ISSN 2347-3487

WAVE NATURE (Part 1)

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Abstract

This essay provides evidence that light and other such waves never at all travel on a continues sine formation, and that at no time these are produced at their full frequency. With further evidence that the dispersion of light is never at all by any change in velocity but by incidence only, and that all waves exist by half-lengths only. And in order to do it justice my exposition became rather lengthy, I therefore beg your patience to bear with me to the end. This issue then may prove to be a giant step forward in the knowledge of fundamentals.

Key words

Waves; Length; Frequency; Velocity

Council for Innovative Research
Peer Review Research Publishing System
Journal: JOURNAL OF ADVANCES IN PHYSICS
Vol. 11, No. 2
www.cirjap.com, japeditor@gmail.com

ISSN 2347-3487

WAVES BY HALF-LENGTHS

Finding a wavelength by the hot spots in a microwave oven is anything but accurate while the frequency on which those ovens operate is clearly listed on it. The rough measure of 6-cm for the half wave is guaranteed to provide one with erroneous results. Given a listed frequency of 2.45 gigahertz, and that divided into the 300.000-km constant of the magnetic velocity equals to 30 billion-cm, that then comes to 12.245-cm the half of which is 6.122-cm, and never 6 cm.

And to find the velocity of that microwave we require a measure of its amplitude as well as length. For since all magnetic waves operate on **a three dimensional basis**, their velocity for distance in time must likewise be calculated three dimensionally. If thus we utilize a circumference at 0.0484-cm (Ref-1), the calculation is as follows. 12.245 + 0.0484 is 12.2934-cm, and that into the 300.000 comes to some 24.403, which then multiplied by the nominal length of 12.245-cm comes to a relative velocity of 298,818-km/sec. That particular wave now if drawn out on paper would be about the thickness of a heavy pencil line 12.2 inches long, with a circular area of 0.0484 cm, which is about 0.019 of an inch.

But "why" do these waves show themselves in half-lengths rather than full lengths? And, do these ovens really operate on a frequency of 2.45 GHz? These are the topics by which we will begin to investigate the real nature of the waves of the spectrum, along with the fact that these types of waves are not found continues.

As a first, we must understand how wavelengths are produced, and at what rate of, and **have this understanding that the secret to wave production proceeds in and by rotations**. A mouth full is it not, and new to our senses? We can always view the sine formation of electricity upon a screen, all because **electricity is always a sine formation, it can never be anything else**, but if we fancy ourselves to bring something like a radar wave upon a screen, we are deceiving ourselves. All because these waves travel so fast like more than 6 times around the world in one second, how short will their duration be upon a computer screen?

Since then electricity also seems to travel like unto light, **it is sight deception**, electricity for it's being does not travel - it only rotates, wherefore its waveform can always be seen upon a screen. The **format** for its pattern however proceeds at the speed near to that of light. (Ref-1) The rate at which electricity rotates then can be regulated wherefore it can be seen upon a screen. When I say **rotations by rotations and into rotations**, you at this point will have no idea as to how marvelous these words are, wherefore you must bear with me just to get a general idea into the reality of wave production.

Atoms rotate, and so does electricity as well as magnetic waves, and even magnetism is a movement in and by rotation. The earth rotates, the sun rotates, all the planets circle, and so do galaxies. As then we generate electricity by rotations and for each half turn reverse that rotation, our sine wave will appear to go up and down. And equally so by DC that by its rotation alternately shows its polarities to any magnet by which again a sine formation is produced. (Ref-4)

For our microwave ovens we quote a frequency of 2.45 billion events per second. But that is not necessarily the real frequency; it is merely the figure of how many 12.245 cm wavelengths will fit into a length of 300.000-km. **The real frequency of any wave is by what number they are produced in any one second of time.** If thus our electricity with its rotation of 3600 RPM multiplies that rate in revolutions impacting upon a magnet by a factor of 1000, we will have a number of events to the tune of 3.6 million (3.600.000).

The unit may thus produce 3.6 million wavelets at 12.245-cm in length every second in time. And 3.6 million into 2.45 billion is 680. Meaning there is an open spacing of 8,333.4-cm between each and every wavelet. Or, each single wavelet comes only once for each 680 possible options. The rotational resonance of our every day electricity at 60 cycles/sec must multiply the events b**y a factor of 40.8 million in order to come to a frequency of 2.45 GHz. And that my dear reader is not done.**

For these things simply do not occur, not even the sun is sending forth its light and other waves but by increments, by a specific rate of. If only 1 wavelet in a million is too much volume from the sun to hurt our eyes, how will we endure it if they came 1 in a thousand, like the brilliance of an atomic explosion guaranteed to blind us? I of course am using examples, not accurate figures, so don't get me wrong. But do not deceive yourself as if all waves are produced end-to-end - one connected to the other**. That is not seen nor done as I intend to substantiate with my rather lengthy review in the nature of waves.**

One must come to the realization that when we discover a wave having a length equal to 12.245-cm, we came to its frequency only mathematically and our knowledge that the constant in the velocity of all magnetic waves is arbitrarily set at 300.000-km/sec. And so by dividing the length into the constant (Vc) it comes to 2.45 billion - as a **possible** (or rather mathematical) frequency, and I shall repeat it to say - **only as a "mathematical" frequency, not the real events per unit in time**.

Then we come to half-lengths. Why are waves seen by half-lengths? The answer in a nutshell is - **because waves are half-lengths,** they are never full lengths **but by computation only**. In all reality all waves are so **by their so-called half-lengths.** And remember how I said, **"So called."**

And now I know that I got you lost in this physics, for at this point we have as yet no idea as to what I am talking about, and I will have to do some explaining in order to make myself understood in a way that you may understand it along with me. For I know that here we have come upon something that no man to date had any inkling of, but if he is

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willing to stay with me and pay attention at my every word he may be enriched as I am enriched from the Father of all creation.

ANGULAR MOMENTS

Why is it that I so often said that light or any wave is not by lengths but in their **angular moments?** And how is light refracted by a prism? Or let me rephrase it to ask - by what part of a wave do the blue color ones refract more than the red colored ones? **Angular moments!** Is that not the answer? It will not be as some have it by a change of velocity, for while that does occur**, velocity is not the cause**. I made this clear on other pages, (Ref-2). The blue for their shorter so called length travel by a shorter, or sharper angle to their line of movement than the red waves, wherefore these blue ones must and will take a shorter turn when struck upon the face of a prism.

And so **what is that angular moment that as such is the true reality of any wave?** It mind you is its half-length, or seen as a half-length as well as computed by a half-length. Here then in order to better clarify myself we need an illustration like Figure 1. The angular moment of any wave **is always** from X to Z after which it turns to go into the opposite direction towards R. If this is visualized upon a treaded rod it comes to a groove once around the rod, or simply one turn of its rotation.

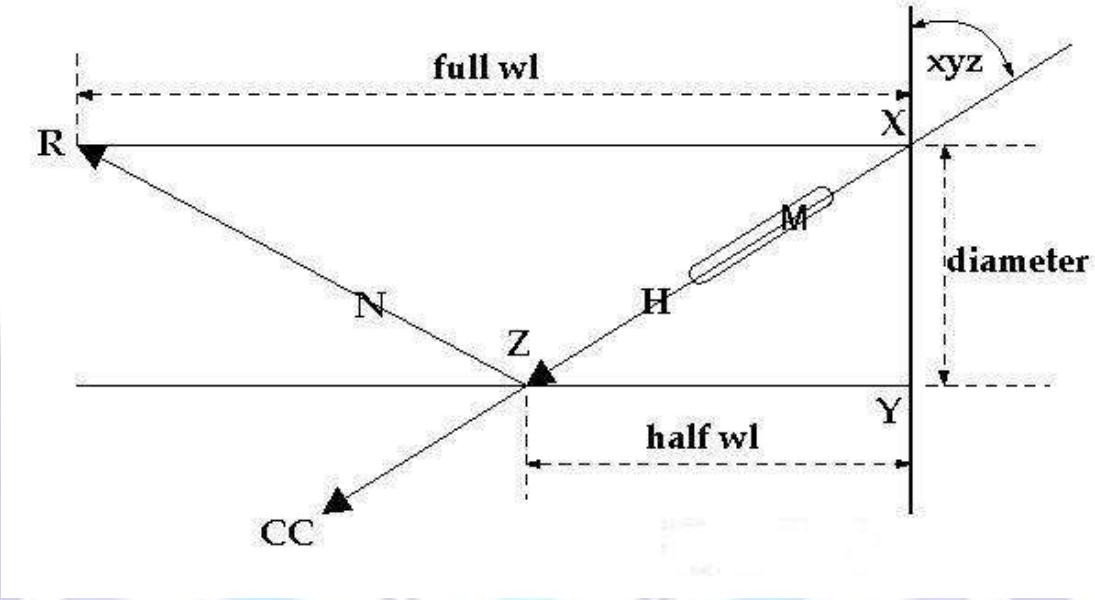

Figure 1. Illustrates the angle by which all wavelets proceed around a circular format.

But that single turn as it appears - is by two directions as well. For here again ask yourself this question - by what part this so called wave does it refracts itself upon a prism? If we answer saying; **"Its angular moment,"** we are hitting the nail squarely on the head. That angular moment then happens to be the coordinates of **X, Y, and Z,** that as such **comprises to be the so-called half-length of the wave.** X to Y is the diameter, with Y to Z the length that as such comes to X-Z as the line of that angular moment. The angle and/or degree of refraction for this wave upon air or water or any prism is the X-Z, by X-Y-Z.

Conclusively it is **not by any whole length,** for then there would appear to be two different angles, the X to Z, and Z to R. In all reality the Z to R part does not exist; X to Z is the only real part of a wave, its most forward part. **It is logical that a grove around a drill-bit has but a singular end**, a single oncoming, a single X-Y-Z coordinate, for while it turns that X-Y-Z always remains the head of the wave.

The wave will thus always arrives as X-Y-Z upon the face of any change in density for which cause when out of the normal it will change its direction of linear movement. The other half of the wave (Z to R) is in effect the tail end with the direction of movement opposite from what is illustrated. If the collateral, the substance of the wave were three quarters of the way around the circumference it would still be reckoned by the half of a full length, since its X-Y-Z can never be more than the span of its diameter in the length thereof.

As a rotating entity this wave may refract, if on the other hand it were the form of a sine wave – what is it supposed to do? For the first half go to the right, then for the second half to the left? And to insert a factual statement; **If waves did not rotate they would never refract, nor therefore disperse in its colors**. Secondly**, waves always rotate since these are at all times produced in that manner, nor can they travel in any other way.** It of course is equally as much in the whole circumference of the wave to operate by its single angular moment by which it moves and refracts, for that angle in its given moment registers itself always singular in the single passing of its diameter, therefore it shows itself by what we call half-lengths.

ISSN 2347-3487

The people that deal with antennas ought to know that a full wave antenna is never a good idea; half-lengths or even quarter-lengths are better all because a wave is never anything more than its half computed length. The reality of a wave as seen by half-lengths may then equally be interpreted for quarter-lengths. And why is that so? It is because of its angular moment, **for once the impulse has made its start and is even a quarter way out around the circumference it will continue so for the full half, after which it in all essence goes into the negative.**

A blue color wave for example does not refract upon a prism by its 400-nm nominal length since its X-Y-Z is 200-nm, (Half-length). **This fact in nature is substantiated by the degrees measured in refraction upon a prism,** and prisms do not promote theories.

Did I lose you, or are my definitions taking hold? I know that I am repeating myself to hammer this into us that waves are **angular moments and nothing more nor less than angular moments.** Nor can an angular moment be regarded like M to H, in figure 1, or from M to Z. No, it must always be from X to Z, no less, no more. If it were any more or less than X-Y-Z would not exist, nor be the factor of its refraction, be it air water or a prism. The full length of any wave as we have it does not reside anywhere in the real world, **but only in the realm of mathematics, and as such we have need of it** - **but only in that realm of mathematics.** Look at the illustration figure 1 with the wave as X-Y-R, when therefore it comes upon the face of a prism which way is it to refract? Is it X-Y-Z, or R-Y-Z, or both? The illustration shows two angles in opposite of one another in that single wavelet. Which one of these is thus the real one by which that wavelet will turn in refracting upon the face of a prism?

The answer here is t**hat we are missing the point.** The whole of the wave is but a **single angle by a single direction,** since it is like unto thread around a bolt, or grove upon a drill-bit. And as such these wavelets can never come upon the face of anything but by the X-Y-Z, **and as such it always turn into but one direction**. When light enters into water – it warms that water. But how does it warm that water? It does so by its rotation as it makes contact upon one of the two connecting points where the atoms of hydrogen are fastened. In making contact the rotation of the light causes an increase in the rate of movement there, at which time it is also terminated. But with a continual supply of light the water is gradually heated. As therefore all of the light will sooner or later come upon a connecting point and be terminated, so it is that by approximately 600-ft down no light at all will be found.

Have I now lost you? It is obvious that no drill-bit can turn clockwise, and counter clockwise both at the same time. Or, if it did not rotate at all then there would indeed be two angles, with one to cancel out the other. But that in itself cannot exist; a mere line has no reflection nor refraction. Nor can a straight line with a dent in it be regarded as anything since that dent as such cannot move forward with the line as a dent - it must circle around something even to be a dent.

Perhaps my choice of words may not be the best, but then I am what I am, but I am doing my best to clarify what is most obvious and factual. Since thus our angular moment comes to the half-length of any wave conception, it is a mere deception on our part to call it as such. It in all reality is not a half-length but rather **the complete wave angle;** it is **the angular moment for whatever length that may be.** Therefore also did I say; **wave "conception"** adding the word conception, since that is what waves are, simply a conception of us, rather than truth or reality.

If I say that it is the **"complete wave,"** I am correct as well as deceptive, **correct in that it is complete,** but **deceptive by calling it a wave,** since it as such **is not a wave** but nothing other than **an angular moment** being driven in a rotation around the atoms in nature as it is driven forward. Waves - as wavelike movement - **is nothing more than a way to go**, or the way by which they move or appear to move. For never at all does light or any magnetic wave move by a weaving formation. **It moves by rotation that as such appears like unto a wavy line.** If we could see the atoms or molecules around which they move about we would no longer call them waves but rather **rotating entities.** We therefore - **can** - visualize what cannot be seen with the naked eye.

SIMPLE LOGIC

Simple logic tells us this, light is a code, as all waves are a code. If then these codes traveled by oscillation the velocity of the oscillation itself would have to be twice the speed of light, a velocity that we know does not exist.

Simple logic also tells us, that if the oscillation were to move at the maximum velocity of 300.000-km/sec, the factual forward velocity of the wave would never at all come to the speed of light, but more to that of sound.

Simple logic again tells us, that the reduction in velocity for any wave is by virtue of its angle, the angle by which it must turn into a circumference. The angular moment moving like a thread around a bolt.

Simple logic therefore certifies how the substance of all waves travel with one single constant, that for distance in time is curtailed by the angle of its rotational path. The longer the length so much the less its angle will be by witch it will travel at a higher relative velocity. And the shorter the length so much more acute the angle will be whereby it will travel at a slower relative velocity.

Simple logic dictates that light or any wave for its self-being never slows down for any density, and that by compression it is forced it into a shorter angle whereby it is also forced to travel a longer route within the same nominal distance, reducing its velocity for distance in time.

Simple mathematics shows us – how when the speed of light in air is 299.702-km/sec, with the constant at 300.000-km/sec – then the circumference by which it rotates can not be any more nor less than 4.84 angstroms based on the 700-nm length, and mathematics do not err.

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Simple logic is not alone in telling us that - transverse waves as well as continues waves for the magnetic spectrum – is a fallacy,

THE NEW WAVE IN PHYSICS

I of course am wrong in this heading to state that we have a "**New wave in physics."** What we really have is **a new or better understanding of the phenomena that we call waves. Waves that are not at all waves but by they're tracking only.** We have the habit to interpret things by their appearance, like light behaving as a sine formation, since indeed these do appear that way**, but that does not necessarily mean that they are that way. If with your car you zig zag your way to the market, it is not that you are a sine formation but only your path of travel appears as a sine formation.**

Does that along with the foregoing explain it better? I know that I am introducing a whole new realm of physics, since **I am introducing nature as it is by the factors and the evidence that it displays unto us. I therefore am not anything like man's physicists, even as I am not anything like man's rulers, nor as his teachers or his preachers.**

CONDUCTANCE

It in a way boils down to **"conductivity", and at that, "directional conductivity".** These angular moment are after all magnetic movements, as coordinates transposed by magnetic power, like if two magnets are near to one another these will likewise join their lines into one. And so we have come to what in general is best known as Magnetism - that I for its reality termed **Conductive movement into directionally conductive movement.** And to somehow show the reality thereof, I entered an illustration of how all things are held together by grids, like the one of water (Figure 3) when it is frozen.

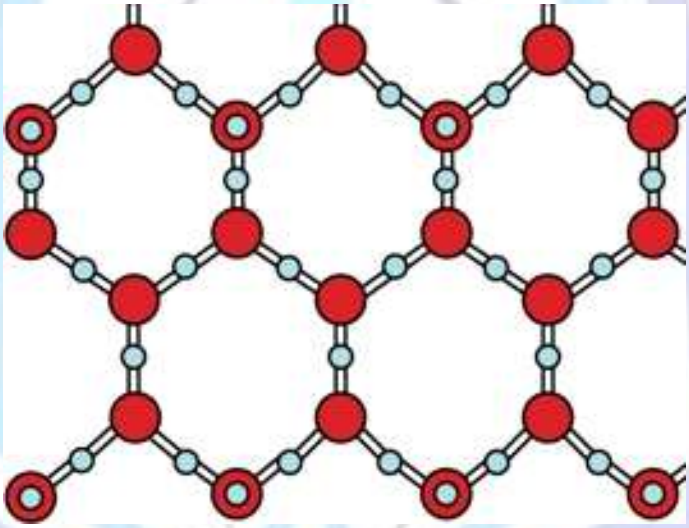

Figure 3. The grid of frozen water.

How or why do you think there are these open areas in it? They are there because all the atoms in the circular fashion around it are projecting a like polarity towards it. That like polarity then in the center of these open areas are movements in opposite direction of one another. And like all magnets will draw themselves away from each other when the direction of their movement is in opposite, so the open areas come to be. But by the same token when movements are in the same direction of one another they will cling to one another. That is how these atoms form these grids, and there are many different arrangements of such grids by and with the many different elements.

Everything in nature for its fundamental movement is magnetic, and why then should you exclude the atom? Or why should you exclude waves? Find something fundamental in nature in which there is no magnetism, and you will be the first to have found something new.

THE REAL REASON FOR THE HOT SPOTS

But we have not as yet come to the **real reason** as to how and why there are hot spots in a microwave oven. The first logical conclusion is that these waves are bounced up to one another creating that so-called standing wave, or wave grid. But that in itself does not create the hot spots, the hot spots occur at the head of the waves. Think clearly and answer yourself this question: At what part of a drill-bit is the work done? Where are the cutting edges of a drill-bit? They are at the very tip, or as we conclude **at the head of the wave.**

Our wave then is like a drill-bit for as it moves forward it rotates. The head of each wavelet or angular moment is the most forward part of the Y-Y-Z coordinate. And that most forward part - as it by deflection and reflection is bounced up against others, is not only in a straight line but at ninety-degree angles as well. Many of these waves then are canceled out by one another, but with a continual supply it does not seem that way. When for example two of

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them are head on by a ninety-degree, both of them are boring, for while they are terminated as soon as they have made their single turn - that boring act continues by the continual supply of new ones. Each wavelet lasts for only a tiny fraction of a millisecond.

That boring of which I am speaking is their rotation upon and around the atoms and molecules that reside within the circumference of their rotation, and that terminates them**, for these waves act just as light acts**. Light as it strikes the ground by its rotation increases the movement within and upon the atoms so struck. At any time when a wave passes the atoms and molecules of any substance - like in air - it does not agitate them. This is obvious with the earth - how it is heated from the ground on up.

The same is true in our microwave ovens; it is at the point of termination where the commotion takes place. And since these are forced into what appears as a standing grid of waves, the heating, or agitation, or increase of general movement (as it really is), only takes place at their heads. **A wave is like a boring tool, or like a pencil writing a circle, its purpose by design is to add or increase the rate of movement by its rotational movement.** And the instant that it does that wavelet is terminated, it no longer exists, unless by the coordinate upon which it is struck it is reflected or selectively remitted. (Color)

As then the tip of a drill-bit is its cutting end, **it is in conjunction with the rest of the drill-bit.** For with the wave as soon as its tip makes contact upon that which it cannot pass - the rest of that angular moment follows to - in all essence - draw a circle. That circle thus is a rotating movement causing an increase in the general movement of the substance**. With our solar panels it creates another circular movement called electricity**. In our microwave ovens it raises what is best known as the general movement of things - that in relative terms is known as temperature.

MORE TO WAVE PRODUCTION

Lengthy is it not by which I am teaching this, and yet what choice do I have in order to bring out many factors leading to the same end? One can correlate many factors simultaneously, but I can only write them down one at the time. If then the previous does not explain all that we wish to hear, it does in a way provide us with some evidence as to how and why there are hot spots in a grid of wavelets. Therefore also I was bound to introduce this reality that like all things of a magnetic nature **these are likewise directionally conductive.**

But there is more to this, for remember how light readjust itself at the slightest change in distance between atoms either expanding or being compressed, and/or refracted into a change of direction? It is by this that on a hot day we observe that apparent water on the road. And how by any mirror without any lapse in time it takes a turn into the opposite. And how for any change in density its velocity also changes. These factors tell us that waves are **extremely susceptible to the medium in which they travel.**

These angular moments thus, **- as the proper name for all wave phenomena**, - is not something that travels on its own independent of its surrounding, but quite the opposite. Its forward momentum may be driven by the 3M, the magnetic entity, but it does so by encircling the media in its path. And not only that - but it makes contact upon each of them, or as we might say **- it is duly susceptible to the spacing of each of them by which their length and velocity are regulated.** No wave can ever travel independent of any media, that goes for light as it does for sound, or any other wave that can be thought of in any medium - space inclusive.

Pass light through air at any normal temperature, and by heating a segment of it the light will instantly be expanded for length and increase in velocity, as well as take a change in direction for those waves arriving out of the normal. How therefore shall it move by any independent format? A 122-mm wave for example is not made by atoms nor by molecules, but by impulses upon a large volume of such parts, like as when in a pool by suddenly pushing upon the water by the whole width of that pool we create a large water wave. With microwaves (Magnetron) we utilize a volume to drive a specific indent into the always-residing magnetic lines of movement.

TURNS INTO TURNS

I wish to bring our attention to something that we are able to count for revolutions per unit in time, namely our electrical current that as a waveform turns by a rotation equal to 60 revolutions per second. And for it our generators are given the right amount of RPM by which it will maintain those 60 cycles. And/or it can also be regulated with transformers since **"Turns equal turns, and compensates for turns."** (Ref-5)

Conclusively the resultant, namely our electricity, rotates by that rate at which it is or was produced. When therefore we hold a magnet next to that rotating magnetic force it will be pushed and pulled to and from that magnet by the rate of 60 cycles, (120 volt) which is 3600 RPM. If however we take a 12 volt battery and place a magnet next to its conductor, the rate of revolutions would be 12 times each second or 720 RPM. (Ref-4). This proves that electricity rotates, and by rotations other rotations may be made, like unto waves.

A magnetron creates waves in their length by resonance, and to resonate is to move back and forth, a one way and the other, or switching with transistors. And for this cavities may be used. If by a magnet you alternately keep turning a positive and negative front to it, you will obtain a resonance to whatever rate of revolution you are accomplishing that feat. For a continues wave of an angular moment now by which a full length of 12.245-cm may be obtained, one will have to do so 2 x 2.45 billion times each second. But in bringing that resonance higher and higher to reach a back and forth movement to the tune of 2.45 billion, one may possibly be generated much shorter waves then the 12.245-cm.

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One may instead be producing such that are a thousand times shorter instead of the 12.245-cm waves that he intended. Our rate of resonance need not necessarily conform to 2.45 billion, to have 4.9 billion individual movements within any second of time. **I doubled it since each single factor of something that resonates has two distinct movements, a back and a forth movement, wherefore the rate of such movements must always be times 2.**

As then any length of a wave also requires a diameter by which it is transposed, and the angular moment proceeds by a circumference of that diameter into the length of it, it comes to a three dimensional concept rather than two dimensional. And it - by virtue thereof must likewise be computed three dimensionally, and not two dimensionally. Evidence of this is on page 80, (Ref-1) how it is imperative that the velocity of any wave is computed by its three dimensional concept, anything else is wrong. .

The 12.245 cm wavelength may compute to a frequency of 2.45 billion, but it is not necessarily produced by a resonance of 2.45 billion. With our intend of 2.45 billion we may be producing wavelengths to the tune of 0.02-cm or shorter still, which - when these are computed to a number in frequencies comes to 15 trillion. This does not mean that we have placed 15 trillion 0.02-cm lengths end on end to pass within one second of time, but there may be only 1.225 million full back and forth movements as the number of waves produced in that one second of time.'

Thus within the 15 trillion possible there are but 1.225 million of them on line, that is 1 in 12,244 that could fit within the line. And so we have a 0.02-cm wavelength proudly acclaiming that it has a frequency of 15 trillion. **But are we correct, or do we make ourselves out for liars?** It is a lie to say that with this 0.02-cm wave we have a frequency of 15 trillion, since in fact we only produced them 1 in 12,244 possible lengths. The frequency therefore is 1.225 million, with an optional to 15 trillion.

We need not come to 600 trillion in order to have a 500-nm wavelength, but rather **come to a short enough impulse on a narrow amplitude to generate that sort of angular moment.** But how is it of the atoms of that tungsten element to resonate or oscillate at a level so minute to produce these 500-nm lengths while the instigator has but a revolution of no more than 3600 RPM? The answer lies in their size as well as their own moment of rotation.

As therefore the electricity is driving the atoms to a frenzy - the speed of their so called internal movement is raised much higher, evident in the fact that they turn red hot, or white hot, **temperature being a degree of movement.** The factor, by which the electricity thus multiplies the rate of movement upon the atoms, can be very high. And there are still other reasons that for the moment I will forego upon. As then the electricity is cut off and on at 60 times each second, so our light bulb is turned off and on at 60 times each second. Point an RPM counter to it and it will read 3600 RPM.

By applying a rotational magnetic force (Ref-4) upon the metal within a light bulb we are applying our means in and upon the atomic level. And at that level, or magnitude, very short wavelengths may be produced, since these are likewise produced on the same narrow scale - the diameter of which is slightly greater than the diameter of these atoms. (The velocity of light as established showed itself to have an amplitude slightly under 1.5 angstroms. Ref-1)

When we apply our means on the molecular level, the diameter being much greater, so also the lengths will be. What we produce are nothing more and nothing less than angular moments that for their onward movement **appear as sine formations.** Any and all angular moments then are instigated by a combination of two factors into a third.

No such wave therefore is ever a sine formation; <u>its way of travel appears as a sine formation.</u> A resonance or oscillation are as such the impacts upon a rotating or spinning movement whereby to create distinct moments into the angular. And that angular is as such born forth upon the ever-present 3M, the magnetic movement at a velocity to the tune of 300.000.000 meters/sec.

A 1-cm wave therefore cannot be produced on the atomic level, nor even on the molecular level, nor can light waves be produced on the molecular level or anything greater thereto. All things have their magnitude, and as such will abide by it. A 1-cm wave goes around billions of atoms, and **it took the combined effort of billions of atoms to produce it. H**ow therefore does man conceive that such a thing can be produced by a mere electron, by some minute part of an atom?

WHAT IS A WAVE?

What is light, the light to our eyes? For here is an eye opener, namely - that by which we see is not light. Light in all reality is no more than a code placed upon a rotating line of movement. **For it is by these codes that we see,** which is to say, by these codes we observe the surface of things. We see through the air because there is no termination, the codes merely pass by, but where they terminate they are selectively remitted to not only present us with color, **but with the very vision of it.** All this by angular moments driven in a circular pattern. Take out the angular and it will be a straight line and darkness to us.

Driving a line of movement into a circular format now would be extremely difficult if it were to do so in an open area, a line like that needs something to hold on to, something that serves as a base of operation or movement. And there is just such an entity for it to move by, namely nature in all its atomic and molecular form. The evidence to this is when we behold that apparent water on a hot roadbed, or any prism, or our face in the mirror. **Light, and all other waves move with full dependence upon all matter.**

People like Schrödinger, Neils Bohr, Werner Heisenberg, and Maxwell, all made their evaluation in the nature of waves, they saw it as wavelike, and as quantities, and I no less made those same evaluations, but I frowned upon

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referring to the quantities as particles. When however anyone came to something called space-time by me they fell through the cracks. Aristotle for example saw it as a disturbance, nor therefore was he far off, and while I pictured the nature of waves in various ways, some of them were but to humor us.

MODULATION

Let us go into "Modulation" **to reveal** what else there is in the nature of waves of which **man as yet has no conception**, **nor ever did I speak of it before, nor was this said or heard before.** Thus it will be an altogether new and unheard part of the sciences. Nor will this be mere hearsay, but rather a **giant step forward in the knowledge of wave formation.**

In the way of modulation there is what is called **Amplitude Modulation,** and **Frequency Modulation.** To modify frequencies is simply to alter the number of events (wavelets) per unit in time, and this is done with much of our equipment. In order to send a message by waveform one usually establishes a carrier wave that is like choosing a freeway by which to pass from coast to coast, a fixed wavelength upon which a series of events (frequencies) may be placed to serve as a code or message.

To thus send a message by Frequency Modulation it is like a digital counter, any number of events per unit in time, like sound converted to electrical impulses that are then interwoven with that carrier wave. But even a carrier wave is never any sine formation - to have its full number of events.

When for example we generate waves at let's say - 50 million events per second in time. And we do so upon a 1-mm wavelength, the maximum number of wavelets that could be produced is 300 billion in any one second. But we are producing these 1-mm wavelets at a mere 50 million per second, all of them exactly 1-mm in length, all of them having an identical angular moment, and traveling at identical velocity, **for if not so - it would not be a 1-mm wave, nor as such serve as a carrier wave.**

We must realize **how any variation into the length of a wave varies its velocity as well**. If therefore a 1-mm wave is followed by a 1.1-mm wave the 1.1-mm wave will advance upon the 1-mm wave, **by consequence of which it as such is not a carrier.** Nor as such can it be analog, **any kind of sine formation**, for as the second wave travels faster than the first there cannot be any bond between them, they are at all times **independent wavelets,** correctly termed **angular moments.**

From hereon in let us modulate the number of events, it's so called frequency, I now said - so called frequency, - because it is not **"it's" frequency, it's 300 billion,** but **"OUR" frequency the 50 million** which we are depositing upon the line. If thus we alter the events from 30 to 70 million, we have a bandwidth of 40 million. If then we modulate these events so that our receiver may activate a certain switch at 30.5 million, and another switch to be activated by 40 million, and again another by 50 million, we have what may be called a numerical code. The receiver thus will pick-up on that wavelength by a numerical order, or it will pick-up on a whole series of events as it was fed in electrically by a voice transmission each letter having its own number of events.

And now for the reality of it all. Below is an illustration; Figure 4, of how man conceives his frequency modulation, the fixed carrier wave, and the signal that he places upon it with the results thereof. Notice however that there is something very wrong here, for when we maintain a fixed wavelength of let's say 11.035 meters, the angular moments and the amplitude (diameter) all remain the same. And yes, so indeed the carrier wave is shown, except that it is shown at its maximum events, it's full 27.185 million events, **and that far out of proportion.**

An 11.035 meter wave travels by an amplitude in diameter at about 5-cm, To therefore illustrate a length of 11.035 meters by no more than 5-cm in width it will appear more like a straight line, it's sine formation on a full scale drawing can hardly be seen.

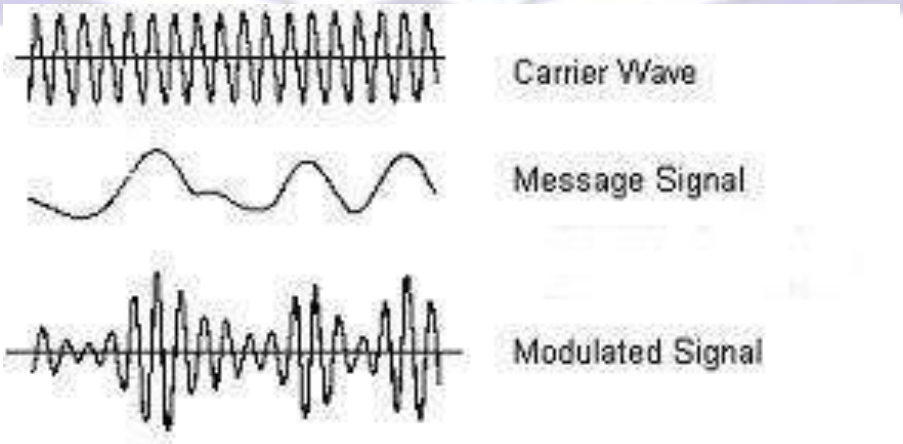

Figure 4. Illustration of waveforms that can never be. Even as atoms with eyes and hooks was an old erroneous conception – so waves by continues formation is in error.

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To then alter the number of events, called Frequency Modulation, you will have to cut down on the number of events while the lengths remain as they are. The illustration here however shows the modulated signal by a whole series of different wavelengths **each of which must travel by a different velocity**. A**nd so what happened to the carrier wave? It disappeared did it not?** Yes because **the illustration depicts the fallacy of what is normally referred to as amplitude modulation.**

Stop and think now, be realistic within yourself knowing that every different length must travel with a different velocity, a fact of nature that has proven itself over and over. How therefore by Figure 4 can the illustration of Message Signal, and Modulated Signal possibly exist? None of these lines could in any way be connected to one another, **since that violates the laws of nature and our knowledge of it. Is it not the law of nature that every length must travel by a different velocity that thus in effect defeats man's conception of continues sine formations?**

And so let us investigate this matter without physical illustrations. If we have a carrier wave of 11.035 meters what shall its frequency be? The answer depends on what reference we are looking for. If one wishes to know what the maximum frequency is of that length, the answer is 27.185 million. But we cannot modulate any such carrier wave, other than to go down, since there is no room to go up. Nor do we ever modulate the 11-meter band at such frequencies, but at a much lower rate so that for any signal we can go up as well as down in the number of events. Man's vocabulary therefore to specify that we are operating on 27.185 gigahertz on the 11-meter band is wrong.

Then let us look at another example **to prove that waves are never continues.** A 1-mm band has room for 300 billion events, and so let it be our carrier wave. Then to modulate it, which of course can only be downwards, we alter our resonance to take away 10 billion of these events. We are now thus generating 290 billion events per second in time.

What therefore will that wave look like? How will you illustrate that wave? Will you couple 290 together in a continues sine formation, with a break in it of 10 wavelength? But what kind of equipment do you have to perform that feat? For if 290 are on a single continues sine formation with a spacing there after, you would have to generate each of these 290 at the rate of 300 billion, not at 290 billion.

This is not possible is it? For you were cutting down your rate to 290 billion, wherefore it is utterly impossible to have or maintain a continues sine formation. What you really have is 290 billion individual wavelets that are spaced by 10/300 billionth of a millimeter.

And so our continues sine formation as man is so font of portraying went out the door, it cannot exist, or it can yes, **but in practice it is never found** or generated in that way. **It is completely impractical to modulate any wavelength at its full number of possible frequencies.** And since this is never done how long will we continue in our ignorance to call wavelengths by a frequency that is never generated, nor utilized? But I am somewhat wrong here - in the above statement that is, since in all **reality we are never at any time able to modulate any wavelength at its full number of events.** This may sound like dropping a bomb on mankind, **but so it is**.

Consider this; you are aiming at producing a certain wavelength at a rate of events to the tune of 300 billion. What you therefore must do in order to accomplish that feat, is to produce 600 billion separate movements each second in time whereby to arrive at 300 billion wavelets. And since the 300 billion is already at the highest of all velocities, you will have to increase your speed to twice the speed of light.

All this because you must resonate, you must produce a switching movement for each wavelet, or by rotations to cut each rotation, (Transistors) and that amounts to 600 billion for a mere 300 billion. **Since then with any kind of equipment we can hardly get to 300 billion, how can waves ever be continues?**

As then there are two terms for length, the full and the half, with the half being the real length of the wave, so there are two frequencies, the one found mathematically by the constant in velocity, and the real frequency, the number of events that are in fact produced. Thus there is F/t, meaning - Transmitted Frequency, and F/m, meaning - Mathematical Frequency. It's our ignorance in wave phenomena as to why we attribute the wrong frequency to wavelength, or the wrong wavelength to frequencies. **And that vocabulary must change or else we will remain ill educated.**

Not everyone however is as ignorant as it is generally seen, for I quote: **"The frequency band for FM radio is about 88 to 108 MHz. The information signal is music and voice, which falls in the audio spectrum. The full audio spectrum ranges form 20 to 20,000 Hz, but FM radio limits the upper modulating frequency to 15 kHz."** unquote

A 100 MHz band has a wavelength of 3 meters upon which 100 million events can be placed. But like the quotation here, we are at most placing 15.000 events upon that line, meaning we are sending out only one wavelet for each 6,666 that can be send; (that is to say "will fit") upon that 100 MHz band.

Does this confirm that we are in no way sending out continues sine formations, but only single wavelets here and there, only 1 in 6,666 for the FM radio signal here specified? One can thus modulate it anywhere from 1 in 5000 to 1 in 6666 by which to listen to our music.

If then we are to illustrate such a wave, one must draw a short angle representing 1.5 meters in length, after which there must be an open spacing for about 5000 meters before the next angular line representing the next 1.5-

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meter long wavelet is drawn. Figure 5 here is then most likely the first time in the history of man that a true representation of a wave is illustrated. This one is of the 10-meter radio band at 15 KHz.

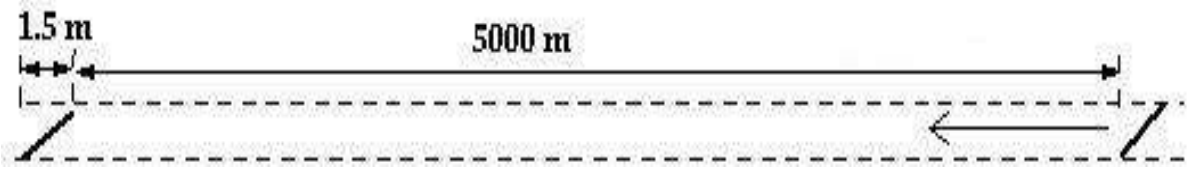

Figure 5. Demonstrates a realistic illustration of a wave, the first ever in the history of man.

AMPLITUDE MODULATION

There is also what is called **"Amplitude modulation."** The problem with this is that there is no such thing, or actually it can be done, and is done, but what we call Amplitude Modulation in reality **is Wavelength Modulation.** By it we are not only changing amplitude, since these are difficult to change, but changing lengths is easy. When therefore we are sending out a code or message by altering wavelengths, we are in effect performing what light does on a continual basis, the various lengths corresponding to the various colors.

Nor therefore can they be continues, one connected to the other with each one traveling at a different velocity. Or is this too complicated to realize? If therefore you are towing a car at 50 mph, and that which you are towing travels at only 45 mph, or 55 mph, how can they be connected? Am I simple enough here?

And so with a 1.5 mm centered wavelength to vary from 0.5-mm to 2.5-mm the same code can be produced like unto light from its 400-to 700 nm lengths. **All these lengths then will come to travel at a different relative velocity, all of them separate from one another.** If then we are worried about interference, for one to catch up with the other, don't be. **Seeing thus how light comes with many different wavelengths each one traveling at a different velocity – how can they be continues?**

If however we insist upon the full mathematical number of events that can be placed upon any such line of movement, forget about wavelength modulation, or any kind of modulation for **you will not be able to do so.** Once a line is full we cannot add another length, **all because it is full. Nor can we come to the velocity nor events needed to create any such kind of sine formation.** (Explained elsewhere)

And if as always we are using electricity to generate these 0.5-mm to 2.5-mm lengths we are not very likely to come to the tune of 300 billion, a 1 million, or even a 10 million is more than sufficient for any message. **Point in case is how we listen to radio music by only one in more than 6000.** For with the 3M at 300.000 km/sec, even one million in any second is enough to have an uninterrupted conversation with anyone half way across the world.

For while such a wave can circumvent the whole world seven times in one second, and you are but one half of a world removed, these 1 million will arrive in 1/14th of a second. One could also say that at such rate one receives 14 letters each second; that is more than I normally pronounce in any one second. And from this point on it can be refined to a 10 million, or 100 million, the latter being still a long ways from full.

To change amplitude one must change the circular diameter by which waves travel, and as he does - he is intentionally or inadvertently changing wavelengths as well, and can come to a large difference, nothing really by which to fine tune anything.

As then I spoke of interference when waves travel at different velocities to perhaps catch up with one another that is not likely to happen. For if we are sending out 10 billion on a line able to hold 300 billion, there is a spacing of 290 wavelengths in between the first and second wave. As then for modulation-sake the margins for length vary only by small degrees, so the velocity varies by small degrees, wherefore wave number 2 is not likely to catch up with number 1 before it reaches its destination. This then all in itself shows the fallacy of continues waves.

For if we alter lengths - **how can they possibly be connected to one another when each one of any different length must travel with a different velocity?** We must come to understand **that first and foremost every different length will and must travel by a different rate of velocity. And secondly; that as each different length travels at a different relative velocity; it by virtue thereof also rotates at a different rate of revolutions per unit in time. Nor therefore can two rotating shafts at different RPM; be coupled to act as one single shaft. And should I repeat this absolute and proven fact in nature, or is this sufficient?**

Modulating wavelengths is a simple matter; all we have to do is duplicate light for its octave but on a larger scale. When with our oscillations we are maintaining a carrier base by a certain amplitude, that is a fixed diameter into the circumference, we can then by increasing and decreasing the speed at which we form the waves bring them to different lengths.

The carrier in this case is not a fixed wavelength, **but a fixed amplitude** while we modulate the lengths upon it. **In reality thus there is no such thing as amplitude modulation**, **its reality being wavelength modulation.** What is called AM, is in fact WM, (Wavelength Modulation) with Amplitude the carrier. It is not impossible to change amplitude, **but it is senseless to do so,** and not anything by which to have a clear or clean signal. In any attempt to

modulate upon amplitude one is continually changing wavelengths as well as their velocities, and so why not just stick to lengths **on a firm base?**

MORE TO LENGTH AND FREQUENCY

But are we convinced how in fact we have been ignorant in so many things and that it is time for us to awaken to the truth, **to be educated**, **and to accept that education**? Or do we wish to remain blind and ignorant because it suites us better than the truth? A good question is it not, and whether this generation will or will not be so educated - future generations when they have seen the demise of their forebears, these will accept it.

One made a statement quote; **"When talking on a cell phone, a transmitter takes the sound of your voice and encodes it onto a continuous sine wave."** If now that is not a **crock**, what will be, for no one can talk fast enough to even fill one percent of any meter band. What we must learn is how a race between a turtle and a hare is never fair. **Yet man seems to think that the turtle will always tie with the hare.**

O, you think that this is not so, that I made it up? No my dear reader, I am speaking of facts for this is in reference to the above quotation. There is yet another saying; **"how a chain is never stronger than its weakest link,"** and while we know it, granting it as a fact, yet we turn around and contradict ourselves for the opposite. And so what am I speaking of? **I am making my comments on the above quotation, that's what I am doing.**

Notice how when anyone asks what wavelength cell phones and other such equipment operate on, he never gets an answer, but he is bombarded with the gibberish of frequencies. It is always frequencies, and frequencies, **always lies, and more lies.**

And how is that so - that the quoting of these frequencies are lies? It is because their figures are not true figures; **they are in effect saying how the turtle ties with the hare.** Man speaks error simply because he does not know the truth, nor does he have an understanding of what in the nature of waves is truthful.

And so let us get to the point for which we will use an illustration Figure 6. At the left is a lady talking on the phone, her voice is carried as sound waves to the phone. Within the phone these vibrations are converted into an electrical code that is then converted to magnetic wavelengths after which by way of an antenna these are send on their way through the air.

The speed at which these sound waves travel from her lips to the phone is about 343 meters per second, (the turtle at its slow pace). The speed at which the magnetic waves move through the air is near to 300.000.000 meters per second, (the hare, or our road runner). The frequency at which our lady is transmitting her lovely voice at the high end is at best 20 KHz. As then the electricity within the cell phone has the capacity to transmit at a rate of 20 MHz or more it is only receiving them at 20 KHz, wherefore it cannot deposit these events at any higher rate upon the magnetic lines of movement.

(I know that 20-KHz is a bit high for voice communication since the average voice frequency is but from 50 to 500Hz, but I am using these as an example.)

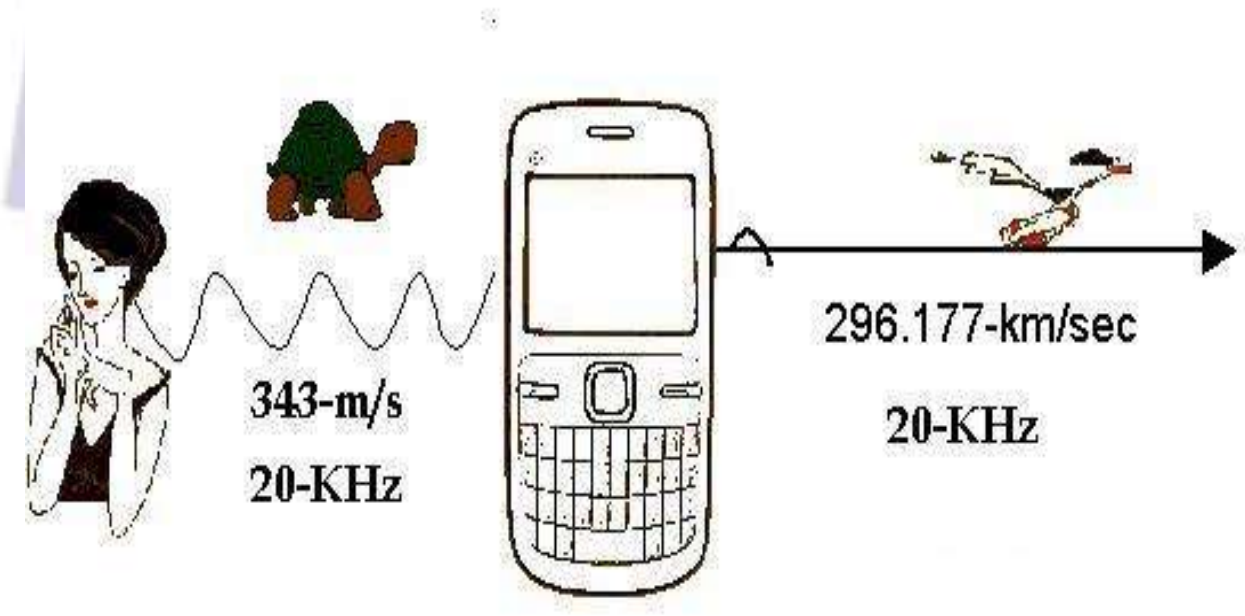

Figure 6. Illustrates the fallacy of continues wave formation.

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How therefore is it said that these devices operate on 800 MHz and 1900 MHz, when the true frequency does not exceed 20 KHz? And yes feast yourself on that fact. Does it not make perfect sense that **when someone hands you two apples a minute to pass on, you cannot hand over any more apples in that space of time?**

When there is a row of men handing boxes to one another down the line - one at the time - to unload a cargo vessel, and you are to be placed somewhere, and you are told to take in the spot where ten boxes at once are handed down. You of course will look at that person as if he has lost his marbles, and so I look at these men as well.

When they say 800-MHz, it boils down to the fact that they transmitting on a wavelength to the tune of 375-mm. Or the 1900-MHz band at 158-mm. When these wavelengths are computed into how many events they can transpose in any one second of time it comes to the 800-million and 1900 million respectively.

These figures for events are therefore only mathematical figures, and in no way real figures. For at no time will you be handing over a million apples per minute when you are handed only two of them a minute. It's the story of the turtle and the hare; it simply is not possible for the turtle to keep up with the hare. And how many times do we have to be **hit on the head for that to sink into us,** how that very same thing applies to other factors as well?

It seems childish to say that frequencies are never generated nor transmitted; only wavelengths are generated and transmitted. When it is spoken of wavelengths and frequencies, many seem to think of them as parts of a wave. But the only real part of a wave is its angular moment, that then may be found to length, while frequencies refers to the number of events.

And so what do we know of what is real in waves? Nothing really since neither length nor frequency are as real as the angular moment is, and while length by its angular moment is the only reality in any wave, **there is nothing to modulate upon except lengths, and these by size or by number.**

Frankly speaking we could rate it as insanity of the FCC or any government body to assign companies that deal with voice transmission any kind of frequency by which to transmit, since all voice transmissions have but one and the same number of frequencies.

If thus the frequency at which one must transmit is the same for all, what is the logic in assigning different companies with different frequencies? And yes think about this; think about how - unlike others I am speaking of facts.

If there be 100 companies wishes their own highway in the sky by which to transmit voice communication - then allocate each one of them a different wavelength by which to transmit the common set of frequencies**. For it sounds ludicrous to say that they must operate on a certain frequency, since each and every one of them without any choice in the matter must transmit by the same frequency, namely the frequency at which voice and musical impulses are brought about.**

Any and all voice communication cannot be deposited faster than the speed of sound, or set for a number of frequencies greater than what it is spoken, the maximum at about 15KHz**. Therefore, if the FCC tells you that you must transmit your voice communications at 800 million events per second, have them committed to the asylum for the insane.**

If however they tell you to use the 37.5-cm band then consider them educated, and allow them to leave the asylum. For to insist that one transmit a voice at 800-MHz is insane. It is the same as to have the turtle move as fast as the hare, or to have sound move at the speed of light. **If then these persons cannot realize this absolute fact - they do belong in the asylum.**

No I am not going to excuse any person, government or otherwise for this, since these ought certainly to know better**, how the frequency of any voice never comes near to the millions.** I of course know that in assigning communication bands by frequencies - a fixed wavelength is issued upon which they may place their turtles. For in any such transmission it is the hare to carry the turtle, so that it may arrive at the same instance that the hare arrives.

My beef is - man's vocabulary, how he never seems to have been educated in proper vocabulary. The reason that in the illustration the velocity of the 3M (road runner) is given as 296.177 km/sec is because that is the correct relative velocity of the 37.5-cm band.

If now from this day onward we decide that we are going to be honest persons, and educated ones, scrap that ideal about those frequencies, and start utilizing wavelengths. **Give someone an honest answer instead of a deceitful one, or lies as they can also be rated for.** If you want to fill a 375-mm wavelength to the full you will have to speak 40.000 times as fast as you do now, and that is provided the air for its number of vibrations per second in time will accommodate you.

Have I now clarified how the statement reading; **"When talking on a cell phone, a transmitter takes the sound of your voice and encodes it onto a continuous sine wave," is but a crock?**

On the 1900-MHz band (158-mm) there is but less than one wavelet for every 95.000 possible wavelets. That is how slow the turtle is to the hare. **We are the turtles, the 3M is the hare,** or our famous roadrunner. If then by this we are not duly educated, I give up, for like it is said; **"You cannot get blood out of a turnip." But I hate to see us as turnips.**

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CREATING WAVES

In air no sound wave can exist without bordering onto, or connecting to others, because the driving force was an impulse causing the parts to move, and as such vibrate. Movement of such a wave is sustained by the physical movement of the parts one against the next in line. With magnetic waves however the movement is by the 3M and sustained by it.

A water wave is like as it is in air, parts moving up against one another. An impulse or spike in water will move the parts of which the water is made up. As then gravity will keep them down, the waves movement is a play between the initial spike and gravity.

Magnetic waves however move by an altogether different entity. If for example you pronounce the letter H, that as you deposit its spike (or impulse) upon the 3M by a specific wavelength, like a carrier wave. And the rate at which you are depositing it is 10 letters every second, and you are utilizing an impulse at the velocity of 10,000-km/sec, while the 3M, the band upon which you are depositing it - moves at 300.000-km/sec, the factor in your deposit is 1 to 30, with a voice frequency of 10. You will thus have one single indent or single spike or impulse 30 km long.

If then as you say they are continues, formations, your sine formation of that letter H would be 30,000 km long, that in all reality is nothing more than a straight line 30,000 km long, with no code at all - since the code was an angle to 30-km in length. The oscillation by which you made the spike limited your angular length to 30-km, for at its normal amplitude it is not capable to produce a length of 30.000-km. (Ref-1) Since then you're rate of events were 10 per second with the carrier moving at 300.000, it will have moved by 30.000 km when the next event comes upon it.

You must realize how the carrier, the 3M, is like a belt moving at high speed, and at any specific wavelength you will have a belt with a certain width, or amplitude. As then that which you are depositing is also a movement at right angles to that belt, a movement to drive a mark upon that belt, - that brings it to two factors.

If then you take that impulse that came to you at 1000-km/sec, and you multiply that factor by ten, to make a marking upon the width of that moving belt at the speed of 10.000-km/sec, the factor is now 1 to 30. By illustration Figure 7, the moving belt depicts a carrier wave at the width of 10, as therefore you start depositing your letter H at point X to Y, at the speed of 10.000 while the belt moves at 300.000, the net result becomes a line from X to Z.

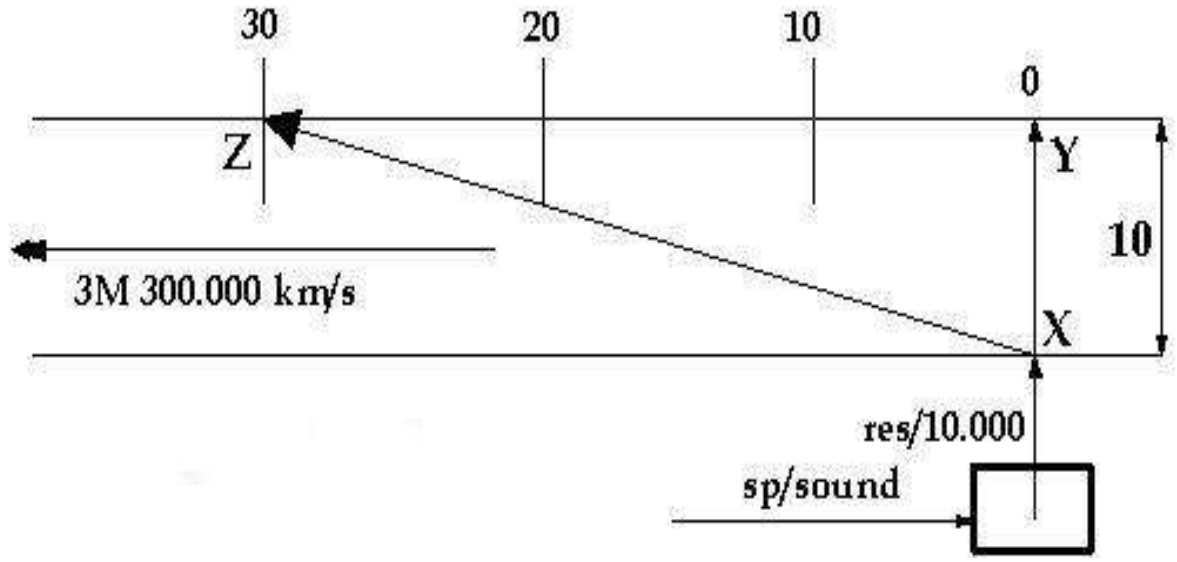

Figure 7. Illustrates waves into lengths by the difference in the velocity by which impulses are formed. The input then is always by rotations and the switching thereof.

You tried to go from X to Y, but because of the difference in the velocity of two movements, by the time you got across the belt the head of your impulse came to point Z, the factor being 1 to 30. And so with the belt being at 10, you are now at 30. What you have now is an **angular moment** that by a circumference in diameter is 10, having a half-length of 30, to a full length of 60, all this upon a carrier wave having a fixed amplitude of 10.

If then for the next letter like an A, you are to make for a difference, so that the A can be distinguish from the H, increase the speed of your resonance to 20.000, that in turn will give you a length of 15, a wavelength half as long. Then to do the V, and the E, of the word "have", you alter the resonance to 14,000 and 18,000 each one giving you again a different length. As then your equipment at the other end reverses these movements back into an audible voice, you will hear the word "have".

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If on the other hand you wish to have your letter H as a continues line, with the difference in the velocities it will no longer be a wavelength of 60, but a line that cannot be read. For to hold on to it for one half of a second your line would be 150.000-km long**, and at that amplitude it is never a code.** If thus man insists upon waves being continues then come to terms **by never drawing anything but a straight line, and a straight line is never a wave.**

If a carrier width is 10-cm, and the belt moves at 3-billion cm/sec, the speed of your oscillation will have to be at 300-billion cm/sec, at which point one will still have a wavelength 10-cm, long and 10-cm in diameter.

This means that you will have to make your deposit at the speed of the constant of light, and in the air you cannot even come to that speed, and much less when passing through metal conductors. Coming to the speed of light here is to come to the velocity of 300.000-km/sec, **something that is only found with magnetism**, while **our efforts are at all times relative velocities**, a driven velocity that is always less to the constant. A transistor may have a high rate of switching, **but it can never switch any faster than the rotations by which it is fed**. **Here is our answer as to why man can never at all create a sine formation, nor modulate at mathematical frequencies.**

Electricity can be brought to any rate of revolutions like high power lines to 200.000 or more revolutions per second. And it can instigate a change in revolutions upon atoms, and/or molecules, and their coordinates by which higher revolutions are obtained, mostly for the production of waves. A 1-cm wave for example turns at 3-billion revolutions /sec. Only a 1-km wave will turn at 300.000-rev/sec. And its velocity by which its coordinate is extended (the speed of electricity) is a relative velocity computed down from 300.000-km/sec by its angular moment. If I am not believed measure the speed of electricity, and you will find me to be correct.

In all essence magnetic waves are like drill-bits, and like all drill-bits their cutting end is at the head, or most forward end of it. Evidence of this is found with our microwave ovens. All magnetic waves travel by rotation simply because - **they are produced and come forth in that manner**. If you fasten the wheel of a vehicle for a turning, to then set it in motion it will go by revolutions, not move linear, nor oscillate, nor vibrate.

Some have the idea as if they are just going to create some frequencies, but you cannot create events, because **it has to be events of something**, frequency itself is just a number. **What you create are lenghts by number of events.** And how else must I word this so that it may enter into us?

And there is still another problem with sine formation, namely that which takes place upon our antennas. Our antenna's are at all times receiving thousand of different lengths, if then all of these were of a continues formation there would be a great deal of interference. So many different lines all upon one and the same stick is not only worse than a traffic congestion but harmful in that they are prone to cancel each other out and/or alter their lengths. For that is like having four lanes on a freeway all conversing on a single lane.

On a freeway these cars would not fit, but on the antenna with all of them rotating entities at varying velocities there is bound to be a commotion, and your radio will sound like it often does - with static, parts of the message garbled. But if they come upon our antenna 1 in 6000 there is much less chance of having a commotion, or interference as it is called. This is like the four lanes of cars conversing one behind one another, decreasing the chance of one colliding with the other.

And if we choose to make use of the shorter lengths, the 1 in 6000 will come to 1 in 60 thousand. For even at 60 thousand or 6 million to one - that alone is more than sufficient to have an unbroken conversation. Consider light for example how at no more than 60 events per second it already seems continues to us, while upon the line of a 550-nm wavelength there are more than 545 trillion possible. **That comes to 1 wavelet in 9 billion.** How happy therefore your antenna would be at so much freedom.

And yes think about this what the term continues entails, how the light in your house turns on and off 60 times per second, while the velocity at which that light travels being near 300.000-km each second, that computes into light coming at you by 5000-km intervals. (1 in 5000) No light bulb ever send out a continues wave, not when its wavelets are spaced by 5000-km each. And if I am not taken at my word, take a device to count events like revolutions, it is guaranteed to read 3600 RPM.

WAVES TO SCALE

If we look at a light-wave passing through air with a so called half-length at 3500A, and the atoms are at a spacing of 7A, it has to circumvent itself around 500 atoms just to complete one half of a single rotation. That single half turn for the length of 3500A is and comprises to be its angular moment. It is by and in that factor by which it will refract to a smaller degree as compared to an angular moment that for its length is 2000A when it strikes a rounded ball like the atmosphere of our earth, or any prism out of the normal.

When it strikes in the normal at a medium where the atoms are spaced by only 3.5A that angular moment is then automatically pushed (compressed) backwards, and as such its angular moment now must circumvent those 500 atoms at a shorter distance.

For the example here, its angular moment is thus reduced by one half. Shall this therefore mean that the whole former length of 3500A will now be found by a full turn around the total of 500 atoms, twice 1750A? For this compressed wave that formerly had its angle relevant to 3500A, is now relevant to only 1750A. The answer here is - **No, it does not**, with the **"why" because it not a length,** but as I so often said - **an angular moment.**

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It therefore is that moment that is compressed, and it will now - when out of the normal - be refracted one half as much as before. And I wish us to take a lesson on how I am using **proper vocabulary,** like when a wave enters upon a change in density - it is either compressed or expanded. The refraction of any wave only comes about when it strikes any change in density - **out of the normal.** And so our vocabulary should be

And yes I know that to refract also means to alter or distort, and since compression is also an alteration - so there may be those to argue with me. But in general to refract goes with to bend or change direction. More I will not argue. But it should be obvious to anyone how - if the half measure of a single wavelet requires at least 500 atoms by which to have it existence, how can that derive from any electron that as a single sided coin cannot exist in the first place? See also Ref-1.

It is thus the angular moment that is a sort of physical and none physical (W3) entity driving itself and being driven forward. And yes I know how cryptic these words are, or even contradictory as some may see it. But try to understand how the term **"angular moment"** in all essence reveals itself.

My reason for calling any and all waves by these words, is because they are as such **moments,** and they not only proceed by an angle, but in themselves are as such angles. Or what other words shall I use to clarify myself, for like I once said, **"Understanding nature is easy while to teach it is another matter."**

To drive and be driven may seem contradictory, even as being physical and not physical, and yet for lack of any better wording it is so, but how do I put that in words, that is the problem. Since then I know and do not know I coined the term of 3W, the explanation of which is by (Ref-5).

When you are in an automobile, you are the one driving, directing it where to go, and to go or pass by any intersection that you wish to pass. And yet you are being driven as well, for it - the automobile in its power and movement - taking you there.

Have I with these words clarified the apparent contradictions?

ROTATIONAL MOVEMENT

By rotation - so waves travel **because its rotational movement is its wavelike formation**. These then are not as such continues but by segments spaced apart by whatever the rate of events these may have been produced. The likes of this is similar to the familiar DNA, nor is it without reason why the DNA is that way. If then we view that DNA how there are billions of atoms grouped together picture yourself a microwave or radio wave to pass around them in the same manner.

The reason that light waves are stopped by any atom larger than its circumference while radio waves pass through almost anything is **because they travel on a different circular diameters** that is properly called its amplitude. Light for example, because of its small amplitude will only pass through such media where the atoms float freely around one another, or where the grid of any solid structure allows for an unobstructed passage.

Unobstructed then means where the head, the most forward point of any angular moment, does not make contact upon any of the 2 to 6 connecting points that may be found in those structures. It will pass through water for some distance since there are but 2 connecting points upon which the head of the wave may strike. In glass or similar structures it will not go that far since there are anywhere from 4 to 6 connecting points upon which it can strike. Since then there are equally or more unobstructed areas on these atoms within these grids light will pass through all of these up to a point.

It goes through our windows without any perceptive loss in light simply because they are so thin, and thin means less chances of striking upon connecting points. But these factors, - size and connecting points - are not the only reasons how and why waves may be stopped in their track. There is also such a thing as adverse, or reverse movement to cancel out the angle of the angular moment; I believe it is called interference. These movements need not necessarily be other waves interfering with the first, since it can also be in coordinates to be acting adversely.

One example is with light entering upon the surface area of a plant that then as such cannot be thought of as coming upon stationary parts, but upon movement. As then these molecules in their combined effort display a certain coordinate it becomes selective as to which angular moment it will arrest, and which one, or ones it will pass on. Even the smallest of alterations in their molecular structure will alter their specific coordinate, and accordingly display that surface area to our eyesight for its change in color.

But not all of the angular moments will factually enter into the surface area of things, for since these areas consists of grids, there are open areas as well as none open areas. Nor are these surface areas necessarily smooth, to say that their surface is a perfectly straight smooth line. For while to us a surface may look smooth, if there be a one thousand's of a millimeter unevenness in it, that could mean a row of 100 atoms stacked on top of one another. And that for the size of light is a large area, or a large dip whereby light can be scattered or reflected.

And even the movement in direction of a coordinate when it is confronted with the drilling format of a light wave may just reflect it rather than taking it in - after which it makes a selection of its various angular moments. If we shine a red light on a green leaf, all the red that is then seen are reflected waves; only the greens are those that came from within.

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When we print a picture with all those different colors in it, it in all reality does not have any color in it, nor is it black, nor is it white. The light as it shone upon it made an imprint of its many angular moments into the substance of that background, be it a negative, or converted into an electrical code. **When therefore we look at a picture there is absolutely nothing to see, and only when it is again struck by light waves to remit these coordinates, then and only then by these many angular moments at the location where they were deposited will we be able to see that picture.**

Even a printed picture with different colors of ink, is but an imprint with no color at all until we hold it in the light **so that the mechanism of light may re-introduce these many imprints for the color to our senses.** All because for the light coming into our eyes we again sort out all these different angles placing them each at their specific location. Remove the light, like at night in full darkness, no picture can be seen, all because **we need a mechanism to illustrate every single angular moment to our perception.**

And light for its octave is such a mechanism, and only at that octave for as much as it concerns vision. It is a good thing that the Almighty Creator limited us to but that octave, lest at shorter angles we would observe the bones in our bodies. Or for longer waves to see right through the wall, stucco, wood or metal, not leaving us any privacy.

There are always more questions and answers that can be defined in much greater detail, (1) Like why a wavelet can never exist as a full length? (2) And how it is by the rotation of any wave that its alterations come about? (3) And how and why any and all waves when generated come to the circular format? As lengthy then as I have been in just defining the nature alone, a full-fledged answer to these question would again become lengthy in order to substantiate them with the norm of things as they are all around us.

CONCLUSION

There is a lot more of the sciences that we do not know than what we do know. If however we train ourselves in simplicity and plain logical common sense we will come to understand far more than is currently known. For all things in nature follow simplicity, as all things in nature are and come about by movement. There is not anything in nature that is idle, even the letters on this screen consist of movement, and it is by that movement in code that we distinguish each letter as these codes are brought to our senses that we in our spiritual nature interpret for their meaning. Nature therefore is a nature within a nature that is known by a greater nature.

ABOUT MYSELF

I in my old age am not a student, but as one would say – a gifted person. I never attended any school of physics, nor do I have any degrees issued by man, but I am a teacher in the wisdom granted me. Nor therefore am I one to deal with or promote theories, but rather with the facts of nature as they present themselves. If we say that light presents itself as waves, we could also say that it is for the sun to travel around the earth, **for so these phenomena present themselves**. Appearances then can be deceiving, seeing how it is by the rotation of the earth that the sun appears to move, but no less for all wave phenomena

Finally, the theme of all science should at all times be **simplicity,** and our own quest so sort out **appearances from reality.**

More information on part 2 of this essay.

Wave nature (Part 2)

Abstract

That light for its different wavelengths travels at different velocities is a well-known fact, but have we ever asked how and why it does so? The answer here will give us new insight into the nature of waves, and how it is not of the prism to delight us with the colors of the rainbow.

Key words

Electricity ; Velocity; Waves; Frequency

PROOF IN AMPLITUDE

A factor in which we err is our concept of waves for size. Our habit is to illustrate them far too great for their amplitude, and far too short for their length. It is just the other way around by which they should be illustrated. **And how can we be so certain of that?** Quite simple.

We have accepted the fact that the speed of light in the air stands at 299.702-km/sec, and adding 90-km/sec as the speed of light in space. Since then there is a nominal length as well as a real length to any wave, the nominal being its crest-to-crest measure with the real length the total length of its sine formation. If therefore we take the total of its real length with that divided into the constant, and multiplied by the nominal length, the result will show its relative velocity, **its velocity for distance in time.**

In order then to discover the real and factual amplitude (Diameter) we must choose a certain length. For the example let it be the red color wave at 700-nm. And to take an arbitrary diameter let us start with 1.54 Angstroms that into

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the circumference comes to 4.84-Angstroms. 7000A then plus 4.84A is 7004.84A as the real length of the wave while 7000A is the nominal length. 300.000 divided by 7004.84, and that multiplied by 7000 then comes to 299.792-km/sec. When therefore we divide 7000 by 4.84 it shows that wave to be 1446 times greater in length verses is diameter, or amplitude if you will. (No wonder therefore it can travel so fast)

Nor can we be wrong in this for it we took a greater diameter like 8A in circumference, the result would come to 299.657-km/sec. and that is not the velocity that we have adapted as the speed of light in space, wherefore the 8A in circumference cannot be correct. In reality therefore - with the evidence before us - waves show themselves to be nearly straight lines, the opposite of how they are usually illustrated. Yet we are bound to illustrate these waves out of proportion to a much larger diameter just to have a view of it. **It then warrants us to make our illustration as close to reality as we can.**

And here is something interesting, a light wave with a frequency of many trillions must rotate at these many revolutions per second. How fast therefore is that speed of rotation in real time? It is about from 2000 to 4000-km/sec, a speed much less than its linear movement. And how did I come to that? I came to it by real time, something all of us should be able to compute.

CARRIER WAVE REALITY

If you have a carrier wave like Figure 8 illustrates - let us say at 1-meter wavelengths. And presuming we are generating these at a full rate, they will not be anything as illustrated by Figure 1. At areas "A" these waves have a greater angle and therefore a greater wavelength than at areas "B". These waves as shown are therefore not all 1-meter in length, nor therefore can they be presumed as a carrier base.

The ones at "A" will and must travel at a greater velocity, and rotate slower than those at areas "B", wherefore they cannot possibly be connected to one another, but cause a great deal of interference and cancellation. This illustration for a carrier wave - to say the least - is atrocious. If then as we presume to super impose another wavelength upon them, like the red line, a wavelength of some 100 meters, as if these 1-meter lengths will carry that 100-meter wavelength, we are merely dreaming **with no conception as to the nature of waves.**

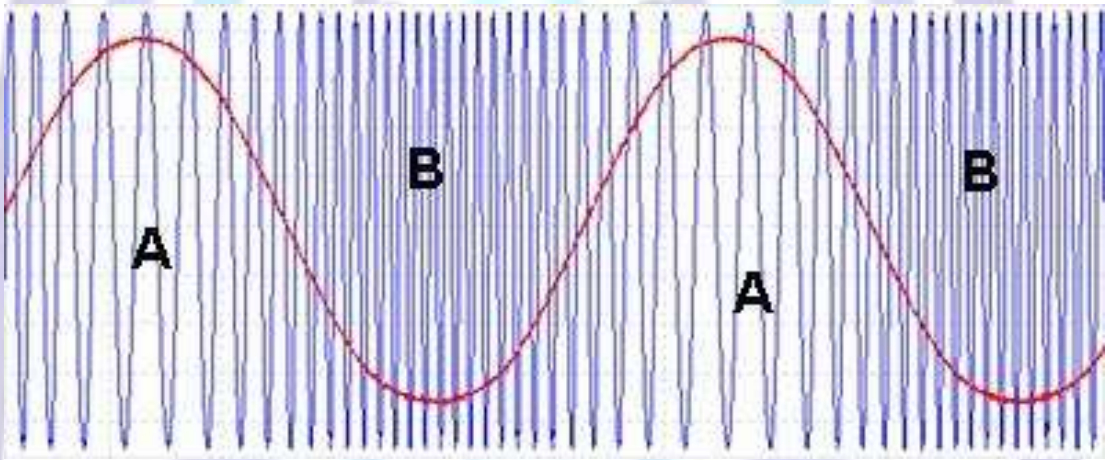

Figure 8. A carrier wave that not as such can exist.

And how am I to educate us in the facts of life? If you have a single lane highway with cars spaced by 100-ft, traveling at 60-mph as your moving base by which to send a messenger, and you place a race-car in between to travel at 80-mph, how is that racecar to bypass all these cars on a single lane? We then presumed to go on over them, or with them, the line of cars serving as our train of movement. But that is most illicit, since first of all that racecar as our signal does not need a carrier, but rather **an open road**, for at his speed these carrier cars are simply in his way.

We conceive as if 1-meter lengths will carry forth a 100-meter length, but that police man moving at 100-mph is passing all these 60-mph cars to catch up with the one who is violating all the rules of the road, if you get my drift.

Do we not realize how by all the evidence in nature where each different length **must travel** by a different relative velocity - that we are violating that proven evidence in nature? How will we convince anyone that light does not refract by a prism while to the eyes of everyone it does refract?

How can one possibly send his signal by something that travels faster than what he presumes it is carried by? Is he not with that type of thinking rather complicating the matter? And what then am I saying, if not - that we know very well how the blue lengths as they refract by a sharper angle also travel by a lower velocity, all because they are shorter lengths whereby they are forced to travel a longer route around the circumference as compared to the longer ones.

We cannot really speak of waves unless first we know how and what they are. We have the notion as if there are all sorts of factors with the waves of the spectrum, but they are but one thing, and one thing only. **Angular moments being driven forth by the force of magnetic, that they are and nothing more.**

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These then as they vary in the angle by which they are driven - do therefore as such come to different lengths, like a bolt that has either 24, 32, or 64 threads per given length. As then any bolt has a diameter so the waves for their circular path must go by a diameter that then for their movement comes to the circumference.

And now that we know what a wave is and how it travels, and that these angular moments are at all times driven forth in the circular by a constant rate of velocity, - these same waves by their nominal length for their distance in time - come to what is called a **relative velocity**.

If we take a 1-cm wave, and directly behind it we place a 2-cm wave, that 2-cm wave will travel faster while it rotates at a slower pace than the 1-cm wave. In the length of 300.000-km there are 300 billion centimeters. The 1-cm wave therefore must complete 300 billion rotations in each second of time. The 2-cm on the other hand will have to make only 150 billion rotations in the same length and span of time. The rate of revolutions thus for the 1-cm length is twice as much as that of the 2-cm. But for speed - as in distance for time - the 1-cm length will be slower since it must make twice as many rotations to that of the 2-cm length within the same time period.

So it is that each different length will and must travel at a different relative velocity, while the 3M maintains its constant upon them for the real length of any wave, namely its length by the full circumference thereof. A shorter length usually means a higher rate of events, and these are usually more stable in comparison to the longer lengths. When we consider light how it travels by such straight trajectories, its secret lies not only in its high rate of velocity, but even more so in its high rate of rotation, into the trillions per second to furnish it with stability.

How thus will one superimpose anything upon any of these angular moments? Will you put a dent into a dent? You will have to be mighty fast to drive a dent into a dent, since in making the first dent - **it is constructed as it moves away from you.** And so you will have to deposit a dented dent at one and the same instant in order to accomplish that feat.

If then one is generating 1-meter wavelengths as a carrier, and he figure to superimpose 1-cm wavelengths upon it, **he figures wrong** since a 1-cm wave must always travel at a different diameter to that of the 1-meter wave as illustrated by Figure 9. What therefore do we have? If we can manage to transmit them within the same space, the 1-cm will travel inside of that 1-meter wave. But is that 1-cm wave really inside thereof for as shown below the 1-meters may be spaced from S to R by 1000-km, while the 1-cm waves may be spaced by 250-km.

The 1-meter wave at S now for distance in time will sooner or later catch-up and bypass these 1-cm waves since it for its greater length will have a greater relative velocity. Presuming the diameter of the 1-meter wave to be 2-cm, and that of the 1-cm wave to be 0.25-cm, the result is as follows. 1-meter as 100-cm plus 2 x 3.14 = 106.28-cm. Then 300.000: 106.28 = 2822 x 100 = 282.273-km/sec. Then 0.25 x 3.14 = 0.785, and 300.000: 1.785 =168067 X 1 = 168.067-km/sec

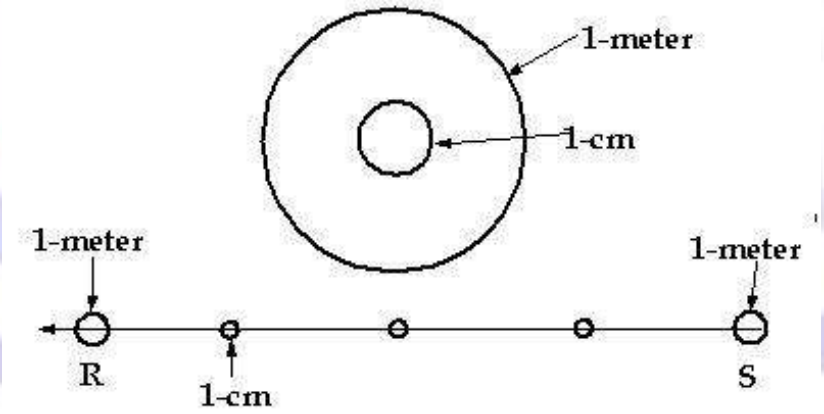

Figure 9. Different lengths at different magnitudes travel at different amplitudes.

The 1-meter wave thus travels faster by 114.206-km/sec. And that is nothing to sneeze at. It will leave those 1-cm waves far behind if so it must travel a long distance, like to another galaxy. Upon our earth however with the distances being very minute the gain will be equally minute. And by the same token in reference to Figure 8, where we thought to superimpose a 100-meter length upon 1-meter lengths, that 100-meter wave **will, and must, and can** only travel by a larger amplitude, **in which case it is completely separate from the carrier in every possible way.**

But what is the sense in producing 1-meter wavelengths as a carrier with the message by 1-cm waves? Or visa versa - to have a 1-cm carrier then to send your signal by 1-meter lengths? For in all reality - in that case **your code will get to its destination before the carrier wave does.** Would it not make more sense to simply modulate our events upon any one of these wavelengths? But now you want to do even better and send out 2 or 4 different carrier lengths simultaneously as were they one, to mix them, into which you compose your code. And yes you can do so, and that may

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or may not be to your advantage for a more accurate and cleaner signal, like as in - it takes two to tangle and with three a stronger bond. This is something the engineers that work with these things ought to know.

But do not conceive as if we are transmitting anything at the full range of frequencies that any wavelength computes into. That in any-ones book is never wise since it leaves us but one way to modulate upon, namely downwards.

But let us get realistic for we know that our platform is like unto a belt moving at the enduring constant of 300.000-km/sec. Nor can we in any way impose upon it, for it is just there and everywhere in the whole of the universe, an entity called fundamental movement, an innovation we can do nothing with other than our use of it. We cannot switch it off so that we can place our code upon it, after which by turning on the switch our code is on its way. Instead **we are to place our codes while it is moving past us.** If then with transistors we are able to produce a high rate of switching, how fast will that switching have to be in order to place each and every wave one directly behind the other to form a continues sine formation, rotational or otherwise?

Here we are at a crossroad, we know how fast the belt moves, and how fast we must act to make our deposits. And how fast is that? Since we have but two real things at our disposal, the electricity at its rate of rotation, and the resonance of the atoms upon which the electricity makes its play, or a combination thereof.

For the electricity alone by Figure 10, at "X", starting at "A" turning the switch on and off when its gets to B, we have a short impulse to a short wavelength. If our switch remains on until the rotation comes to C, a mere quarter of a turn, the resulting angular moment will be longer, and very long if it comes all the way to D. If our switching is so slow with the speed at which the electricity deals out its polarities to go the full circle, then there be no wave at all, no impulse.

The reality of this is like light when it strikes upon vegetation, it by its rotation does not produce waves - but increases, or simply agitates the rate of movement of the atoms and molecules of that vegetation. All because there are no impulses there but simply **a rotation to advance rotation**. That light then as it enters these molecules of that vegetation is absorbed or spun out again by its coordinate that is selective to certain particular angles at which that light enters the same.

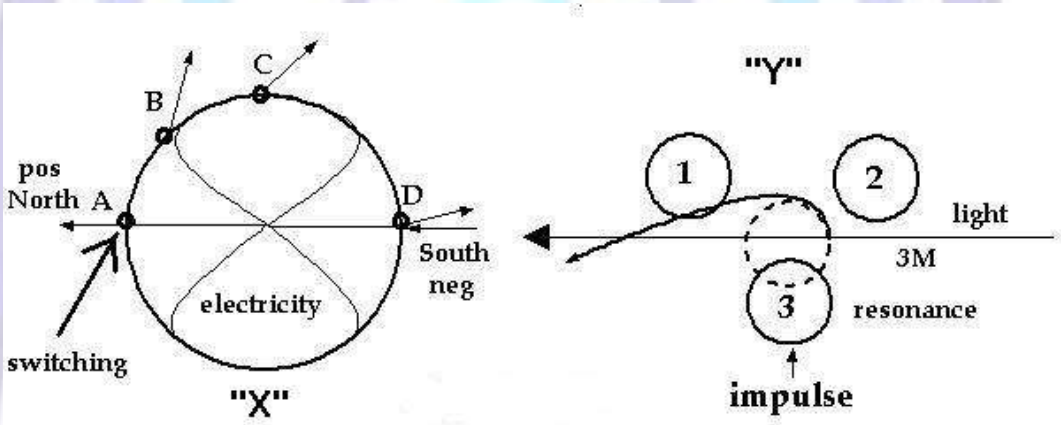

Figure 10. Sample of wave production.

In the case of resonance, or oscillation as it is also called, our reference comes to Figure 10 section "Y". For the example I show three atoms with the line of 3M passing midway. As therefore a magnetic pulse is imposed upon atom 3 driving it upwards into the fields of atoms 1 and 2, it places a dent into that line of 3M. Since then these atoms always rotate the dent comes to a rotational format around the atoms next to it (not shown).

This is typical of light since the circumference is not much larger than the atoms themselves. And here we are to correlate the one movement simultaneously with the other. As atom 3 was driven upwards at a certain rate of speed, and the 3M has its rate of speed, that so called dent can never be a straight line upwards but into an angular line - in line with the 3M. And that upwards move being by a rotating entity, the resultant becomes a slanted line into and by rotation.

Atom 3 now will be driven back to its original location by the magnetic fields of these 3 atoms so that the process can start all over again. But the conditions must be met whereby atom 3 will again be driven up, since it will not by itself move up nor down, but only by a pulse powerful enough to drive these three magnets into each other.

That then may occur a thousand or a million times each second. The number of wavelets on such a line may then come to 1-million, and if the lengths were 700-nm, that computes into more than 400 trillion to fit within a single second of that line. Nor can that atom move back and forth at the rate of 800 trillion events to produce 400 trillion wavelets on a single line. But assuming there are 1000 of these sets of atoms, it means that a billion of these light waves can be generated at the same time, **but not at the same line**, but at 1000 different lines of light. **And a single billion is still a long ways from 400 trillion.**

And here we ought to take note how it takes 3 full size atoms, and a pulse powerful enough to drive these magnetic atoms into one another just to make a single wavelet on the order of light. How thus is it for an ant (electron) to tackle an

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elephant? And for the longer waves to a greater amplitude**, millions, and billions of atoms are needed in order to produce these waves.**

When we presume that we are superimposing a signal upon a carrier wave, we are in effect doing nothing other than modulating that carrier wave. **For no carrier wave can carry forth anything that as such is attached to it.** It is either inserting itself in between, or it by its deposit destroyed or rearranged those waves on which we thought to attach it. Waves, as those of the spectrum that pass unobstructed through air and space are never ever on a continues format, **while electrical so-called waves are always continues**. When a data signal is send through a cable its format is electrical and therefore continues.

Data can also be send on the format of light being passed through a tube or fiber optics. In that case the light is thought to serve as the carrier, our data however will not be on a continues basis, but imbedded in between those of the light. Nor will any kind of light that we contrive to generate be continues, not even with lasers that in essence pump more and more wavelets on one and the same line. The ideal of light by a tube or similar way does not as such serve as a carrier, but rather as a guide for data to be transmitted.

ONE MORE EXAMPLE

By Figure 11, I modified our ideal of modulation upon a carrier wave. Waves number 1, 2, and 6, are the fixed carrier lengths that is then modulated by increasing and decreasing the lengths thereof, or as we may ill presume to super impose them upon that carrier formation.

By every law in nature now, and as we well know no two waves of different length can ever be joined to one another since each of them will and must travel by a different relative velocity, due to which these will also rotate as a different speed of one another. The waves from 1 through 6 here may all travel on one and the same amplitude, as also a preferred method.

My illustration (Figure 11) then is very wrong, for as 1, 2, and 6 show the extend of the amplitude, the waves noted 3, and 5 must fit within that same amplitude, and should therefore be drawn out much wider to fit within that amplitude, while wave 4 must be condensed. This illustration is not any frequency modulation, but an amplitude modulation whereby different wavelengths are produced on different amplitudes, all of which can only be separate individual wavelengths traveling at different velocities. In my book not a very efficient way to transmit data.

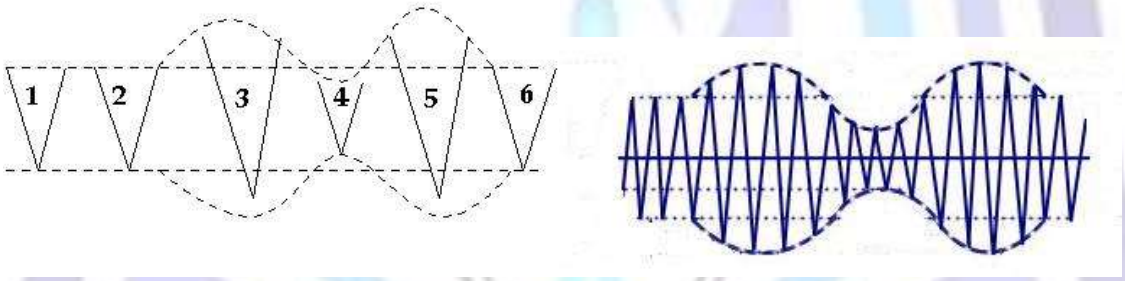

Figure 11, and 11a. Carrier wave modulated by wavelengths that are always separate from one another.

But then if we have our highway in the sky at a fixed wavelength called carrier, and we deposit our data upon it, it becomes like an inserted message by different lengths all of which may be spaced by various distances between one another. **For at no time can any kind of code be attached to any of these carrier lengths, they are simply inserted on the same amplitude**. If and when it so happens that at the instant when a certain length of a code comes upon one or more of these passing carrier lengths, it simply alters that length.

Or if it happens to be precisely the same length at precisely the same point in rotation you will have two lengths fastened to one another. And that my dear friend means a loss of your data, for your data is supposed to be one length and not two coupled together. Your receiver at the other end will look at it and not know what to do when instead of one it are two lengths that it must read. Another error in my illustration figure 11, is to show full lengths rather than half-lengths. There is of course a lot more that I can say or illustrate here, but let this be sufficient.

VOCABULARY

Our vocabulary now can be as raw as our interpretation of appearances. Quote: "**In radio and television applications, the amount of times a carrier wave oscillates each second is what determines the frequency of a station or channel."** Unquote.

Will man never learn that a transverse wave cannot subsist in a fluid where there is no mechanism for oscillation? For I gather that this person is linking the propulsion mechanism with the number of events. But he failed in one of the most important factors, namely - **how does he propose to get his wave to travel at the speed of light?**

He should not have mentioned oscillations since that means a back and forth movement, and that computes into additional distances, as well as stops and starts. Since then the wave did arrive at its destination at a speed to that of

light, what sort of velocity do these oscillations have to accomplish that feat which is clearly outlawed and frowned upon by virtually everyone? These oscillations for their speed of movement, and their stop and start must come to twice the speed of light, a velocity no one in his right mind believes upon.

Then there is this quote: **"In the case of frequency modulation, a data signal is used to modify the frequency of the carrier. When this occurs, the frequency of the carrier increases as the amplitude of the data signal increases."** Unquote. The carrier no doubt was thought to operate at its maximum rate of events, it is therefore not possible to increase that frequency even by a single count. As then we gather that the data signal messed with the amplitude, it must either be erasing a great deal of those carrier frequencies, or ignore the carrier altogether. For as that data signal came to invoke itself upon amplitude - it in reality started to produce different wavelength, both greater or smaller, but at least in a series of different lengths, forcing each and everyone of them to travel at a different velocity.

Not very wise, for if we wish to have a clear signal; **we ought to receive it as we send it out.** With different lengths however the longer ones will gain upon the shorter ones, **consequently the pattern at the receiving end will not be quite the same as it was when it was send.** No wonder therefore that we complain about noise, and loss of signal etc, etc. The only comfort here is that for our distances up and around our earth, these are so minute for the speed at which these waves travel that from transmitter to receiver the change is minor.

But if we wish to communicate with someone on Uranus, I would stick with frequency modulation, with what I call a rigid system, and forget about changing amplitudes. Even light does a better job, it may have thousands of different lengths, but these are all on the same amplitude. And what more shall I say in that regard? I was anointed to be a teacher but who is willing to be taught? Start producing a fixed wavelength, and with the data signal modulate the events thereof. This ought to give us a clear signal.

REFRACTION

Light refracts, but how does it refract? By its change in velocity as it enters upon a medium more dense, or by the angle of its waveform? The answer should be logical that it is in the angle of its waveform. Different angles to the equal differences in velocity invokes the logic that it can only be by their angular moments. And this being so, we cannot possibly have a wave the likes of what is depicted by Figure 12.

If we start out at section "Y", there is an angle namely C to D by which it comes upon the face of a prism noted g and g. And yes it as such may refract into direction from P to g1. But it has an opposite angle noted B to C as well, which way therefore is this critter to refract upon a prism? I am stating here and now that I am not the one who invented that wave, something that will refract both ways as these angles approach upon the prism.

But we have never seen this format for a wave to refract upon a prism to go both ways, or no way at all. Mr. Huygens thought to have it in the bag, by having all such waves to come flat on, like at X, and never at all from their sides like section Y.

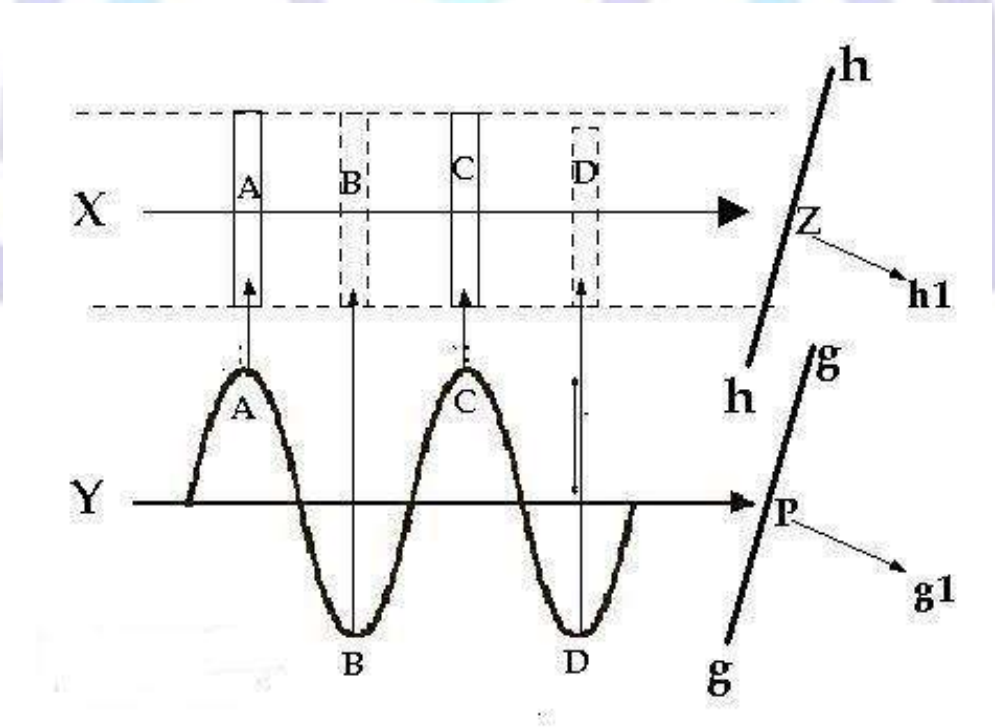

Figure 12. Typical sine wave illustration for refraction upon a prism.

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His version of waves are not at all by a sine formation, nor in any angle, but straight on as frontal waves. (Ref-2) Then to realize how the reality of all such waves is more like a straight line than any angle coming at it. And for me to give us the benefit of both worlds I drew up this illustration, for waves can arrive in any position, can they not? And so what if they came broadside like in section "X", would they again refract into the same direction, from Z to h1, like Huygens has it? It seems logical does it not? But there is something wrong here in that the angle at section X, is much less to that at Y. Have we therefore seen a blue wave to refract at different angles, shorter when they arrive sideways and not so short when they obey Mr. Huygens? For what guarantee do we have that all of them will come broadside, or only at their sides?

And so my dear people when are we going to give up on this? By Figure 13, I drew up the reality of it, a rotating waveform refracting by its angular moment. For by rotation that wave has only a single head and single angle, the X-Y-Z coordinate no matter at what position it strikes. And do we want proof of this in case my word is not good enough? Well, there is a simple way to find out. From the air each wave has its particular length to which it will refract, but from a density such as glass or water those angles have been compressed and must therefore refract by a greater degree. And now all we have to do is discover that my word is true.

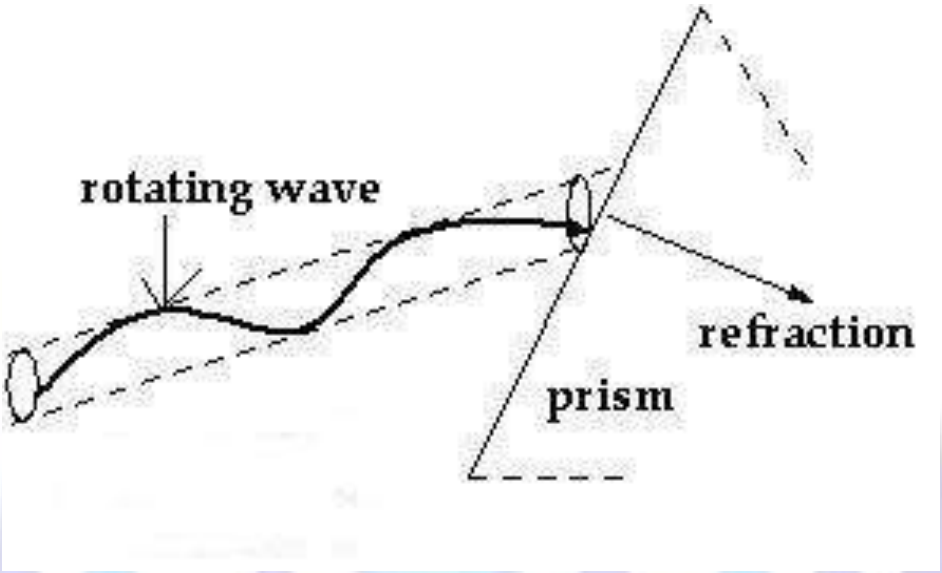

Figure 13. Light's refraction by rotating waves.

WAVES VERSES WAVES

There are water waves, wind waves, land waves, road waves, sound waves, hearing waves, skin waves, and even thought waves, all kinds of waves. So we come to light waves and radio waves, as well as electric and magnetic waves, a whole range of waves, and yet most of these mentioned are not waves.

The wave in a road is simply a turn in the road. The hills as they go up and down can also be seen as waves, while it are gently sloping hills. The flutes upon a drill-bit can also be seen as waves, or the arm of the piston of a steam locomotive fastened to a wheel for its up and down also appears as a wave. With water however there are real waves and not merely a figure of speech, or are they real and not rather rolling motions like when they come upon the shores? The wind has waves, and even heat is called a wave, like a heat wave, and a cold- wave, or is that a cold-snap?

Particles have waves, or is it that they make waves? But then so do people wherefore the voice can also be a wave. Scientists have it that quote; **"Every elementary particle exhibits the properties of not only particles but also waves."** Unquote. Here it is no longer a figure of speech because we contrived waves as a very property of a part be it idle or on the move, and that for logic and common sense must rub us the wrong way. If now these were swimming we could see their wake as waves, but as a property is hardly logical.

A bullet does not have any waves, it kills, and while it moves it may make waves, the kind that we call - its wake. But then man and his scientists may be two different species, and who is to tell the two apart? Atoms as particles are not like any rock or bullet since these do have a property to carry with them. But then we are wrong since that magnetic movement that they carry forth is not a property as such, but more like - how they are a property of that movement by and of and in which they exist and subsist. And so who is to tell - as to whom belongs to whom?

But atoms do not usually float around, they are happy just being a part of all these many grids in nature, unless we in our irrational behavior start blowing them up, or shooting them at something, then they can damage things. But then there are lots of them that do move and float around like the wind, and the waters, and when we rearrange their structures in turbines and our piston engines, or even in our bellies to serve the needs of our bodies.

It seems that everything comes down to movement, and even up to movement as well. And of course that fundamental movement by and in which atoms subsist is motion, and at that a complex motion to not only display that

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typical pattern of magnetic but to happily spin around as well. And by it all sorts of things are found, movements into a countless array of patterns that are more precise than even our own contraptions. When ten strangers come to them each with a different color shirt, they chap off the head of eight or nine allowing but one or two to leave their happy home.

Waves as waves can be gently rolling hills or liquids while it moves up and down or back and forth. While light for it function must be like unto a drill-bit with a single flute**. Light as such serves no purpose unless it has the power of rotation, like an axle to turn the wheel that moves the vehicle**. Those poor plants and flowers sitting in the dark are crying out for help, with no-one to put some zip into them, They have their atomic rotation and molecular coordinates, but sitting in the cold these slow down slower and slower.

What they are in need of is a rotating shaft with a head on its outer edge, like a single flute to engage with their now slow motion by which their adrenaline may be raised. The flowers closed themselves up for the night awaiting those rotating heads of the sun, for up to now all that came to them were straight line, none of them rotating. Like the flaps of an airplane are pulled in or driven out by rotations - so these flowers are in need of rotations by which to open up again. Or like the drive-shaft of a car to once again get its wheels moving, or how else are they to get to the pub or for anyone to admire them?

Since when did we start calling the rotation of a shaft or drill-bit as the wave of it? We did so from the start since we were unaware of the fact that these devices do turn. The crankshaft of an 8-cylinder engine also makes waves does it not, yet we do not call it a wave. Waves are not particles, and while I hinted for the angular moment to consist of some sort of substance. That my dear people is not anything solid nor liquid nor gas. As then I designated it 3W that is about as far as I will go, with the rest for man to speculate upon.

Waves are easily formed, we smell them and we taste them, but are they waves or simply coordinates? A coordinate can be any shape of form, a complex set of eights formed within one another, or the turns of a simple string floating by that in turn can also resemble waves. The difference between a red and a green color is the angle at which the tip of a single flute comes to enter upon a rotating or otherwise spinning coordinate. If it does not match it is history, otherwise it is passed on to delight man and beast with his scenery. Sound is often referred to as waves when it are but vibrations, but while they move onward their intrusion appears as waves.

The wave nature of matter is first of all that it subsists by movement and is contained by movement as well as displays movement. But they are not as such a property of matter, but of their wake while they are in motion. Nor can we say that matter is a property of that most marvelous fundamental movement that the One and only God established whereby all of matter came to have its being.

With matter on the move it leaves a wake that can be interpreted as waves, but mostly the interaction of the parts of matter by confrontation and Relative Angular Movement are prone to produce waves, like those in a light bulb, or by cutting the electrical coordinate on and off. Heating for example is simply by conduction that too is like light shining upon us. When you have a wheel turning at 50 turns per second, and another at 40 turns per second, those by conduction will bring each other to a common rate of rotation.

And that in all essence is no different from the light of the sun as it strikes upon our skin. When we are cold those minute parts of our skin have a rather low internal movement, but with light and the infrared for their rotation impacting upon them it is bound to increase that internal movement making us feel warm. It is pure logic as to why the linear movement of a wave will have a higher rate of speed than the factor of its rotation, all because that which we are so fond of in calling waves are much longer than the width of them by which to turn.

The kind of waves that travel slowly through the air to give us the smell of things are more correctly termed coordinates, like strings, the kind we like and such that are odious. These are not the kind driven forth by nature's fundamental movement, but in general with the wind and the general movement between all things. A coordinate can be just about any shape or size. For a magnet it is the figure eight, for light and other magnetic waves it is a twisting line with a single flute. For the atom by themselves and in grids there are figures of eight galore, and these form again what is referred to as multiplexes, like an eight in an eight, and those at just about any angle.

Our rotating magnetic line known as electricity couples figures of eight end on end, Complex molecules and component factors couple them by triangles and by squares, and then some. And so you see everything is by movement, be it rotation or taking a linear path that then comes to any combination thereof. For in movement there are but two fundamental directions, linear and angular, a single entity in two to four and that into an endless realm of combinations.

Mr. Broglie may think to have it all summed up, but he lacks insight into the fundamentals of all things. Or has he, for like it is said; **"If a particle of mass moves with a certain velocity it then has an energy that manifests itself in the form of a wave,"** and he even computes the length of these so-called waves. But what was it that we came up with - if not that parts on the move leave a wake? Who then is the wiser, we with our common sense of logic, or that other specie of man who see things differently? I at this point however am still trying to figure out if that particle is deemed as a wave, or if it be its wake? It's hard to tell with the choice of words such as they are.

VELOCITY VERSES VELOCITY

The general consensus is that the cause for the refraction of light lies in velocity. And to quote what is said; **"Refraction is the change in direction of a wave due to a change in its speed."** And another. **"The difference in the speed of light in different media causes bending of light."**

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Is it then of me to be different from everyone else to insists that the cause for refraction does not lie in any change of velocity? No, it is not that I wish to be different, but in knowing truth it becomes me to show that truth - that by it we may all come to the truth. Sight deception is a major issue by which man has erred in many ways and still does. It is true that as a wave passes into a change of density that its velocity changes, but that velocity is what is properly called, a Relative Velocity, a velocity for distance in time.

The reason as to why that relative velocity changes **is due to, and by virtue of** the change in wavelength. But that we did know, did we not? And yes we did, but in an elementary way, simply knowing that as wavelength changes so does velocity. The **how and why** thereof has not as yet dawned on us, which therefore I must illustrate and define. And to hit the nail square upon the head, **it is the "angle" in the length of the wave that determines that relative velocity, and the "why" lies in their mode of travel – to proceed by a circumference.**

And so now we know. Yes - provided we give up on waves being transposed in any transverse version, and to accept the fact that all waves move by rotation. I however do not expect one to accept just my word for it, but rather the evidence along with it. You would like to figure it out for yourself, but without a gift of insight that may prove to be difficult if not illusive, and so why don't we do this together.

First and foremost we must come to terms with this **- that there is no mechanism in the air or space by which any wave of the spectrum can be transposed by oscillation.** Only sound for its so-called waves are transposed by oscillation or vibration, one part moving up against the next. And since we know as to what speed that comes to, realize this as well - that with sound we are speaking of parts, of a particle of substance, while light does not consist of particles, but of coordinates in and by movement.

A block of iron for example is a block of matter, when therefore that block of iron is magnetized, shall that magnetism and those lines that it displays also be matter? No, because it as such is movement, or like I said, a coordinate. And a coordinate is not something that you link to matter, but to motion or movement. If light consisted of particles it would not reflect upon a mirror but go right on through it, only a coordinate of movement has the ability to reflect without any harm to the tender tissue of a plant, or a piece of tinfoil.

I could put us on the spot by questioning, - how if refraction is caused by the change in velocity, then how come it does not refract when the light enters into the normal? For whether it comes in the normal, or out of the normal, the change in velocity is exactly the same. The change in velocity then is always proportional to the change in wavelength. **And that obviously so since** I already acclaimed that it is - **in the angle of the length of the wave that determines the relative velocity.** But we ought to dig up an illustration by which we can better clarify this absolute fact in nature.

Figure 15, illustrates the typical sine formation that we have adapted for the waves of the spectrum. Notice therefore that it is not a particle, nor does it consist of particles, but it is just as we have drawn, a coordinate of movement. As then the arrow in the middle indicates the direction of movement, the velocity of that movement is at all times the speed at which the sine wave travels for distance in time, properly termed its Relative Velocity. And that speed as we know is always less than the constant that we rate at 300.000-km/sec.

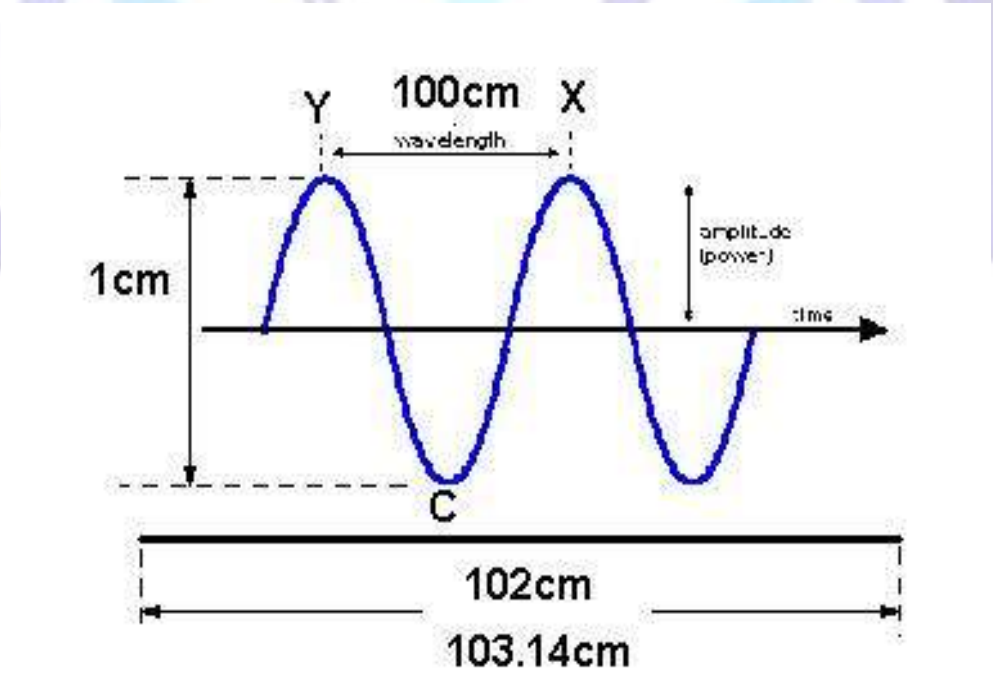

Figure 15. Illustrates the typical sine formation of waves expressed in its terms of.

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And so let us ask - just what is that velocity of constant, that speed of 300 million meters a second? For if no wave ever travels at that speed, not even in space where we have it at 299.792-km/sec, how did we come to that constant of velocity? And yes, consider this - how and why is it called a constant **when we have yet to name anything to travel by that velocity?**

The answer to this is simplicity in itself. By the illustration from Y to C, to X, **the speed at which that wave is formed is the constant**, the full 300.000-km/sec. While the velocity at which the whole of the wave is transposed, like Y to X, is its relative velocity, namely that velocity that we find by measuring distance in time.

But rather than measuring - how shall we suppose to find that velocity mathematically? That too is quite simple, Y to X, as the crest-to-crest **is the nominal length** of the wave, while Y to C to X is the **actual and/or full length** of the wave. If thus the nominal is 100-cm, and the diameter 1-cm, it comes to a circumference of 3.14-cm. And 3-14 plus 100 being 103.14-cm, and that divided into the 300.000 is 2908 that then multiplied by the nominal comes to 290.866-km/sec.

But perhaps we are confused for we have the notion as if these waves are as they are illustrated, while in reality they are not anything like what is shown by Figure 15. If we look at electrical waves, **as we always do, these do appear that way, but only with electricity,** any wave passing through air cannot be seen, nor brought up on any screen.

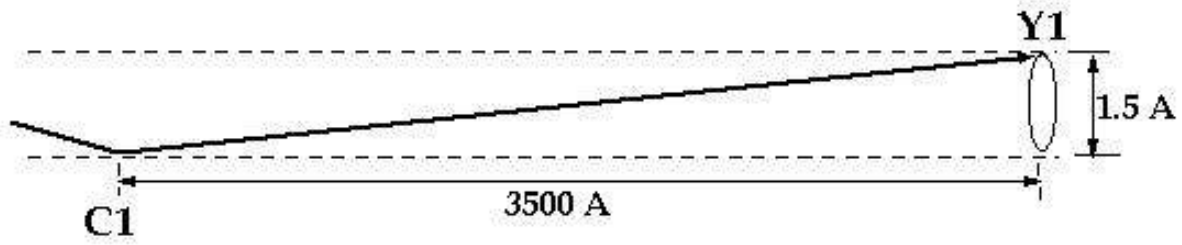

Figure 16. Illustrates the half portion of a wave more realistically.

Illustration Figure 16, is more like it - since we know for a fact that the diameter of a light-wave is somewhere around 1.5 Angstroms. And we also know that red light has a full length of 7000A, the half of which is 3500A. C1 therefore corresponds to C, and Y1 corresponds to Y. And even at this we are not able to illustrate light realistically, unless on a floor we draw two lines 3.5 meters long spaced by only 1.5-cm wide. and within this we draw our wave from one end to the other, top to bottom or visa versa. That mind you is the length of an automobile at a width no more than our thumb.

Looking at even a half-length of a wave realistically it will appear to us as were it nearly a straight line. **And yes all waves are nearly straight lines.** That is also one reason why they can circumvent the earth seven times in one second, **and how and why it is the constant in velocity that by all means is the one and only real velocity of any and all waves.**

Or have I lost you now? Perhaps I have - wherefore I will have to put it in other words. Stop and think, ask yourself this; what is that velocity that we measured for light? It was its distance in time was it not? But what is distance in time? It was how far that angular moment advanced itself by a certain number of kilometers in a second of time. And who was doing all the moving? **Was it not the constant driving that nearly straight line?** As then that line moved by a circular pattern once around the circumference for each 700-nm, it was forced to travel a greater distance than 300.000-km, within those 300.000-kilometers that is must pass within a single second of time.

That greater distance then is the sum of that circumference multiplied by the tally of its frequencies, the number of 700-nm lengths that will fit within a length of 300.000-km. The reduction in velocity down from the constant is thus - due to - and found by - whatever that additional distance came to. Those velocities that we therefore always work with is not any real motion, the constant being the real motion, the real movement. Our physical measure for distance in time - as a velocity **- is not as such the movement of the wave**, but how much by its angular moment it decreased for distance in time.

I asked a question, stating, **"Was it not the constant driving that nearly straight line?"** Ands here it is - that velocity of 300.000-km/sec that is found nowhere else, not with any wave. **But it is found with magnetism**, and here you will have to take my expertise on it since I do not know of a way to factually measure the speed at which these magnetic lines move. Since then my expertise on fundamentals appears to exceed that of any person on the planet, believe me when I say that the velocity of magnetism in its lines or coordinate as such - is at all times the named constant at 300.000-km/sec. And by it all waves are moved in their angular moments to their lengths. And equally so with electricity, its sine formation that we can bring upon a screen contains that very same movement and velocity of constant.

If then we measure the speed of electricity it will be proportionally less by its angular moment that then may be computed in the same way whereby the relative velocity of any wave is calculated. The only reason that we can factually observe the sine formation of the electrical coordinate is because its pattern remains stationary, while the 3M, the magnetic constant that inhibits - and as such are its lines of movement - just as those of any magnet also contain or inhibit that velocity and movement of constant. We however are unable to observe that movement, for just as we cannot see the wind, yet we know it to be there.

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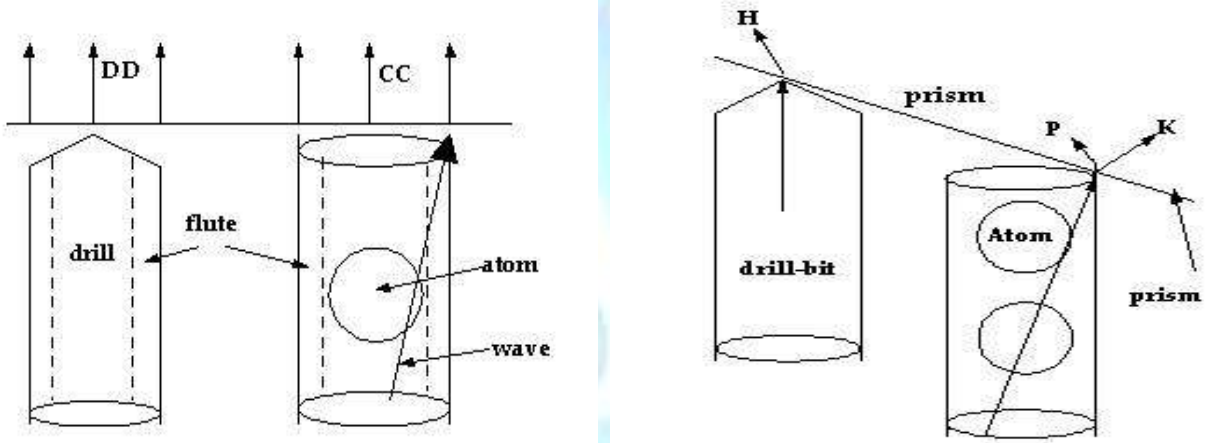
REFRACTION

At the start our subject was supposed to be on **Refraction and how that came about**. I then got carried away as that happens more often with me. Shall I then rehearse in how and by what refraction comes about, for I did so earlier, but not sufficiently whereby to evidence the same? A wave then is similar to a drill-bit, similar in that it rotates, passing around the substance of nature serving as their highway upon which to travel. For at no time did we see an automobile flying through the air with nothing for its wheels to ride upon.

So it is with waves, a coordinate requires a substance upon which and by which it may be a coordinate, be it a figure eight of force like any magnet, or a wave on the move, encircling single atoms like light, or millions of atoms within those of radar, or billions of them with any length greater than 100 meters. How therefore does a wave - when coming in the normal - pass into a greater density straight on - without refraction?

In reference to Figure 17, if a wave were just like a drill-bit it would pass straight on by DD, all because a drill-bit has its point **at the center of its rotation** - as illustrated. But the waves of light and radio etc., have this difference that they rotate around atoms and such substance, wherefore **their point lies in the circumference** rather than in the center as illustrated by both Figures 17, and 18. When therefore by Figure 18, it comes in contact with the prism the most forward point of that angular moment digs in (so to say) and turning as it goes toward P - it is automatically diverted (refracted) into direction K.



Figures 17, and 18. Illustrates the entry of rotating waves into a denser medium.

A standard drill-bit on the other hand with its point in the center of its rotation and beveled off would tend to go into direction H. And why then should that same wave in Figure 17, with its point at the outer edge of its rotation also pass straight on in toward CC? It is because the point of a wave for its diameter into the circumference - is always **like unto the flat end of a tube.** And that line coming parallel upon a greater density will not, and cannot as such refract, the **two lines being perfectly parallel.**

But there is more to this, for that tube with its flat end is not as such a tube, but a tube filled with atoms, and/or molecules unto which the wave for its movement will adhere. In the normal therefore the wave will simply be compressed for it to continue its normal passage around the atoms that are now spaced closer together than they were in the air. Whereas by Figure 18, the instant when the flat end of that so called tube came upon the prism, with the line of that prism in an angle before it, it is the edge of that tube that makes first contact, and it follows the same pattern that Mr. Huygens illustrates for his waves, like a row of men walking obliquely into a bed of sand.

But now we come to the question - what if the point of that wave arrives at the left - away from the face of the prism rather than on the right as illustrated? The answer here is manifold, first of all we must never forget that a wave is a rotating entity, and at that a rotation at extremely high revolutions. For the 700-nm wave that is about 400-trillion revolutions per second, and more for the blue wave. Secondly, if the point of the wave comes first at the left - then the area at the right **is a void**, and our wave would again dig in the same way refracting to K, all because it is a rotating entity with its point at the flute thereof.

Thirdly, that so called tube, as we said earlier, is filled with substance, and thus not as such an empty tube, for which cause - into a fourth reason, it rides dependent upon it, whereby it is not easily driven from it. Evidence of this is with light traveling in such straight lines. And no less by that apparent water on a hot road caused by a change in distance from one atom to the next, thinner air as it is called whereupon the light makes its refraction. A wave will compress at any greater density, but the instant it encounters a few atoms with greater spacing it instantly expands accordingly. That thus shows how dependent those waves are upon the substance of nature and their relative spacing.

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How far by the heat of the sun upon a roadbed may the atoms distance themselves from one another? If it be 1 or 2 angstroms, what are 2 angstroms to something that travels at a velocity of 300-thousand-trillion-angstroms each and every second? Yet that light reacts upon it most perfectly.

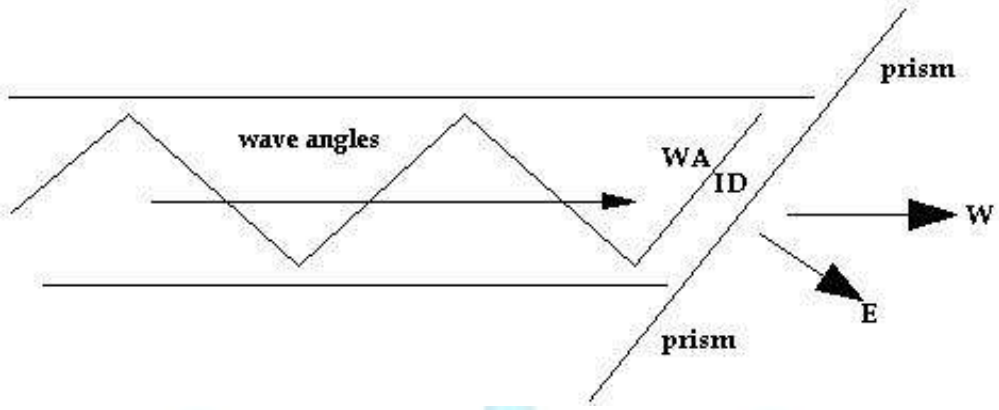

Figure 19. Illustrates how a sine wave would come upon a denser medium.

If now we consider a normal sine formation to come upon a prism as per Figure 19, the first angle as it strikes upon a prism is parallel with the surface; it should therefore proceed straight on to W. While the trailing angle comes to the X-Y-Z coordinate by which it should refract towards E. **Since then within any prism we do not see a straight as well as a refracted ray of light, it is a confirmed fact that light does not travel by any such sine formation**.

Illustration Figure 20 then shows the X-Y-Z coordinate by which any and all magnetic waves refract. The degree in the refraction then is first and foremost by the angular moment of the wave, the X-Y-Z coordinate, and secondly by its angle of incidence at which it comes upon the face of the prism. See also (Ref-2).

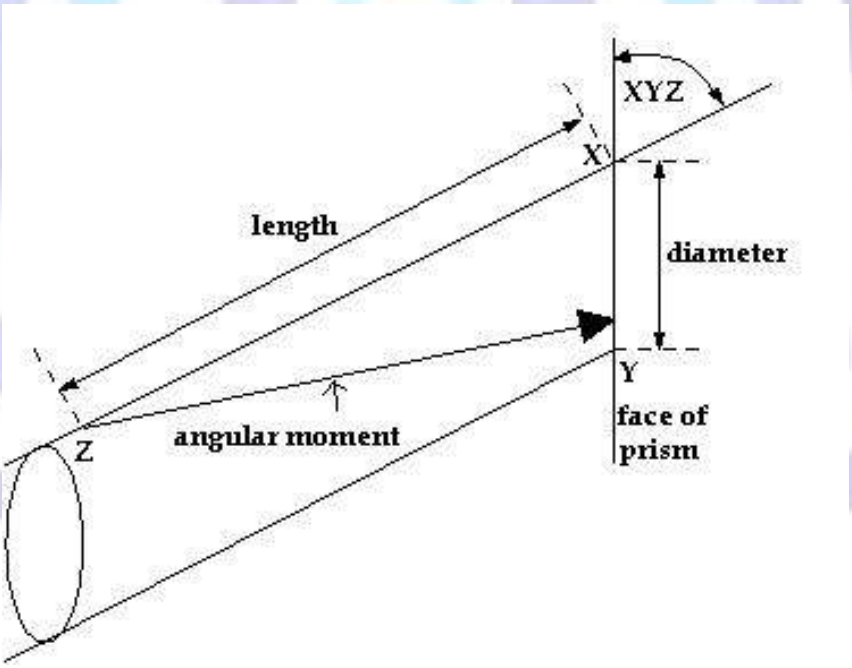

Figure 20. Illustrates the XYZ coordinate by which all waves come to their degree of refraction.

Then to evidence this fact in nature, if we pass a 700-nm wave and a 400-nm wave through a prism, the difference in their angular moments is 300-nm, that for half-lengths comes to 150-nm. The separation in the refraction of these two waves must then by degrees be the equal to those 150-nm. And so all we have to do is physically measure that degree separation - if it corresponds to the half-lengths or the full lengths. If it were the halves it serves to confirm my word, if not someone made an error since they cannot possibly refract by whole lengths

INCIDENCE AND DENSITY

Now it warrants us to enhance the further reality of waves in how and why they refract by entering a change in density, and the consequent dispersion of light into its colors, its separate wavelengths. And to lead up into that let us review the measures of light from its high end at some 700-nm to its low end at 400-nm, these being round numbers. If we substituted millimeters for angstroms, the half-length of the blue wave would measure 2-meters with the red at 3.5-meters

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to a width of 5 millimeters, that per illustration Figure 21 comes to a rectangular. As then the red 7000A wave spans from R to S, the blue 4000A wave spans from R to H.

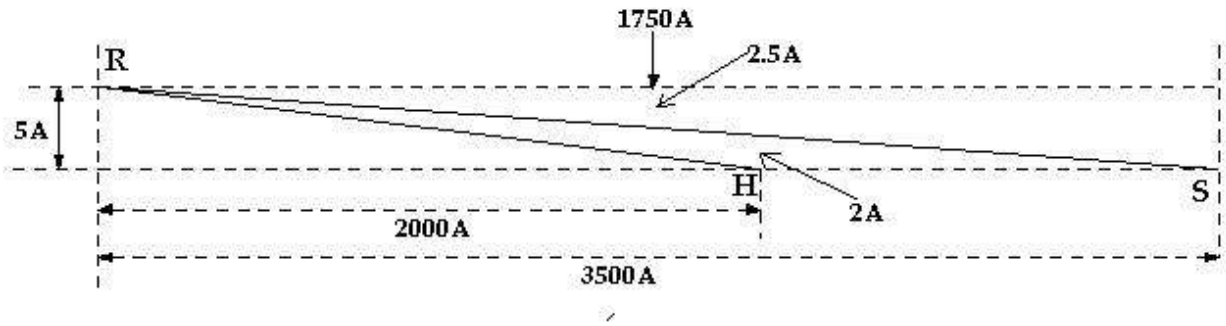

Figure 21. The half measure of waves calculated for distance between them.

What therefore may the degree separation between these two be, or in percentages of its tubular width? At the midway point of the red wave 1750A, the line passes at center wherefore the distance at that point will be 2.5A. And since the blue wave is somewhat passed that point - the distance at H between the two waves is somewhere at 2.14A. With the blue wave having a span of 57.15% of the whole that leaves 42.85% from H to S. And 0.05 x 42.85 comes to 2.1425. as the distance between H and the line of the red wave, also as 42.85% of the circumference, or full width.

And so let us assume or surmise that the separation between these two waves is at these figures, and that they will always remain at these figures, for when there is a contraction or expansion both of them will be reduced or expanded by the same degree, or measure. And that goes for refraction as well, for when both come at a fixed index of refraction and one is to refract at a sharper angle to that of the other, that in itself does not change the degree by which these two have their fundamental separation.

Then with our reference to Figure 23, we have only one angle of incidence to one angle of refraction, while I show 2 angles of incidence to more than one angle of refraction. And to debate the current version of it, when light strikes a denser medium such as the prism and is refracted according to the index thereof - **there can be no separation of the light into its different colors.** The reason for this is our own selves by affixing a singular index to it.

Nor is it of the prism to separate wavelengths; **a prism does "not" disperse light into its colors, it cannot do so. It is by and of "incidence" alone that light is seen for its colors. And that we can take to the bank, or as a law, since that law is plainly written in nature, besides the fact that we also wrote it – only we are not aware of our own doings.**

And here is another law written in nature: **Any "one" incidence can never have more than "one" angle of refraction. To have more than "one" angle of refraction one is in need of more than "one" angle of incidence.**

The prism is useful in that we can see through it, that it remits its wavelengths back out of it into all directions, like a turntable, how the light by its rotation also works around with molecules set into its grid whereby its coordinate can radiate out into a near 360 degrees. And that is not at every atom nor molecule, **but by lengths of,** for when a particular wave spans 500 atoms, that event takes place at these intervals. **That same thing then is not seen in the air where the light finds no termination, while the coordinates in glass or plastic do.**

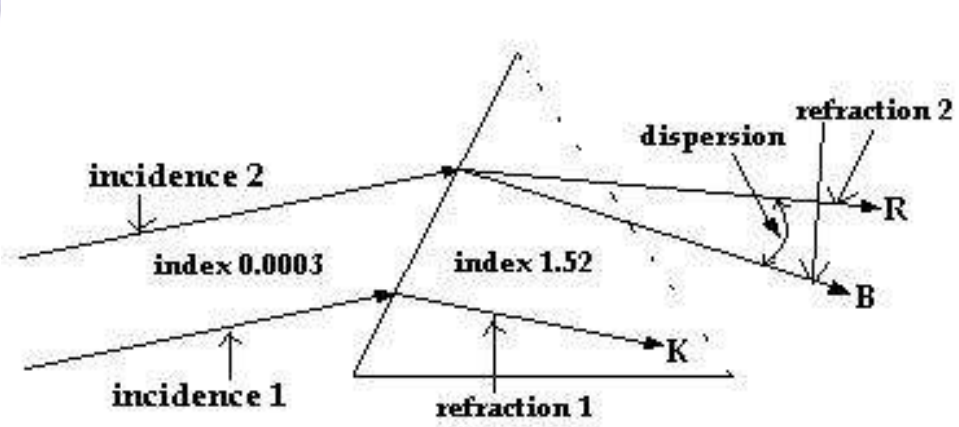

Figure 23. Illustrates the dispersion of light to be by incidence only, since again it is never of any substance to cause more than a single angle of refraction to any single angle of incidence.

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By illustration figure 23, incidence 1 has but a single angle to the face of the prism by which to refract into what can only be a single change in direction. But because sunlight always arrives with a great number of different angles inherent in their lengths, there is always **more than one angle of incidence**; therefore did I show two incidences, 1, and 2. Incidence 2 is the one that contains the varied wavelengths - and comes paired with incidence 1.

When therefore any one of these incidences encounters a dense medium like our prism, they - out of the normal will refract **"first and foremost"** to its own angular configuration that I call it's XYZ coordinate, and secondly to the compactness, the degree of that density that we have established **as the index of it.**

Conclusively, the angle of refraction **is a twofold affair**, and this is important to remember, for when any number of different lengths arrive - at obviously - different angles of incidence, at any prism - **each and everyone of them will refract by exactly the same degree relevant to that index.**

The index, or the prism as such, does not, and cannot refract anyone length more than the other. If it did - then the index as such is useless - since **it is a single fixed degree of density.** In consequence whereof **it is impossible for any prism in itself to cause any diversion into the waves by which their colors are seen.**

We always thought that a prism separated light into its colors, and if that were true than the earth also does not rotate before the sun, but that it is the sun to move around us. **A prism can refract waves but only each to their own incidence**. This is so because each different length of the light presents its own particular angle of incidence - and these will refract to each their own angle of refraction, that as such is more acute for the shorter verses the longer lengths resulting into the array of color.

The dispersion of light thus is **exclusive** by and of, and in the waveforms themselves as they arrive at different angles of incidence to different angles of refraction. **That is how the colors are seen - AND IN NO OTHER WAY.**

Our index to refraction now is also the index to retardation, and/or expansion, its primary use being for velocity, but since it works equally well for refraction, it seems that it is mostly spoken of for refraction. And we might as well keep it that way so as to make us forget about velocity, **it not ever in any way being any cause to refraction.** The evidence to that was previously shown, and I will speak some more of it. While then I found the index to be useful for velocity it was but marginally so, and of no use at all in determining the retardation or expansion in the changing lengths of the waves, since that goes by still another factor, and that factor likewise alters velocity. (Ref-1)

It might be said that there are two angles of incidence, but in reality with our normal single incidence there are up to 3000 or more in that octave of light alone if numbered by increments of 1. The light as it enters into a prism, or any other such density, does not change it mode of movement, it came encircling atoms and it will continue to do so, but its angular moment now being compressed to a sharper angle these must now make more turns around the circumference from its previous rotation in the air.

Consequently, its relative velocity will be reduced, for that is how and why different lengths come to their different speeds. What would however be a curious note - is to discover what the color of a red 700-nm length is within the prism. 299.792 divided by 1.52 (the noted index) comes to 197.231-km/sec. and that velocity pertains to a length that is far less than that by which a blue wave is known.

In other words, those many colors for their reduction in wavelength within the prism are beyond our visible range. The only reason that these waves within the prism appear to be visible is because they revert back to their original in leaving that prism to our beholding. We therefore never at all observe what in all reality is within that prism.

If then we wish to check on those angles of incidence from the high 700-nm to the low 400-nm if indeed their incidence is by half-lengths or full lengths, we need but measure the separation between them, as we came to earlier by that 40+ percent difference.

It is obvious that we will have to rewrite our theories on refraction, the laws of nature demand it, and while the Snell's law may be useful its theory is based on wrong conclusions. Anyone can measure one angle from the next, but for an understanding of fundamentals one is in need of the Teacher by whom insight might be awarded him.

By illustration Figure 15, I clearly showed how the velocity of any wave driven by the magnetic constant is formed regulated - and - altered - by their angular moment as it must pass by a circular route. It is therefore not only obvious but conclusive that there is but one single velocity, **and one single velocity only**. All waves of the spectrum travel with one and the same velocity through any and all densities. **It is completely impossible for the movement of light etc., to slow down or speed up for anything as trivial as the densities in nature.**

And this we may write as a law**, since it is a law of nature**. The speed that we record for distance in time is not really a velocity, it is **an imposition upon velocity**, an alteration by which the true velocity appears to be moving slower. And that also may be written **as a law of nature** since it is factual and indisputable. Is it not also by a law in nature how the earth turns – rather than for the sun to move around us?

The velocities that we have obtained by physically measuring the same, or obtained mathematically, are just that namely - a mathematical entry of a variation, or alteration, or imposition to the one and only real velocity. The relative velocity of waves are in effect a factor of mathematics, measuring distance for time. The term "Relative" thus is quite appropriate for these so called velocities, a relative factor, a factor relating to - but not being the entity itself, or the movement thereof.

ISSN 2347-3487

Sight deception is what has us in a bind. When you are sitting in a train going 10mph and through the windows you see another train moving in the same direction at 20 mph, that train to you appears to be moving at only 10mph, and even if you physically measured that speed from your seat it would be 10mph. But you are of course mistaken since you should have considered your own velocity in respect to the other train. In like manner we deceive ourselves with light for its movement and refraction. Without insight and a proper understanding in the nature of things we are always prone to be misled by appearances, And for that we are in need of one to whom such knowledge and insight is given. For of my own I never discovered anything, all that I am is a gift to me.

In the question as to **how and why** light and other such waves refract; the best way to illustrate that is by a phenomenon called reflection drawn up by Figure 24. If waves came as lines like unto C in the illustration, they would not reflect but glance off into direction D. But since all waves - as lines - travel by a circumference their so-called point comes to a tubular area, and it is as such that they strike upon any given plane. If now a ray of light came upon a surface from direction "A", and there was no rotation, it would simply collapse or turn into the normal. It therefore as such would not reflect and for all practical purposes be like unto the line at C.

But because that tubular area is tubular by and in the rotation of that line in the circumference - our rotating line in all essence rotates itself into a new direction heading towards B. It is by this that as it turns away from the plane it must do so by the same angle in which it came. No matter what its angle of incidence happen to be, the reflected angle will always be equal to the incidence - all because it is a rotating entity by and in a tubular configuration.

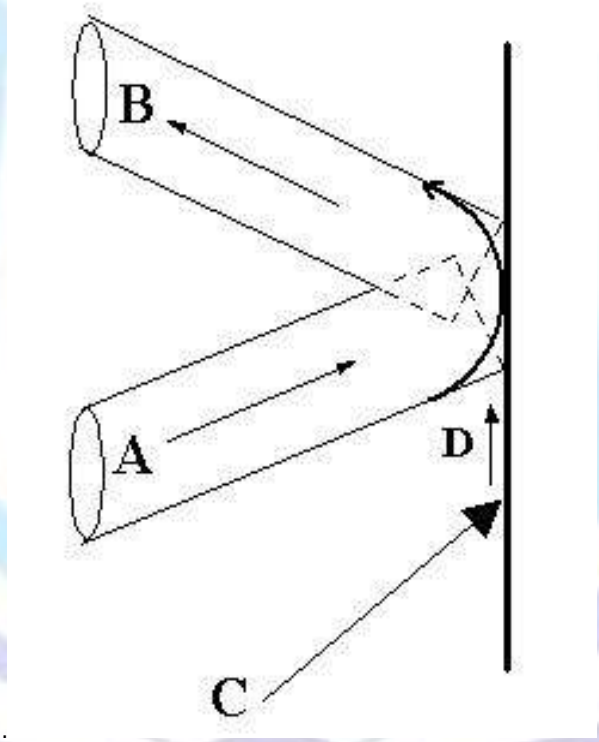

Figure 24. Conveys how no wave but a rotating wave is able to reflect and/or refract.

And thus to come back at our question in how and why waves refract or reflect, it is first and foremost **by "incidence"** that then comes **paired with the rotational format** of the wave, for without the latter no wave could possibly reflect nor refract as we know it. Secondly, and this is by the entry of a wave into another density, the entry comes before refraction. And how did I figure that? Because a wave cannot refract to take in **a greater angle** than what is foremost dictated upon it by its incidence. The turn by its entry into the denser media has this additional dictation - to follow the track that is laid out for it, which for a diamond is more condensed than for glass or water.

The full angle of refraction thus is **additionally determined by and in its mode of travel**. One could conceive it as a train upon a track, howsoever the track is laid out - so the train must follow.

And lastly our vocabulary could use some improvement. When for example we say that the speed of light in air is 299.702-km/sec, it is an ill-conceived statement in that it fails to specify the particular wavelength to which that applies. I was forced to take a pick, and I choose the 700-nm length by which in the velocity so noted - I was to discover its amplitude. The blue wave in air travels at less than 299.547-km/sec, while the 550-nm length is near 299.646-km/sec.

How therefore can the speed of light in air be 299.702-km/sec when that velocity pertains only to the red 700-nm length in air? Therefore when speaking of any velocity **it is imperative to specify the wavelength to which that velocity applies.**

ISSN 2347-3487

Conclusion

If any man can prove that light or any wave for its different lengths does not vary in velocity in any and all mediums, I will apologize to him for all my errors, and destroy whatever I have written. If however blue light does in fact travel slower to that of red light – who is to contradict me?

I have stated that the dispersion of light in a prism is by the half wave measure. I however had no real means to measure it, yet I stand by it. If this proves to be different I shall be wrong, yet in order for man's scientists – along with Mr. Huygens to with their wave theory be correct, their angle of refraction must correspond to what is real for frontal waves, that then of course will be less to the real angles of the waves.

And is not this a simple logical deduction – that if waves arrive as frontals, there would be no dispersion, nor therefore any rainbow. A whole new realm of physics so it seems that I have been bringing forth, while I have merely been correcting that which was in error from the start.

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