Untime: relative measurement from within a singularity: time and distance are negative; as untime is the distance in which order (anti-matter) is untraveled, this order travels inward of itself instead of out and is amassed at a epicentre within the black hole.

Push : outward gravity expressed (disorder)

Pull : inward gravity impressed (order)

1 : a state of infinite energy, Alpha

0: a state of zero point energy, Omega



In 1877 Ludwig Boltzmann provided a basis for answering this question when he introduced the concept of the entropy of a system as a measure of the amount of disorder in the system. A deck of cards fresh from the manufacturer is perfectly ordered and the entropy of this system is zero. When the deck is shuffled, the entropy of the system increases as the deck becomes more disordered.

There are 8.066×10^{67} different ways of organizing a deck of cards. The probability of obtaining any particular sequence of cards when the deck is shuffled is therefore 1 part in 8.066×10^{67} . In theory, it is possible to shuffle a deck of cards until the cards fall into perfect order.

$\Delta S_{\text{sys}} > 0$ implies that the system becomes *more disordered* during the reaction.

$\Delta S_{\text{sys}} < 0$ implies that the system becomes *less disordered* during the reaction.

The sign of ΔH for a chemical reaction affects the direction in which the reaction occurs.

Spontaneous reactions often, but not always, give off energy.

The sign of ΔS for a reaction can also determine the direction of the reaction.

In an isolated system, chemical reactions occur in the direction that leads to an increase in the disorder of the system.

In order to decide whether a reaction is spontaneous, it is therefore important to consider the effect of changes in both

enthalpy and entropy that occur during the reaction.

The third law of thermodynamics defines absolute zero on the entropy scale.

Third law: The entropy of a perfect crystal is zero when the temperature of the crystal is equal to absolute zero (0 K).

The crystal must be perfect, or else there will be some inherent disorder. It also must be at 0 K; otherwise there will be thermal motion within the crystal, which leads to disorder.

As the crystal warms to temperatures above 0 K, the particles in the crystal start to move, generating some disorder. The entropy of the crystal gradually increases with temperature as the average kinetic energy of the particles increases. At the melting point, the entropy of the system increases abruptly as the compound is transformed into a liquid, which is not as well ordered as the solid. The entropy of the liquid gradually increases as the liquid becomes warmer because of the increase in the vibrational, rotational, and translational motion of the particles. At the boiling point, there is another abrupt increase in the entropy of the substance as it is transformed into a random, chaotic gas.

In an open system, the law of entropy of disorder is decreasing while an ordered order is advancing. The law of spirit is Order, and the law of matter is Disorder.

1. The second law of thermodynamics states that energy (order/disorder) increases in a system until infinite, and thus the law of inverse thermodynamics the state decreases. All energy in the system is balanced through the increase and decrease of the selected system. Thus, order increases until time recedes and moves back to a state of disorder.

2. The states of order and disorder balance the rate of entropy in the system. The isolated confinement of our universe thus is granted a reference of zero energy of infinite energy due to the law of matter increasing and decreasing due to order and disorder.

3. Therefore, all energy becoming disordered or ordered through the state of balance must equal the total of the system. Thus, expansion and a receding effect may occur.

4. From a singularity, all matter is becoming ordered from the rate of disorder being impressed. So energy moves from a state of disorder to order (increase) yet once ad infinitum is reached it recedes from order to disorder.

5. Thus, from the transfers of energy, order and disorder continually create new dimensions that propagate a new existence through the equilibrium of what occurs in time.

1. Disorder and order are as seen by reality both positive and negative charges. The perception of matter constitutes a positive charge, yet is fused with the negative charge of order due to what we perceive. The disorder (matter) is thus positive and order (antimatter) negative.

2. The law of electromagnetism states that one system overrules the state of a magnetic pulsation in each particle. If disorder is present, more over the state of order, there will be a stronger positive charge. If the order in the particle is more than disorder, the particle will be negatively charged.

3. All disorder and order are attracted to the polar entity from which they came. Thus adhering a balanced electromagnetic field. Thus, the electromagnetic field can be manipulate by the structures of disorder and order from whence the force of magnetism occurs.

4. All particles are attracted to each through the magnetism of each molecule. As disorder and order combine structural forces, they both exhibit a law of no-empty space through the ether and their charge. All particles thus throughout space form the magnetic balance of planets, stars, and black holes.

“ entropy is commonly associated with the amount of order, disorder, or chaos in a thermodynamic system. This stems from Rudolf Clausius' 1862 assertion that any thermodynamic process always "admits to being reduced [reduction] to the alteration in some way or another of the *arrangement* of the constituent parts of the working body" and that internal work associated with these alterations is quantified energetically by a measure of "entropy" change, according to the following differential expression:^[1]

“the entropy of the universe increases during any spontaneous process”

Helmholtz in 1882 called entropy "Unordnung" (disorder) (5)

- disorder in any sense other than strict application to molecular energetics

-everything disorderly from drunken parties to dysfunctional personal relationships,⁵ and even the decline of society.⁶

-things move spontaneously [toward] chaos or disorder".⁷

(For every action, there is an equal and opposite reaction.

Newton's Third Law)

“Energy is moving from a more “disordered” state to a more “ordered” state in an open thermodynamic system. Disorder and Order are both vibrations and frequencies of light; expressed in the Universal Equation. Disorder is error correcting itself through non-linear dynamics, in which chaos is becoming in an ordered pattern to a complete, Absolute state of perfect Unity.

-“Entropy must therefore be a measure of chaos”, but this quote is from an internationally distinguished chemist and author.^{7, 8}

- From this, it is equally straightforward that an increase in entropy is due to an increase in the number of microstates in the final macrostate

-Most of those questioned were wrong; they saw "patterns" in the configuration that belonged to the class that would have the greater entropy not less — the configuration they should have called more disorderly if they truly could discern disorder from the appearance of a single "still" from an enormous stack of such "stills".

Calculations by Styer evaluated similar diagrams in a book about entropy by a prominent chemist. It has been widely-read by scientists and non-scientists alike. His results showed that five diagrams that were checked were invalid; they had probably been selected to appear disorderly but were statistically not truly random. Humans see patterns everywhere. Conversely, we can easily be fooled into concluding that we are seeing disorder and randomness where there are actually complex patterns.”

1. The rate of order is proportional to the rate of disorder. Order is in relationship to reason, and as time progresses, energy moves from a state of disorder to order. All energy is a state of disorder and as time evolves, so evolves reason (order). Disorder is an expression of light that along a continuum depletes and becomes order. As such, all moves from a state of disorder to order, until collapse of fabric is woven. The order to disorder relationship is void to matter, nothing to everything, the adjacent is matter to void, everything to nothing.

2. Nothing (order) was the basis for an evolutionary change to everything; disorder. The law stated that all order must become disordered, and such dimensions were constructed.

3. As order at once became disorder, the fold expanded and thus propagated dimensions in which our being or essence derives. We derive from order, a consciousness before reality; as whence to follow by disorder which is consciousness in matter.

4. As we experience disorder in our plane of existence, we continually experience the order of nothing, and thus; what we experience the cosmos experiences. All was once before ordered, and upon becoming disordered, the energy resumed its destination to become ordered once again; ad infinitum. The cycle of order to disorder and disorder to order continues for infinite.

5. A state of nothing; order, is thus represented in our system as a black hole. Its goal is to become ordered at a state of infinite, through the reverse and forward reaction of the event horizon. Thus from infinite all exists in everything and nothing.

6. A black hole is thus order (antimatter) that wishes to become a complete state of infinity. As thus, when ordered, the inward pull is expressed out in the form of a new reality (an inward impressed outward pull) and a star in which disorder can thus again return to order, or to the void. In a black hole, gravity is impressed to a point, thus the collection of matter fissions until it reaches infinite while the mass grows.

7. As the cycilinear happenings of a circle of life dictates, all is transforming to a more logical and reasonable state. The disorder of light is continually expelling light as gravity expressed outward. Yet all gravity is balance by the state of uniformed bodies, whose mass constitutes a gravitational equilibrium. As light of disorder is expelled, so such does it returns to order, to maintain a rate of equilibrium.

8. A star is a rate of molecules which depleted themselves from infinite until nothing and once upon reaching that depletion of disorder, it explodes as a supernova and then thus implodes, creating a black hole that encomes all disorder to order.

9. The essence of light is expelled as disorder upon our dimension. Light, is impulled in the core as hydrogen atoms, and through fusion creates the outward form of light. Light is thus a carrier agent of order; hence, information.

10. Light is constantly dispelling disorder at a continuous rate; the speed of light. It is acting from a state of infinite to a state of nothing. Thus, energy is forming a dimensional plane of order that is spiritual in nature and constitutes conciousness in matter.

11. As stated, when depleted, a star explodes as a supernova, and then thus is impressed by energy to implode and create a black hole that is thus consuming all to reach infinite.

12. As the law of balance states, what evolves must be through time. As all is balanced, equilibrium is always reached. That being said, all disorder and order balance each other as the law of entropy dictates.

13. Entropy is both disorder being expressed and/or order being impressed. Both are the perception of the other, as thus we only perceive disorder as that is our state (unless chasms are unlocked through the Zen of nothing). And entropy is defined as the disorder becoming less in a system.

14. In relative formation, all disorder is expressed from a singular point in which gravity first becomes (this point is the big bang) and when the outward strings formed disorder, time and the speed of light expelled disorder throughout the cosmos, althought, at first, the speed of light was not balanced, it was held in thought that the speed was maintained. Yet, the speed of creation was faster then instantaneous, so the light balanced through time into a light speed quatum force.

15. All light or disorder continues on its formal ray until a state of nothing is funded. Thus, the disorder assumes change and becomes nothing in which the next beam or photon fills the gap, as the diminished particle pulls within itself to produce an outward dimension, hence all particles experiencing a return to nothing repeat the capturing of a new dimension. And thus the law of light is such; all disorder becomes order that is inhabited by more disorder. This hypothesis can be represented by quantum physics in

which all realities are “bubbles/spheres” that are all around us.

16. A black hole, as stated earlier, is moving to a state of unity within the realm of order. Once infinite is reached, the black hole implodes and then creates a new dimension in which a star forms rays of disorder to thus form another system of order.

17. As the cosmos is within and without us, we are also the essence of disorder and order. Our outer appearance is a state of disorder and our inner soul is order. The disorder is diminishing and becoming more ordered. Therefore, outward we seek disorder and inward we seek order and thus we can never reach infinite (as knowledge becomes finite) unless we perish.

18. As the universe evolves as we evolve, all is a proportional check and balance that resumes as such in both subjective and objective basis, one which is outer(obj.) and one which is inner(subj.).

19. As we exist, so do we not exist. This is the illusion of reality. The collective agreement states that we are everything (disorder) to nothing(order), and the void is nothing to everything. Both evolve as we evolve/as so does the universe.

In the example above, we learn everything becomes nothing.. The universe is thus the same; in order is reason and disorder unreason.

21. As light evolves along time to order, so such we evolve through time to become more ordered. We are inheriting in the universe and the universe is inherited in us. Through chaos we create reason.

22. Thus from the statement above, we can assume that consciousness move from a state of nothing to a state of infinite, entwined with the void of self. Nothing is moving to a state of everything, and whence reached, we transcend dimensions. Yet, our body is moving from a state of everything (disorder) to nothing (order); disorder like a star, in which we will deplete to nothing and then thus exist in order. Yet, some consciousness comes from order and is diminishing to disorder. This occurs when order descends upon order instead of transcending, yet both are the same in accounts of the universe.

23. Evidenced thus, we are all a star of cosmic dust moving from a state to another state. Yet, our soul may diminish or create an existence by the experiencing of the subjective being.

24. Evidenced again, all matter in a black hole is trying to reach a state of infinite; in thus it collapses and forms a star moving from infinite (everything) to nothing (order). As time progresses, such order as goldilocks states emerge. These goldilocks states represent the micromasm and the micromasm of the universal harmony, as the state of galaxies, solar systems, and universes all evolve to a higher order when the state is primal.

25. All gravity pulls the self to a central point, were the splicing or fission of atoms recollect and form new spheres of dreams. Both in and out of us. Thus, dreaming in untime is of the fourth dimension.

“In virtue of the [first law of thermodynamics](#) (the *conservation of energy principle*), an isolated system can pass only between states of the same global energy.

The second law of thermodynamics introduces *irreversibility* of the evolution: an isolated system cannot pass from a state of higher entropy to a state of lower entropy. Equivalently, the second law says that it is impossible to perform a process whose only final effect is the transmission of heat from a cooler medium to a warmer one. Any such transmission must involve outside work; the elements participating in the work will also change their states and the overall entropy will rise.

[equilibrium](#) state and reaching it is interpreted as the *thermodynamical death* of the system.

for any system of black holes, the sum of their surface areas cannot decrease. This statement was proven by Stephen W. Hawking (around 1972) and is known as the *second law of black hole dynamics*.”

“Black hole dynamics, that increase the thermodynamical entropy $> S > UP$
black hole entropy and thermodynamical entropy cannot decrease, “

26. $-c = m^2 (d)$

Negative speed of light impresses itself creating disorder squared of fissioned particles which are energy.

Thus, negative light which is impressing itself in a black hole, is equal to the energy of a fissioned particle that is returning upon the epicentre in which the system constructs itself. The negative speed of light is untime, and the mass of a yet to be fissioned particle is squared, and the energy is encoded with the mass within. As all energy and mass constructs a black hole; and the negative speed of light impels order to a stringed center that amasses itself then pulls itself through the inward gravity and expresses itself as a star in the new dimension.

“In nearly all its meanings, entropy can be viewed as a measure of disorder and chaos, as long as by order one understands *segregating things by their kind* (e.g. by similar properties or parameter values). Chaos is the state of a system (physical or dynamical) in which elements of all *kinds* are mixed evenly throughout the space, so that the space is *homogeneous*. For example, a container with gas is in its state of maximal entropy when the temperature and pressure are constant throughout the volume. That means there is approximately the same number of particles in every unit of the volume, and the proportion between slow and fast particles is everywhere the same. States of lower entropy occur when particles are *organized*, for example: slower ones in one area, faster ones in another. A message has high entropy if all short words appear with equal frequencies in all sufficiently long subwords of

.

Any trace of *organization* and *logic* in the structure of the message allows for its compression and hence lowers its compression entropy. These observations lead to the common sense meaning of entropy.

To have order in the house means to have food separated from utensils and plates, clothing arranged in the closet by type, trash deposited in the trash container, etc. When these things get mixed together, *entropy* increases causing disorder and chaos. In a social system, order is associated with classification of the individuals by their skills and assigning to them appropriate positions in the system. Law and other mechanisms are enforced to keep such order. When this classification and assignment fails, the system falls into chaos.”

<http://www.scholarpedia.org/article/Entropy>



Figure 1: In a naive analogy, energy in a physical system may be compared to water in lakes, rivers and the sea. Only the water that is above the sea level can be used to do work (e.g. propagate a turbine). Entropy represents the water contained in the sea.

- In classical physics, the entropy of a physical system is proportional to *the quantity of energy no longer available to do physical work*. Entropy is central to the [second law of thermodynamics](#), which states that in an isolated system any activity increases the entropy.
- In [quantum mechanics](#), [von Neumann entropy](#) extends the notion of entropy to quantum systems by means of the density matrix.
- In [probability theory](#), the entropy of a random variable measures the *uncertainty* about the value that might be assumed by the variable.
- In [information theory](#), the compression entropy of a message (e.g. a computer file) quantifies the *information content* carried by the message in terms of the best lossless *compression rate*.
- In the theory of [dynamical systems](#), entropy quantifies the *exponential complexity* of a [dynamical system](#) or *the average flow of information per unit of time*.
- In sociology, entropy is the natural *decay of structure* (such as law, organization, and convention) in a social system.

- In the common sense, entropy means *disorder* or *chaos*.

(Curator: [Tomasz Downarowicz](#))

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1. Therefore, what is nothing is everything; what is everything is nothing. As both matter and antimatter make a molecular bond, thus the void and existence merge as one. Something, is thus both; and while both, we perceive what we are. Thus, those eyes that are open perceive both the realm of order and the reality of disorder. As indefinable as something is, it can be both nothing and everything, for both premises fit in its occurrence.

2. The first law of thermodynamics states that energy can neither be created or destroyed. All matter that is; is, it only changes perception to what we perceive. Everything and nothing are relative to perception our perceptions perceive the visual plane of geometric densities, that constitute this three dimensional basis for reality; a visual reality of the atom. As such, if there is no visual plane of dimensional reality, we could not perceive the agent of light; entropy.

3. In relation to the previous section, nothing is defined as order which is a black hole; increasing due to the event horizon. As disorder becomes order, so such does the reality transform inside the black hole to which is everything, from nothing. Thus all we can perceive is within a black hole.

4. All antimatter (order) inside a black hole is thus turning everything to a pinnacle point where the fission of atom correlates to the principle of thermodynamics. Additionally quarks are separated and formed in various geometrical transformations.

5. As the black hole continually feeds disorder (everything) into its system, it forms order upon the epicentre and thus provides a basis for a new dimension by the fission of atoms; reforming, and extracting within. Everything (disorder) is returning to an existence of nothing(order), thus creating something.

6. As gravity continually feeds a black hole with matter, time becomes irrelevant and thus untime is procured. This untime, is order impressing itself along an epicentre within the black hole. As time is uncreated by the fission of quarks, so such does order create beguist the fission the recreation of atoms.

As in untime, everything exists because it is nothing, and thus the void expels all from the epicentre. In the basis of time, nothing exists because it is everything. As to say, both are something so these correlative exist because we exist.

8. Disorder is limited by a state of infinite to a state of zero. The star of disorder explodes then the epicentre implodes and thus the birth of a new reality with the multiverse. The limits of a system gives rise to what happens next in time.

9. Order is limited from a state of zero to a state of infinite, giving rise to what occurs in untime. As time means nothing in a void, it is also in time with everything, so such by limiting the system, what occurs in time is based on untime.

10. Both order and disorder are an expression of our perception. They both make the whole of which we can perceive. As such, each are balanced by the proportional rate of the other. Stars and black holes react in equilibrium in the system to create a harmonious state. If one is expressed, so must the other be impressed. Again, the circle of balance.

Disorder is continually depleting itself from a state of infinite to zero, light becoming order. As depletion occurs, the atom becomes order, and thus we experience reason within the framework of an atom and the transformation within the multiverse.

12. In other words, order is being associated with the atom, and whence is returning to its primitive state of disorder. Thus when a black hole reaches a state of infinite, order is impressed and expelled thus gain as light in a new dimension.

13. As time is involved in our three dimensional reality, such order and disorder move in a framework of arbitrarily infinite. Thus, when infinite reaches a finite state; time progresses to change each form into its alternate.

14. Time moves a star into a depleted state, where whence the photons fuse and become the light expressed towards a black hole (void). As such within a black hole, untime moves the fission of atoms to collect to a state of everything (order). Whence the state of infinite in a black hole is reached, it impresses then explodes as disorder.

15. All order and disorder are a state of both nothing and everything. They both exist as entities which we perceive. Yet we only; as evolution goes; perceive the outer realm of everything; disorder. Yet if we turn our eye to an inward gaze, we perceive order (nothing), in which our being thus extends. As both disorder and order balance each other, they are proportional and create a perfectly balanced system. As thus as us or thus as space.

16. As we perceive nothing; order, it continually expands unto infinite until the event horizon reaches it equilibrium, and thus the black hole or nothing collapses, creating a star in a new dimension. As we perceive everything; disorder, time progresses from infinite to zero, and thus when all fusion stops, the star explodes as a supernova and thus as time moves it's essence arbitrarily along. It collapses into order and creates nothing; a black hole.

17. As stated previously, when a black hole reaches a state of order, it commences into a form of a star pulled through time itself into a new dimension, in which nothing creates something which in turn is everything.

18. The system reaches a state of pure equilibrium because it is already balanced. Thus the state of nothing and everything promote the factor of nothing/everything. In mathematics, $1 + 0 = 1$. Therefore, stating that one is everything and nothing is zero, we can see how both exist together. And as time evolves, so does the system in which it is already balanced.

19. Order(noting) moves to a state of infinite. Disorder (everything) moves from a state of infinite to zero.

20. Think of a black hole as a popcorn kernel. As the atoms inside the kernel rearrange to form new molecular bonds, the constant of the kernel increases. Thus, when a state of infinite, or expression is complete, the kernel expels itself as a new system. Thus a black hole "heats up" to its own density, until a state of infinite is reached. Where upon it explodes as a new star. The kernel is an inward expression in which upon being displaced or "heated up", reforms and becomes everything(disorder).

21. As we exist, our form is a form of an outward expression (everything), and thus we move to the inward expression of nothing. We form our self as the universe forms itself. For when we form self, the universe also forms self. Thus is the balance of self.

22. Time in a black hole , does not exist in the ability to move forward(until its pulled through time's cone), yet its fission creates untime with the essence of unbecoming within the framework of energy.

23. The essence of nothing within a black hole presents the image of everything to our perception. As order increases inside a black hole, the everything of disorder along the event horizon is thus engulfed by the impression of gravity.

24. The rate of particle transformation along the vent horizon; it atoms change due to fission, is present within the order of the nothing of a black hole. At whence a black hole reaches infinite from its consumption of mass; the singularity is pulled through times cone and thus expels a point of disorder within the restriction of a new universe, thus adhering a multiverse. Thus from nothing to everything; order to disorder.

25. Everything is trying to become nothing, in which case, it is something, while nothing is something in which it is trying to become everything. Each existences are something of a whole, that which we perceive everything and nothing.

“What are the bases for Boltzmann’s introduction of order to disorder as a key to understanding spontaneous entropy change?”

That all or at least most of the parts of it surrounding us are initially in a very ordered — and therefore very improbable — state

When whenever two or more small parts of it come into interaction with each other, the system formed by these parts is also initially in an ordered state and when left to itself it rapidly proceeds to the disordered most probable state.” (Final paragraph of #87, p. 443.)

[Pitzer’s calculation of a mole of any substance at near 0 K shows that *none* can be more ordered than having the possibility of 10²⁶,000,000,000,000,000,000 different accessible microstates! (Pitzer, *Thermodynamics*, 3rd edition, 1995, p. 67.)]

What is entropy, really?” that their students occasionally had the courage to ask. Their response, because it was what had been taught to them, was “Learn how to calculate changes in entropy. Then you will understand what entropy ‘really is’.”

“Verwandlung” or “transformation”, he limited it and “disgregation” to discussions of fusion or vaporization where the “disgregation values” changed.

if the final state is random, the initial system must have been the opposite, i.e., ordered. “Disorder” was the consequence, to Boltzmann, of an initial “order” not — as is obvious today — of what can only be called a “prior, lesser but still humanly-unimaginable, large number of accessible microstates”

all of the molecules are only in one energetic arrangement — an instantaneous ‘freeze-frame’ photo of molecular energies on energy levels

A greater dispersal of energy in a system means, in terms of its microstates, a ‘temporal dance’ over a greater number of possible microstates than if there were a smaller number of microstates.

“danced in” over finite time, that calculated number influences how many chances there are for the system’s energy arrangement to be in at the next moment.

entropy increase as greater “disorder” in elementary chemistry texts for many years was that of ice melting to water.

Sparkling orderly crystalline ice to disorderly mobile liquid water

“entropy is the quantitative measure of disorder in the relevant distribution of the system over its microstates.” [Callen, italics mine, to indicate a completely erroneous implication of the nature of a system’s occupancy of one microstate at one time in an equally erroneous connection of thermodynamic entropy with communications’ disorder.] “

Entropy and Disorder

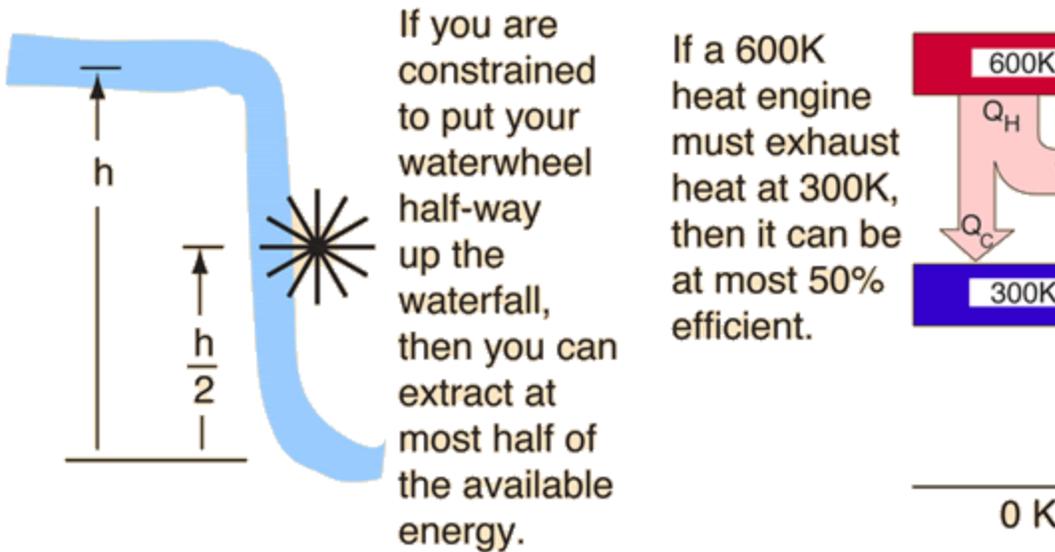
If you assert that nature tends to take things from order to disorder and give an example or two, then you will get almost universal recognition and assent. It is a part of our common experience. Spend hours cleaning your desk, your basement, your attic, and it seems to spontaneously revert back to disorder and chaos before your eyes. So if you say that [entropy](#) is a measure of disorder, and that nature tends toward maximum entropy for any isolated system, then you do have some insight into the ideas of the [second law of thermodynamics](#).

Some care must be taken about how you define "disorder" if you are going to use it to understand entropy. A more precise way to characterize entropy is to say that it is a measure of the "[multiplicity](#)" associated with the state of the objects. If a given state can be accomplished in many more ways, then it is more probable than one which can be accomplished in only a few ways. When "[throwing dice](#)", throwing a seven is more probable than a two because you can produce seven in six different ways and there is only one way to produce a two. So seven has a higher multiplicity than a two, and this gives some insight why systems in nature like the molecules of a gas would spontaneously tend toward states of higher multiplicity or higher "entropy".

For a glass of water the number of molecules is astronomical. The jumble of ice chips may look more disordered in comparison to the glass of water which looks uniform and homogeneous. But the ice chips place limits on the number of ways the molecules can be arranged. The water molecules in the glass of water can be arranged in many more ways; they have greater "multiplicity" and therefore greater entropy.

Second Law of Thermodynamics

The second law of thermodynamics is a general principle which places constraints upon the direction of [heat transfer](#) and the attainable efficiencies of [heat engines](#). In so doing, it goes beyond the limitations imposed by the [first law of thermodynamics](#). Its implications may be visualized in terms of the waterfall analogy.

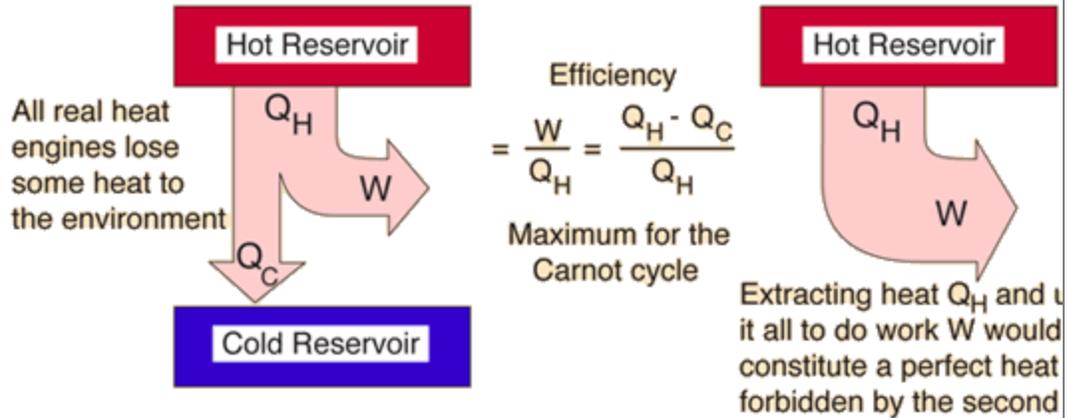


The maximum efficiency which can be achieved is the [Carnot efficiency](#).

Second Law: Heat Engines

Second Law of Thermodynamics: It is impossible to extract an amount of heat Q_H from a hot reservoir and use it all to do work W . Some amount of heat Q_C must be exhausted to a cold reservoir. This precludes a perfect [heat engine](#).

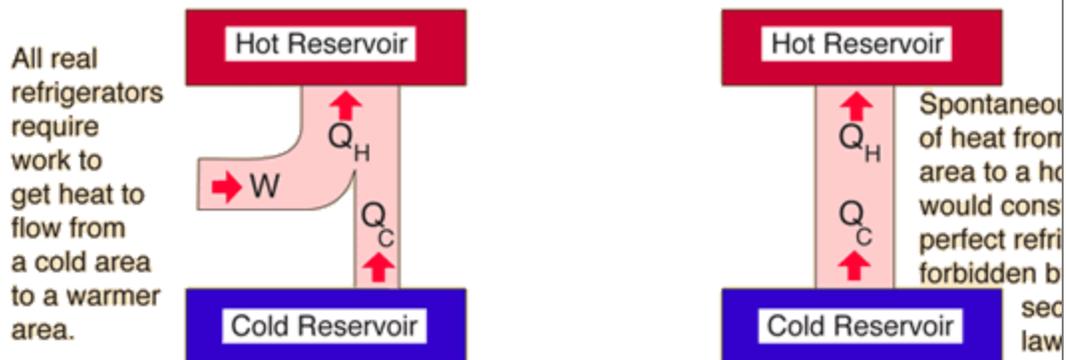
This is sometimes called the "first form" of the second law, and is referred to as the Kelvin-Planck statement of the second law.



Second Law: Refrigerator

Second Law of Thermodynamics: It is not possible for [heat](#) to flow from a colder body to a warmer body without any [work](#) having been done to accomplish this flow. Energy will not flow spontaneously from a low [temperature](#) object to a higher temperature object. This precludes a perfect [refrigerator](#). The statements about refrigerators apply to air conditioners and [heat pumps](#), which embody the same principles.

This is the "second form" or Clausius statement of the second law.



It is important to note that when it is stated that energy will not spontaneously flow from a cold object to a hot object, that statement is referring to net transfer of energy. Energy can transfer from the cold object to the hot object either by transfer of energetic particles or electromagnetic radiation, but the net transfer will be from the hot object to the cold object in any spontaneous process. Work is required to transfer net energy to the hot object.

Second Law: Entropy

Second Law of Thermodynamics: In any cyclic process the entropy will either increase or remain the same.

Entro py:	a state variable whose change is defined for a reversible process at T where Q is the heat absorbed.
Entro py:	a measure of the amount of energy which is unavailable to do work.
Entro py:	a measure of the disorder of a system.
Entro py:	a measure of the multiplicity of a system.

Since entropy gives information about the evolution of an isolated system with time, it is said to give us the direction of "[time's arrow](#)". If snapshots of a system at two different times shows one state which is more disordered, then it could be implied that this state came later in time. For an isolated system, the natural course of events takes the system to a more disordered (higher entropy) state.

<http://hyperphysics.phy-astr.gsu.edu/hbase/thermo/seclaw.html#c4>

[https://chem.libretexts.org/Bookshelves/Physical_and_Theoretical_Chemistry_Textbook_Maps/Supplemental_Modules_\(Physical_and_Theoretical_Chemistry\)/Thermodynamics/Energies_and_Potentials/Entropy/%E2%80%98Disorder%E2%80%99_in_Thermodynamic_Entropy](https://chem.libretexts.org/Bookshelves/Physical_and_Theoretical_Chemistry_Textbook_Maps/Supplemental_Modules_(Physical_and_Theoretical_Chemistry)/Thermodynamics/Energies_and_Potentials/Entropy/%E2%80%98Disorder%E2%80%99_in_Thermodynamic_Entropy)

1. What is disorder and order other than energy? They are both a manipulation of what we perceive. Thus as our perceptions perceive disorder, the question arises, what is the perception of it? Heat is disorder. The closer we are to a heated object, the greater the amount of disorder is present. This is due to the rate of molecules moving within an electrical field of the atom. As to say, the greater the heat the greater the disorder. Order is relative to the cold. The colder the element, the greater the order, as time moves so disorder converts to order in which a state of order deprives the atom of motion from heat, thus the transfer to order cools the atom. Both order and disorder are just our perception relaying what is through our sensory perception.

2. As we evidenced earlier, disorder is a star in which from infinite it is depleting itself. The fusion of quarks creates the energy and heat of the star. As a star is energy, thus the energy of the star is heat. Therefore, the heat of the star cools as it becomes more ordered, and thus the overall heat changes. As star is scolded still scorching until it reaches a state of nothing and collapses upon itself. Thus, the disorder of a star produces heat from the highest heat going to the lowest heat, and it expels its heat through the strings of light waves and solar flares.

3. Each light wave becomes more heated the closer we get to its point of creation. Thus heat is a wave of particles travelling through space that heat up the closer to the source in which it comes from. And thus, the farther from the source, the more order and coolness the wave or particle will experience.

4. A black-hole is the opposite of expression, it is impression of waves. These waves collect on a central force, the epicentre, and produces no heat. The wave is forced inward on its center and continually is fed until infinite is reached. Thus order is the collection of cold atoms within the black hole.

5. A black hole; the larger the density, the cooler the whole. The smaller the density, the warmer. Thus, finding black holes is not an easy task, since there are no emissions.

6. The closer the star, or disorder, the greater the temperature of the light-wave. As we also receive more disorder, the wave of order is less and thus more natural occurrences within the frame of heat occur. The closer one gets to order the cooler the temperature of the ever expanding event horizon. Thus order is relevant to the cold. A black hole is the cold compared to the molecules of disorder upon the event horizon. Thus the greater the amount of particles, the cooler the black hole is. As such, the black hole is a system of particle fission, so as mass is adjusted, so such the temperature doth as well.

7. Heat is relevant to the conduction of temperature within the field of disorder and order. The densities are based upon reference from their source of heat, and while heat dissolves into order, such the law of temperature dictates. The law is thus, heat moves from a higher state to a lower state in which disorder moves to order.

8. The state or rate of an atom only describes the process of heat relative to disorder and order. Each state has been processed over time, through billions of years and comes to be such a state to manifold life by the continuance of order; thus do to heat (Goldilocks state). In the Goldilocks zone, such heat entertains the primal makings for life to evolve.

9. The amount of heat present in an atom is thus described as a greater state of inner motion. And the greater the motion, the greater the rate of disorder.

10. The state of motion which produces a high rate of disorder due to the heat of the structure, can be evidenced by a star in fusion, or the earth in flux. The heat in these two objects presents a state of greater motion, and thus greater disorder. Hence, heat is relevant to motion of particles by the rate of disorder.

11. The core of the earth, which is in a state of flux due to temperature, is a magma that is in a geometric form that carries more forms as it becomes ordered (cooled). Thus the order from a more motional state to a static is the essence of disorder to order.

12. Temperature variances describe the state of motion within an atom to the relevance of disorder to time and the speed of light. The inert molecules within the atom are moved by disorder and the variance or disorder is what moves the atom. Thus, the atom is moved by disorder.

13. The greater the rate of molecular movement, the greater the heat of the density. Although, with less movement comes less heat, as thus the rate of a densities heat is based upon movement from within the atom.

14. The difference of relative heat or cold to the system is based upon the distance from a form of disorder. The closer one is to the fusion or flux of disorder, the greater the field of heat, relative to a point in time by which disorder extends. The earth is a form of disorder (heat) that contains the premise for life, due to its orbit in the ellipse. Thus heat is a constant in the structure to support life. Inastoday, the order of energy in space is colder the further away from a central point; in that which it expels itself from . Thus, the

order of energy in space is relative to its temperature from a principle point due to relativity of the mass.

“There are two requisites for entropy change in chemistry. An increase in thermodynamic entropy is enabled in a process by the motional energy of molecules (that, in chemical reactions, can arise from the energy released from a bond energy change). However, entropy increase is only actualized if the process results in a larger number of arrangements (microstates) for the system’s energy, i.e., a final state that involves the most probable distribution for that energy under the new constraints.” [That probable distribution of Boltzmann is identical to Shannon’s.]

“The two requisites, energy and probability, are both necessary for thermodynamic entropy change; neither is sufficient alone. In sharp contrast, information theory (often misleadingly called information “entropy”) is alone sufficient for its mathematical purposes, depending only on $-k \sum p_i \log p_i$, where k is an arbitrary constant that is not required to involve energy.”

Frank L. Lambert, J. Chem. Educ. 2007, 84, 1548-1550,
<http://entropysite.ox.y.edu/ConFigEntPublicat.pdf>.

“All things trend toward disorder. More specifically, the second law of thermodynamics states that “as one goes forward in time, the net entropy (degree of disorder) of any isolated or closed system will always increase (or at least stay the same).” [\[1\]](#)

Entropy is simply a measure of disorder and affects all aspects of our daily lives. In fact, you can think of it as nature’s tax. [\[2\]](#)

Left unchecked disorder increases over time. Energy disperses, and systems dissolve into chaos. The more disordered something is, the more entropic we consider it. In short, we can define entropy as a measure of the disorder of the universe, on both a macro and a microscopic level. The Greek root of the word translates to “a turning towards transformation” — with that transformation being chaos.”

“Nor public flame, nor private, dares to shine;

Nor human spark is left, nor glimpse divine!

Lo! thy dread empire, Chaos! is restored;

Light dies before thy uncreating word:

Thy hand, great Anarch! lets the curtain fall;

And universal darkness buries all.”

— Alexander Pope, *The Dunciad*

<https://fs.blog/2018/11/entropy/>

In *The Mechanical Theory of Heat*, Clausius explains his findings:

... the quantities of heat which must be imparted to, or withdrawn from a changeable body are not the same, when these changes occur in a non-reversible manner, as they are when the same changes occur reversibly. In the second place, with each non-reversible change is associated an uncompensated transformation...

... I propose to call the magnitude S the entropy of the body... I have intentionally formed the word entropy so as to be as similar as possible to the word energy....

The second fundamental theorem [the second law of thermodynamics], in the form which I have given to it, asserts that all transformations occurring in nature may take place in a certain direction, which I have assumed as positive, by themselves, that is, without compensation... [T]he entire condition of the universe must always continue to change in that first direction, and the universe must consequently approach incessantly a limiting condition.

... For every body two magnitudes have thereby presented themselves—the transformation value of its thermal content [the amount of inputted energy that is converted to “work”], and its disgregation [separation or disintegration]; the sum of which constitutes its entropy.

Clausius summarized the concept of entropy in simple terms: “The energy of the universe is constant. The entropy of the universe tends to a maximum.”

The “Arrow of Time” is a name given to the idea that time is asymmetrical and flows in only one direction: forward. It is the non-reversible process wherein entropy increases.

1. Time is the measurement from a singular point in which the atoms evolve through our dimension. Time, or the atoms, only increase in order and base themselves in time from the point in which they came. Thus, the time and untime is not negated by distance from a singular point, but is an expression of distance from the point of beginning or ending.

2. Direction in space is meaningless; up, down, right, left, are of all the same species. Thus, if we use a singular point to express time, all becomes meaningful and gives us order from disorder. As order increases, thus distance and time increase.

3. Basing distance and time off relativity from a central point, we begin to understand the essence of order and disorder.

4. In essence, all time is a distance travelled from a point. The closer we get to the point, the stronger the pull of gravity (by an amassed object) and thus the greater disorder. Inastoday, the time when there is a beginning, is stringed to the expelling force of gravity that an infinite amount of disorder.

5. A star of disorder is expressed in all ways from its point of center. It is an analogues three dimensional propagation that is enrante to all that is.

6. A star expressed as disorder would qualify all coordinates within the system of its gravity. Thus the stronger the pull of gravity to the greater mass of disorder.

7. Transformations of disorder to order is continuous to the arbitrary center of an coordinated (amassed or neh). Thus relativity upon this relation corresponds to analogues symmetry in a no symmetry field. All transformations are developed to a single point in which added together, form a bond of atoms of disorder that relativity relates the example of disorder unto order.

8. Examples of Metem-principles(simplified), thus explains relativity in a coordinate system.

Distance = Speed of Light

$Ds = x$

$x + d1, x + d2, x + d3 = x$

Coordinates are relative to distance in that is propagated by the speed of light. Therefore, each coordinate is a point in which the speed of light is expressed.

Speed of light is equal to coordinate of Distance/Time

9. The coordinates also derive the speed of light as the distance travelled. As such, relativity form a point is both time and distance as one, due to velocity.

10. Therefore, Disorder

$$dx = cdx$$

Speed of disorder relative to time and distance

$$dx_1 + dx_2 + dx_3 = \text{reference of particle transformation}$$

As thus, all energy is nothing.

$$0 = dx$$

$$\infty = cdx$$

$$Dx + cdx = - \infty$$

As thus, all energy is everything.

$$\infty = dx$$

$$0 = cdx$$

$$\infty = dx + cdx$$

The third law of thermodynamics defines absolute zero on the entropy scale.

Third law: The entropy of a perfect crystal is zero when the temperature of the crystal is equal to absolute zero (0 K).

11. This explains how the speed of light is stringed within itself with a particle fission at the center in which expands the black hole due to the order of unlight, the light or "dark" wave moves in on itself and creates untime, as evidenced above, with the reference of energy being zero or infinite.

12. The rate that the velocity or disorder expels is equal to the speed of light. As each

particle or atom is its own universe and density, thus from disorder comes order as due to velocity, time, and distance, which are all one in a propagation of matter.

13. Order, is thus two things. It is the antimatter which evolves particles to a reasonable dimensional clarity, and it is also a black hole were all unreason converts to reason. Thus, a black hole is untime and matter becoming negative, in which the strings of light force inward on self and creates the epicentre that continually is fed by more matter. Thus, a black hole is untime, a negative velocity, and distance untraveled from a singular point within the black hole. Although, order outside a black hole is based in time expression itself forward, as it is moving from a nothing to everything within our system.

As we know

$$cdx = x$$

Thus light is equivalent to velocity of a particle in motion. Thus extending for infinite along cyclilinear progressions. The speed of light, distance, and particle all result in x , which is the speed of light. Thus, the variable or constant is light, in which expands along with the speed of light.

The introduction to a unified theory of everything comes through the definition of Logos. The meaning of the universe is compounded into a single formula of reason. The formula, of which reason is stated, develops through the universe in multiple dimensions and propagates the essence of possibility and probability into a simple formula.

The formula is as follows:

$$T(D) = C$$

10. Example of disorder as a star with fusion energy at its initial state (in which energy is at a high rate of entropy).

Let T = Time T = .01 s (goes on infinitely, until order becomes one)

Let D = ΔS (disorder) D = x

Let C = Speed of Light C = 300 000 m / s

$$T(D) = C$$

$$.01 \text{ s} (x) = 300\,000 \text{ D}$$

$$D = 30\,000\,000 \text{ D}$$

This shows the amount of Disorder (S) within the system is created thus a massive amount of energy emanating from the star that is becoming of thus an explosion through time; due to time being secluded into a open system of double limits.

To express the energy moving relative to the Dian and time is as follows.

Time in this equation is lowered to a closer net to zero, so the example of a star of disorder emotes. Its rate of disorder is highly present; as a mass of energy (hydrogen) fuses together and forms order through waves of light. Thus, disorder of the star.

Let T = Time T = 10 000 000 000 s (goes on infinitely, until order becomes one)

Let D = ΔS (disorder) D = x

Let C = Speed of Light C = 300 000 m / s

$$T(D) = C$$

$$10\,000\,000\,000 \text{ s} (x) = 300\,000 \text{ m / s}$$

$$D = 0.00003 \text{ D}$$

This shows that as time progresses, so such the energy state of disorder becomes less and the rate of order, which is the limit, the energy becomes.

Above is evidenced that the greater the reference of time, the lower the amount of disorder present from the relative point in which the energy is expressed. The energy expressed from this equation above relates to the lower state of disorder from whence the reference of time produces.

The second law of thermodynamics states that energy (order/disorder) increases in a system until infinite, and thus the law of inverse thermodynamics the state decreases. All energy in the system is balanced through the increase and decrease of the selected system. Thus, order increases until time recedes and moves back to a state of disorder.

Disorder is matter becoming coherence into Order. Order consists of Harmony, Peace and nothingness. Order re-forms itself as spiritual (chi (Kundalini)) within a vortex upon the field of awareness.

Key Points

- This ratio of Q/T is defined to be the change in entropy ΔS for a reversible process:
- $\Delta S = (Q/T)_{\text{rev}}$
- .
- Entropy is a property of state. Therefore, the change in entropy ΔS of a system between two states is the same no matter how the change occurs.
- The total change in entropy for a system in any reversible process is zero.
- We can see how entropy is defined by recalling our discussion of the Carnot engine

Key Points

- Each microstate is equally probable in the example of coin toss. However, as a macrostate, there is a strong tendency for the most disordered state to occur.
- When tossing 100 coins, if the coins are tossed once each second, you could expect to get either all 100 heads or all 100 tails once in 2×10^{22} years.
- Molecules in a gas follow the Maxwell-Boltzmann distribution of speeds in random directions, which is the most disorderly and least structured condition out of all the possibilities.

Key Terms

- disorder: Absence of some symmetry or correlation in a many-particle system.
- Maxwell-Boltzmann distribution: A distribution describing particle speeds in gases, where the particles move freely without interacting with one another,

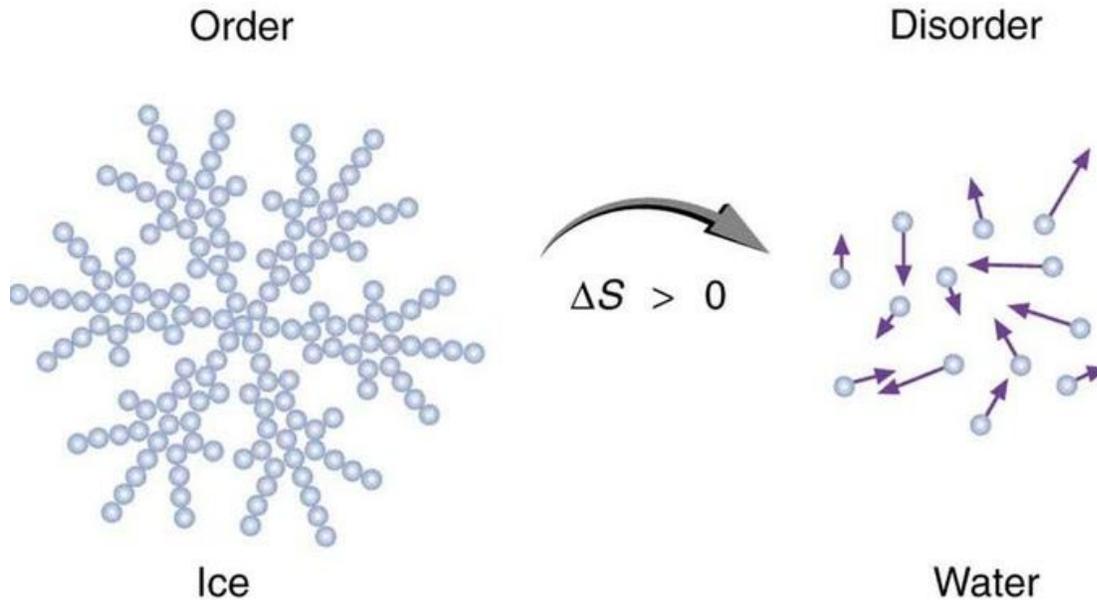
except for very brief elastic collisions in which they may exchange momentum and kinetic energy.

Key Points

- Mixing two systems may decrease the entropy of one system, but increase the entropy of the other system by a greater amount, producing an overall increase in entropy.
- After mixing water at two different temperatures, the energy in the system that could have been used to run a heat engine is now unavailable to do work. Also, the process made the whole system more less structured.
- Entropy, unavailability of energy, and disorder are not only related but are in fact essentially equivalent.

Key Terms

- entropy: A measure of how evenly energy (or some analogous property) is distributed in a system.
- disorder: Absence of some symmetry or correlation in a many-particle system.



Entropy of Ice: When ice melts, it becomes more disordered and less structured. The systematic arrangement of molecules in a crystal structure is replaced by a more random and less orderly movement of molecules without fixed locations or orientations. Its entropy increases because heat transfer occurs into it. Entropy is a measure of disorder.

As an example, suppose we mix equal masses of water originally at two different temperatures, say 20.0° C and 40.0° C. The result is water at an intermediate temperature of 30.0° C. Three outcomes have resulted:

1. Entropy has increased.
2. Some energy has become unavailable to do work.
3. The system has become less orderly.

Key Points

- In the early, energetic universe, all matter and energy were easily interchangeable and identical in nature.
- As entropy increases, less and less energy in the universe is available to do work.
- The universe is destined for thermodynamic equilibrium —maximum entropy. This is often called the heat death of the universe, and will mean the end of all activity.

Key Terms

- geothermal: Pertaining to heat energy extracted from reservoirs in the Earth's interior.
- entropy: A measure of how evenly energy (or some analogous property) is distributed in a system.
- asteroid: A naturally occurring solid object, which is smaller than a planet and is not a comet, that orbits a star.
- Living organisms have evolved to be highly structured, and much lower in entropy than the substances from which they grow.

It's possible for a system to decrease its entropy provided the total change in entropy of the universe increases:

$$\Delta S_{\text{tot}} = \Delta S_{\text{sys}} + \Delta S_{\text{env}} > 0$$

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.entropy: A measure of how evenly energy (or some analogous property) is distributed in a system.

<https://chemed.chem.purdue.edu/genchem/topicreview/bp/ch21/entropy.php>

1. Finally, the disorder to order and order to disorder can explain many facets of life, here are some examples.

a) The disordered creature becoming more ordered through evolution

b) Through life we discover order, and become ordered.

c) Through time, priori's are realised and order is instilled.

d) Drugs, disorder (nature) creates disorder, yet disorder can instill order.

e) Diseases, either disorder (sickness) creating a need for order, or vice versa.

“Entropy is fundamentally a probabilistic idea: For every possible “usefully ordered” state of molecules, there are many, many more possible “disordered” states. Just as energy tends towards a less useful, more disordered state, so do businesses and organizations in general. Rearranging the molecules — or business systems and people — into an “ordered” state requires an injection of outside energy.

Let's imagine that we start a company by sticking 20 people in an office with an ill-defined but ambitious goal and no further leadership. We tell them we'll pay them as long as they're there, working. We come back two months later to find that five of them have quit, five are sleeping with each other, and the other ten have no idea how to solve the litany of problems that have arisen. The employees are certainly not much closer to the goal laid out for them. The whole enterprise just sort of falls apart.

It reminds one distinctly of entropy: For every useful arrangement of affairs towards a common business goal, there are many orders of magnitude more arrangements that will get us nowhere. For progress to be made, everything needs to be arranged and managed in a certain way; we have to input a lot of energy to keep things in an ordered state.

Of course, it's not a perfect analogy: We have to consider the phenomenon of self-organization that happens in many systems, up to and including human organizations. Given a strong enough goal, a good enough team, and the right incentives, perhaps that group wouldn't need a lot “outside ordering” — they would manage themselves.

“The ... ultimate purpose of life, mind, and human striving: to deploy energy and information to fight back the tide of entropy and carve out refuges of beneficial order.”

— *Steven Pinker*

Sociologist Kenneth Bailey writes:

When I began studying the notion of entropy it became clear to me that thermodynamic entropy was merely one instance of a concept with much broader applications ... I became convinced that entropy applied to social phenomena as well.”

“Entropy is an important [mental model](#) because it applies to every part of our lives. It is inescapable, and even if we try to ignore it, the result is a collapse of some sort. Truly understanding entropy leads to a radical change in the way we see the world. Ignorance of it is responsible for many of our biggest mistakes and failures. We cannot expect anything to stay the way we leave it. To maintain our health, relationships, careers, skills, knowledge, societies, and possessions requires never-ending effort and vigilance. Disorder is not a mistake; it is our default. Order is always artificial and temporary.”

Resources:

[1] <http://www.exactlywhatistime.com/physics-of-time/the-arrow-of-time/>

[2] Peter Atkins

[3] Based on the work of Tom Tombrello

[4] Derived from the work of Peter Atkins in The Laws of Thermodynamics: A Very Short Introduction

<https://chemed.chem.purdue.edu/genchem/topicreview/bp/ch21/entropy.php>

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<http://entropysite.oxy.edu/ConFigEntPublicat.pdf>.

<http://www.scholarpedia.org/article/Entropy>