Chapter 1 (existing)

New technical terms used in this chapter:
Black-Hole [C-R]
IB^3 Schwarzschild radius
Neutral Zone [C-R]

Gravity and the C-R theory

subtitled: **Not Just Pulling Your Leg**
or: **Some Heavy Thinking**

The Newly Postulated Nature of Gravity

The C-R theory has postulated a new explanation for the nature of gravity. This nature of gravity is based on (after)thought experiments which will be included and discussed further in the appendix.

The C-R theory has also concluded that gravity behaves in an easily predictable manner, even at the edge and the inside of a Black-Hole [C-R]. The C-R theory obeying black hole is so different from conventional black holes, a new way of differentiation and marking has been chosen, using the double capitalized-hyphenated, super-scripted Black-Hole [C-R]. This includes the new understanding of how gravitational fields function, both outside and inside the vicinity of a Black-Hole [C-R], and how they influence matter.

C-R has postulated that the true nature of gravity is caused by curvature; a significantly different mechanism than that which is currently accepted as the best explanation of gravity. Most current theories believe that gravity is a force, comparable to the electromagnetic force. If so, there should be hypothetical gravitational particles, called gravitons, that will be interchanged. This interchange is believed to be comparable to the interchange of the W particle (the Vector Boson), which is believed to intermediate both the strong and the weak nuclear forces.

The C-R theory will attempt to demonstrate that gravitons are not the cause of gravity. The C-R theory believes that the curvature of space-time is what causes the "effect" of gravity. This slow-down of time from the curvature results in energy being "squeezed-out of" matter somewhat like orange juice is squeezed out from an orange. Only 100% of the available energy can be extracted, just as only 100% of the available orange juice can be squeezed from an orange. Squeezing any harder, or exerting more effort will not yield more orange juice. Ditto for gravity.

This energy, which comes "out-of" any mass which is being warped or bent in a space-time continuum, causes the kinetic energy, or acceleration which we think of as "gravity". This acceleration is independent of the mass or it's density, it results strictly from the apparent slow-down of time, proportional to the amount of the warping of time.

Rejection of Gravitons

The C-R theory has chosen to reject the idea of hypothetical particles of gravity, called gravitons. Here is the conclusion, based on the results from several thought

experiments, which will be covered more fully in the appendix.

The thought experiments seem to demonstrate that, if gravity is caused by hypothetical particles called gravitons (sometimes geons), then violations of Conservation of Energy become MANDATORY and unsuitably random at the outside edge of the conventional black hole, or the IB^3 Schwarzschild radius.

The IB^3 Schwarzschild radius is the boundary to a Black-Hole $^{C\text{-}R}$. It is the total and complete surface area where the gravitational escape velocity of any electromagnetic particle/wave, is equal to the speed of light. This non-escapable[1] gravitational trap is caused by the intense and complete curvature of the space-time fabric.

Alight at the end of the Tunnelling

Current theories which involve gravitons require that, in order to allow any gravitational force to be felt outside of the (conventional) black hole boundary, some mechanism must exist to allow the tunneling of these hypothetical gravitational particles. If this tunnelling of gravitons in this case is anything less than 100% efficient, the gravitational attraction felt outside the black hole must decrease by a random, and possibly fluctuating amount. This random amount would be proportional to the efficiency of the tunnelling mechanism or process, across macroscopic distances.

There is only one other alternative, still using gravitons, which would allow conservation of energy to be true. That would require that these gravitons must tunnel out from the collapsed singularity at the exact center of the black hole.

In order to uphold Conservation of Energy after the collapse, these gravitons must still be emitted outside the black hole at precisely the same rate and intensity (or frequency and energy) which they were before the gravitational collapse.

Like salmon swimming upstream, these gravitons would be required to fight their way against their own gravity through the inside of the black hole. In this volume of the space-time fabric, the escape velocity is at least equal to, if not greater than the speed of light. These hypothesized real particles must tunnel through macroscopic distances, with an efficiency EQUAL to exactly 100%. Even if the gravitons were generated at 500% of the required amount, with the coupling-out efficiency equal to 20%, how would the singularity at the center of the black hole know how many gravitons needed to be emitted, or how many emitted gravitons were intercepted and interacted with the real world?

Welcome tunnelling, to the real world
or
A "Well-thought = Out" Experiment

Tunnelling of electrons from a "forbidden zone" is recognized as a valid phenomenon in quantum mechanics, when limited to atomic-length distances. Sub-atomic particles like electrons are allowed by the quantum mechanical theory to tunnel

---

[1]Non escapable under normal circumstances. See chapter ?? and page XX for more complete C-R theory speculation on possible methods to escape from a Black-Hole $^{C\text{-}R}$.

(i.e., sneak through) from a low energy region (a well), through a high energy region to a lower energy region. This phenomenon always takes place with less than 100% efficiency.

In the case of the electron's escape from an atom, it could be said that the tunnelling is allowed due to the probability that at some point in time, the electron will have enough energy to pass through the forbidden energy barrier. Alternately, it could be said that there is a finite probability, measured over a finite time, that the position of the electron will be found outside the barrier. This means that given a sufficiently long time, the electron probably will tunnel through any barrier[1].

In this real-world example, the ease of tunnelling is facilitated when the "forbidden-barrier" is composed of real atoms. In a totally collapsed center of a conventional black hole, the "sufficient-time" option also seems to lose any validity. The notion of measurable-time is undefined when using relativistic logic on an infinitely dense singularity. Additionally, conventional tunnelling involves electrons, but does not include photons, or hypothetical "particles" to choose the electric charge.

Since neither of these two possibilities involving tunnelling as the cause seems likely, the C-R theory has concluded that gravity has some other underlying mechanism. Tunnelling cannot provide an adequate explanation of gravity existing outside of a black hole.

Understanding the Gravity We're Standing Over

I expect that this will be a controversial area in the C-R theory. The clues to the behavior of gravity have been around for quite a while, but the original Newtonian description of gravity by classical physics has blinded current scientists to an intriguing possibility. Curvature, not gravitons, is the true cause of gravity.

C-R theory Assumption A (as in apple, as on Isaac Newton's Head)

The effect of gravity must be felt outside of the Black-Hole $^{C\text{-}R}$, at the same intensity as before the collapse[2]. If gravity outside decreases to any lesser amount, when the central mass of the Black-Hole $^{C\text{-}R}$ remains constant, conservation of energy MUST be violated[3].

---

[1]This is described by the Schroedinger equation, and the probability is described by Psi squared.

[2]There may be some small decrease in gravity caused by the loss of some mass, converted to energy, and radiated away during the collapse. This loss of mass, with the slight reduction in gravity is similar to the small amount of mass lost (converted into energy and radiated away) during the sun's energy output.

This small loss of gravitational curvature is acceptable using the normal conservation of energy as long as the rest-mass is similarly reduced. What the C-R theory would object to is when the exact same mass produces less than 100% of it's full quota of gravitational effect.

[3]For a full discussion of why conservation of energy would necessarily be violated if gravity decreased,

(continued...)

Its Relatively Simple

Einstein, in his theory of Relativity, predicted the slow-down of time near a large massive body. The C-R theory "discovery" is that technically, gravity does not "cause" the slow-down of time near a massive body. Rather, it is the forcing of matter into slowed-down time which “causes” kinetic energy to “leak-out”, caused by the curvature or bending of the fabric of space-time, which creates the “effect-of” gravity.

Current theories (pun intended) with an open switch.

Current theories have run into difficulties because they have misunderstood the nature of gravity. An analogy to the current view of gravity would be: Imagine a lightbulb, with an initial surge of electricity rushing through its filaments, caused the light-switch to turn on. The claim that this inrushing current causes the light switch on a wall to be flipped to the on position would be - understanding the event backwards.

Squeezing out the Truth
(Awful pun: Can you Orange a demonstration?)

Consider the earlier analogy of (half-of) an orange in a juice squeezer. As the orange is warped, or bent, or squeezed, the juice comes flowing out. As long as there is fluid left in the orange, extra squeezing will produce more juice. What could this possibly have to do with gravity (or did the C-R theory just pick the wrong fruit)?

Imagine a singular hydrogen atom, with the electron at it's lowest allowable energy level, the "s" orbital, i.e., at the temperature of absolute zero. By quantum mechanics, the thermal energy level of the electron in it's orbital of this hydrogen atom cannot be decreased by radiating away any more energy.

Now imagine this hydrogen atom (still at absolute zero) in a time squeezer, and warp it's little space-time fabric into a stronger gravitational field. (Similar to the orange.)

Since the hydrogen atom is at it's lowest possible (temperature-wise) energy state, it cannot expend any energy to radiate away any photons. The hydrogen atom can however, pick up some speed (kinetic energy) in the direction of the time-warping, and will slow-down timewise in measurable "real-time".

Notice that, until the hydrogen atom impacts something else and converts its speed into heat, the total energy content of the hydrogen atom system remains constant.

Notice also that the hydrogen atom gravitationally seeks-out the lowest potential energy area. This area also corresponds to the area with the slowest "real-time" clock, i.e., to the area of the maximum space-time warping or bending.

The C-R theory speculates that the fabric of space-time can be bent or warped or twisted or squeezed (do you get the picture?), to decrease "real-time" of matter. This suggests that there is a right-angle, or phase relationship between real-time and "imaginary-time". (This compares to an electronic system, with either inductance or

---

[3](...continued)
see the Thought Experiment #XX in the appendix.

capacitance in a circuit.)

Notice that the hydrogen atom still exists at absolute zero. Other than a real-time energy (gravitational potential energy) loss, it has remained essentially unchanged, throughout it's ordeal.

NEW for 2006: Imagine if the hydrogen atom's total system (the proton and the electron) could instantly be converted into energy, using $E=mc^2$, its converted energy sum would always be equal to its energy in that gravitational field, at that time. Notice, this means that the very same hydrogen atom would be "worth" more energy at the "Great Attractor" than on earth, and would give more energy, if converted on earth than it would at the outer edges of the universe, at an area of, say, 90 to 95% redshift. This imposes a reference frame over the universe, and means that space is NOT isotropic anymore. This contradicts THE prime assumption of general relativity, that space is isotropic, or identical and equivalent everywhere else. This will be covered further in the "New for 2006 section", and in section(s) __.

The Space-time Curvature-to R-C or R-L Circuit analogy
(or: **Use Inductive Reasoning)**

If you could view space-time from an external frame of reference, you might notice a similarity to the description between gravitational curvature and time slow-down to a Real(-time) current vs. Imaginary current in an electrical circuit composed of a pure resistance and a pure impedance, either inductance or capacitance.

Just for the "L" of it

Try to imagine a situation using the above mentioned electrical circuit, with an inductance. Consider a diagram plotting the instantaneous phase angle of either the electrical field potential or of the current flow, once a voltage is applied.

To understand this type of circuit, conventional wisdom requires an "imaginary" voltage and an "imaginary" current must be used to track the inductive portion of the circuit. These "imaginary" currents really exist, but they are out of phase with the "true"(RMS) voltage and current which appear across the resistance. In mathematics, the contribution to the voltage and current flow is tracked using i, or the square root of -1.

If the inductive-reactance, measured in ohms, vastly exceeded the resistance, also measured in ohms, the phase angle of the current and voltage flowing in the circuit would approach 90^o. The "power" flowing through the circuit would be largely "imaginary", as the real power and current flow would be a minuscule fraction of the total current flowing in the circuit.

Can we Root-out the solution, through this Route?
(using root [-1])

In a similar way, you now can imagine a space-time vs. gravitational curvature plot drawn as a phase-angle diagram between Real-time and Imaginary-time. At normal, everyday gravitational levels, the phase angle of the curvature would be so small as to be

unmeasurable by any practical means[1]. As the gravitational field intensified, the phase angle of the diagram would start to become noticeable on our chart.

One could easily and instantly see that, the plot of the amount of the curvature of space-time at the IB^3 Schwarzschild radius would be approaching a 90 degree phase angle as the escape velocity approached the speed-of-light. The real-time would approach 0, and all "time" would be imaginary once inside.

Is this Angle of Approach Right?

If you again use the electronic circuit analogy as a reference, and you can imagine what would occur at the 90 degree space-time phase angle. You would have a total imaginary-time existence. Any combination of matter-energy will be (with respect to time) in a minimum energy state.

The situation: At the outermost edge of a Black-Hole $^{C\text{-}R}$. The curvature is 100%, and the escape velocity is exactly the speed of light.

The C-R theory will suggest that the mass which is now inside the Black-Hole $^{C\text{-}R}$ represents the gravitational analog to the quantum mechanical presentation of the electron in it's minimum energy state. Gravitationally time-collapsed matter-energy may also behave similarly to the hydrogen atom's electron at absolute zero.

At absolute zero, the hydrogen atom has it's electron at the lowest possible temperature energy level, the "s" orbital. The electron cannot lose (radiate) any more energy once it occupies this orbital.

If the electron were to collapse in its orbit further, closer to the hydrogen nucleus, it would gain energy. If the electron were to jump into a "larger" more energetic orbital, it would also have to increase it's energy. In either case, the electron could no longer be classed as remaining at absolute zero. Yet gravitationally, more energy CAN be surrendered!!

Recycling a good Idea from past History or “Collapsing”: an Argument.

In the early 1900's the quantum mechanical theory explained the existence of matter, and suggested why the electron did not continuously radiate away energy until it would collapse almost instantaneously (within one-fifth of a second) spiraling into the

---

[1]New for 2006: Even though the angle here on earth would be small, it is not zero. The minimum curvature would be at “The Great Attractor”, and at the maximum curvature the angle would measure 90^o which would be anywhere at the Schwarzschild radius. We could probably only notice the difference in curvature by going to many other places in the universe, and measuring then comparing our observations of earth from each location.

We would notice a very peculiar pattern. Measuring our distance from the “Great Attractor” (where the C-R theory maintains is the CENTER of our universe), anything closer to the center as compared to us would appear blue-shifted, and anything further from the center would appear to be red-shifted to us. Strangely, there should be a shell of matter at the same distance from the “Great Attractor” as we here on earth, which will not be red or blue shifted at all.

This STRONGLY IMPLIES that there is a preferred reference frame in the universe, and that space is not isotropic.

proton, even at absolute zero. Maxwell's equations predicted that a moving electrical charge should continuously radiate away energy. Quantum mechanics triumphed because it eliminated the singularity predicted by classical mechanics. Scientists in the early 1900s grudgingly grasped that the quantum world around them had a built-in, and rather sensible limit, which prevented matter from collapsing into non-existence.

The C-R theory asks, in the case of a gravitational collapse into a Black-Hole $^{C\text{-}R}$, is there also an analogy which will provide a similarly satisfying solution to the problems faced by a prediction of the total collapse into a singular point? If the total collapse of the electron into the proton was not allowed by nature, even though classical physics demanded it, can it be that nature has imposed a similar limit to gravity?

The Old Ideas on Gravity Can't Stand up to Scrutiny

If gravity behaves as the C-R theory predicts, (from the C-R thought experiments) the slowdown of time is what "causes" gravity.

The IB^3 Schwarzschild radius is the Black-Hole's $^{C\text{-}R}$ external boundary. Here, the local reference-frame for time is slowed-down or warped down to absolute zero-time, in terms of any external, real-time, reference frame.

There's No Time to Allow A Collapse
or
Just in the Niche of Time

C-R theory Assumption B (as in Black-Hole $^{C\text{-}R}$):

Because Bending space-time into a Ball creates a Barrier of no-real-time, a Black-Hole $^{C\text{-}R}$ is Barred from Burying it's Bulk (in a Singularity).
or
The mass trapped within the Black-Hole's $^{C\text{-}R}$ IB^3 Schwarzschild radius cannot collapse into a singularity. This is because gravity is only an observed effect, caused by the de-activation of real-time existence. Once all real time is eliminated, any mass-energy trapped inside the Schwarzschild radius is at it's lowest attainable energy level. Further collapse is impossible, without adding energy.

By the C-R theory, at the Black-Hole's $^{C\text{-}R}$ IB^3 Schwarzschild radius boundary, no further collapse (inward) is possible! This occurs because of the reduction of real time for all mass inside this IB^3 Schwarzschild radius to absolute zero. Inside this boundary, the matter-energy combination is at the lowest possible gravitational energy state, with respect to real time.

Because real-time has already been reduced to the minimum of "0" (no-time), "gravity" cannot collapse matter or energy any further. ALL of the "real-time" has been taken away from the matter and energy which are now trapped inside the Black-Hole$^{C\text{-}R}$.

The curvature of space-time cannot squeeze (or curve) any additional local time out of existence or transform (exchange) the "real-time" energy from the mass into more kinetic energy, because no real-time remains. Even if curvature increases, no additional

slowdown can occur. Like squeezing an empty bottle, no additional squeezing can extract more.

Using the C-R electrical analogy, imagine that at the Black-Hole $^{C-R}$ boundary, 100% of the real time has been transformed, warped, bent or rotated into an imaginary (i.e., 90^{O} phase shifted) reality of existence. All matter trapped inside this zone has surrendered as much of its detectable "real-time" existence as is available.

Inside the IB^3 Schwarzschild radius, there is nothing time-wise left to lose or to give up. Even with a more intense curvature, with a greater (faster than the speed of light required to escape) gravitational escape velocity, there is no energy or "real-time" left to squeeze-out.

Whatever matter-energy that is trapped in this zone must still exist, and must still possess most of it's basic properties. Mass, electrical charge, momentum, angular momentum and rotation still exist within this zone. (See chapter 4)

In this situation, without imparting or inputting more energy into the gravitational collapse, whatever mass (and energy) is trapped in this zone cannot now expand out of, or contract further into the Black-Hole $^{C-R}$.

Your Opinion: Can you remain neutral?

Because the real-time occurrences are forbidden at (and presumably-inside) the IB^3 Schwarzschild radius, and because no further gravitational collapse inward is possible, the contents of this real-time-inactivated volume of space-time must behave as if they were neutral.

The denizens in this zone are neutral to all speed-of-light (electromagnetic) interactions, to each other, and to the passage of time. C-R has therefore named this "place": the Neutral Zone $^{C-R}$.

The matter-energy trapped within this Neutral-Zone $^{C-R}$ still exists, and still warps space-time sufficiently to maintain the gravitational curvature constant outside of the IB^3 Schwarzschild radius. The contents further inside of the Black-Hole $^{C-R}$ will be covered in several later chapters. (Hint, just like a Tootsie-pop, there may await a special surprise in the center.)

This simple discovery: that gravity cannot collapse matter beyond the 0% real-time curvature stage; eliminates the problem of the singularity from consideration when discussing (C-R) Black-Holes $^{C-R}$.

When the C-R theory combines this first 'discovery' with the further conclusions, predictions and assumptions that are covered in the next sections, the resultant theory is: not only very simple, but totally elegant.

Author' note: Sneak Preview - The C-R theory universe will take on a marvelous simplicity and elegance, with ingeniously interrelated components. The C-R theory conclusions will strongly suggest a pre-planned, non-random overall design to the universe.

Chapter 2

New technical terms:
Black-Holes [C-R]
IB^3 Schwarzschild radius
Active Zone [C-R]
Neutral Zone [C-R]

(Sparking some controversy)

The Electrical Nature of Black-Holes [C-R] (from the C-R theory)

(subtitled: **Discharging Current Assumptions About the Electrical Nature of the Black-Hole** [C-R]

O.K., just say Charge It

If you can remember the conclusions reached back in Chapter 1 on the nature of gravity, C-R concluded that gravity is caused by a slowdown in time. The resulting increased curvature frees-up (liberates) or squeezes-out energy from matter. In chapter 2, a further set of thought experiments will be used to test the present-day conventional assumptions about the electrical nature of the Black Hole[C-R].

With results obtained from some simple (after) thought experiments, to be discussed later in the appendix, C-R has found another incredibly simple, and simply incredible observation.

C-R Theory Assumption "C":

A Black-Hole [C-R] Communicates no Charge-Coupling Info.
or:
A Black-Hole [C-R] does not allow any internal or external knowledge of it's electrical charge. The contents (Matter and Energy) inside the "Neutral-Zone [C-R]", which is within the Schwarzschild radius, are infinitely insulated electrically from each other, and from the external "real world".

The Charges: A Cover-up

Using the C-R theory assumption "C" above, the theory concludes once a Black-Hole [C-R] "swallows" an electrical charge, that electrical charge will remain effectively insulated inside the IB^3 Schwarzschild radius. Any electrical knowledge of the swallowed charge will be covered-up by the nature of the Black-Hole [C-R]. Essentially, the charges will be "invisible" and non-detectable from the outside of the IB^3 Schwarzschild radius. New for 2005, C-R would suggest renaming the IB^3 Schwarzschild radius either the insulation boundary, or isolation boundary.

This C-R theory conclusion follows from the limited nature of the quantum mechanical tunnelling process. C-R has postulated that there is no possible way in which

the imbalance in the electrical charge could be communicated or "coupled-out" from the inside of the Black-Hole $^{C\text{-}R}$ to the outside. This is mostly because the necessary “time-dependent” electromagnetic interactions are forbidden when the escape velocity is equal to or in excess of the speed of light.

I’ve told you a million times!!

An additional reason to discount the probability of tunnelling as a practical mechanism of electrical knowledge: the distance which needs to be covered from the inside of the Black-Hole $^{C\text{-}R}$ is macroscopic, orders of magnitude larger (millions, billions, or more) than the atomic width barrier distances encountered in working devices like the tunneling diode.

What's the Matter?

One of the most unusual observations which any potential theory of the universe encounters is the overwhelming preponderance of regular matter. Any theory should either A: attempt to explain why this occurs, or B: show what significance this has for the overall scheme of things in the universe.

Most theories cannot adequately explain why this occurs, and regard the overwhelming abundance of matter (over anti-matter) as an embarrassment or an inconvenience. Although the C-R theory does not explain specifically why mostly matter exists, the C-R theory works the best if this overabundance of regular matter is indeed the case. The C-R theory almost seems to require the universe to be composed exclusively (with a few [anti-] particles as an exception) of one type of matter only[1].

On the Nature of Matter: Protons, Neutrons, Electrons
or
It's Elementary (particles, that is), My Dear Watson

All of the everyday matter with which we are familiar is constructed only from protons, neutrons, and electrons. Some smaller amounts of other sub-atomic particles have been detected, but they appear to make up only a minute fraction of the total mass in the detectable and observable universe.

When ordinary, everyday matter is considered, some physicists contend that the size, mass, and charge of the electron, proton and neutron are temporary properties, which were somehow determined by or are now related to the present state of the universe.

Dirac's hypothesis would be a prime example. Dirac postulated that the properties of the electron mass, the size and age of the universe were linked. He speculated that, as the universe expanded, the force of gravity (by the gravitational constant g), the strength of the electrical charge, and other parameters would decrease with time.

---

[1]The C-R theory could, just as easily, thrive in a universe populated with almost 100% anti-matter. In our universe, the abundance of matter is all that matters.

The C-R theory predicts that there will be no change in the properties of the basic particles in the universe. Regular matter will retain the same basic atomic properties it now has, even if there is an "end" to the universe[1]. The reason for this confidence is that some intact matter will remain unchanged, even during the big bang. In fact, it is only due to the unique nature of the universe's regular matter that C-R can predict that universe will be able to recycle and sustain itself at all.

C-R Purposely Puzzled to Put-together the Pieces

When considering a Black-Hole $^{C\text{-}R}$, one must contend with it's nature, which goes beyond the experience of current physics theories. The Black-Hole $^{C\text{-}R}$ also resides outside the possibility of exploring it's nature by simulation inside a laboratory setting. What C-R is about to postulate is based on the previous C-R theory assumptions, "A","B","C", and the conclusions about the nature of the Black-Hole $^{C\text{-}R}$.

Scenario: (Consider it a PLUS -{pun intended})

Imagine a hypothetical, single hydrogen atom, very near the IB^3 Schwarzschild radius of a Black-Hole $^{C\text{-}R}$. Imagine what happens when the Black-Hole $^{C\text{-}R}$ will attempt to swallow this hydrogen atom.

Author's Note: The reason for the oversimplified view of the hydrogen atom and it's behavior near the Black-Hole $^{C\text{-}R}$ is to allow you, the reader to comprehend, in English, how these events may occur. This is not intended to be an absolute and complete mathematical and theoretical description of the event. (J.R.)

Consider the singular hydrogen atom. One proton, one electron. The electron will orbit around the proton, or the electron-wave will resonate around the proton, depending on whether you wish to consider the case of matter {particles} only, or matter-energy {waves} in combination.

Imagine that a typical Black-Hole $^{C\text{-}R}$ is about to swallow this singular hydrogen atom. Many other atoms, ions, and molecules are probably nearby. They will likely be quite hot, quite excited, and quite energetic.

There should be many collisions between our atom and other near-by atoms, with additional collisions involving singular protons and/or electrons, if the energy level is high enough to ionize the proton.

Our hydrogen atom undergoes many violent collisions. These collisions will input energy into the electron orbiting around hydrogen atom. The energy from many collisions will likely provide the electron sufficient energy to at least climb-up to a higher energy level orbital, if not to be knocked loose and to be provided with the energy to escape from the proton altogether. Whichever the case may be, either the energetically excited or the totally escaped electron should have a much higher kinetic energy to mass ratio when compared to the proton.

---

[1]My present thinking (starting in 2006) is that the universe will not end. See later on in Chapter__, page __)

Next, consider the Black-Hole [C-R]. Here is a physical entity, which will preferentially attract, if not swallow a sub-atomic particle by its MASS.

A Unique Idea to the C-R theory: When considering the kinetic energy attained by the electron, compared to its gravitational mass; the electron should have a very fair chance to escape if the proton is swallowed first. Once the proton or proton-neutron combination was swallowed, C-R would also predict that the electron has a very high probability to "tunnel" away from the Black-Hole [C-R 1].

At the IB[3] Schwarzschild radius, as the proton or proton-neutron combination is swallowed, at least 50% of the electron's remaining atomic unit of orbital-resonance-width is still time active. Once the full attraction to the proton disappears inside the Neutral Zone [C-R], the electron will have a powerful incentive to retain it's freedom.

Is it not reasonable to assume that a Black-Hole [C-R] will preferentially swallow our hydrogen atom's (now ionized) proton when faced with a mass to charge ratio exceeding 1800 times that of the electron? With the mass to charge ratio greater than 3600[2] for the proton-neutron combinations, the C-R theory would predict that these "combo-snacks" would be "devoured" even more preferentially.

In the case of higher numbered elements, the mass of a typical atomic nucleus will usually consist of both protons and neutrons, with electrons clouding around the outer periphery, initially along for the ride. With the average number of atoms surrounding the average Black-Hole [C-R], most Black-Holes [C-R] have a very high collision-energy potential. This may result in many, if not all of the electrons being stripped from the nucleus. The liberated electrons are separated from the influence of the nucleus and its positive electric charges when the protons and neutrons near the IB[3] Schwarzschild radius. (Multiple ionization).

DeFUNition[3]:
A Black-Hole [C-R] could be called a Mass-Sieve Body

---

[1] In this instance, the C-R theory applauds the potential for quantum-style tunnelling. The distance the electron would have to leak-through or jump-across would be no more than ½ the diameter of the individual atom, and probably less than the width of the proton once it has completely entered past the IB[3]-Schwarzschild radius. .

As the proton or proton-neutron combination first disappears into the Black-Hole [C-R], all external knowledge about the real-time properties, except for mass, are blocked at the IB[3] Schwarzschild radius. When the proton is half consumed, the electron's "circular" orbit would consist of ½ time active (outside the Black-Hole [C-R]) orbit, and ½ forbidden interaction (Neutral-Zone [C-R]) orbit. Could any of us blame the poor electron if it decided not to leak-into (enter) the cold, dark, time-frozen abyss of the Neutral-Zone [C-R] inside the Black-Hole [C-R].

The electron would have no incentive to follow the guiding charge from the proton if it could no longer "feel" or detect the proton's positive charge. See the thought experiment #XX in the appendix.

[2] The average elements after hydrogen and helium will tend to have more neutrons than protons, so the ratio should exceed 3600 for combinations of protons and neutrons.

[3] DeFUNition = A definition just for pun.

C-R theory Assumption "D": The Reynard Diode Effect

A Black-Hole^{C-R} "Diode" Does Directly Deposit Positive Charges into a Detached Dimension.
or
Any Black-Hole^{C-R} will act somewhat like a diode. Positive charges, with their heavier masses, and neutrons will be swallowed, and trapped inside. The lighter electrons will be left outside of the Black-Hole^{C-R}. The Black-Hole^{C-R} will act like a mass and charge rectifier.[1]

Proceeding with the C-R theory assumption "C", that electrical charge, once trapped inside the Black-Hole^{C-R}, becomes "invisible" to the outside universe, for all practical purposes, then you can expect that an active, matter-consuming Black-Hole^{C-R} will be surrounded by a cloud of EXCESS electrons. These electrons will be self-repelling, which will automatically cause the rate of any swallowing of matter to be self throttling.

Now, Here's a "Repellent" Idea:

C-R theory Assumption "E":

Excess Electrons Easily Escape Enormous Epicureans, (Black-Holes^{C-R}), Enjoying the Exit.
or
Expect Electron Excreta to be Explosively Exiled, Externally Exhausted from an Exotic Zone

(In plain English: Every active, matter-consuming Black-Hole^{C-R} will be surrounded by a cloud of excess electrons. If these electrons are NOT detected, the C-R theory hypothesis must be false!!)

The Benefits of "Charging into the Hole"

If the previous assumptions are true, several things immediately become apparent.

First: Any active (matter-swallowing) Black-Hole^{C-R} will be consuming and storing up excessive positive charges on the inside, and freeing excess electrons outside of the IB^3 Schwarzschild radius.

Second: The positive charges stored up inside the Black-Hole^{C-R} will be

---

[1] In this case, a Black-Hole^{C-R} might occasionally devour and contain some negative charges too, if it can catch and eat them. The C-R theory merely states that nature has so arrayed a Black-Hole's^{C-R} design such that most negative charges regularly escape. The Black-Hole^{C-R} will act vaguely similar to a diode in an electrical circuit, i.e., a one-way electrical device.

time-inactivated. Because the curvature of the space-time fabric will create an escape velocity equal to that of the speed-of-light, no electromagnetic action, interaction, or reaction at that speed will couple-across this barrier.

A simple analogy would be: similar to matter at the temperature absolute zero, matter inside a Black-Hole $^{C\text{-}R}$ exists[1] at absolute zero-time-wise. This trapped matter is at its absolute minimum gravitational/time existence energy level. In the same way, the total electrical charge from all of the protons swallowed also exists, but the charge is "frozen"; unfelt, unaffected and stored inside the most perfect "insulator" in the universe.

Third: As long as the Black-Hole $^{C\text{-}R}$ remains active, it will try to swallow as much matter-energy as it can obtain. By the C-R theory, the only properties which can be determined from the outside of the Black-Hole $^{C\text{-}R}$ are, the mass of the Black-Hole $^{C\text{-}R}$, and the momentum it possesses[2].

This property isolation-insulation includes rotating Black-Holes$^{C\text{-}R}$. Obviously, the warping/curvature caused by the rotating Black-Hole $^{C\text{-}R}$ would be nearly identical for a stationary mass[3]. As long as the net change in gravitational warping with time is equal to zero, the world external to the Black-Hole $^{C\text{-}R}$ will not be able to tell whether the mass inside is rotating or not[4].

---

[1]No serious theoretician would dispute that real matter could exist, physically, at nearly absolute zero-temperature. C-R proposes that matter and energy also physically exist at absolute zero-real time.

[2]Conventional theories conclude otherwise. Those theories suggest that a black hole (non C-R) will couple-out, by tunneling, information about the rotation of the mass, and the electrical charge of the contents.

While the C-R theory cannot argue that conservation of energy would be violated if these did occur, C-R claims that these information leaks are very improbable by tunnelling alone. See Chapter XX for a discussion on conventional tunnelling from the inside of singularities inside black holes.

[3]There should be a small, measurable mass-energy change for a mass held stationary, and the same mass rotating. This would be due to the kinetic energy difference in the masses themselves.

Here is a practical thought experiment. Imagine the surface of a semi-filled water balloon (representing the curvature of space at some region), lightly poked by a dull pencil (representing the curvature of gravity). Measure the curvature of the depressed section of the balloon. Then, rotate the pencil along it's long axis at a constant speed. Let the friction equalize the slippage on the balloon's surface, and measure the curvature again. The curvature of the balloon's surface will not change with respect to time. Thus: C-R concludes: similarly no information measured from the curvature will couple-out any reliable information about the speed of rotation of the inner massl.

For the same reason, the C-R theory suggests that measuring the geometric curvature produced by a rotating mass will not reliably couple-out any information about the speed of rotation of the source.

[4]For an exception to the never coupling-out information statement, see the C-R section ?? in Chapter

(continued...)

(This is one area in which the C-R theory differs substantially in its conclusions, compared to almost all current theories.)

SCREWY C-R IMPLICATION: For any rotating mass inside the Neutral Zone [C-R] of a Black-Hole [C-R], as measured with respect to it's own (frozen) local time reference frame, any speed at all (it's speed) would seem infinite, or at least greater than the "measured" speed of light.[1] In this instance, the theoretical implications of that are enormous. If the speed of light (measured at any local external time-frame, -but which is "time frozen or trapped" in the Neutral Zone [C-R]) can be exceeded in this one instance, does that not imply that the speed of light might be exceeded somewhere else within our universe by other "tricks" too? This should give other theoreticians something to ponder over.

Fourth: Even though the Black-Hole [C-R] appears to have the upper hand, and can accumulate anything and everything, seemingly without limit: by its very nature, it sows the seeds to its eventual demise.

Fifth: Since any active, matter swallowing Black-Hole [C-R] accumulates a tremendous amount of positive charges and matter-energy, it accumulates *THE ONLY KNOWN* force capable of overcoming gravity at a reasonable (macroscopic) distance.

Sixth: Once a sufficient amount of positively charged matter is swallowed or accumulated, the Black-Hole [C-R] is primed for a possible release and escape of its contents. Notice: The more matter and energy the Black-Hole [C-R] consumes, the more "potentially" unstable it becomes.

Scenario: A Primed Example
(or How a Black-Hole [C-R] can eventually become an ex-Black-Hole [C-R])

The scenario would proceed like this: Imagine that the Black-Hole [C-R] traps, and time-inactivates everything (in what the C-R theory terms the Neutral Zone [C-R]) inside the IB[3] Schwarzschild radius. Externally, there would still be other matter, or other Black-Holes [C-R] located outside. Eventually, a probability exists to encounter either a sufficient gravitational perturbation (bump) or attraction to take place to spring open the trap. Possibly, a disturbance from a co-orbiting body or satellite, a nearby star,

---

[4](...continued)
XX. Deliberate (human?) modulation of the shape of the rotating mass inside the Active Zone [C-R] of the Black-Hole [C-R] into a changing, non-symmetrical shape may allow very-limited communication with the outside by measuring the change to the geometric-curvature-warping over time. Unless there was a pre-agreed upon code, there would be great difficulty in interpreting the message of the code. In this one case, there is the potential to send very limited, slow messages, whether or not they could be understood from the outside.

[1]Technically, as a saving grace, there is NO way the contents from inside the Neutral Zone [C-R] could actually measure the speed of light. The conclusion still stands.

constellation, galaxy will occur over time. The IB^3 Schwarzschild radius will be tidal-shifted enough that some portion of the matter-energy-proton contents of the Neutral Zone $^{C\text{-}R}$ within the Black-Hole $^{C\text{-}R}$ (with immense accumulation of positive charge primed to spring into self repulsion) will be re-activated.

-ex Marks the Spot?
or,
A “disturbing” encounter

For matter stored in a well-packed Neutral Zone $^{C\text{-}R}$ the spot nearest to the disturbance encounters a region where real-time is now active, the positive charges will again feel their mutual repellence. They push-away other re-activated positive charges, and this decreases the density of the local mass. This decrease in density can allow even more of the stored up positive charges, spiked with a liberal dose of freshly released, purely energetic photons, to be freed. As this continues, the rest of the matter-energy soup will be allowed to undergo the same reaction.

In a very short period of real time, there will be a noticeable release of extremely high energy and self-repelling positive charges. Eventually, many of the positive charges will find their way outward, to be belatedly re-united with their long-lost negatively charged companions. The Black-Hole $^{C\text{-}R}$ will release some or all of its captivated contents, and the universe will proceed merrily along its way.

Notice: Naturally, with no complicated new theories, the C-R theory provides a simple, straightforward explanation for the origin of cosmic rays, a nova, a supernova, a Seyfert galaxy, a quasar, gamma ray bursts, and could provide an explanation as the source (the causative mechanism) of the origin of the big bang itself.[1]

Ionic Irony

IMPORTANT: Notice that, due to the attractive/repulsive nature of electrons and protons, even if the positive electrical charge "disappears" into an "insulated" Black-Hole $^{C\text{-}R}$, conservation of energy is not necessarily violated. This occurs because any energy gained by either the positive or negative charges is provided courtesy of the gravitational rest-mass energy released when those particles fell into the Black-Hole $^{C\text{-}R}$. Since the positive and negative charges can eventually re-attract their opposites, only a shuffling of potential and kinetic energy needs to be explained away. There is never any "real" gain or loss of energy which will violate conservation of energy.

The results achieved if electrical charge "disappears" temporarily are exactly the opposite from the brief "disappearance" of gravity from a Black-Hole $^{C\text{-}R}$. Again, the C-R theory predictions turn out to be the opposite of most present-day theories. When questioning: Why to believe the C-R theory?, please proceed on to chapter 3.

---

[1] Even though this WOULD explain the source of the energy or the OOMPH behind the big bang, I now doubt the big bang. This is because the C-R theory does not allow the universe to collapse in the first place. Nonetheless, some readers who insist on the big bang are welcome to incorporate this part of the C-R theory into their personal beliefs.

On a lesser scale, the C-R theory might also help explain the electrically charged activity of the solar wind, sunspots, solar flares. See Chapter ___, section ___

Chapter 3

If Black-Holes $^{C-R}$ Obey the C-R Theory Scenarios.

(subtitled: **The C-R theory, a phenomenal response.**)

Some Possible Scenarios:

If Black-Holes $^{C-R}$ do behave in the ways described in the previous chapters, we would expect to observe certain key phenomenon throughout the universe.

What about our sun?

Consider this possibility. Imagine an active (Comedy-Recycling theory obeying) Black-Hole $^{C-R}$ at the center of our sun. If this were the case, what would you expect?

First, you would expect that the sun should be producing very few, if any, neutrinos. Conventional theories would predict the generation of many neutrinos as the by-product of the expected hydrogen fusion reaction proceeding somewhere inside the sun.

C-R does not demand that no fusion occurs at all, and no neutrinos are ever being created somewhere inside the sun. C-R merely suggests that whatever fusion, if any does occur, it is secondary to, and driven by the primary energy source, a Black-Hole $^{C-R}$.

Second, here is what you would expect if a Black-Hole $^{C-R}$ did exist at the center of our sun. Billions of ionized electrons should be streaming away from an area comprising the outer IB^3 Schwarzschild radius of the Black-Hole $^{C-R}$, which would be very near the center of the sun. Electrons generated at this depth should produce more intense magnetic effects than electrons which would be released during a fusion powered event. Electrons generated by a fusion powered reaction should not be freed-up much lower than the upper layers of the gas-liquid-plasma at the surface of the sun.[1]

The outward flow of these charged particles should generate measurably large electrical currents. These excess electrons might have the tendency, although mutually repulsive, to join their collective magnetic fields together. This would reinforce the ability of each individual electron to escape through thousands of kilometers of pressurized hot liquid solar mass.

By collimating or bunching together, these electrons should speed their individual exit from the sun. This bunching of electrons would have the tendency to create huge,

---

[1] New for 2006, I have found an interesting web site on the Photosphere. By Ralph E. Juergens www.kronos-press.com/juergens/k0404-photosphere.htm
" The site claims that for some solar features covering up to 2/3 of the solar surface, there must be AT LEAST 150 excess electrons for EVERY hydrogen ion!!! In fact, with the real mix of matter encountered on the sun, even that ratio must be exceeded. The C-R theory could exist nicely with the features as described. In contrast, fusion power, and mostly electrically-neutral gasses seem much more incompatible with the observed features as described in this article. The author believed that the sun was powered externally, by some outside source.

explosively energetic, magnetic storms.

[Author's Hint: From this description, this possible scenario should sound suspiciously like sunspots. The C.M.E. process, or coronal mass ejection, occasionally observed coming from the sun, would also seem to occur more easily under C-R theory type conditions.]

Fourth, you would expect those currents to be somewhat affected by the gravitational influences of the planets orbiting the sun. You could probably detect a very weak seasonal and directional modulation effect of on the sunspot activity.

C-R would predict that this effect would be caused by the gravitational and tidal influences of the planets sloshing the sun's outer hydrogen-helium gas cloud or liquid ocean around the more massive and inertially damped Black-Hole $^{C\text{-}R}$. As this solar cloud/ocean would be tidally shifted or sloshed around the central Black-Hole $^{C\text{-}R}$, the overall area of the maximum consumption of protons and neutrons could be shifted or directionally concentrated around the IB^3 Schwarzschild radius at the central region.

This sunspot-modulation effect is what we would expect if the orbits of the nearer planets and more massive planets could slightly influence the sun's charge-swallowing activity. There should be some small effect on both the frequency of the occurrence of the sunspots and their intensity when plotted in conjunction with the planetary orbits[1].

Fifth, the Black-Hole $^{C\text{-}R}$ would be self-throttling. For every atom's nucleus the Black-Hole swallowed, there would be a number of electrons freed. The energetic nature of the accumulated excess of like-repulsing, negative charges (electrons) would spread-out and thin-out matter nearing the Black-Hole's $^{C\text{-}R}$ gullet. There could be no thermal runaway of the Black-Hole's $^{C\text{-}R}$ rate of reaction. In the same way, there could be no rapid, total collapse of the sun's gas cloud/liquid-ocean, since the heat generated in the vicinity and the mutually repelling negative charges produced would tend to throttle back, or push away and slow down the in-rush of the hydrogen and helium fodder.

Sixth, because of the excess negative charges being constantly produced and released, there should be a noticeably negatively charged solar wind coming from the sun. There has been a mention that the solar wind actually accelerates as it moves away from the sun. Could this be due to the self-repulsive characteristics of embedded excess

---

[1]This effect would be, by another name, the Jupiter Effect. The Jupiter Effect was disowned by it's two authors in a later book, Beyond the Jupiter Effect, because, at that time, there was no possible method known whereby gravitation, the wimpiest force at atomic distances, could influence the fusion reaction thought to power the sun.

In their 1974 book, The Jupiter Effect, the authors John Gribbin and Stephen Plagemann claimed that there was a slight statistical correlation between sunspot activity and the orbits of the nearer and more massive planets. Fourier analysis seemed to suggest that there was some statistical significance between the planets orbits and the level of sunspot activity.

The authors went on to link the effect of sunspot activity on the earth's weather systems, which in turn created extra drag on the earth's rotational speed, which increased the strain on the earths crust, and made earthquakes more likely. The culmination was the prediction of disastrous consequences during the planetary line-up in 1986.

electrons?

The solar wind is normally thought to be composed of a stream of positively charged alpha particles (protons). This is due to the fact that the high energy, massive protons are easy to detect. From foil sheets left in space, the impact craters from the positive charges are also easily measured. The much less massive (energetic) electrons do not leave similar impact craters.

Nonetheless, the Comedy-Recycling theory predicts, if a Black-Hole [C-R] is really the power source of our sun that the solar wind will be found to be predominantly composed of or comprised by excess negative charges. [1] Although these charges have not yet been detected, to the best of my current knowledge (pun intended), they haven't been looked-for, either. (That pun was written before my 2006 discoveries of web sites supporting the idea of excess electrons. The pun was too good to eliminate, now, even though the statement is no longer true!)

The Aurora Borealis: Exciting Evidence

Since the C-R theory predicts that Black-Holes [C-R] and White Holes [C-R] will be producing exceedingly intense and unexpected quantities of negative and positive charges, any nova or supernova, as well as a solar flare or a CME (coronal mass ejection) event, may produce ionic events which will assist in confirming the C-R theory predictions.

Certainly, the Aurora Borealis provides visual evidence that electrical ions are active and at times plentiful in the upper atmosphere. The presence of the Aurora confirms the abundance of charged particles (from somewhere) interacting on a grand scale, as near as our own Earth's upper atmosphere. The Aurora in no way hinders or negates any theoretical assumptions or predictions made by the C-R theory.

Where's the Neutrinos?
or
Gee, whizz

Briefly mentioned earlier, if thermonuclear fusion is the sole source of energy powering the sun, where are the predicted neutrinos from the reaction? Some experiments have shown that at the most, there are only 1/3 as many neutrinos being detected as whizzing from the sun as you might expect.

Can this paucity of neutrinos result from the supposition that most of the sun's energy is coming from a gas cloud undergoing gravitational collapse into a Black-Hole[C-R] at the center of the sun? Notice that, if the Black-Hole [C-R] were the central engine driving the sun, the high-energy conditions near the IB^3 Schwarzschild radius, the outer boundary

---

[1] Although the article has been around for a good amount of time, I have just encountered it in 2006, and decided to include a link to it. The claim is that the earth has been measured to have an abundance, or an EXCESS of electrons, to the tune of 400,000 coulombs, with each coulomb consisting of Avogadro's number, or 6.02×10^{23} electrons. The article does not suspect that the charges come from the process of energy generation on the sun itself. www.keelynet.com/energy/moray5.htm

of the Black-Hole C-R, may make secondary fusion possible to a lesser extent[1].

New for 2006: One new idea about neutrinos; if there are many fewer neutrinos being produced (by fusion) than would be expected, but we are still detecting them (even at a lesser-than-expected rate), the neutrino may be much more interactive than expected.

Is there an Oblers's Paradox for Neutrinos?

Similar in scope to Oblers's paradox, if fusion has powered all of the stars visible in all of the universe for all of these billions of years, then, where are those neutrinos? You must consider these possibilities: Either these neutrinos which are expected don't exist; they had to be taken out of the way, somewhere, or; they must be here, and they can't be detected.

The most reasonable explanation is: even if some neutrinos are being produced by fusion, many are also consumed and held in storage inside any Black-Hole C-R which happens to reside in their path. The C-R theory predicts that neutrinos will also remain trapped inside of a Black-Hole C-R, as determined by the same type of logic which was used in the other thought experiments.

What about Other Observed Phenomenon/Spectacles? (OOPS)

Now consider a constantly increasing magnitude of phenomenon, and try to relate these to the process of overcoming the Black-Hole C-R. C-R could tentatively term these: White-Hole C-R phenomenon.

White-Hole C-R phenomenon would be defined as the equivalent of releasing the stored energy-mass contents of a Black-Hole C-R over an extremely brief period of time. In a fraction of a second, a White-Hole C-R type event could release energy accumulated for thousands, millions, or billions of years by the parent Black-Hole C-R.

A Black-Hole C-R Sings: “Please Release Me!”

On a stellar scale, the anti-Black-Hole C-R phenomenon could be described quite appropriately by the nova.

For a somewhat more massive star, a supernova would be the result. Next, the Seyfert galaxy would fit in.

---

[1]This paragraph represents that ever useful scientific friend, the all inclusive, variable fudge factor. If any solar-origin neutrinos are detected, the byproduct fusion explanation could account for the creation of some stray neutrinos.

If anywhere near the predicted level of neutrinos is detected as coming from the sun, the C-R theory will concede that there is very likely no Black-Hole C-R providing power for our sun. While this would provide a drawback to the possible methods and sources of energy-concentration within the universe, the C-R theory would be only disappointed, not devastated.

[Hint: Every experiment should have access to a spare fudge-factor, if needed, to explain away post-published inconsistencies.]

With a galaxy centered and galaxy sized Black-Hole [C-R], the quasar becomes a very viable candidate. This quasar may also be the predecessor equivalent of a younger proto-galaxy viewed several million years earlier.

My original thinking, when I first wrote the C-R theory was: if a Black-Hole [C-R] stored away the energy contents from the entire universe, the big bang would be an event easily explained by the C-R theory.

All of these possible "White-Hole" events described represent the same type of occurrence. Each event has an increasing proportion of mass and energy released. Also, notice what happens as each magnitude of these events increased. The associated time-frame would appear to be shifted towards an earlier period in the history of the universe. Also, notice that the reference frame for the larger and older events can be viewed as if it encompassed more of the outer edges of the universe.

All white-hole events detected should have a characteristic, noticeably sharp-peaked, high energy positive charged particle burst. The energy for the acceleration of the positive charges released in the "White-Hole" type of events comes courtesy of the gravitational potential energy stored up inside the Black-Hole [C-R], over a much longer period of time.

An important C-R theory discovery concerns the time and the timing of the energy release. At the outer areas in our universe, time is slowed-down at the edges. An event taking a fraction of a second measured locally in a quasars local time-frame, could be seen as slowed down (red-shifted) substantially in our local time-frame on earth.

The slowed-down nature of time at the outer reaches of the universe imply that some areas may not only look younger to us, but may still be experiencing the initial or ongoing effects of the big bang. These objects may not just represent the history of the universe as it happened billions of years ago, but literally, would represent some areas now undergoing those same reactions.

This implies that some objects in the universe could be today (by earth time, and their time, too) only minutes or seconds old. The more massive objects might even contribute further to their individual time-slowdown. Objects seen at the edge of the universe which we thought occurred and ceased billions of years ago may even today be the *YOUNGER* siblings of our own galaxies.

Compounding: The Problem

One recent discovery in the frigid cold and near-vacuum of deep space has been the abundance of chemical compounds and complex molecules and ions. Until recent times, outer space had been thought of as possessing a very low energy potential, with very limited possibilities of chemical reactions. Scientists had expected to find limited amounts of simple molecules, and primarily, matter in a basic elemental state.

A reasonable question to ask would be: Why are so many compounds and complex organic molecules the rule, and not just the occasional exception? The C-R theory has a convenient explanation to this conundrum. C-R predicts a high probability of electrical activities due to the supposition that both Black-Holes [C-R] and White-Hole [C-R] phenomenon involve the production of copious amounts of charged particles. Observers should be little surprised that these charges, zipping around energetically, would catalyze complex chemical reactions even with the given, low energy, low density conditions which

had been expected in space. With the given temperature of deep space listed at 2.7 K, the chemical reaction rate should have been expected to be lethargic, at best.

While the abundance of complex compounds does not prove the C-R theory, I do regard the issue as another feather in the C-R theory cap, another piece of circumstantial evidence in it's favor.

The Outer Planets (past Mars): A Short(ed) Story

The discovery of the volcanic activity on Jupiter's moon Io must represent the biggest shock from the data recorded by the Voyager satellites. Could this volcanism, with its tremendous release of energy, be caused by the shorting together of electrically charged (+) ions and (-) electrons trapped by massive Jupiter?

What if the most massive planet in the solar system was magnetically sweeping up large currents of excessive electrons from the sun, as well as collecting energetic quantities of positively ionized hydrogen and helium atoms from space, in the form of cosmic rays? The inner atmosphere of the planet, or the innermost full sized moon could feel the brunt of the resulting energy released from the de-ionization. Any moon unlucky enough to have a solid metal core would represent a short-circuit to arc welding-quantity currents.

This "short" scenario above is plausible enough to compete with the current favorite explanation. NASA scientists feel that the volcanism might be powered by the tidal drag and tug-of-war from Jupiter's gravitational pull.

If the C-R theory is correct, Io should have an interesting magnetic field. If the energy to power the volcanism is provided by the numerous electrical charges trapped, then the magnetic field should be responsive to the currents flowing through Io. The volcanism may also ebb and flow with the change in currents during increased sunspot activity.

Catch (10)[22]

Additionally, because Jupiter is already the most massive planet in the solar system, it would catch and add even more mass in the form of both ionic hydrogen and helium. Energy would be released when these swept-up ions were re-combined with any handy, nearby electrons to become neutral atoms once again. Jupiter might well be radiating more energy due to that activity, at that spectral wavelength, than it received from the sun.

This would also imply that the planet, by it's size, was continually acquiring a lion's share of the available mass entering the solar system. Given suitable time, this new mass could eventually collapse Jupiter into a proto-star.

To a lesser extent, the same electrical discharge phenomenon may be occurring on Saturn, and the outer planets Uranus and Neptune too.

Spouting off some Steam

(Author's note: Since writing the above I have learned that even more intense volcanism appears to be ongoing at the surface of Triton, the largest moon of Neptune.

The volcanism has been announced to consist of at least 5 active, nitrogen-steam-spouting volcanoes.)

Another Plug for Current Events
or
A Current Concurrence on Currents
(Subtitled, The C-R Theory: Raisin a Ruckus)

The C-R theory predicts that there should be unexpectedly abundant currents traversing constantly through space[1]. Excess electrons will be displaced around an active Black-Hole [C-R], and excess protons will be released during any of the various White-Hole phenomenon which was discussed in the paragraphs above. Everywhere out there, preposterous current levels should be detected, compared to the levels expected by modern competing theories.

C-R predicts that these massive currents will be commonplace throughout the universe, not just a local exception occasionally discovered. In addition, highly active multiple-ions should be noteworthy in space, which had been considered a cold, low-energy vacuum just a few years ago. I believe that the C-R theory explains why complex organic compounds and molecules are common in space, not just the exception.

North, to Alaska, go north, the Rust is ON
or
And Now: The Rust of the Story

Engineers were surprised, a few years back, to find the Alaska pipeline corroding faster than they had expected. They concluded that the same currents which caused the Aurora Borealis were causing the premature corrosion of the pipeline.

The Alaska pipeline currents would be another phenomenon which the C-R theory could straightforwardly explain. If currents are bombarding our earth continuously, what could be more natural than for our planet's magnetic field to corral and concentrate the currents near the magnetic poles? The action of the currents traversing the grounded metal sections of the pipeline could well stimulate premature galvanic ageing.

---

[1] Currents over and above the magnitude which would be expected from an electrically neutral universe. Conventional theories say that loose electrical charges should quickly find their opposite counterparts, and rejoin as a neutral atom.

Chapter 4

New technical terms used in this chapter:
Active Zone [C-R]
Black-Hole [C-R]
IB^3 Schwarzschild radius
Neutral Zone [C-R]

Inside the C-R type of Black-Hole [C-R]

The C-R explanation: It's About Time

Let us consider an example of a particle, a simple hydrogen atom. The time-slowdown of this hydrogen atom near the Black-Hole [C-R] is caused by the curvature (the warping or bending) of space-time. As the hydrogen atom approaches the Black-Hole [C-R], the curvature of space-time increases which causes the acceleration of gravity to get stronger.

When compared by an interested outside observer, the real-time experienced by the hydrogen atom near this Black-Hole [C-R] would decrease, relative to an identical hydrogen atom in a lesser gravitational field. In addition, as the curvature increases, the gravitational escape velocity approaches closer and closer to it's ultimate limit, the speed of light. The locally measured time rate experienced closer to the Black-Hole's [C-R] boundary will be slower and slower, when compared to some far-away point possessing a more negligible gravitational curvature.

A Couple of Points to Consider

Imagine that we were able to choose either a point at the exact center of the universe, or else, a point outside the universe, infinitely far from every known gravitational field. Let us try a comparison to the intensely curved point near the Black-Hole [C-R]. We would notice, in the absence of any detectable gravitational field, the real-time clock-rate at either of the uncurved points would run faster, or be less-slowed-down, (and maybe more real?) than any other point in the universe.

The hydrogen atom would appear to gain kinetic energy as it approached the Black-Hole [C-R], but it would also appear to lose energy. The hydrogen atom would appear to be slowed down, if we could observe it without disturbing either it's energy or momentum. The amount of slowdown would be given by the equation:

change in energy = change in time x the mass x c(squared)

We can see that the kinetic energy gained by the mass is determined by the curvature of time, or the amount of time slow-down. The acceleration is independent of the mass or the density.

As C-R stated in Chapter 1, the warping, or bending of the spacetime fabric will "squeeze-out" kinetic energy from a mass, similar to a juicer squeezing orange juice from an orange. In the case of the hydrogen atom, as curvature increases, you can imagine that an increasing portion of the atom is bent, or squeezed into "imaginary-time"

in a somewhat similar manner to the complex phase relationship in an impedance-reactance circuit.

To further describe the situation, you could imagine a two dimensional diagram of a hydrogen atom drawn on a sheet of clear, balloon-like, rubber. Now imagine the diagram projected on a sheet of white paper. As you look at the sheet from a lower angle, the "real" image you see would appear to shrink. The projected image would represent the "real time" portion as represented by appearance of the hydrogen atom. The diagram sheet itself would represent the fuller picture, since the sheet would never change. Your perception would be that your view of the atom is changed, and it must be viewed differently.

Using the clear rubber sheet imagined in the description, let us now stretch, curve, or bend the clear rubber sheet. The projected image will appear to be distorted, possibly either lengthened or shortened. Imagine that we have the strength to bend the portion of the clear rubber sheet with the diagram to a 90^{O} angle with respect to the light source. For all practical purposes, the image in the projection would disappear, totally. Notice that both the sheet and the diagram would be safe, and that both would still exist. Viewing the paper, however, we could never detect that the diagram was still in existence.

The rubber sheet diagram experiment somewhat describes the gravitational bending events as they are imagined using the C-R theory. The bending, or curvature of time is simulated by stretching the diagram so that it will appear to be more nearly parallel to the path of the projector's light.

Bending the sheet will cause the object in the diagram to appear shorter. If we were to compare this diagram to electromagnetic energy (at resonance, as in a particle of matter), the shortening of the image would correspond to a red-shift, or to a time slowdown in the real object. Similar to the situation where the diagram was bent or curved at the 90^{O} angle, this behavior of the diagram simulated the observed changes to a real particle trapped inside the Black-Hole $^{C-R}$.

Notice that at the 90 degree angle, the diagram itself, and our analogous particle still exist, but they cannot be perceived or located by any real means. Of course, if the source of the 90^{O} bending were removed, the diagram would appear entirely normal again. In the same way, if the source of the gravitational curvature (the mass of the Black-Hole^{C-R}) was removed, the particle would again appear normally.

Inside Insight, the Hole Story, Part II

In a marked difference with other theories, the C-R theory demands that, within every Black-Hole $^{C-R}$, there is an Active Zone $^{C-R}$. This Active Zone $^{C-R}$ comprises the entire volume located on the inside of the inner IB^3 Schwarzschild radius.

Again, because of the conclusions reached earlier in this paper, C-R stated that matter inside the inner IB^3 Schwarzschild radius of the Black-Hole $^{C-R}$ is not able to collapse into a singularity. The C-R theory predicts that inside every Black-Hole $^{C-R}$ there will be an Active Zone $^{C-R}$.

This Active Zone $^{C-R}$ MUST have exactly enough matter at a density sufficient to create an inner IB^3Schwarzschild radius. Once inside this radius, the gravitational curvature, and the time slowdown will decrease to 0%, or none, at the exact center of

the Black-Hole [C-R]. Every interaction permitted outside the Black-Hole [C-R], in real time will also be permitted inside the inner Active Zone [C-R].

Because the matter-energy combination swallowed-by, or trapped inside of the Black-Hole [C-R] is fully time-frozen, the combination behaves as if it were neutral to every possible interaction, including action by it's stored-up electrical charge. The C-R theory has termed this zone inside the Black-Hole [C-R] the Neutral Zone [C-R], for that very reason. The matter in the Neutral Zone [C-R] is invisible to and undetectable by the time active matter located in any active zone.

From the outside of the Black-Hole [C-R], the only attribute from the Neutral Zone [C-R] [1] which could be detected would be it's mass, and it's momentum. Only the gravitational curvature could be felt outside the IB^3 Schwarzschild radius. All other properties would be insulated from any outside influence. There is no mechanism[2] which would allow electrical charge, angular momentum, spin, or any form of electromagnetic energy to couple or tunnel across the immense "forbidden-zone" which the conventional black hole would represent.

The C-R theory postulates that gravity works by inactivating the time "felt" by particles of matter[3]. Once that time has been reduced to zero, no further gravitational collapse is possible. There will be no more time left to inactivate. There is no more potential energy which can be extracted by gravity from the matter-energy trapped or confined in the Neutral Zone [C-R]. Therefore, the matter-energy combination in the Neutral Zone [C-R] is at gravitational state comparable to the heat energy (kinetic energy) of a hydrogen atom at absolute zero.

It Happened!!: Last Fall

There is no further possibility that the inactivated matter in the Neutral Zone [C-R] can escape to collapse inward towards the center of mass. The confined matter would have to gain energy to cross through the inner IB^3 Schwarzschild radius. If the matter did cross this barrier, it would become time activated once again.

---

[1] Outside the Black-Hole [C-R], knowledge about matter located inside the Inner Active Zone [C-R] would also be prohibited. The Neutral Zone [C-R] effectively infinitely isolates and insulates everything inside the IB^3 Schwarzschild radius. Of course, the gravitational contribution from matter in the Neutral Zone [C-R] and the inner Active Zone [C-R] will be felt. See thought experiment ##?? in the appendix.

[2] See the C-R theory comments on tunnelling, and why “C-R” rejects it, in chapters 11 and 13. These chapters will explain why “C-R” shows it is unlikely that tunnelling can provide either the solutions or answers needed by a theory of the universe. I would allow that tunnelling might provide a billionth (or less) of the amount of gravity needed to maintain conservation of energy, but not the full 100%.

[3] Gravity could also be viewed as bending or influencing the "path" over which energy travels. Of course, sub-atomic particles can be viewed as both particles and energy-packets-at-resonance. The explanation of the "matter" point-of-view is solely for the benefit of the understanding for you, the readers, and is not intended to limit the behavior of the real world events.

Restored real-time activation implies that, inside the inner Active Zone $^{C\text{-}R}$, matter can never physically be collapsed into a singularity. This is because matter inside the inner IB^3 Schwarzschild radius is still time active, and still has potential energy from gravity.

Amazingly, there is no inward gravitational pressure on the Active Zone $^{C\text{-}R}$ from the matter in the Neutral Zone $^{C\text{-}R}$, because that time-neutral matter is already at its lowest potential energy state. Further gravitational "attraction" inward is missing because time inactivated matter cannot be further inactivated below "absolute" zero (or 100% de-activation). Within the Neutral Zone $^{C\text{-}R}$, the curvature may well push the escape velocity above the “speed-of-light” but so what. Everything in the Neutral Zone $^{C\text{-}R}$ is already shut down and turned-off.

Inside every Black-Hole $^{C\text{-}R}$ there is an inner Active Zone $^{C\text{-}R}$. This Active Zone $^{C\text{-}R}$ is a benefit provided courtesy of the "limited" nature of gravity which the C-R theory has postulated (or discovered). Once matter has collapsed into timelessness (inside the Schwarzschild radius), to the point where it has been de-activated, it no longer experiences what you would have to call real-time. This matter is in its lowest possible (ever) energy state. There is therefore now no further tug or pull by gravity which can cause the matter in the Neutral Zone $^{C\text{-}R}$ to "fall" inward.

Imagine a toothless gear trying to engage a chain drive. There is nothing for the gear to grab onto. Another analogy might be: try to stir a can of paint using only an imaginary stirrer (with your hands ABOVE the can). Try as you might, no amount of effort or exertion will have any effect on the paint. These analogies give you some idea of the *frustration* gravity must feel trying to further collapse matter which is already real-time inactivated.

A Quantum Leap: A Classic(al) Success Story

Many years ago, scientists had a dilemma. Classical Mechanics couldn't explain theoretically why any matter existed in the universe. Classical physics (Maxwell’s equations) predicted that any moving electrical charges should continually radiate away their energy. Given any atomic configuration, the existing theory said that the electron should spiral down into the nucleus and collide with the proton. This predicted phenomenon was termed the Ultraviolet Catastrophe. Experimentally, those scientists were forced to concede that the real world had a lifetime exceeding the fractions of a second which their theories predicted.

Quantum mechanics provided the answer. It prohibited the electron from losing (or radiating) energy except in discreet packets of energy, now called quanta. These energy-level transitions became the salvation of the universe. Theoretically, at least, the universe was now permitted to exist. (**WHEW!!**)

The invention of Quantum Mechanics solved one of the biggest dilemmas posed by classical physics. That was the predicted collapse of the electron into the proton, leaving only neutrons in the universe. Quantum mechanics succeeded because it

eliminated the problem of the collapse of an atom into a singularity[1].

While the solution was opposed bitterly by those educated scholars of the time, the Quantum theory explained events so successfully that it eventually became the dominant theory. The author suspects that the C-R theory will face similar opposition; even though the C-R theory intends to rid theoretical physics of it's current nemesis, the gravitational collapse of matter into a singularity.

(*Authors Jibe*: Haven't you just heard about some other obsolete theory {Classical Mechanics} which also predicted a non-realized collapse into a singularity like this a few paragraphs ago?)

Gravity is (kind-of) like Seniority: No Time = No Pull

The C-R theory speculates that nature prevents time-depleted matter from falling further inward. This situation is similar to the electron that still has energy, and does not collapse into the hydrogen atom's nucleus even approaching absolute zero.

Gravitationally collapsed matter-energy remains imprisoned in the timeless zone, which C-R calls the Neutral Zone $^{C-R}$. This Neutral Zone $^{C-R}$ is contained inside the Black-Hole $^{C-R}$'s IB^3 Schwarzschild radius. Any matter or energy in the Neutral Zone $^{C-R}$ exists at it's lowest time-energy level.

Any matter-energy in the Neutral Zone $^{C-R}$ could only become real-time-active again by *adding* energy. Adding energy would be necessary to allow the trapped contents to *collapse* (move towards the time active center) further inward. This matter-energy would have to gain energy from somewhere before it would experience real-time once again.

If the Neutral Zone $^{C-R}$ contents tried to expand back outward any further, outside the IB^3 Schwarzschild radius, there would also have to be an energy gain. Extra energy must be added before the contents can experience real-time again[2].

Active Participation

There will always be an Active Zone $^{C-R}$ at the center of every Black-Hole $^{C-R}$. The nature of matter is such that a singularity cannot ever occur. Every Active Zone $^{C-R}$ located inside the inner IB^3 Schwarzschild radius of a Black-Hole $^{C-R}$ is essentially, a closed, self-contained “universe”. Every inside Active Zone $^{C-R}$ MUST have a sufficient quantity of matter at a sufficient density to produce a curvature equal to the speed of light at it's outer boundary. Otherwise, the Black-Hole $^{C-R}$ never would have formed in the first place.

Theoreticians: Are You Seeing Any Red, Yet?

Hypothetically, what if our universe just so happened to reside inside the

---

[1]That wasn’t the only reason quantum mechanics succeeded, but it was the main reason. There are now many phenomena only quantum theory can successfully explain.

[2]Or the curvature would have to be reduced so that the escape velocity was reduced, below the speed-of-light.

active-portion of the inside of a large Black-Hole [C-R]? You would expect, if not demand that nearer the outer edges, the space-time curvature should be greater. As a result, time closer to the edge of the universe should run more slowly. (Hint: Maybe more red-shifted.)

C-R would also expect that again approaching the outer edges of this "universe existing inside a Black-Hole [C-R]", objects would appear to become younger, as well as dimmer. This might be because objects in this universe would be younger and slowed-down in time. Note: Matter near the outer portion of this *hypothetical* universe would not necessarily be required to travel away from us at speeds laughably close to light speed to appear redshifted. The net accumulation of gravitational curvature will suffice to slow down this region's local time.

The reader would expect this *hypothetical*, imaginary universe to look **SUSPICIOUSLY**, sneakily close to what is observed in our own universe. Quite possibly, there would be no predictable or discernable difference between the two alternatives.

Is our universe **Open or Shut?: Case Closed**

Some scientists have remarked about the possible coincidence that the universe just seems to contain enough mass[1] to close the universe[2]. Our hypothetical universe discussed above appeared identical to a gravitationally self contained Active Zone [C-R], inside a Black-Hole [C-R]. The simplest possible explanation is: this is not just a coincidence, but the hypothetical and real universes appear identical because the C-R model happens to be correct.

Many Holes in One Whole Black-Hole [C-R]
or
We ARE working in the Lab

The C-R theory certainly allows the possibility that the observed universe is entirely contained within a Black-Hole [C-R]. Indeed, the C-R theory allows many smaller Black-Holes [C-R] to exist within the contents of the larger Black-Hole [C-R].

The inside (Active Zone [C-R]?) portion of our universe might well serve as the only readily observable example of a theoretical model Black-Hole [C-R]. Our universe may be considered as the easiest laboratory example from which to gain our understanding

---

[1] Within an order of magnitude (power of ten), out of 10^{82}, or 82 magnitudes.

[2] The coincidence is that the matter needed to close the universe appears to be within one order of magnitude (a power of 10) of the amount needed. Considering the apparent size of the universe, and the amount of matter calculated to be contained within the universe, suspicions have been aroused by the closeness of the two numbers.

Of course, by the C-R theory, the numbers would be related. If the size of the universe shrank, the amount of matter needed to maintain curvature would be less, and more matter would find it's way into the Neutral Zone [C-R]. The C-R theory states that any (inner) Active Zone [C-R] must always remain exactly critical.

about the inside of an active Black-Hole [C-R].

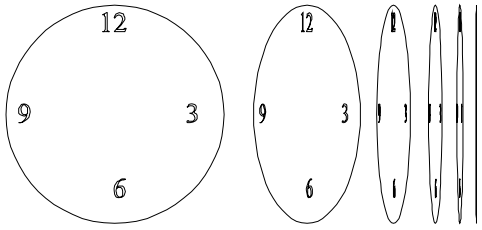
This Time: A Twisted explanation
or
The C-R theory: A New Twist

Here is another additional analogy to the Black-Hole [C-R] vs. time vs. gravitational attraction model presented above. Consider the real-time vs. imaginary current flow in a resistance-impedance circuit. You could choose the analogy with either capacitance or inductance alone in the circuit with resistance. For the sake of the next puns, use inductance.

Inductive Reasoning
or
Just for the "L" of it

Let us perform a thought experiment in an electrical circuit consisting only of resistance and inductance. If we applied a constant frequency alternating current, there would be a phase angle to express the relationship between the voltage present across the components. During any real-time alternating current or voltage flow, the current is 90° out of phase between the inductor and the resistor. If we further considered a circuit where the inductive reactance was effectively much larger compared to the resistance, we would have almost total imaginary power-flow. There would be almost NO heat produced, and almost no energy wasted. Even if we were to double the size of the inductance, the 90° phase angle would not change.

The above analogy would appropriately consider either the voltage across or the current through that nearly infinite inductance. Comparatively, the poor resistance would experience no real power. This experiment characterizes some aspects similar to that of the real-time vs. imaginary-time relationship C-R claims exists in the Neutral Zone [C-R].
NOTE: with respect to the resistance, the R-L circuit could pretend that the resistance was not present, or non-existent.



Imagine a flat clock, viewed head-on, then rotated at increasing angles, up to 90o. Notice that clocks viewed at a right angle will appear to be motionless. The change of activity with time is hidden from the viewer, but not gone.

In these experiments above, C-R is dealing with real-world phenomenon. Comparatively, for the next few decades, at least, the Black-Hole [C-R] will be impractical to simulate or evaluate in the lab. Since that is the case, theory remains the only alternative to experimentation.

On to the Next Phase, a New Angle to Consider

C-R feels that it would be justified in assuming that real-time will behave in a

similar fashion to the "real-power" in the R-L circuit discussed above. It should be able to talk intelligently about the 90° phase angle between real-time and imaginary-time, as measured in gravitationally curved space-time.

There's NO Time Like the Right Time (or **There's NO Time Left**)

Theoretically, C-R could claim that in the Neutral Zone [C-R] located inside of a Black-Hole [C-R], time would have to be measured in totally imaginary units[1]. As far as measuring or detecting real-time in the Neutral Zone [C-R] inside the Black-Hole [C-R], the total duration of real time would be absolutely zero. We would suppose that, if we could multi-dimensionally view the time trapped wavicle (particle-wave resonance at the quantum mechanical level), it would behave like and appear as if its time axis was shifted by 90 degrees from all 3 of our normal axes, i.e., height, width, depth. C-R might speak of this shifted (perpendicular) perception as “the Right (angle?) time”, or as “no time Left”.

As a packet of matter-energy, our particle trapped within the Neutral Zone [C-R] of the Black-Hole [C-R] would still possess every property that makes it a particle. Our *zebra* cannot change his stripes. The time-frozen particle "exists" in every real sense of the word. What the particle is forbidden from doing is behaving as it's normal, real-world self. It cannot interact individually with any other particle, whether that particle is active in time or is time-frozen.

Will it take a Prince Charming to Happily End this Fairy-Tale with the Right Angle?

For all practical purposes, the only detectable properties from a time-frozen particle is mass and momentum only. In every other aspect of its "self" as a particle, the time-trapped particle behaves as if it were a "Sleeping Beauty", oblivious to all which occurs around it.

Nevertheless, the "slumbering" particle still exists, poised to resume its existence in real-time should the opportunity present itself. If this happens, the happily mindless particle will resume it's real-time existence as if it's bad "Black-Hole [C-R] dream" never happened[2].

---

[1] Just for pun, C-R could propose the equation for time in the Neutral Zone [C-R] is: 0 = i c , pronounced: Oh! I see. [0 = (no) time] = [i = (imaginary)square root -1] [+c = speed of light]

[2] If and when the particle awakes from its “slumber”, it will not “remember” anything that occurred during that time technically, because no time passed.. It will not be aware of any passage of time while in the Neutral Zone [C-R] at all.

Chapter 6

Some Conclusions derived using the C-R theory

CONCLUSIONS

Given New Assumptions, Extreme Simplicity

Using only a few, slightly modified assumptions, the C-R theory explains some very astounding events, with very simple arguments.

Matters to Consider

For many years, scientists have noticed the fact that matter in this universe seems to be made almost entirely of regular (not anti-) matter. Normal scientific procedure assumes that any theory of the universe which can give the best, simple reason for this to be so, is more likely to be true. The C-R theory does make use of the unique properties and abundance of regular matter to explain some events in eternity. C-R has a greater chance of being correct than other theories which must take this fact as an embarrassment and/or aberration.

Occams' Razor: Trimming the Assumptions
or
C-R beats Conventional theories, not just by a whisker.

The principle of Occams' Razor is this: the simplest theory, with the fewest necessary assumptions, is more likely to be found correct.

Forces: A (more than four... = gone) Conclusion

The C-R theory needs **NO** new (i.e., fifth or sixth) hitherto undiscovered or unknown basic forces. C-R needs no irrational or unreasonable starting hypotheses. C-R does use some new revised hypotheses. C-R's assumptions were based almost entirely on a compatibility with the law of conservation of energy. C-R assumed that any event which seemed to violate this law was impossible, and not likely to be successful. C-R further assumed that any event which seemed to be permissible by conservation of energy would be more likely to be correct, more likely to be real, and more probably useful to a new theory.

Blocks: Our View

One additional novelty of the C-R theory is a new use, hitherto unexpected, for the basic building blocks of our universe. The C-R theory presents a very logical, highly self-organized, new use for the all abundant, already existing particles of regular matter: the everyday electrons, protons, and neutrons. That the Big Bang could be caused

exclusively using these sub-atomic particles in combination with Black-Holes [C-R] should add some credence to the theory. C-R may be wrong; the assumptions could turn out to be wrong. Why then does the C-R theory seem to provide a practical, common-sense, straightforward explanation to some of the mysteries of the universe? Most scientists had suspected that the universe would be very difficult, if not entirely impossible to understand.

(Note: J. B. S. Haldane is often quoted as stating that the universe is not only queerer than we imagine, but that it is queerer than we CAN imagine.)

Recycling Matter: Real Conservation (of Energy)

Here is the most delightful and satisfying aspect of the C-R theory. For the first time, a possibly real, very practical method and pathway has been detected and discovered by which the universe could re-cycle itself, both partially, and totally.

By the C-R theory, conservation of energy virtually prohibits ANY significant amount of real-world tunneling from the inside of a Black-Hole [C-R]. C-R must conclude that the Black-Hole [C-R] can only STORE energy while it remains in it's collapsed phase. The Black-Hole [C-R] also sorts, consumes and then stores excess positive charges. By mass, the Black-Hole [C-R] chooses the more massive protons, and proton-neutron combinations.

During the gravitational collapse, and inside the Black-Hole's [C-R] Neutral Zone [C-R], real-time interactions between the stored positive electrical charges are technically forbidden, and probably impossible. The positive charges still exist in every real sense. They must be in this state: frozen in real-time. They are, for all practical purposes: inactivated, unresponsive, oblivious to each other, and to all the matter-energy around them. The only thing that this matter-energy trapped inside the Black-Hole [C-R] is still able to do is curve space-time, i.e., simply make gravity.

Old Theories: Their Logic Collapses

One of the conclusions, derived directly from the Law of Conservation of Energy is: The gravitational curvature produced outside the IB^3 Schwarzschild radius of the Black-Hole [C-R], which is caused by the mass trapped inside of the Black-Hole [C-R], cannot decrease by ANY amount. If the gravitational curvature did decrease by even the smallest amount, then, a body orbiting around the center of mass of the Black Hole [C-R] would gain a random amount of energy.[1]

Hence: the gravitational curvature outside the Black-Hole [C-R] is forbidden to decrease. If gravity were caused by allowing hypothetical gravitational "particles" to tunnel out from the Black-Hole [C-R], gravity would decrease unless the tunnelling efficiency was exactly 100%.

---

[1] Additionally, both conservation of Momentum and of Angular Momentum could be violated. Practically, who cares? It should be sufficient to restrict consideration to the premise: What if conservation of Energy is violated?

Opening a Can of Wormholes

If the Black-Hole $^{C\text{-}R}$ was permitted to "wormhole" some of it's mass to anywhere else in any universe, the external gravity surrounding the Black-Hole $^{C\text{-}R}$ would decrease, unless some very complicated energy accounting shenanigans can be performed exactly to the nearest h/v****(Greek needed here--JR)***. (This would be the maximum upper limit to the uncertainty, by the Heisenberg Uncertainty Principle.)[1]

Could gravity producing sub-atomic particles of matter[2] travel at faster than light speed(s) to anywhere in the universe (or beyond), and allow the wholesale preservation of Conservation of Energy to remain valid? This would be unlikely, unless matter possessed an intuitive knowledge of energy, momentum, and angular momentum disruptions, and the matter decided to correct these imbalances exactly when tunnelling took place.

Therefore, the C-R theory concludes that: The Law of Conservation of Energy does not allow such malicious mischief as the Easter-egging of mass, energy, momentum, and angular momentum by wormholes as long as there is mindless-matter in the universe. This conclusion rules out the likelihood of, if not any possibility, of ANY type of higher-dimensional wormhole/tunnel. The energy (and momentum) imbalances which would be created by "worm-holing" matter thither and yon around the universe would demand a malevolent disregard of the most sacred physical laws on the part of mother nature.

From the consideration of the above principles, the C-R theory comes to another interesting, and I have no doubt: "You can't possibly be serious- or right!" conclusion.

Do You Wonder: What's in Store?

From the thought experiments which are performed in the appendix, and the observations made in the section immediately above; C-R must conclude the following. Having demonstrated that a Black-Hole $^{C\text{-}R}$ cannot "tunnel" itself away into nothingness, and that it cannot otherwise radiate any matter-energy whatsoever from it's stored inner contents, C-R leads into this next, inescapable conclusion (Conclusion E).

A (Black) Hole $^{C\text{-}R}$-Lot of Order

Since there is a whole-lot of order still observed in this universe, conventional

---

[1]Although, theoretically speaking, if one assumes the entire universe was created from next-to nothing, or a simple singularity no bigger than 10^{-37} meters wide, and unknown starting mass, then a much smaller random violation of conservation of energy caused by the kinetic energy gained by orbiting matter would seem to be a mere pittance by comparison.

[2]Conventional theories generally call the carriers of gravitational force gravitons. They would approximately be analogous to photons, the wave/particle carriers of electromagnetic energy, like light, radio waves, microwaves, x-rays, and heat. Whereas photons carry energy and momentum with them

theories assume this indicates our universe must be (relatively)young[1], and not infinitely old. The Second Law of Thermodynamics states that: In every system, everywhere, energy content declines. All systems proceed from a higher energy state into a lower energy state. Events progress from a more organized state (order), to a less organized state, (disorder). There may be brief local exceptions to this, but only because of an energy input from somewhere else into the local area. The net energy content of the universe is always decreasing.

Thermodynamics: C-R Theory's Second Opinion
or
Entropy or Not Entropy?: That is the Question

Here is another conclusion on the nature of the Black-Hole [C-R], based on the C-R theory:

C-R theory Conclusion "E":

Energy-Eating Black-Holes [C-R] do not increase in Entropy!

The Black-Hole [C-R], while it is in it's energy acquiring phase, CANNOT obey the Second Law of Thermodynamics. In simpler language, the Second Law of Thermodynamics DOES NOT APPLY, and CANNOT APPLY, to ANY Black-Hole [C-R]. [HINT: Maybe it's NOT really a *Law*, then, is it?][2]

Notice, the C-R theory still accepts that every non-Black-Hole [C-R] area does obey the "Law". The conclusion must be that, for consistency, and ruled-over by a more supreme law; i.e., the Law of Conservation of Energy, the Second "Law" of Thermodynamics does not cover the Neutral Zones [C-R] in Black-Holes [C-R]. It never did, it never can, it never will.

---

[1]Most current theories place the start of this universe at the big bang, approximately 13-18 billion years ago. They also date the appearance of the oldest observable matter (quasars and the like) at 12-15 billion years old.

[2]To be objective, the second law of thermodynamics was derived from some 18th century thermodynamics experiments. The experiments involved a closed system, and the results were generalized into a "law" for all known phenomena and all known interactions in the universe. At that time, practical Black-Holes [C-R] were never even heard-of, much less considered.

To be fair: the Black-Holes [C-R] were never even known or suspected when the second law of thermodynamics was instituted. Can Black-Holes [C-R] help themselves if they refuse to be subject to this "unreasonable" law while they are merrily munching, concentrating, and storing-up quantities of matter and energy? Does the mandatory obedience by all other "normal" matter and energy interactions necessarily imply that Black-Holes [C-R] too must be enslaved by entropy?

To be more nit-picky, let C-R play devil's advocate with the presumed starting singularity of this universe. From what more energetic source did this starting singularity degenerate? If the singularity started from nothing, then entropy is already defenestrated (a big, fancy word for thrown out the window).

If a starting condition of 100% pure nothing can violate entropy by becoming a highly energetic something (our universe), then C-R's competition already concedes that entropy can be violated.

If Black-Holes [C-R] Break the Law - Book 'em
or
Accept the Exception

Yes, C-R realizes that the textbooks say that the Second Law of Thermodynamics ALWAYS applies to EVERYTHING. Yes, C-R realizes that all good Physicists and Scientists accept and believe what they've been told in school for all of their life. Yes, C-R realizes that many people will never come around to accept or believe the conclusion on entropy as presented above, even if it could absolutely proved it to them.

Even so, whether you personally believe that the C-R theory Conclusion "E" is true, the proposed “change” in the rule should be stated. Whether some rule is believed or not, in the absolute sense, never affects its truth. C-R’s perception of the truth may be skewered, but ultimately science must give in to a demonstrated fact, however hesitant the older generation seems to embrace the new idea.

(If the C-R theory conclusion is wrong, observations should demonstrate so in the future, and at least this part of the theory can be dismissed as a bad guess.)

Black-Holes [C-R] Played Hooky when God gave disorder[1]
or
An Entire Class: Dismissed

The Second Law of Thermodynamics states that in every system, there is a tendency for entropy to increase. When entropy increases, reactions proceed from more energetic, to less energetic events. Randomness, overall, is supposed to increase. Objects and events proceed from order into disorder.

Certainly there are small areas where matter or energy seems to become locally more-organized, but only at the cost of an energy input taken from somewhere else. Never before has there been any seriously proposed candidate for a real event which appears to allow the Second Law of Thermodynamics to be overruled or circumvented.

Considered among all of the energy-handling phenomenon in the universe, the Black-Hole [C-R] is so far, in a class by itself.

But, Wait a Second, too

Note: The author does allow that, once the contents from the Neutral Zone [C-R] of a Black-Hole [C-R] become liberated, they are allowed to release the pent-up (concentrated) energy and mass in a White-Hole [C-R] phenomenon, the second law of thermodynamics does again apply. The contents now can interact, communicate, decay radioactively, be detected visually, absorb and emit photons just like other real matter.

A good lawyer might also insist his “clients”, the Neutral Zones [C-R] were not guilty of intentionally breaking the second law because, technically, no time existed inside the Neutral Zone [C-R] . Therefore, no record could be kept or documented of their actual

---

[1]My original line was ... when God gave entropy classes. Upon re-write I sensed a better or newer pun between disorder and “dis order”. This footnote permits both

“lawbreaking”.

Chapter 7

The C-R theory and Recycling
(subtitled: **The Universe: Under Dew Process**)

The Recycling Concept: Not All Washed-Up[1]

One of the most beautiful, simple, and elegant processes discovered in all of nature is the concept of the hydrological cycle. Because of this cycle, almost all of the water in existence today on earth is the same water which was present at the creation of the earth. Some chemical reactions and hydrolysis of water have occurred, so not 100% of all water molecules are the exact ones which were here at the founding of this planet, but overall, the same water has been here since the beginning. Remarkably, water can undergo seemingly infinite cycles of accumulation, evaporation, condensation, precipitation, flow, accumulation... over a very long period of time.

One of the amazing things in the area of scientific theories is the way that some events or explanations of phenomenon in one area can closely parallel happenings in seemingly unrelated fields. Even so, the simplest and most straightforward explanations are often the best, and nature seems to be addicted to the multiple re-use of good ideas.

Parallels with Nature: A New Slant to Consider

The C-R theory speculates that the matter and energy within the universe recycles, somewhat in parallel to the way water recycles here on earth. The C-R theory proposes that the Neutral Zone $^{C\text{-}R}$ within the Black-Hole $^{C\text{-}R}$ plays a major part in this recycling. While the existence of the hydrological cycle does not prove the C-R theory, it does provide a suitable natural framework as a blueprint for building a similar system.

Using conservation of energy as a guide, C-R has proposed an unsuspectedly practical nature to the C-R type Black-Hole $^{C\text{-}R}$ that plays a crucial part in this recycling. C-R assumes that the true nature of the Black-Hole $^{C\text{-}R}$ is vastly different than the current conventional theories suggest.

The C-R solution: Low Entropy- Concentrate on it

The matter-energy-consuming nature of the Black-Hole $^{C\text{-}R}$, and the IB^3 Schwarzschild radius "trap" which defines the limit of the Black-Hole $^{C\text{-}R}$, the Neutral Zone $^{C\text{-}R}$ of the Black-Hole $^{C\text{-}R}$ can only consume matter and energy, not liberate them. In short: this implies it can only *CONCENTRATE* both matter and energy. This invalidates the second law of thermodynamics, which states that in the real world - energy concentrations with time can only decrease. However, this only invalidates the second law for the Neutral Zone $^{C\text{-}R}$ of the Black-Hole $^{C\text{-}R}$, the second law still applies to every other region of the universe. This indicates that all Active Zones $^{C\text{-}R}$, i.e., non-Neutral Zone $^{C\text{-}R}$ areas inside Black-Holes $^{C\text{-}R}$, do still obey the Second law of thermodynamics.

---

[1] And just for pun I add this: folding-in some dryer humor.

Is Black-Hole C-R Behavior Random: Wanna Bet?...Not a Chance!

The C-R theory states that the Black-Hole C-R exploits the property (probably not accidental or random) of the difference in mass between an atomic nucleus and it's associated electrons. The Black-Hole C-R preferentially swallows and de-activates positive charges, while letting some or all of the negative charges escape. This mass-selectivity of the Black-Hole C-R allows all of the still-free electrons to repulse each other away from the active Black-Hole C-R.

This utilization of a "newly-discovered" use for a Black-Hole C-R has the advantage that storing up mass and energy in the Neutral Zone C-R re-concentrates mass and energy back to the original levels conventional theories only associated with the early (post)-big bang. Thus, the Black-Hole C-R also stores up - in abundance, the only known force (at non-atomic distances) which can already overcome gravity. This concept is so simple, so refined, and so unique, it almost has to be true.

Even if you, the reader, believe that the above conclusions are all wrong, you then have to demonstrate that the logical progression of events which follows from the above scenario either are not happening, or are unlikely to happen.

C-R is Positive You Can not Evade the (positive) Charges

A most surprising discovery which almost pops-out from the C-R theory is the extent to which unbalanced electrical charges and massive currents should be active in the universe. Unless Black-Holes C-R (or some mystery batteries?) are continuously creating local imbalances of electrical charge, the conventional theories of astrophysics favor a quick and ongoing return to local neutrality. Even such reactions as nuclear fusion and nuclear fission should not favor the production and re-distribution of electrical charges on the scale in which they are encountered in the universe.

Present day theories about (non C-R) black holes are even less promising to provide solutions to the abundance of solitary and energetic charged particles. These theories claim that, by tunnelling, the black hole (non-C-R type) selectively equalizes the charges trapped inside to those present on the outside. While this doesn't necessarily hurt the search for other possible ionic producers, the black hole which doesn't produce and separate charges doesn't help matters any.

If you think you have no use for re-use

Recycling implies multiple uses. This means that, unless the big bang was a one-time fling in all of eternity, the contents of this universe must have recycled[1]. If the

---

[1]The only other selectable low number would be zero. Since we are here now, the number must be at least one, and that makes the chances zero for the possibility of no existences. See below, new for 2006, for a modification of this statement.

If only one use, then the big bang is a once in eternity possibility [One divided by infinity]. Any greater number almost implies many re-uses. But wait, there is now more.

New (Claim) for 2006. The author now feels that the big bang may not have occurred at all.

(continued...)

universe has ever recycled at all, then the mass and energy which exist today have very likely been around for multiple times. If a one shot universe is very unlikely throughout all of infinity, low numbers of recycles such as two, three, four, and so on are necessarily also very low probabilities[1]. The implication from this is, the matter-energy contents of the universe have been here infinitely long, and have recycled for a correspondingly large number of mini-cycles. As a whole, the universe has NEVER completely recycled ALL the contents at the same time.
****
Also: Add sections currently within your thinking from later chapters considering mini-recycling, phenomenon now known.

J.R.: Consider moving this below to a much later chapter, or into a "historical appendix." Author's note: I now believe this section below, using the C-R theory as the source of the cause for a modified Big-Bang (not starting from a singularity) is obsolete. I leave it in for historical reference, and because it did represent my thinking at the time when I originated the C-R theory.[2]

Creating: A Stir (I no longer think along this line for 2006)

Back at the start of this current (re)cycle of our universe, C-R speculates as to the following:

Some matter and energy would have been left in an Active Zone [C-R] at the center of the universe, although entropy may have dissipated the contents into a very run-down state of matter.

The Neutral Zone [C-R] surrounding the inner Active Zone [C-R] would have held the contents of most of what we now see as our universe. This combination of matter and energy in the Neutral Zone [C-R] would have been time-frozen and inactivated. The contents would already be primed to permit some small disturbance to shift the boundaries of the Neutral Zone [C-R] a sufficient amount so that activation would occur.

This activation could have been brought about by a tidal tug caused by some

---

[1](...continued)
Instead, our universe has ALWAYS existed, but that the individual matter-energy contents HAVE recycled. Technically, this could allow ZERO overall recyclings (of the universe as a whole (or as a Black-Hole [C-R]). The universe would always look approximately as it does now, but with different characters over time. Gamma Ray Bursts, quasars, supernovae, or novae could represent our universe's attempts to continually recycle matter and energy naturally.

[1]See the new for 2006 footnote on the previous page. This represents a revision in my thinking, or I understand it differently now, after thinking it over for about 27 years. The new version did not originally occur to me back then.

[2]Another reason I do not now consider this valid is, the C-R theory allows no way to collapse the contents of our universe gravitationally. Since matter at the outer edges is ALREADY at a lower energy level than it would be here on earth, gravity cannot collapse that matter WITHOUT acquiring the extra energy required to do so. This is in stark contrast to those conventional gravitational theories still thinking Newtonially, where matter will tend to fall as close as possible to the center of any mass.

gravitational disturbance from the Active Zone [C-R] located outside of our universe, or from some disturbance within the Active Zone [C-R] inside the universe. There is a possibility that some other unknown cause could have triggered this event. (For instance, a sufficiently loud verbal command or cue, such as “Let there be Light”?)

Detonation First, Big-Bang to Follow?

Once any portion of the contents of the Neutral Zone [C-R] was tugged back into a real-time situation, the lid could be blown off of the Black-Hole [C-R]. Most of the trapped protons, neutrons, photons, neutrinos and whatever else would start to expand as the positive charges repel each other at an incredible rate. As the density at the Neutral Zone [C-R] would be locally decreased by the newly-activated matter, the loss of density would lessen the escape velocity (the curvature) experienced by other nearby matter-energy trapped in the dwindling contents of the Neutral Zone [C-R]. The relatively high ratio of self-repelling protons which would be shoving each other out of their way would contribute to the outermost surge-burst of positive charges released with extremely high energy.

Since the contents of the universe would never have been concentrated into a singularity, the initial starting density and energy of the universe, using the C-R theory as a guide, would be considerably less intense than that predicted by (or at least, expected by) conventional theories. Even so, the energy levels generated at release time would be orders of magnitude above any energy levels our civilization could achieve in a laboratory setting within the foreseeable future.

Once our universe was activated, there would be an incredible display of light (and other energy) such as could never be witnessed by mortal man. The intense level of heat, radiation, and energy produced would, at this time, prevent the survival any kind of living creature based on chemical compounds.

Within some amount of time, the energy level would be low enough that chemical bonding would again be possible, and the molecules needed to sustain life would be allowed to exist again.

Inside this newly created universe, there would be an ample amount of freshly recycled matter and energy. These would remain available to build and stock a livable universe for quite a while, at least to cover billions of years.

Chapter 8

Observing Our Universe - C-R theory conclusions.

Will they affect your perspective on the nature of the universe?

Conclusions:

Give the C-R Theory Active consideration

Here is another conclusion: a direct consequence of the nature of a Black-Hole $^{C-R}$ as described by the C-R theory. From the C-R theory assumption B, C-R concluded that the Black-Hole $^{C-R}$ physically could not ever collapse into a singularity. This is due to the geometric nature of gravity, an effect caused by curvature of the space-time fabric of the universe.

What happens just starting inside the edge of the IB^3 Schwarzschild radius, the boundary where the escape velocity equals or exceeds the speed of light? Because the time has been curved-down or reduced to zero in this zone, no further gravitational acceleration by potential energy decrease is possible. There is no force, no interaction, and no measurable movement which can be experienced by any real particles or energy. Therefore, C-R concludes that there must be a Neutral Zone $^{C-R}$. All particle-to-particle interactions and particle-energy interactions will be impossible in this Neutral Zone $^{C-R}$. No communication of any kind would be possible

Once matter and energy have been collapsed into this Neutral Zone $^{C-R}$, even the gravity which drove those particles forcibly into the Neutral Zone $^{C-R}$ can have no further effect. Since the energy in this state of "existence" is already at the minimum possible, no further inward collapse is possible, either. This implies that there must also exist an inner Schwarzschild radius.

Because this matter-energy in the Neutral Zone $^{C-R}$ is already at it's minimum possible energy, there is no inward force, crush or push by any of the contents of the Neutral Zone $^{C-R}$. Therefore, an inner Schwarzschild radius must also exist. This inner Schwarzschild radius must have occurred at the time of the collapse of matter into a Black-Hole $^{C-R}$.

There must be real, time-active matter and energy further inside every Black-Hole $^{C-R}$. Additionally, there must be exactly enough matter at a sufficient density to exactly close the Black-Hole $^{C-R}$ at the inner IB^3 Schwarzschild radius.

The Neutral Zone $^{C-R}$, by itself, can therefore have any amount of extra mass, over the amount required to form (gravitationally close-off) the Active Zone $^{C-R}$. In the special case when a brand new Black-Hole $^{C-R}$ has just formed, if there is no extra mass remaining inactive after the Active Zone $^{C-R}$ is formed, then there is only one IB^3 Schwarzschild radius, and there is no Neutral Zone $^{C-R}$. The inside of the Black-Hole $^{C-R}$

would still be unable to contact the outside of the Black-Hole C-R, and vice-versa[1].

Any mass consumed after the Black-Hole C-R is created will be trapped or stored in the Neutral Zone C-R. There will necessarily be both an inner and an outer IB[3] Schwarzschild radius.

From the outer IB[3] Schwarzschild radius, calculating the volume vs. the mass would yield the overall density of the Black-Hole C-R. This would not be sufficient to determine what percentage of the mass was in the Active Zone C-R and how much mass was trapped respectively in the Neutral Zone C-R [2].

Therefore, the C-R theory makes Assumption "E"[3]:

There Exists an Active Zone C-R inside Every Black-Hole C-R.

This inner-Active Zone C-R is always exactly critical. The time will be fully slowed-down to zero as one reaches the outer boundaries of this inner-Active Zone C-R. Events and objects nearer to the edge of this universe will appear to be younger (by age), dimmer, and slower (red-shifted?).

This also shows that at the exact center of every Black-Hole C-R (which is also the center of the inner Active Zone C-R, too), the total gravitational curvature must be at a minimum (equal zero with respect to the contents of the Black-Hole C-R). If an external gravitational field exists from outside the Black-Hole C-R, that part of the field will still be felt at the center.

Therefore, at the center of every Black-Hole C-R is an Active Zone C-R. In this Active Zone C-R, matter and energy are active, and are not collapsed into a singularity, or stopped in time[4]. The matter inside the inner-Active Zone C-R remains unchanged even if the matter in the Neutral Zone C-R or the outside-Active Zone C-R undergoes activation.

In smaller Black-Holes C-R, matter inside could be very dense, at least as dense as pure neutrons from a neutron star. The density will NEVER be extreme enough to collapse into a singularity!!

What if our entire universe resides inside a universe-sized Black-Hole C-R?

The reader should notice that, approaching the edges of the universe, objects

---

[1]See chapter __ page __ for a technical exception to the statement.

[2]If the Black-Hole C-R was brand new, the Active Zone C-R would be very close to, if not equal to 100%. For any existing Black-Hole C-R, that percentage would not be nearly so certain.

[3]This was also going to be C-R theory Conclusion "F":A Black-Hole's C-R Fabric Free-Floats Formless, Time-Frozen. Flash: "Singularity" Fable Fake!!

[4]The matter and energy will be slowed-down, though, depending on their distance from the increased curvature closer to the IB[3] Schwarzschild radius.

would appear fainter and younger. There are three possible causes which can contribute to this appearance.

First: This would occur because the speed-of-light limit might make the light from the events at that great of a distance take that long to reach the observer.

Second: This would also be due to the C-R theory's postulated properties of our universe that while nearing the edge of the universe, the objects would be in a time-slowed-down reference frame. This would give those objects the appearance of being dimmer and further away than they really were. These objects would also appear to still be young, because they would still be young. Since the time-frame these objects reside in would be slowed-down, their measured real-time of existence, from the big bang would literally be shorter than would be the case from our location.

The objects at the outer edge of the universe would also appear to be substantially red-shifted. Notice that this appearance could be partially due to the object receding at massive speeds, but that this red-shifting could also come solely from the mass of the universe warping time to a slowed-down rate.

New pun for 2006:

Conventional theories on the expanding expansion of the universe:
or
Dilutions of Grandeur

Third: Since conventional theories predict that the universe is expanding, and the outer-most objects are receding, the theory of relativity predicts that the objects will appear to have their local time-frame Doppler-shifted, or slowed down by the fraction of v/c[1] of their outward expansion. Because of this, conventional theories attribute the red-shift almost exclusively to the recessional velocity from the expansion of the universe. The conventional conclusion would be: our universe is still expanding, diluting, cooling-off, wearing down, petering-out.

The measurable red-shift effect from possibilities two and three would be identical over a short period of time. Over many centuries or millenia, there should be detectable differences. If the red-shift is attributable only to a gravitational time-slow-down, there should be no variation in the over all appearance of the red shift over time[2]. If the red-shift is due exclusively to the expansion of the universe, and the tremendous recessional velocities encountered, then as the objects recede further, the rate of speed and the amount of the red shift should increase.

Since the fainter objects near the edge of the universe could also be younger[3], C-R could use them to demonstrate and display a view of the phases of progress of the

---

[1] This would be the famous Lorentz-Fitzgerald contraction. See the appendix for this formula.

[2] Overall, no variation. Individual objects may still move, interact, orbit, swing around, and change measurably with time.

[3] A change for 2006. In earlier versions I only imagined they would be younger from the big bang. Now I allow the possibility that the a universe is infinitely old, but the matter making-up individual objects might have been recycled and appear new, but could also be far older than a big bang would allow.

universe from it's creation. The lesser White-Hole [C-R] phenomenon would appear in progression from gamma ray bursts, quasars, Seyfert galaxies, galaxies, supernova, nova, and normal clusters of stars.

If the red-shifting observed in distant objects is due to the local time-slowdown in those regions, and not due to rapid motion away from us, there should be almost no difference in the background radiation from different directions[1]. This would be due to the homogenous and symmetrical nature of the gravitational time slowdown as viewed from the inside. Any light observed should verify the fact that the red-shifted light from all different directions was produced from the same time-inactivating method.

The C-R theory would predict that the light energy from these regions near the edge of the universe would not be frequency-shifted by the travel through the gravitational field. Rather, the local gravitational field there would establish it's own slowed-down reference frame as far as activation of matter-energy was concerned. By measuring this reference frame and comparing it to the spectral frequency produced in the far-off time-shifted regions, all far away regions having the same time slow-down would produce the same frequency shifted spectra.

*** You may want to move this section below, and qualify the old big bang ideas or put them in a section set aside.

A New Light on an Old Question

Oblers' paradox resulted from a deceptively simple question asking: Why is the sky dark at night? The question was asked on the assumption: If the universe is infinitely old, and if there are infinitely many stars in the sky, in every direction, the entire sky should be equally bright with light in every direction one looked.

Sunlight in the daytime, and the continual progression of day and night tell us that the sky is significantly less bright at night than during the day. Only the sun seems bright, and the billions and billions and billions of other stars at a distance cannot collectively equal, much less outshine our one nearby sun. Since the brightness at night does not equal the brightness of day, some questions were raised about the nature of the universe.

At least one of three basic assumptions in the premise must be false, suggested by the simple fact that the sky is dark at night. Oblers himself speculated that the answer lay in the fact that there was obscuring dust in the universe, and that dust absorbed light. This was the reason the sky was dark at night. Scientists soon realized: if dust absorbed light or heat and energy from distant stars, this dust in turn would get warm or hot, and it would start to re-radiate the intercepted energy within a short time. Because the re-radiation only postponed the time before the universe became as bright as the sun in all directions, scientists concluded Oblers' guess was not the correct answer to the question.

Scientists then concluded that the reason the sky is dark at night is that the universe is expanding. This answers Oblers' question, somewhat.

---

[1] Any observed differences would more likely be due to OUR local system's movements, not to any overall movement in any direction.

The C-R theory has a different opinion on the answer which could also be interpreted as correct.

First, C-R argues there are Black-Holes [C-R] in the universe. In fact, the universe itself may reside inside (and thus, be the inside of) a very large Black-Hole [C-R]. Some of these Black-Holes [C-R], if they are not surrounded by clouds of matter, may also be consuming or absorbing visible energy, as well as swallowing matter.

Next, from the C-R theory, the universe is slowed-down, or time de-activated as one approaches the outer edges of the universe. The objects located nearer to the edge of the universe should appear younger and dimmer, due to the time slow-down. This causes objects and events near the edge of the universe to appear to be red-shifted. They will appear to be less energetic because they spend less of their existence in what we (on Earth) would call real time. The objects may also be receding from Earth by an appreciable velocity.[1]

By the C-R theory, you, the observer would have no quick way of knowing or measuring which of the two options (time slow-down or rapidly receding acceleration) caused the red-shift, or how much each part contributed to the total effect. C-R suggests that a much simpler explanation is allowing the universe to exist inside a completely closed, (C-R type-of) Black-Hole [C-R] than to attempt to describe our existence inside of a (non C-R) black hole singularity. If this is the case, there probably is 0 (zero, no, nothing, nada) recessional velocity, and 100% red-shift.

No End: Insight

If an inner-Active Zone [C-R] exists, this implies that some portion of matter in this universe will always exist in it's present configuration and state. This matter will not be subjected to the universe-rending reactions or conditions thought to occur in the conventional big bang type of scenario. Importantly, this implies that the underlying laws of physics of the universe cannot, and do not change arbitrarily with every Black-Hole [C-R] to big bang event. This also implies that the (approximate) quantities and sub-atomic properties of the protons, neutrons, and electrons which exist now have *ALWAYS* existed. There never was a time when they did not exist, and there never will be a time when they do not exist. The C-R type of big bang has no mechanism, power or method left which will suffice to change the basic nature of protons, neutrons, electrons, neutrinos, or the laws of physics, ...etc, at each recycling.

C-R theory Conclusion "BBB":

---

[1]Again, this is the conventional explanation. This considers only the recession velocity caused by the expansion of the universe (or is it the expansion caused by the recession velocity?)

For 2006, the C-R theory's author now believes that there is no outward expansion at all. Therefore, the time slowdown is 100% of the observed cause of the red-shift. Some Black-Holes might consume stray photons (light) contributing to the observed darkness.

The Basic Building Blocks of the Universe are not arbitrarily changed at every basic Big Bang belch

It is possible that the basic building blocks of matter-energy can undergo violent changes, and some particles can be changed into other particles or into their equivalent energy in intense nuclear reactions. For the most part, our universe's matter which exists now has an infinite recycling lifetime. This matter may have changed states, it may have been recycled through some Black-Hole [C-R] events, and it may be reworked from time to time in high energy particle collisions.

Matters To Come

From the law of Conservation of Matter-Energy:

Even though our universe, as it exists now, may have had a specific beginning, we must conclude that the matter-energy which makes up our universe has always existed. It never was created from nothing. It never will disappear or dissipate into nothing. Over time, it will recycle. Some of the particles may be changed to their energy-equivalent counterparts, and some energy will be reconfigured back into particles. Literally, the contents of our universe must go back from everlasting and they will remain substantially the same clear into everlasting (not numerically expressible).

C-R also speculates that the ability of the universe to recycle itself is in no way random. There must be an intelligent Creator behind the design and the execution of recycling.

If the universe was a random collection of miscellaneous parts then there would be an extremely small probability that the universe could organize itself into an infinitely recycling entity. There would be infinitely greater possibilities that even if the universe came together once accidentally, it would dissipate itself in a one shot deal, and dilute into infinity it's content of matter and energy. Such a universe would be hopelessly lost forever.

The coincidence that humanity would be around during that once in an infinity event is asking too much of random probability.

There must be an intelligent Creator, guiding the events and plans of the universe. This Creator must be as infinite and old (i.e., everlasting) as the matter-energy which comprises the universe. This Creator may be the direct cause of the accomplishment of the big bang. The big bang would represent the formal start of this go-round of the cycle of the Universe.

A new set of ideas for 2006:

The author of the C-R theory, (J.R.) [me], has decided to further believe in the theory to the extent that there may not have been a single big bang, but a continuous set of mini big-bangs, going on at the outer edges of the universe, continually. The gamma ray bursts detected as coming from all directions in the universe, could have been averaged out to be continually refreshing the 2.7 K background radiation. The self-repelling electrical nature of the released positive charges could smooth-out, naturally, the background radiation, equally in all directions.

In essence, the C-R universe may exist in a literal, steady state, continuously

refreshed, with the exact appearance it has now. This universe would be infinitely old, yet not faded-out or infinitely expanded. Since the entire universe's contents are enclosed within an Active Zone $^{C\text{-}R}$ inside a universe-sized Black-Hole $^{C\text{-}R}$, the net size, and energy content are fixed, and do not change with time.

Remarkably, the C-R type universe CANNOT collapse, as all conventional theory gravity scenarios demand, because of the nature of gravitational curvature. In essence, the contents closest to the outer edges of the universe (the inner IB^3 Schwarzschild radius) are already at their lowest energy possible. In order to collapse inward, these contents would have to GAIN energy, which they don't have and can't get.

A Note to the reader: The author does not expect most readers will accept this explanation upon first hearing, as it goes against everything you have been taught. I had the same reactions when this first occurred to me, and I would not expect others to change their lifetime beliefs right away. My goal is to introduce the concept, to expect your non-belief. I assure you, your non-acceptance of these ideas does not surprise me.

I have, over time, accepted these ideas to the extent that I now can advocate the C-R position. Eventually, enough phenomenon discovered in the universe should seem to support and confirm the C-R theory, enough to convince a few readers to consider changing their viewpoints.

I have not entirely changed the original text of the C-R theory, when I believed in the big bang, (although not from a singularity). Too many people have been brought up to accept the concept, and I cannot totally rule-out the initial event. (I am much more skeptical of the big bang, especially of somehow allowing even a partial collapse of our universe from it's present size.)

Another Note, on the Expanding Expansion of the Universe:

I would be remiss if I did not comment with a 2005 C-R theory spin on the recently-derived claim that the universe is not only expanding, but the expansion rate is expanding.

Scientists have used the observed data from Cephid variable stars, and their abundance in observed galaxies nearby and far-away to determine the rate of expansion in the universe. What was not taken into account by conventional theories is one of the newly proposed C-R theory's ideas, that the universe is not ISOTROPIC, or the same in all directions.

Rather, when observing distant objects appearing to be red-shifted by large amounts, these objects are ACTUALLY existing and operating at the reduced time-rates we observe!! They are slowed-down by the effect from the gravitational curvature. Without doing any math, I would predict that the expanding expansion (and the appearance of the expansion itself) will disappear if or when the time-slowdown is taken into consideration.

Like the Convicts said: "We was *Framed*"
or
Our *Relativities* did it!

In the simplest words, Relativity must be wrong!! Way out there isn't equal to HERE (on earth). There is an overall PREFERRED reference frame existing within the

universe, with “The Great Attractor” at its center, and the red-shifted objects in every direction nearing the observable edge of our universe.

(Ironically, Einstein thought of the idea that curvature slows down time, but his thinking was “too Newtonian” to apply it to the universe, overall!! The C-R theory merely took this idea and BELIEVED it, then applied it to what we SEE in this universe.)

I am reminded of the Chico Marx quote “Who you gonna believe, me, or your own two eyes.” (I do not remember which film the quote occurred in, it’s been too many years ago. But it was too good of a line to pass-up and not recycle it.)

Extended, and Expanded Definitions - 2006 revision of terms used in the Comedy-Recycling (C-R) Theory

Author's note: These extended definitions are intended for use by those readers who do not have the patience to read through the entire theory, those who have forgotten what they read, and those skimming through the theory. I left most of the jokes out of this section. These definitions will be suitable for use with the Completely Recycling theory, an international friendly, joke free, contraction free version derived from the Comedy Recycling theory, intended to follow shortly.

I have tried to include enough information in each definition to explain many of the complete C-R theory ideas as a stand-alone section. I also attempted to compare the C-R theory version of ideas against the conventional theories (or the competition).

A:

(Time) Active Zone $^{C-R}$: [Add a diagram, or a link to one]

The C-R theory's description of the Active Zone $^{C-R}$ is perhaps the easiest of all, since all non-Black-Hole $^{C-R}$ areas of the universe qualify as an Active Zone $^{C-R}$. There are also two types of Active Zones $^{C-R}$, inner [enclosed inside the Black-Hole $^{C-R}$] and outer [everything outside the Black-Hole $^{C-R}$]. The definition of the type of an Active Zone $^{C-R}$ would apply whether the Active Zone $^{C-R}$ was located within the inside, time active, central region of a Black-Hole $^{C-R}$, or whether the Active Zone $^{C-R}$ included the entire time-active universe outside of any Black-Hole $^{C-R}$.

The qualifications to be a (Time) Active Zone $^{C-R}$ merely require that matter (and energy) be able to detect the passing of time, and interact in real time.

Case 1, the inner Active Zone $^{C-R}$:

For an Active Zone $^{C-R}$ located inside of a Black-Hole $^{C-R}$, regardless of the size of the Black-Hole $^{C-R}$, certain events must be recognizable:
First: The density of the inner Active Zone $^{C-R}$ located directly inside the Black-Hole $^{C-R}$ will be exactly sufficient to fully close-up, or warp spacetime. The escape velocity will always be below the speed of light. At the start of the inner IB^3 Schwarzschild radius the escape velocity will satisfy the condition of exactly equaling the speed of light. (This IB^3 Schwarzschild radius will be located entirely inside of a Black-Hole $^{C-R}$, as per our initial conditions.) At the center of the Active Zone $^{C-R}$, the net curvature from all the mass of the Black-Hole $^{C-R}$ is zero.[1]
There is ALWAYS this imposed reference frame, between total-complete curvature at the inside IB^3 Schwarzschild radius, to zero curvature at the center. Everything in between will be roughly linear on a chart of curvature, also depending on the distribution of matter.

---

[1] The total curvature may still be above zero at the exact center, due to conditions existing outside the Black-Hole $^{C-R}$. This would be especially true for where in the entire universe the Black-Hole $^{C-R}$ was located.

For very small Black-Holes [C-R], the inner Active Zone [C-R] could be solid matter, possibly even pure neutrons. Somewhat larger Black-Holes [C-R] could have an Active Zone [C-R] composed of a liquid or gas, or a mix of both.
For the largest possible Active Zone [C-R], our universe, the majority of the inner Active Zone [C-R] could be a vacuum, with occasional solid, liquid and gas.

Second: The total sum of the net curvature at the outermost boundary (which is the INNER lB^3 Schwarzschild radius) from the entire contents of the Active Zone [C-R] (mass/density/volume) will be EXACTLY critical. Consider any matter which exists inside this boundary of the radius. The matter located closer to the outer boundary at the edge of the inner Schwarzschild radius will exist in a more intense, more warped gravitational curvature. Matter there will appear to be more time slowed-down, or red-shifted than the contents residing closer to the center. Because of the more intense curvature, the events in this outer region would actually be occurring at a slowed down pace, when viewed by an observer at a location closer to the center. Therefore, any objects nearer to the outer edge would not also appear to be younger, they physically would be younger. (i.e., aging at a much slower overall rate)[1]

Third: This gravitationally induced red-shifting would occur even if none of the objects in this zone were moving with respect to an observer located somewhere further inside the Active Zone [C-R]. This would be the case since, nearer to the center, the gravitational curvature would be less, and the region would be comparatively more real-time active.

Fourth: The objects which would exist in this more intensely curved, outer portion of the Active Zone [C-R] would already be at a lower potential energy level than the objects in the less intensely curved central regions. Therefore, the gravitational "attraction" originating from the central region by conventional theories would not be able to pull the clumps of mass back into the center, since the center would represent a higher energy environment.

Fifth: If there was any matter located outside of this inner Active Zone [C-R], in any size Neutral Zone [C-R], or in an even larger Active Zone [C-R] located outside of the outer lB^3 Schwarzschild radius; this matter would be forever undetectable from the inner Active Zone [C-R], as long as one or both of the

---

[1] New for 2006. If the universe is continually existing, vs. beginning at a big bang, the age factor becomes less significant. If all matter and energy has existed forever, the relative "youth" of objects existing in slower-time, or highly red-shifted becomes much less of a factor in the overall appearance. In addition, it allows these objects to have a much more enriched spectrum with heavy elements than could possibly be expected if one considered their age by reasoning from a big bang start.

I was NOT thinking along those lines when I originally wrote this section. Because most of my readers will be in a similar frame of mind considering the big bang, I have left the original section in with some new additions.

IB^3 Schwarzschild radii exists.[1]

Sixth: NOTE: These hypothetical, C-R derived conditions described are startlingly close to the actual conditions observed in our universe today. Therefore, one might surmise that our universe represents both a practical, and likely, our only laboratory study model of an C-R type Active Zone $^{C-R}$.

Seventh: If the agreement between these hypothetical conditions and real observations of the universe do favor the C-R theory, and our universe is indeed an inner Active Zone located inside of an even larger Black-Hole^{C-R}, the rest of the events described by the C-R theory take on a greater probability, if not a near certainty.

There is nothing in the C-R theory which would prevent smaller Black-Holes $^{C-R}$ from existing inside even larger Black-Holes $^{C-R}$, possibly within even greater Black-Holes $^{C-R}$.
Additionally, there is nothing in the C-R theory whatsoever to prevent many Black-Holes $^{C-R}$ from mutually residing within the same inner Active Zone $^{C-R}$ of any singular Black-Hole $^{C-R}$ without consuming each other.
The concept of the Active Zone $^{C-R}$ is fully capable of supporting multiple internal Black-Holes $^{C-R}$, while still retaining it's overall features as an Active-Zone $^{C-R}$ throughout all non Black-Hole $^{C-R}$ areas.
Note: An additional note, since matter in a Black-Hole $^{C-R}$ is ALREADY at its minimum energy, one Black-Hole $^{C-R}$ should not attract another. This should allow MANY lesser Black-Holes $^{C-R}$ to co-exist within very small regions of space.

Case 2, the outer Active Zone $^{C-R}$:

Next, let us consider the case of an Active Zone $^{C-R}$ located totally outside the (external) IB^3 Schwarzschild radius of a Black-Hole $^{C-R}$. The only major difference from the inside scenario would be that, as one increased distance out and away from the gravitational curvature at the IB3 Schwarzschild radius of the Black-Hole $^{C-R}$, real time

---

Actually, if both of the IB^3 Schwarzschild radii, inner and outer, were done away with, i.e., after a nova, supernova, ..., there would be no prohibition from people who had been inside communicating with people who had been outside. Once the contents of a Neutral Zone $^{C-R}$ of a Black-Hole $^{C-R}$ are freed, a condition is possible to again permit communication between regions which had been time-insulated. The events in each region would be unknowable to each other only while the Black-Hole $^{C-R}$ and it's Schwarzschild radii were in existence.

Even more unlikely as a scenario, if the total internal distribution of matter either inside of the Schwarzschild radius could be concentrated and shaped together (modulated) over time, the mass near the Schwarzschild radius could be bunched and unbunched deliberately over time in order to change the curvature to communicate some intelligence.

It would be necessary to pre-arrange coordination of the meaning of the change in modulation before the Black-Hole $^{C-R}$ formed. Otherwise, communicating the modulation would not imply the intended meaningbe possible. There would be no mutually sure way, short of pre-planning the Black-Hole $^{C-R}$ transcending modulation, to communicate what the each of the signals might mean.

would occur (or flow, be measured at, or exist) at a greater (more active, real time) rate.

From the outer Active Zone $^{C\text{-}R}$, we would have to submit to the practical realization that the events occurring within the Black-Hole's $^{C\text{-}R}$ IB^3 Schwarzschild radius are forever unknown and unknowable to us. We could determine the Black-Hole's $^{C\text{-}R}$ mass, and possibly it's average density. We could detect it's momentum. We would detect it's gravitational time-warping capability.

The outer Active Zone $^{C\text{-}R}$ would represent the time-active, real-world, everyday universe with which we were familiar. All known physical laws would be applicable in the Active Zone $^{C\text{-}R}$.

Age of the Universe:

The present estimates of the age of the universe, and also the size of the universe hinge on several assumptions.

The first assumption is that the redshifting of the light from distant objects is a direct measurement of their speed of recession.

The next assumption is that the universe is expanding in proportion to the calculated velocities determined from the measured red shift information.

The next assumption is that events in the universe occur identically, at the same time-rate, in the same manner that the interactions would occur on earth[1].

The next assumption is that, if all calculated motions were reversed over the calculated distances, this will yield the time calculated from the moment of the beginning of the universe to the present.

From these assumptions, current theories assert that our universe began approximately 13-20 billion years ago.

Unfortunately for those theories, the C-R theory has a perfectly disruptive monkey wrench to throw in to each of the four assumptions.

As for the first assumption, the C-R theory categorically predicts that gravitational redshift will produce at least some amount of the detected redshift. Therefore, the calculated velocity of recession is likely to be in serious error.

For the next assumption, the expanding universe, the expansion idea was based on the assumed recessional velocity. If that is in error, then the figures for the amount of expansion occurring, and the time-to-distance correlation for expansion may also be seriously flawed. By varying the starting-condition fudge-factors, the C-R theory can accommodate almost any amount of expansion. If the universe was falling in upon itself, C-R could explain it away. If the universe was mostly static, or steady state, C-R could accept that, too. If the universe was expanding some, a little or a lot, C-R could accommodate any of those assumptions. In addition, the fudge factors would allow C-R to comment upon measurements of the universe as it appears today. C-R would only face a challenge to adjust the fudge factors to account for a change in appearance over time. Either the position of the stars, relative to the background, or a change in the amount of redshift, either positive or negative could be accommodated. Additionally, C-R

---

[1] In other words, the theory of relativity says that space is isotropic, or IDENTICAL in all directions. The only problem is that we can see objects which are red-shifted and objects which are blueshifted as compared to earth.

could accommodate a change in brightness or decrease in brightness from far-away objects with relative ease.

The third assumption, that all events occur in the same time-frame, with exactly the same measurable results as on the earth would also be challenged. If the gravitational redshift and time slowdown do exist, then events at the outer edges of our universe would occur at only 10% of our real time rate in a region with a 90% red shift. Since this affects the overall brightness/energy-output/distance calculations, the distances derived from the data may again be seriously overestimated. If the real time-frames are different, then all data viewed from "far away" would need to be time-base-corrected before they could be compared, one for one, to events occurring near the earth.

As a supplement, one additional consideration for distance calculations. The original distance to brightness correlations upon which the size of the universe was measured, was based on the relationship between the variable dimming period, and the absolute brightness (luminance) in a special class of stars called Cephid-variables.

The relative brightness of Cephid-variable stars was compared, and assumed to be identical for stars with the same periodicity. If that was the case, then distance alone would account for the difference in the apparent relative brightness (magnitude).
(** Check the next logic again!)

However, if the actual time-bases of the Cephid-variable stars observed were unequal, then the relationship between the periodicity, and the brightness measured, the magnitude (output) will be doubly in error. The periodicity will be slowed down, as objects further out towards the outer edge of the universe should exist in a slower timeframe, and the brightness emitted (light-output) from that periodicity will also be lower than expected. In that case, the distance to the stars would be overestimated.

New for 2006: The C-R theory now says, best guess to the universe's age would be infinite. Although the universe is not totally static, but dynamic, it does continually recycle. The 2.7 K background radiation is NOT the doppler shifted remnant from the big bang, but averaged radiation from gamma ray bursts, quasars, supernova and nova, going on continually. See sections __ and __ for more complete technical explanations.

B:

Big Bang:

At the present time, the big bang is the heavyweight champion theory of the universe. Most scientists accept it as the scientific explanation most likely to be true. Most scientists believe that this explanation has currently knocked out all of the serious contenders. They would believe that, while needing some points of clarification, the big bang theory most closely fits all of the experimental data.

The big bang theory predicts that the universe started off some 13-20 billion years ago, from either absolutely nothing, or an assumed singularity.

If the universe started off from absolutely nothing, then everything we now find in the universe was due to some properties of space and time abhorring a vacuum. Some have speculated that the quantum flux vacuum (nothingness) had so much potential energy that, after the beginning, an expansion occurred, during which, all matter and energy existing nowadays popped-up.

If, on the other hand, the universe was created from a singularity, here is one scenario. A singularity (from somewhere?) existed. This singularity consisted of a gravitationally collapsed point of some amount of matter-energy. At some instant in time, out (or up) from that location, an event called the big bang started. As a consequence of that event, from the initial starting conditions, everything arose which we find in the universe today.

The big bang theory essentially was derived by taking the present universe, with all that we observe, and time-reversing all events seen today. Since the universe gives the impression that it is expanding, the time reversed universe should be collapsing. Without some good scientific reason to believe otherwise, as we imagine that the time and the age of our universe are reversed; the matter and energy of our universe are assumed to have come together at one nearly-infinitely dense physical point at one instant in time, and for one event.

The C-R theory detects a problem with this scenario: it incorporates too much wishful thinking. Reversing the events, up to a limit, is fine. Once that limit is exceeded, the starting conditions and the reasons for the start-up become obscured in the standard big bang model.

The increasing red-shift in objects which appear to be further away is one of the first phenomenon encountered which appears to support the big bang theory. For this reason, most scientists unquestionably believe that the universe today appears to be expanding. A potential problem exists. The C-R theory maintains the standard gravitational time-warping could also slow down time. This would also give the farthest components near the outer edge of the universe the reddest appearance.

After George Gamow first proposed a theory of an exploding, expanding universe, he predicted that the remnant from this first, energetic spectrum might still be detected echoing around. This spectrum should be highly red-shifted.

Unknown to theoreticians at that time, two workers from Bell labs, Arno and Penzias had already measured a mysterious microwave radiation equivalent to 2.7K coming uniformly from every direction in the sky. This was lower than the 10-15K microwave radiation teams were searching for.

The uniform nature of the background radiation in every direction suggested the spectrum originated from the outer reaches of the universe and the very beginning of time. Once the predicted redshifted energy was indeed discovered, it was (almost) unquestionably accepted that the expansion of the universe was true.

The C-R theory originally agreed that any expansion could account for some of the observed red-shift[1]. Another possible explanation, ignored by conventional theories, is that the universe is not (rapidly) expanding, but gravitationally time-slowed. The trouble is - the gravitational redshift could easily produce exactly the same observed effect, over a short period of time.

Both any ongoing expansion, and the normal, time-slowdown in a more intense, (more bent, more warped) gravitational curvature could, in fact, be contributing to the overall appearance of the redshift in the universe. This leaves a dilemma. Is there any way in which we can conclusively say: By how much is the universe expanding and/or to

---

[1] I now have my doubts about any expansion occurring in this universe. This represents a change from my original thinking, newly posted in 2006. See the Extended Definitions section about Expanding Expansion for a more complete account.

what extent is the timeframe slowed-down?

The C-R theory says no, there is no immediate way to easily tell if the universe is only expanding, and by how much? Unfortunately, over the comparatively short measuring period of a few years or decades, the changes which would differentiate between the relative contributions from two causes might not show up, and if they did, the differences might be so subtle as to be masked entirely.

While the C-R theory does not absolutely forbid that the universe is rapidly expanding, its author suspects (and predicts) that almost all of the red-shift seen in the universe will be found to occur because of the gravitational red-shifting.

The conventional basis for the determination of the age of the universe has been thoroughly pummeled by the C-R theory knockdown of at least four of the basic assumptions. Lesser assumptions were that the entire expansion has been somewhat linear from the beginning of time, and that the far-away objects measured were producing energy at nearly the same rate as similar objects in our part of our galaxy.

Since the speed of recession (or expansion) has been called into question, now C-R will throw in the additional monkey-wrench of the time slowdown. If some of the far away, red-shifted objects observed are indeed slowed down to only 10% of our real-time rate, (which we experience here, in this part of our galaxy), then the brightness and distance estimates which have been painstakingly worked out over the years are questionable, too.

The present big bang theories would predict: if the universe was still increasing in size; as the universe expanded, the outer velocities would increase with the size of the universe. This would be due to the Hubble constant, which demands that the farthest out galaxies expand at the fastest rate. On the other hand, if the universe was neatly closed-up, the velocities would probably be ZERO. This contrasts to the standard gravitational theory belief that the universe should be slowed in it's expansion by the imminent inward pull of gravitation.

Newer thinking, 2006 version.

If the matter at the outer edge portion of the universe was stationary, then the entire red-shift would be due to the gravitational time slowdown. The outer matter of the universe should be steady in it's redshift over time, and the rate of redshift would not change[1].

An additional consideration is: if some of the matter at the edge of the universe approaches a more intensely curved space-time, it would acquire a greater amount of red-shifting over time. This could occur if some of the matter had some outward velocity, and drifted into more intensely time-slowed down space. Ironically, since the curvature is greater THERE, objects should FALL (or be attracted by gravity) towards there.

Since the gravitational timeshift (or slowdown) would be the most intense in this outer region, one would expect objects there to be very much dimmer, and ageing much slower than would be predicted by conventional theories. Conventional theories say that

---

[1]Some individual objects may move or age over time, but the overall relative red-shifts should be the same in 1.5 billion years (10% of the conventional theory's current guess for the universe's age) as viewed now. Just take two pictures, and place them side by side.

the reason these objects appear to be so young is that it has taken light so long to traverse the enormous distances. We supposedly are observing objects as they existed billions of years ago, and which are likely to have long-ago either vanished or evolved into more normal, mainstream stars and galaxies.

The C-R theory says, the main reason these highly red-shifted objects (for a 90% red-shift) appear to be dim is because they ARE time-slowed down. When they produced their light, which we view today, these objects are only emitting energy at 10% of the same rate as here on earth.

If gravitational time slowdown is the main cause of the observed red-shift, then the size of the universe may have been seriously overestimated. The age of the universe might have been seriously underestimated.

Black holes (non C-R):

This is a paraphrased definition of a conventional, non C-R theory obeying black hole, extracted and condensed down from present theories. Most of these theories predict that the force of gravity will become so intense from the immense accumulation of intensely concentrated mass, that matter will no longer be able to resist total collapse. The entire mass contained within the critically curved volume of space, now termed a black hole, will collapse into an infinitely dense point, also called a singularity.

At the outside boundary or the circumference of what now has become the black hole, the gravitational escape velocity will exactly equal the speed of light. No known particles or energy can travel above this speed. (There are postulated to be particles called tachyons, which can only travel faster than the speed of light. At the present time there is no evidence that these tachyons exist.)

Present theories predict that as the radius of the mass collapses, even after the black hole (non C-R) forms, the escape velocity must continue to increase proportionally. This presents theorists with a difficult dilemma. What happens when the escape velocity exceeds the fastest possible permitted speed? (How) Can matter trapped in a black hole ever manage to see the light of day again?

In addition, the present day "conventional" theories concerning black holes proclaim that: black holes can store no electrical charge. Additionally, any rotation of the mass inside the black hole will be "leaked (or coupled)" away. (Either by tunnelling of hypothetical gravitational particles called gravitons, or by the influence of frame-dragging.

Some present-day theories about black holes allow the mass swallowed by some smaller type black holes to be "radiated" away slowly. This is accomplished by a combination of the Second Law of Thermodynamics and the quantum mechanical phenomenon called tunnelling. The process of radiating away the mass of the black hole is defined as Hawking radiation, in honor of it's theoretical discoverer, Steven Hawking.

Some theories also propose to allow the mass swallowed by the black hole to find a shortcut. This path would consist of a wormhole or tunnel through the fabric of the heavens. By traversing this route, matter could escape to reappear somewhere else, or

at some other time, in some other part of this universe, or in some other universe.[1] (Take your pick of one and or all of them. See Chapter 13, also)

Black-Holes C-R (C-R theory obeying type):

(Authors Note: Throughout this paper, the C-R theory will use this double capitalized and hyphenated term for any Black-Hole C-R which obeys the Comedy-Recycling (C-R) theory. The C-R theory predicts that ALL Black-Holes C-R will obey the rules and assumptions. There are no proposed classes or exclusions to the Black-Holes C-R.)

(By the C-R theory, the only black holes than won't totally obey the C-R theory conditions are those hypothesized, theorized, or imagined by other conventional theories. The C-R theory will only mention these black holes to ridicule, disprove, or refute their existence.)

Some C-R theory conditions imposed on all Black-Holes C-R:

The C-R theory predicts that the gravitational field-strength outside of the newly-formed Black-Hole C-R, measured immediately after the gravitational collapse must be totally unchanged from the gravitational-field strength of the same mass, before the collapse.

The C-R theory predicts that the mass inside a Black-Hole C-R cannot collapse into a singularity. This is due to the nature of gravity, which C-R predicts is an effect, not a force. The effect of gravity is literally caused by the squeezing of real-time activity from any mass.

Here is why a total collapse cannot occur: As any (time-active) mass proceeds into greater gravitational curvature, it becomes less time-active. This matter gains (by exchange) an equivalent amount of kinetic energy in the process. At the IB^3 Schwarzschild radius, all of the available potential energy from, or out-of matter measured by real time activity is already de-activated. When this happens, the effect of the "force" of gravity is gone. There is no longer any source of additional kinetic energy (speed) to be gained.

No further collapse beyond the IB^3 Schwarzschild radius is possible. The matter inside this Neutral Zone C-R would need to collapse. Inside every Black-Hole C-R, there exists a volume of space containing exactly enough matter to curve the escape velocity to the speed of light. Everything inside this boundary is not critically curved, and which is still real-time active. For totally curved (de-activated) matter to proceed further inward, it must acquire additional energy. Since this matter has no practical source of available energy, any further inward collapse into a singularity is now impossible.

C-R calls this critically curved, fully de-activated portion of the Black-Hole C-R the Neutral Zone C-R. The Neutral Zone C-R is defined as the entire volume of the Black-Hole C-R where the escape velocity is greater than or equal to "c", the speed of light.

---

[1] Of course, this simply moves the problem of recovering the matter and energy of a black hole to somewhere or somewhen else. This approach rarely works here on earth.

During the gravitational collapse forming the initial Black-Hole [C-R] any excess mass will be trapped in the Neutral Zone [C-R.] Any mass and energy trapped there must behave as if it were time inactivated; essentially - “neutral in every possible interaction”. This is why C-R chose to call this volume or region the Neutral Zone [C-R]. It is located between the outside of the Black-Hole [C-R], and the beginning of the inside Active Zone [C-R].

Since the time-active matter nearer the center of the Black-Hole [C-R] is left alone and unaffected by the collapse; this volume of space is still time active. This Active Zone [C-R] must contain EXACTLY enough mass at a sufficient density to curve up spacetime at it's outer border. If there is too much mass, the Neutral Zone [C-R] simply increases in size. If there isn't enough mass, then the Active Zone [C-R] expands outward, and re-activates some of the mass of the Neutral Zone [C-R]. Therefore, there must always be an ***exactly*** critical Active Zone [C-R] at the center of each and every Black-Hole [C-R]. The matter-energy in this volume of space remains fully, “real-time-active”, and therefore more energetic. The Active Zone [C-R], for all intents and purposes behaves similarly to any portion of the universe located outside of the Black-Hole [C-R].

Ironically, the C-R theory predicts that the net curvature at the exact center of an Active Zone[C-R] at the inner volume of any Black-Hole [C-R] must always be MINIMUM or zero. This is exactly the opposite of the prediction from any standard theory suggesting a singularity.

The C-R theory predicts that the Black-Hole [C-R] will preferentially sort and swallow the massive particles composing the nucleus of atoms by mass. The total exchange of all real-time active energy into gravitationally released kinetic energy, will effectively and temporarily de-activate positive charges like protons, and the neutral, equally massive neutrons. The Black-Hole [C-R] will also encourage electrons to tunnel from any portion of the nucleus of an atom remaining time active. Since the electrons should each have more than 1800 times the kinetic energy to mass ratio as compared to the more massive hadrons (the proton and neutron), this will aid at least some of the electrons in their escape from the gravitational trap.[1]

The C-R theory predicts that any rotation of the mass inside the Neutral Zone [C-R] of the Black-Hole will have no net effect on the external curvature (gravitational field strength). To visualize why this may be so, let us imagine a grid of squares, drawn on the surface of a balloon. When the balloon was inflated, press down with a dull pencil. The

---

[1]Another way to visualize the likelihood of the electrons to escape would be to view the total probability of the electron's position, or the total area over which the electron's wavelength will spread out. Compared to the more concentrated masses of the nucleus, the location of the electron can actually be described something like an energy-cloud.

As the electron is about to be swallowed by a Black-Hole [C-R], it changes it's instantaneous position. There is a greater probability that the electron will prefer to inhabit a time-active portion of it's permitted area of existence. The electron attempts to "average itself" while it crosses over the exact active/inactive border of the outer Schwarzschild radius. After the proton and neutron are engulfed into the Neutral Zone [C-R], the electron suddenly realizes it never wanted to enter the Black-Hole [C-R]. This allowable indistinctness, and the ability of the electron to exhibit both some of the properties of a singular particle, and some of the properties of an indistinct, resonating, energy-wave allows many electrons to escape. This mass-sieve effect is a true use of the tunnelling phenomenon at the atomic level.

slight geometric stretching would simulate the energy-path change caused by gravitational curvature at some spot in the universe. If we were to sharply press down on the surface of the balloon with a suitably dulled pencil to keep the balloon's surface from popping or bursting, we could simulate or imagine the distorted curvature near the outside of a Black-Hole C-R. If we would steadily rotate the pencil, or even rotate the balloon, the shape of the outside curvature at our location would not continually change. Because of this very simple thought experiment, C-R points out that even if the mass inside the Black-Hole C-R rotates, this rotation will not be effectively coupled through from the Black-Hole C-R by the geometric curvature. (Essentially, curvature does not support frame dragging.)

The C-R theory predicts that while the Black-Hole C-R is active, that is, consuming (and concentrating) both matter and energy, it cannot obey the second law of thermodynamics. This is because the Black-Hole C-R can only acquire energy at this time. Any energy seen as coming from the vicinity of the Black-Hole C-R is there only because the Black-Hole C-R is swallowing matter and energy, and the collisions of this combination release copious amounts of energy[1].

The mass-energy contents stored inside of the Neutral Zone C-R in the Black-Hole C-R can only increase in quantity, and increase in the degree of organization[2].

If the C-R theory is correct, the second law of thermodynamics does not, and cannot ever apply to the contents of the Neutral Zone C-R of any Black-Hole C-R. This prohibition is only in effect while the Black-Hole C-R is active, or consuming energy. If the Neutral Zone's C-R contents of a Black-Hole C-R ever become re-activated, the entire content released must again start to obey the second law of thermodynamics.

New idea for 2006: It may be much more difficult to create or destroy an existing Black-Hole C-R, but it may also be un-necessary. As long as the Active-Zone C-R inside the Black-Hole C-R is untouched, the Black-Hole C-R will continue in existence.

Note: Because the matter-energy within the Black-Hole C-R is already at the minimum possible energy configuration, the "effect" of gravity from one Black-Hole C-R cannot attract and consume another Black-Hole C-R. It is very unlikely that any lesser phenomenon could cause enough of a disturbance for a Black-Hole C-R to break it apart, or cause it to cease existing.

---

[1]Technically, the infall into a Black-Hole C-R will supposedly release many times more energy from the mass than the "small" portion of energy released by the fusion reaction. Fusion from hydrogen into helium will release 0.7% of the equivalent rest mass/energy, whereas the gravitational infall releases from 25% to 50%.

[2]The mass in the Neutral Zone C-R will increase as long as the Black-Hole C-R consumes matter. This will remain true until or unless some event stops the Black-Hole C-R activity. As the mass inside the Neutral Zone C-R increases, so will the net entropy (disorganization or disarray) of the Black-Hole C-R decrease. See Chapter ** and/or Definitions *****.

There is no regular provision for the Neutral Zone C-R to emit energy on a continuous basis. Only during an anti-Black-Hole C-R event can the Neutral Zone C-R release energy.

C:

Closed Universe:

When scientists talk of a closed universe, they refer to a universe which possesses enough matter at a sufficient density to close-up, or warp spacetime to the amount of complete curvature. It means that the escape velocity at the outermost boundary would equal "c", or the speed of light.

Strictly speaking, a closed universe invokes the geometry of spacetime. The closed universe exists entirely inside the surface area where the outer radius equals the escape velocity of the speed of light. Nothing from the inside of this universe can possibly escape. This geometric curvature completely traps and confines all of the matter and energy contents of the entire universe.

By the C-R theory, if the entire contents of the universe are contained inside the Active Zone [C-R] portion inside a giant Black-Hole [C-R], then the total mass + energy content of the universe can not decrease over time. This confinement would seem to supersede the overall increase in entropy called-for by the second law of thermodynamics, as well.

The C-R theory maintains that it is not just a lucky coincidence that the universe appears to be almost closed. The C-R theory claims that our universe is an Active Zone [C-R], entirely contained within a universe sized Black-Hole [C-R]. If any type of a Neutral Zone [C-R] still exists outside of the Active Zone [C-R] (our universe, too), then the Active Zone [C-R] will always contain the proper amount of mass at the required density to remain exactly critical. That implies that our universe has always been closed, and will always contain exactly the right mix of mass at the density combination to perfectly close up the universe.

Most theories are embarrassed that the universe appears to be tantalizingly too close to call between an open, unbounded universe, and a closed, self-contained universe. Dirac even predicted that the gravitational constant, g, might decrease with the number of particles and the size of the universe. This is one way to explain the apparent coincidence that there appears to be almost enough matter (within a magnitude of a power of ten) to be sufficient to close the universe.

The C-R theory maintains that this complete and exact closure is natural, normal, and continuous. There is no embarrassing mix of coincidences needed, merely the normal, self closing action of a standard C-R theory Active Zone [C-R]. Any and every Active Zone [C-R] inside of every Black-Hole [C-R] will also always appear to be totally, and exactly closed. If any excess mass to density ratio exists over and above the amount required to perfectly close off (or warp shut) the Active Zone [C-R], then the Active Zone [C-R] simply shrinks. It's radius decreases somewhat, and the excess amount of mass and/or energy is safely and carefully deposited into the ever-waiting Neutral Zone [C-R].

Another assumption popular in theories today is that, if the universe is closed, it will inevitably and eventually totally collapse back into a singularity. The C-R theory shows that this assumption may not be fully justified. You, (the reader), should note that at the outer edges of the closed universe, the greater gravitational curvature has slowed-down time. The loss of gravitational energy is real, and the potential energy of matter near the outer edge is LESS than the potential energy of matter closer to the center of the universe.

Before the matter at the outer edges of the universe could collapse inward, the matter would need to feel the gravitational attraction. To be drawn inward, the matter

would necessarily be pulled into a higher energy region. The energy equivalent of this matter "falling" inward is that objects on the surface of the earth would "fall" upwards, towards the sky. Since we know that on our earth objects don't voluntarily fall from a lower energy region into a higher region (at least on their own accord), so C-R also predicts that this matter near the outer edge of the universe can't simply fall inward.

If even a small amount of rotation is involved on a universal scale, then it might well be impossible for the total radius of all matter in the Active Zone [C-R] to simply shrink with time. This is obvious for the same type of reasons that all of the sun's planets don't conspire (by gravity) to shrink all of their orbits simultaneously.

The C-R theory imparts both a new stability and rationale to a closed universe. The C-R theory does allow some eventual mixing of the contents of the Neutral Zone [C-R] and the Active Zone [C-R]. In this way, changes could occur in the net size and mass of the active portion universe over time, without the necessity of sacrificing the closed nature of the universe[1].

Complex time:

(This analogy is comparable to the existing difference in the relationship between real numbers, and complex numbers in mathematics.)

IDEA: In the C-R theory, time in this universe would have a real and an imaginary (or right-angle) component. At the center ("The Great Attractor"), time would be the fastest, or 0% imaginary. Anywhere at the IB[3] Schwarzschild radius, or 100% curvature, time would be 100% imaginary. No real-time interactions could take place there, and no speed-of-light communication, or knowledge, could occur.

New for 2006: The percentage of real time vs. complex time would represent a way to measure the time-slowdown or red-shift. If closer to the "Great Attrector", there would be a blue-shift.

This term would represent the total time that a particle or wave would take to either sit in it's own orbit, travel a distance, or undergo a reaction, as measured by an external observer. Complex time = total time.

Notice that in totally uncurved spacetime (the center of the universe), complex time = real time. As well, in the Neutral-Zone [C-R] of a Black-Hole [C-R], then:
complex time = imaginary time = 0 real time

Curvature: [Re-word Explanation]

Curvature, as explained by the C-R theory could be considered as the cause of the gravitational forces influencing matter. In the newer C-R theory concept, geometric curvature plays the only role in the ultimate behavior of gravity.

---

[1]Although it may be allowable for the contents from the inner Active Zone [C-R] and the Neutral Zone [C-R] to mix, I believe it may be fairly unlikely. There could be a huge risk if the highly charged and suspended-energy contents from the Neutral Zone [C-R] could be freed inward. It could cavalcade into a complete freeing of the Neutral Zone's [C-R] contents inward, and a release of an incredibly energetic, highly toxic to lifeforms, concentration of energetic positive charges, and burst of trapped energy. Over time, with only one known (observable) example, I cannot totally exclude the possibility.

In his theory of Relativity, Einstein proposed that gravity was the result from the four dimensional interaction of a warped geometry and it's effect on real matter. He seemed to spend a large amount of time trying to relate that geometric concept to the other basic forces of nature, without success[1].

The C-R theory has pursued this geometric concept exclusively. Briefly, the key to the C-R theory idea is that gravity is more-like an effect caused by effect of curvature upon matter, not actually a cause. The cause of gravity is the curvature, i.e., bending, twisting, or warping of space. Think simplicity. Imagine an orange, and an orange juicer, to squeeze it. The effect of gravity on matter is roughly analogous to the effect of the juicer on the orange! In a like manner, Curvature (producing the effect of gravity) warps, or squeezes energy-content from matter. NOTE: In the C-R theory, the SOURCE of the kinetic energy "liberated" from matter comes from the MATTER itself!! This means, in a C-R reference frame, matter in a more curved reference frame is no longer energy equal to matter in a less-curved reference frame.

CONSIDER: A 1 kg pizza (pepperoni, mushroom, green olive, double cheese)[2].

If we place the pizza on a table, then lift it by 1 meter, the pizza itself has gained 1 kg/meter of energy (1 newton). We now drop the pizza, allowing it to SLAM back onto the table.

In conventional theories, and conventional thinking, gravity must somehow produce the difference in energy, and account for the difference.

In the C-R mode of thinking, the energy difference comes about straight out of the pizza itself. The lifted-up pizza (in less curved space-time) had more real-time energy, by EXACTLY the same amount of energy expended by whoever lifted-up the pizza.

When the pizza was dropped, that extra, stored-up energy was freed-up from the pizza, and converted into kinetic energy (speed). Upon hitting the table, the kinetic energy was converted into noise and heat and vibration.

Now, take the same pizza, and take it to "The Great Attractor". Afterwards, take the same pizza now to an area of 95% red-shift. The energy difference at these two locations is "stored-in" the pizza itself!! In essence, if we could convert its mass into pure energy, we would find the energy released at the "Great Attractor" would be EXACTLY more than the energy released at the 95% red-shift location, by the EXACT amount of energy difference expended to transport the pizza between those two locations!!

This is not only a radically NEW idea, but a huge simplification, WHICH HAS BEEN MISSED by conventional theories (in competition to C-R). The theory of relativity says, space is isotropic, or identical in every direction. In simple terms: "there" is the same as "here", and so is everywhere else, too. In that case, it is up to local gravity to somehow produce, and account for the energy differences.

Back to the real world.

This curvature partially de-activates, or slows down the real time experienced by

---

[1]One reason for the lack of success is his "too Newtonian" thinking. By not "Believing" or realizing (accepting) the effect of curvature upon matter, the theory of relativity imagined space as ISOTROPIC, or the same in all locations. In reality, by not expecting or accepting the full affect of curvature upon matter, Einstein missed the possibility that there is a preferred reference frame imposed upon our universe, by the overall curvature.

[2]This combination is the author's favorite. Additionally, pizza is a very good "tool" to attract and hold the attention of a high-school or college student, the C-R theory's target audience..

matter. The greater the curvature, technically speaking, warps more of the resonant energy package (matter) into a less energetic state. The potential energy "lost" by matter is converted into kinetic energy, either speed or heat. The reader (you) could say: The resident energy packet now travels through a longer, more distorted, more confined, less real-time-quickness, situation.[1] In exchange for this loss of activity, measured in real-time, the particle gains kinetic energy, or speed.

D:

Dark Matter: (Maybe a Fudge Factor?)

Conventional theories worry whether our universe is open or closed, and bounded or unbounded. The key to answer this question centers on the debate about the amount of undetected dark matter. Dark matter is the presently undetected, "hidden" matter which would be required to produce the red shifts, interpreted as the gravitational accelerations present in the universe today. Most theories predict that the amount of known matter, detectable and available in the universe, is only about 1/10 to 1/100 of the amount needed to close the universe. (That is, to achieve the density able to close-up the universe by maintaining the gravitational curvature [escape velocity equaling "c" the speed of light] at the outer boundary.)

For the universe to be closed, most present theories must agonize over the expected abundance or lack of dark matter (i.e., in less scientific terms, dark matter provides the legendary, theoretical, variable fudge factor). This dark matter is matter which is too cold to produce enough electromagnetic radiation to give itself away. Thus, it is not energetic enough to be detectable on it's own.

Using the C-R theory, one should have little trouble speculating that the universe gives the impression that it is completely closed. We have already seen that there exists at least a 90% time slowdown ratio (red-shift) by measuring the spectral lines from observable objects located near the outer edges of the universe. Extending this measurement slightly farther, it would not take a wild imagination to suppose that the universe possesses EXACTLY enough mass to achieve the additional and final 10% time slowdown (red shift).

Indeed, the C-R theory only needs to add 10% or less of an additional slowdown

---

[1] In simpler words, red-shifted matter has less energy because it takes its original energy, and travels a longer path (at resonance) to travel the "same distance". Thus it appears red-shifted, or time-slowed down.

In simple thinking, imagine a 10 cm distance, represented by a single straight strand of spaghetti (representing the "path" light or energy takes). In slightly more curved space, stretch the spaghetti (or add more to compensate) by wrapping it around a pencil to add "distance" (representing some extra, hidden [rolled-up] dimensions). To travel the same 10 cm path, light now "snakes" around through a slightly longer path to travel the same distance.

To represent a 95% red-shift, wrap enough extra spaghetti around a sausage or a balloon to add 20 times the original "straight" path distance, to "dilute" the same energy take 20 times as long to cover the same original path. These extra dimensions are of course "invisible, or too small to actually see. Matter there (at a 95% red-shift) will detect nothing amiss, but will see everything "closer to the center, inside the universe" as blue-shifted. Only the matter further out would be red-shifted.

(red shift) and then the universe becomes totally closed. If this were the case, then there is no coincidence that the universe always appears to be tottering on the edge between exactly closed or slightly open[1].

The C-R theory would also have no foreseeable trouble in allowing at least some of the extra "dark matter" required to accomplish this universe-closing, to exist in one or many Black-Holes C-R. This dark matter could also take a variety of sources. While not required by the C-R theory, it could accommodate massive amounts of near massless neutrinos, magnetic monopoles, interstellar dust, or even the totally hypothetical tachyons. Any of these suggested options could be called upon to provide the seemingly-ubiquitous and ever-handy fudge factor.

One of the more interesting C-R inspired possibilities is that the universe is considerably smaller than present theories calculate. This could follow from the interpretation that the outer regions of the universe may not necessarily have to be racing away from us at 90% or more of the speed of light. The redshifting effect may be caused entirely, (or only partially), by the gravitational time slowdown of events at the outer edges of the universe. Of course, since the events occurring there would be time-slowed down, the brightness per time and distance figures used as THE reference standard for comparison purposes would also be totally unreliable. Since the age of, and distance to these objects would also be thrown for a loop, the carefully calculated timetable, listing events from the beginning of creation could need considerable revision.

The expansion of the universe, as derived from the Hubble constant, would no longer be a valid unit of measurement. Neither could the Hubble constant be relied upon as the only valid principle upon which to base multiple assumptions.

Regrettably, the C-R theory cannot just come out and say: "AHA, here is the dark matter everyone has been looking for, just under this constellation or near this galaxy". What the C-R theory can claim, based on general observations and simple principles: It is not too farfetched to suspect that the universe has exactly enough matter at the right density to totally close the universe. In other words, we are existing inside one exactly critical (C-R theory, only, type-of) Active Zone C-R, inside of a Black-Hole C-R [2]. That this discovery or speculation should not be overly remarkable or surprising, is perhaps one of the C-R theory's greatest contributions.

In one sense, if we wish to know: is the universe closed; it is irrelevant to need to know how old the universe is, how dense it is, how far away the outer edges are, how long the universe and it's matter have been here in it's present condition, or where it is ultimately headed. The universe has exactly the right amount of matter to close the

---

[1] New for 2006, see the extended definition on expanding expansion.

[2] This appearance is not just a happy coincidence. Every inside area, or Active Zone C-R, of a Black-Hole C-R will have this same appearance. The C-R theory defines the Active Zone C-R as the EXACTLY critical central region of real time activity inside every Black-Hole C-R. Every Black-Hole C-R must have at least one. (For convenience, we refer to the area outside the Black-Hole C-R as an Active Zone C-R, too.

Both Active Zones C-R are very similar, and the rules governing them are nearly identical. The difference is that the outside Active Zone C-R becomes less active on it's inside, near the IB[3] Schwarzschild radius, whereas the inside Active Zone C-R becomes less active as we approach it's outer edge.

universe because we are existing inside a typical, C-R theory obeying, Active Zone [C-R] inside a Black-Hole [C-R]. By the C-R theory, being exactly critical is the only condition which defines an Active Zone [C-R]. Therefore the existence of exactly the right mix of regular and dark matter to, in sum, close-up the universe is not, in any way, particularly co-incidental.

With whatever system of measurements we use, and however we gage both our distances and our eons of time, the universe will always present the same approximate appearance it has right now, of containing precisely enough matter to warp it shut. By the C-R theory, the universe appears "almost that way" because it is exactly that way.

De-Activated:

The C-R theory refers to any matter or energy as partially de-activated if they have been slowed-down from their original timeframe[1]. The amount of time de-activation is proportional directly to the curvature, warping or bending of spacetime. This would occur on a scale somewhere between no curvature and no de-activation at "The Great Attractor", and total curvature with total de-activation at the IB^3 Schwarzschild radius.

Total de-activation occurs when and where the curvature is at or above the speed-of-light. The only place where this is possible is in the Neutral-Zone [C-R] , located just inside a Black-Hole [C-R].

Matter or energy which is time frozen will not experience any real time interactions. The matter and energy will maintain an existence, and will continue to produce (cause) the spacetime warping which causes gravity.

As to the nature of matter existing while time is de-activated, one cannot say for sure how any encounters would be handled. C-R speculates that either the materials would likely behave as totally resilient billiard balls, impervious to any penetration or intermixing, or the particles would act ghostly, and pass right through one another without respect for mass, electrical charge, momentum or position. Either way, one could never measure the interactions inside the Neutral Zone [C-R] to see if any occurred.

E:

Electrons:

Electrons are the premier, and predominant negatively charged subatomic particle of the universe. The number of electrons is thought to exist in roughly (if not exactly) the same parity with the number of protons.

It is the dual, particle-wave nature of the electron, and it's tendency to favor certain resonant modes (or harmonic vibrations, like notes from a piano string), which gives matter its chemical properties. The individual electron can only gain or lose energy in a fixed increment, called a quanta. The difference in the energy level of the many possible different resonances accounts for the frequencies of light or of electromagnetic energy released or absorbed when an electron changes it's orbital, and therefore it's level of

[1]The timeframe is also the energy level possessed by matter at "The Great Attractor".

energy. Since the speed of light from a particle is not supposed to change with the change in energy[1], the frequency change of the existing energy is all that can affect (or accomplish) the transfer of energy to represent the energy level differences.

The C-R theory predicts that an active Black-Hole $^{C-R}$, which is consuming, swallowing or trapping matter will preferentially swallow the more massive protons and neutrons, and will generally leave some amount of electrons outside the Black-Hole $^{C-R}$. In effect, the Black-Hole $^{C-R}$ will swallow more of the massive protons and neutrons (and various and sundry other things like photons of energy, and neutrinos). Due to the greater energy to charge vs. mass ratio experienced by the lighter, more kinetic electrons, the Black-Hole $^{C-R}$ should effectively sort, deflect (i.e., spit-out), or reject many electrons. One could also envision this case as an example of the electron tunnelling away from the nucleus of the atom which is undergoing de-activation. In short; to sort, the Black-Hole $^{C-R}$ will act as a mass-sieve body.

If the above scenario is (sort {of}) the case, one would expect to find a huge excess of electrons produced near every active Black-Hole $^{C-R}$. The C-R theory explains that it is a mandatory characteristic of a Black-Hole $^{C-R}$, creating a localized excess sea of negative charges in the vicinity. A secondary benefit to these self-repelling electrons is that they provide an automatic throttle to prevent a runaway collapse of matter rushing into the Black-Hole $^{C-R}$. This method would give very quick response feedback, and allow the Black-Hole $^{C-R}$ to take a leisurely lunch; to ingest a large lump of matter rather than forcing the Black-Hole $^{C-R}$ to greedily gulp an entire mound of bulk down it's rapacious, insatiable maw.

(***Label this part below as speculation, or speculation with good, new evidence?***)

If there is a Black-Hole $^{C-R}$ at the center of our sun, look for any solar-based phenomenon involving EXCESS electrons.

In the first attempt to find a practical use for an C-R Black-Hole $^{C-R}$, C-R would propose a case for a hypothetical Black-Hole $^{C-R}$ at the center of our sun. The actual useful work would be performed at the outer IB^3 Schwarzschild radius. The C-R Black-Hole $^{C-R}$ would be incessantly brunching on an infalling cloud or gas-bag composed of hydrogen and helium. The atoms would accelerate inward, and gain energy. They would collide with other atoms. These heavier nucleii of these elements would be rushing ahead... salmon-style, against an outflow of liberated electrons. At the IB^3 Schwarzschild radius, the masses of the nucleii would be parted from their electrons, and in their view, depart for all eternity. The protons and neutrons would energetically jump into the Neutral Zone $^{C-R}$ at the IB^3 Schwarzschild radius, into a complete and restful neutrality. At the same IB^3 Schwarzschild radius, the electrons would now find themselves as unwelcome leftovers from the main meal.

In the aftermath from each atom, only the energy released, and the electrons would survive the incredible journey from that twisted region. There would be immense streams of electrons released. These electrons, flowing in a self-inductive magnetic stream of current, could possibly be confined magnetically, bunched or driven together. If

---

[1]Actually, this constancy of lightspeed may not be the case. See the W.I.R.D.A.R.D. principle for some speculations on the speed of light. Even so, as the photon's speed would be measured by us, we would measure the photon's speed as exactly "c", for whatever conditions we encountered.

this scenario existed, one should expect to find billions of amps of extra electrons flowing outward from the surface of the sun.

Even more incredibly, one would expect that the sun's inner core-gas cloud existing outside the Black-Hole [C-R] would be subjected to the possible directional modulation by the regular cycles of gravitational influence from the planets. Imagine if this gas cloud could be cyclically sloshed around the Black-Hole [C-R] by normal tidal drag. Some regions, symmetrically above and below the equator of the rotation could experience increased local densities of bunched electron flow. This provides a basis to allow a slight gravitational modulation of the direction and numbers of the resulting electron stream. One would expect to find a directional and a multi-year planetary modulation pattern in the solar sunspot activity[1]. Remarkably, this exact effect was predicted by the book, The Jupiter Effect. Regrettably, the authors later repudiated their own idea - for lack of a causative mechanism, since everyone knows the fusion power of the sun should not possibly be influenced by the meager gravitational pull of the planets.

The C-R theory definitely predicts that electrons will have an important and different use in this “Brave New Universe”. The lowly electron will add it's all-important contribution, a significant benefit to the overall fate of the universe. The C-R theory elevates the importance of electrons to the overall recycling of the universe, much more so than would be the case with conventional theories. In fact, the C-R theory would vehemently oppose any theory of the universe which suggested, or allowed the basic mixes and properties of subatomic particles like the electron to change arbitrarily at (each?) the big bang.

Entropy:

Entropy refers to the amount of disorder in the universe. As disorder increases, so does entropy. The second law of thermodynamics states that in every system, energy content goes downhill, from increased order to disorder. The concentration of high energy will flow or spread out into a more uniform, even distribution of dissipated or spent

---

[1]Although not specifically intended to be covered here, there remains a slight probability that the collective predictions of astrologers could have a slim amount of factual basis. If the sunspot stream was indeed modulated by the sum of the gravitational drag from the planets, then the likelihood or probability of solar flares directed towards the earth's orbit could collectively vary with the positions of the planets. Absolutely nothing in the C-R theory would suggest, however, that each planet would individually have any independent effect on either the sun or the earth.

For a more generalized coverage of the effect of sunspot activity on the earth itself, see the 1974 book, The Jupiter Effect by John Gribbin and Steven Plagemann

A brief summation of their hypothesis is that increased sun-spots increase the solar radiation directed towards earth. This modulated radiation would then increase the rotational drag on the earth. This not only slightly changes the length of the day, but places enormous strains on portions of the earth's crust. [Hint: try holding onto 6 quintillion tons of mass and change the rate of spin. The potential energy difference is awesome.] These strains, then combined with additional tidal influences from the moon, could cause a triggering release of pent-up strain along the earth's seismic faults. Hence, indirectly to blame, the planets influence the sun, the sun influences the earth, and the earth is then susceptible to a higher probability of devastating earthquakes.

energy.

The C-R theory agrees with all of those conclusions, with only one "minor(?)" exception. The C-R theory concluded that an active Black-Hole C-R must be consuming and concentrating energy into it's Neutral Zone C-R. The Neutral Zone C-R of a Black-Hole C-R must, therefore, violate the increase in entropy.

The only question which needs to be answered is, is the increase in entropy mandatory in all systems, everywhere? Certainly, in the closed system "once-heated" water tank experiments performed in the last century, the energy content always went from high energy to lukewarm energy over time. However, is our universe doomed to follow the results of this one experiment in spite of the remarkable physical conditions which may exist inside a Black-Hole C-R?

A non-scientific observation may suggest an answer. Assume that our universe is infinitely old. Look around. Is energy anywhere at a minimum? Are there signs everywhere of uniformity, constant temperature, and maximum dispersion of all matter and energy? If not, then, in this case, entropy cannot be supreme.

While contentedly chortling, and thinking, AHA, but if the universe isn't infinitely old, that argument collapses; C-R would maintain that this universe started off too energetic for entropy to allow if starting from nothing.

See the C-R theory second opinion on the Second Law, Chapter ** and page ***.

Event Horizon:

The C-R theory has specifically avoided the use of the term event horizon. The reason is: in conventional theories the event horizon is the part of the conventional black hole where real knowledge of events is lost forever. The conventional explanation is that our external knowledge of events simply slows down, but never literally goes into the black hole. The concept of the event horizon is kind-of like the magicians cute female assistant, a distraction from what you should really pay attention to.

In practicality, the specific information provided by a C-R view of matter being swallowed by the Black-Hole C-R will be limited. The enormous amounts of energy and freed-electrons should be released. Instead of fading-out to infinity, an active, matter consuming Black-Hole C-R will instead be releasing huge quantities of electrons, in proportion to the protons and proton-neutron combinations the Black-Hole C-R eats.

An important note: A difference from the C-R theory is that any information about particles and their properties which enter into the Neutral Zone C-R is never lost. The information may be "stored" for a long time, and will be infinitely isolated and infinitely insulated from any knowledge by the outside world. This information will never be lost for all time as was proposed as a result from a conventional black hole.

This extended definition is (at this writing) the only intentional mention of the event horizon in the C-R theory.

Expanding Expansion (of the universe): An exclusive C-R theory spin:

Very recent experiments have been interpreted as demonstrating that our universe is not only expanding, but that the expansion is accelerating. The C-R theory has a VERY IMPORTANT alternative spin to put upon these results.

A brief explanation of the experiments would be: Closer-in and very distant

galaxies had their Cephid-variable stars measured, for absolute brightness, luminosity, and the period-rate of blinking. The more distant Cephid variables were dimmer than expected, and were blinking slower than would be expected, based on the near-earth measurements. The conclusion was: The more distant stars were dimmer and slower because they were accelerating away at a faster rate. Not only is our universe expanding, but the acceleration is accelerating.

The C-R "spin" is this: The conclusion from the experiments has one glaring error. The assumption, from the theory of relativity, is that everywhere else in the universe is just like here. The small problem is that: the visual evidence shows exactly the opposite. As far as one can see, in almost any direction, objects and events are red-shifted, and by enormous amounts.

While the C-R theory would not disagree with: If everything is expanding away from us at nearly the speed of light, everything out there should be enormously red-shifted, the C-R theory also suggests (-and actually, concludes) that the red-shift is caused almost exclusively by the strength and amount of gravitational curvature.

Expanding Universe:

Conventional theories of the universe point out the red-shift of distant objects as the total proof of the expansion of the universe. The universe is surmised to be expanding uniformly everywhere - in line with the Hubble constant, which states that, as the distance from the earth is doubled, the rate-of expansion is doubled also.

The outer edges of the universe, with their enormous red-shifts, are thought to be receding from the earth at speeds up to 95% (or even more) of the speed of light. Unfortunately, the common theories have no explanation for the cause of the expansion. Even more so, they now have the idea that the expansion will continue and accelerate even more, not slow-down, or stop and reverse.

The C-R theory does not contend with the hypothesis: if the velocities of these objects are truly speeding away at these enormous speeds, that the red-shifts would be correct. What the C-R theory contends with is, there may be another, simpler, better explanation. This explanation may single-handedly account for all of the red-shifts, or it may allow some portion of recession generated red-shifts to add-on in combination[1].

The C-R theory suggests that gravitational curvature, and the resulting slow-down, may account for most, if not all of the red-shifts encountered. As the curvature becomes more total, and more complete, the matter and energy are progressively time-inactivated. The gravity works essentially by bending the matter into a less-active state[2].

The time slowdown produced by gravity is an already known, although seldom appreciated phenomenon. On earth, the slowdown from earths gravity is exceedingly small. An atomic clock will detect the differences. For an atomic clock flown at an average of 30,000 feet above the surface of the earth for about 6 hours, the net gain in

---

[1]By the C-R theory, further expansion outward is very unlikely. The size of the universe is already fixed, and constant. Unless the density of matter inside the universe (the inside Active Zone $^{C\text{-}R}$ at the center of this universe) increases or decreases, the size should be constant. Individual objects may dynamically move around and interact, and those would be allowed to Doppler-shift higher or lower with respect to us here on earth.

[2]One could also say, at higher curvature, hidden dimensions would add increased path-lengths for light to travel, essentially forcing light to travel 20 times further than on earth to give us a 95% red-shift.

time was about 53 billionths of a second. (The time difference due to the speed of the airplane had been removed from that figure.)

At the outer edge of the universe, the curvature would be 100% complete if this universe was the inside of a giant Active Zone C-R. While this is not necessarily the case, the coincidence that almost exactly this curvature is observed (within 5% of total de-activation.) should be taken to be significant.

The C-R theory thus predicts that (almost) all of the observed red-shift is due to the natural conditions at the edge of the universe, and not necessarily at all due to the rapid recession of the contents of the universe. One of the most unexpected events, if this is true, is what happens to the likelihood for a collapse.

If the matter at the outer edge of the universe is much-more time-de-activated, it follows that it is already at a lower energy level than matter residing closer to the center of the universe. It follows that, the matter at the outer edge will not only resist collapse into the center, but will actually need an additional energy input in order to approach the center of the universe. In brief, the gravitational field would tend to attract matter outward, and make it fall "up", in order to bring matter to a lower energy level.
***

Notice: When conventional theories describe the outer universe, all kinds of weird explanations, with no accounting for the extra energies needed must be invoked to explain why the red-shifts appear to be so huge. In contrast, the C-R theory explanation for the appearance is a natural occurrence resulting from only one requirement. The C-R theory suggests that our universe is (NOW!!) the active portion inside a universe-sized (C-R type) Black-Hole C-R.

F:

Falling, a new gravitational definition?

An all conventional (Newtonian) gravitational theories, matter will fall towards the center of a mass. When one considers curvature as the cause of gravity, the results may not always be the same. Curvature would be different. The C-R theory states that objects should only “fall” towards the region with the greatest curvature, then stop there.

On earth, a big difference between the C-R theory and the conventional theories would manifest itself in how a ball would fall down a hypothetical shaft-hole drilled through the center of the earth. Conventional theories state that the ball would always fall to the center of the mass (although it may oscillate past the point, then return again, if the ball possesses excess kinetic energy).

In the C-R theory, the conventional resting point, the center of the earth, is actually a “higher energy” location. In fact, the center of the earth is a HIGHER ENERGY location (or less curved) than even the surface of the earth!!

(Although this is NOT the case): if earth had UNIFORM density throughout, the C-R theory would predict that nothing could ever fall down into a well-shaft or a mine. Those areas below the surface would have lesser curvature, and therefore would actually be at a higher energy level than on the surface.

However, the C-R theory states that the situation IS very different than conventional “Newtonian” theories suppose. Interestingly, on earth, maximum curvature

is NOT at the surface of the earth. Because earth's density increases substantially, and more than quadruples with depth towards the center, the gravitational curvature increases down to 2200 km below the surface!! Once at the mantle/core boundary, the curvature should then decrease to zero at the center of the earth.

Hypothetically, a ball dropped down a hollow shaft, drilled-through the center of the earth, would fall, then come to rest *at the mantle/core boundary*. This is where curvature is MAXIMUM.

Next, consider if our universe is the inside a universe-sized Black-Hole[C-R]. Surprisingly, the curvature at the outer edge is much greater than here on earth. The curvature is the minimum at the center of the universe, also known (ironically!!) as the "Great Attractor".

Technically, this means that matter at the outer edges of our universe is ALREADY at a lower potential energy than matter here on earth! This means that matter there would have to gain energy to fall inward!. (see the next definition for a more complete description)

G:

Gravitational Collapse:

There are two cases of gravitational collapse where the C-R theory predicts something radically different than conventional theories. One is the collapse of matter into a (conventional) black hole, and the second is the potential collapse of the universe.

In conventional theories, the gravitational collapse occurs when the force of gravity overwhelms a very dense lump of matter. Space-time folds, rolls, or knots matter into an infinitely dense, and theoretically unknowable (and un-imaginable) state. This infinitesimally small point is termed a singularity. The singularity is produced as the entire mass is collapsed into a (conventional) black hole.

Conventional theories ability to describe the conditions encountered fall short after the speed of light escape velocity is reached, then exceeded(?). The fate of the mass trapped in the singularity, and the fate of the singularity itself are left strictly up to the imagination. For a more rational, and possibly less bizarre speculation, see the C-R theory description below.

By the C-R theory, a gravitational collapse is a limited event. While the C-R theory does allow gravity to collapse matter into a Black-Hole[C-R], once that event occurs, gravity cannot collapse matter any further. This is postulated to occur in a manner roughly parallel to the impossibility of the collapse of the electron into the nucleus at absolute zero.

Historical note: This description of the electron orbiting the hydrogen atom is for comparison purposes only[1]. This discovery of a quantum-restricted orbit for an electron

---

[1]For these purposes, one can view the electron from a variety of equivalent ways. One could consider the electron as a cotton-like, or mist-like cloud, vaguely located, but localized to a preferred zone, a shell, or a lobe. One could also view an individual electron as a solid, small sphere, carrying electrical charge in an orbit around an atom.

These descriptions are not meant as much to define or restrict the atom, as to give us poor,

(continued...)

dethroned determinant (classical) physics, and enthroned relativistic, indeterminate, quantum mechanics as the preferred description for all sub-atomic events.

At absolute zero (temperature), the lowest energy - temperature-wise, in the case of the orbiting electron, the quantum mechanical theory prohibited that total collapse of the electron into the nucleus. This was because the electron energy can only be at a minimum in the lowest energy orbital. (This orbital is defined as the only orbital occupied by 100% of all hydrogen atoms at absolute zero.) If the size of the electron orbit was either increased or decreased, the system of the hydrogen atom acquired more energy.

In a like manner, the C-R theory predicts that the gravitational collapse of matter will similarly cease to occur once gravity[1] has removed all real-time energy from the mass-energy system involved.

The concept of another minimum, the minimum amount of real-time energy when time equals zero is a unique prediction of the C-R theory. Starting at the boundary where matter is collapsed into the IB[3] Schwarzschild radius of the Black-Hole [C-R], time would have no value, or no real amount[2]. The C-R theory predicts that the mass and energy will still exist, but they will essentially exist but they are "turned-off", interaction wise. Effectively, these particles are stored totally decoupled from reality, or unable to overcome their "barrier". Any matter and energy in this state will be oblivious to all electromagnetic interactions. A possible analogy is to imagine the particles, warped into a state where "their back is turned" to all interactions. The particles are "bound" to shun electromagnetic (speed-of-light) interchanges.

Inside the Neutral Zone [C-R], the turning-off (totally saturated geometric warping) of all interaction(s) is still in effect. The matter and energy trapped within the Neutral Zone [C-

---

[1](...continued)
beleaguered humans some graspable notions with which to evaluate and understand the electron. This understanding is the key to speculating on this new C-R theory behavior for an electron.

[1]In this case, gravity as in: energy released due to the slow- down of time. What C-R terms the force of gravity is actually an observed after-effect.

[2]Some imagination may be needed here. Imagine time as a clutch-plate in an automatic transmission. Imagine a plate of matter, warped 90^0 with respect to the same clutch plate. In this case, the matter would be disconnected, oblivious to any influence from the real-time (clutch).

Another possible analogy is to imagine matter trapped in a packet-sized pocket of spacetime. The matter still possesses it's residual energy, it still keeps in touch with it's own internal clock. While confined in this trap, the matter remains unable, unwilling, and forbidden to interact with any other matter or any energy.

For almost all practical, real-world purposes, matter trapped in the Black-Hole [C-R] might as well be ghost particles. Even though these particles exist, we can't communicate with them. They can't be seen. These particles might even have the ability to pass right through each other without interacting. [Gravity, i.e., curvature of spacetime, continues as if nothing happened to the matter.]

Strictly speaking, this matter is infinitely insulated and isolated electromagnetically from all other matter. This includes other particles trapped in the Neutral Zone [C-R]. (Author's Guess: Since no real time passes in this zone, no real laws of physics, or the theory of relativity are violated.)

R will still accomplish their regular quota of gravitational interaction by geometrically warping space and time. This will occur in spite of the fact that the matter and energy within this zone must behave electromagnetically as if they were totally neutral. "Events" or "Interactions" in the Neutral Zone C-R simply do not occur. All other interactions with anything located within as well as external to the Neutral Zone C-R are forbidden .

Any electrical charges trapped in this zone will be forbidden from communicating or interacting with any matter anywhere. Even the photons of energy itself will be trapped within this zone. A photon will have energy and frequency and momentum, but will be similarly real-time frozen[1], and incapable of expressing itself.

Gravitational Constant, "g":

Conventional theories would define the gravitational constant as determining the amount of gravity produced between two masses a given distance apart. The greater the gravitational constant, the greater the gravitational pull.

Some theories of the universe, starting with a theory proposed by P.A.M. Dirac, have speculated that the gravitational constant would decrease (change) proportional to the size and age and expansion of the universe. Present day experiments seem to put a very small limit on the amount of change which could occur in the gravitational constant before we could measure the result.

New for 2006: The C-R theory now proposes that, instead of a gravitational "constant", "g" is actually earth's local value for a relation between matter and the de-coupling effect. The amount of gravitational curvature accomplishes some de-activation of real time. That "change in time" is what actually creates the pull of gravitaty. I have revised my thinking to a fantastic claim. The gravitational constant is not-exactly

---

[1]The C-R theory now maintains that the time-frozen photon must conserve it's energy, which means it's frequency as measured by an external standard must survive intact. The effect would be similar to a lone photon, trapped in a very small, totally reflective, mirrored room. Since interactions are forbidden, the photon must be perfectly and totally reflected, and can never be absorbed. To the photon itself, no time will seem to pass during the entire confinement.

For another attempt at visualization; if you imagined "chronons" as the minimum measurable intervals of time, we could have a straight-line of 10^{+42} chronons representing a "thickness" of one second.

Imagine the time-trapped photon resonating in a folded-up or rolled-up dimension curved back into itself (knotted or twisted into a loop) somewhere inside the space of a hydrogen atom's electron orbit diameter (width). The lightbeam/photon trapped or imprisoned inside this one-dimensional thickness would be chasing it's tail at "c", the speed of light.

In this way, the theory of relativity is satisfied, lightspeed is travelled, the electromagnetic lightbeam is confined, and the frequency of the confined photon is maintained, allowing conservation of energy to hold true. Even that old spoilsport principle of causality is satisfied.

The C-R theory speculates this is how to maintain a constant [frequency-based] energy in a "timeless" photon which can only exist when travelling-at or resonating at lightspeed. Literally, this brings the time-deprived (but time-derived) photon back into the fold, by folding-over the photon into a hidden, rolled-up dimension. This allows conservation of energy to be true while still keeping the photon timeless (no real-time enabled). Technically, if we measured or detected time by the distance travelled at the speed-of-light, you (the "observer") could not get from "there" to "anywhere else".

constant, but will vary in value with location inside our universe. This may explain why, whenever the "constant" is measured on earth, it's precision "varies" beyond all the expected error bounds. I will predict that the value will be slightly different if an experiment can be designed to check the "value" of "g" measured on the moon, Venus or Mars. The value should change much more substantially when measured far away from the earth's gravity field.

A mass transported to the center of this universe (ironically known as "The Great Attractor") will be more active and more energetic, or worth more energy, than exactly the same mass here on earth. If that same mass is then transported to the outer edges of the universe, it is worth less total energy there. This is a consequence of a reference frame imposed on our universe. (See diagram___) At the outermost edge, the full amount of real time has been inactivated for any matter beyond the inside IB^3 - Schwarzschild radius, also called the Neutral Zone $^{C-R}$. Inside this Neutral Zone $^{C-R}$, real time could not be measured. Since it's value would already be absolute zero on the time scale, no further gravitational influence can be felt by that matter. The matter itself still produces curvature of space-time as it's contribution to the total gravitational field. Notice: no energy, no electromagnetic influence is expended to maintain the "field".

Gravitons:

Conventional theories say gravitons are particles which are thought to exist which would represent the answer to the ultimate cause (or source) of gravity. The graviton would be to gravity as the photon would be to light (or any electromagnetic radiation, at any frequency).

By conventional theories, the graviton would be the carrier of the gravitational force. When masses interchanged gravitons, in something like a mad baseball game of catch and relay, the gravitational force would appear as a result.

The interactions would take place in somewhat the same manner as interactions take place for the other forces of nature. For electromagnetic interactions, the photon is used. For the strong and weak forces, the vector boson is used as the carrier particle.

Gravity (conventional, Newtonian):

The first modern, scientifically successful explanation of gravity was proposed by Sir Isaac Newton. By the conventional (Newtonian) theory, gravity is a somewhat understood force, which is demonstrated when large, massive objects attract each other. The greater the mass, the greater the attraction.

Conventional theories of gravity sum-up the total behavior of gravity as if it emanated from a single point at the center of a mass. For an example, at the surface of the earth, these theories say that gravity behaves as if the entire interaction originated at the center of our earth. All other gravitational interactions in the universe are assumed to agree with the Newtonian standard of reference.

By conventional theory, the "force" of gravity is proportional to the mass of the two (or more) objects in consideration. If either mass is doubled, then the force increases by a double amount. If the distance between the masses is doubled, the attractive force of gravity is one fourth of the previous amount.

In Newton's theory, at a distance, the force of gravity is supposed to behave as if

the entire gravitational force emanated from a point at the exact center of each mass under consideration. The force could be calculated from the size of the two masses, and the distance between their centers. In addition, the force of gravity is defined by a gravitational constant, “g”, which would be multiplied by the two masses, and divided by the distance squared, to obtain the value of gravity in some standard, measurable units.

Gravity (from curvature) :

In his Theory of Relativity, Einstein concluded that gravity was due to the apparent curvature of spacetime. Large masses warped, curved, or bent spacetime near themselves. The warped geometry of spacetime would cause matter in motion to alter it's course.[1] This curved geometry caused the shortest, most direct, and least energetic (most preferred) path for matter in motion to be modified by the bending.

Einstein, in his theory of relativity, predicted that the strength of the gravitational field would be proportional to the sum total of the bending of spacetime by each of the (two) masses.

Einstein spent the later years of his life attempting to combine the description of gravity contained within the Special Theory of Relativity with what was known about the other basic forces in the universe, to attempt to come up with a Unified Field Theory. The Unified Field Theory would explain all forces of nature in the simplest possible terms, with all forces derived from the same basic concept. He was never successful in achieving a theory which would unify the four basic forces.

Gravity (The C-R theory view):

The C-R theory basically agreed with Einstein's original thoughts on gravity. Where it differs is that it did not attempt to reconcile gravity to other forces, using hypothetical particles called gravitons.

C-R could state that gravity is what appears to be the "force" attracting larger massive objects together. The C-R theory predicts that gravity is actually a side-effect, caused by the deactivation of real-time.

By the C-R theory, gravity results from the squeezing, bending, or warping of the real-time activity of any packet, or quanta of matter-energy, causing the energy expressed as real-time activity to decrease. All objects will seek their minimum energy level. In the case of masses, their absolute minimum energy level could only occur at a NO REAL TIME situation. This situation can only occur inside the IB^3 Schwarzschild radius in the Neutral Zone [C-R] of a Black-Hole [C-R]. (The IB^3 Schwarzschild radius starts where the escape velocity reaches the speed of light. Anything trapped between the inner and outer Schwarzschild radii, {in the Neutral Zone [C-R]}, is suspected to be impervious, and unaffected by any and all time.)

The appearance of the "force" of gravity occurs whenever any mass successfully bends, warps or pushes another mass into or towards a less time active state. In a direct exchange for the energy loss expressed in active time, the mass gains an exactly

---

[1] The standard quote from Einstein has been translated something like: "Matter tells spacetime how to warp (or bend), and warped spacetime tells matter how to move."

equivalent amount of kinetic energy (speed). The kinetic energy can be exchanged for heat or light energy by friction or intra-molecular collisions.

The speed of light, squared, times the mass, times the change in real-time[1] (as measured by a distant observer) will yield the portion of the total energy released.

Since the energy is released in proportion to whatever the mass of the object times the $E=mc^2$ times the proportional time loss, one can see that the amount of kinetic energy gained is not dependent on the mass. The amount of curvature, or bending of time (which can be figured by the amount of time lost per unit of time) will be the only influence on the rate of acceleration, and on the kinetic energy which the mass can acquire.

One of the biggest differences between this description of gravity, and the conventional description of gravity is that the C-R theory clearly does away with the possibility of the collapse of any mass into a singularity. Since the mass can only continue to be subject to the gravitational curvature or gravitational collapse while some real-time exists to de-activate; once the real time has decreased to zero, no further acceleration, or collapse (compaction) is possible.

This simple explanation for the elimination of the gravitational "singularity" represents a possible triumph for the C-R theory, hopefully equaling the triumph of the quantum mechanical theory over classical physics.

The quantum theory proposed that there was a minimum energy orbital for an electron. Once in that orbit, the electron could not radiate away or surrender any further amount of energy. The problem encountered by the classical theory was the false assumption which postulated that the constantly moving electron would continually lose or radiate away[2] all of it's energy until the electron collapsed entirely into the proton.

In a similar manner, the C-R theory forecasts that the minimum gravitational

---

[1]This change in real time would be unitless. It could be expressed as either a loss or a gain of an amount of real-time activity. For a redshift of 90%, the total kinetic energy gained would be +90% of the starting {$E= mc^2$} rest-mass energy.

For a more mundane, subtle, everyday effect, the loss or gain would be much smaller. In an experiment, an atomic clock was flown in a jet for about 6 hours at an average height of 30,000 feet. After correcting the figures for the speed of the aircraft, a net gain of 53 billionths of a second was realized.

Dividing 53 billionths of a second by 6 hours worth of seconds, one can see that the atomic clock gained about 2.5 trillionths of a second each second from the less intense gravitational curvature 30,000 feet up. Not exactly the obviously apparent real-time gain one would hope for.

Carrying out the calculation to a more human level, lets use a long staircase, 30 feet high. Climbing to the top of the staircase to escape the greater gravitational curvature would yield a net gain of 2.5 quadrillionths of a second per second as the reward for our efforts. Needless to say (which is why I'm saying it needlessly) on our human scale of time measurement, gravitational time gain is unapparent and invisible to our senses.

[2]The classical theory used the large scale (macroscopic) observation that moving electrical charges radiate away some of their energy, and continued using that same assumption clear down to microscopic levels. The forecast of the ultraviolet catastrophe predicted that every moving electron should radiate away it's energy continuously until it collapsed into the protons and neutrons of the nucleus. The predicted speed of the collapse would have required all matter in the universe to collapse within about one fifth of a second. Fortunately for our way of life, that calculation was found to be in error.

energy for any particle (or mass) must occur when no active real-time remains. Note from the quantum based analogy that the hydrogen atom still possessed energy at the temperature of absolute zero. The hydrogen atom was forbidden from radiating that remaining energy away since either expanding or collapsing the electron's orbital added energy to the atom.

At absolute zero real-time the de-activated particle (hydrogen will do nicely), will still possess some energy. This atom will be totally uncoupled from the external world, and totally unresponsive to any outside stimulus as long as it remains in a zero-real-time condition. From any interactive standpoint, other than still contributing geometrically to the total gravitational curvature, the particle behaves as if it were neutral. This is why the C-R theory calls the Zone in which this occurs the Neutral Zone [C-R].

Another big difference in the C-R theory vs the classical gravitational theory is in the predicted behavior of a mass in a non-increasing gravitational curvature. One possible example: Consider a well shaft that would be drilled clear through the entire diameter of some asteroid or moon.

Try releasing a ball at the top of this well-shaft. As long as the density of the materials forming the asteroid or moon was fairly constant with depth, the C-R theory would predict that the ball would not fall down into the shaft. The C-R theory predicts that the ball would eventually come to rest wherever the gravitational curvature was the greatest. By the pre-conditions, this could only be at the top of the shaft.

Conventional gravitational theory[1] would predict that a ball dropped into such a shaft would eventually come to rest only at the center of the object. At that location, the net gravitational curvature would be zero. However, the active time-domain energy at this point would be greater than at the well-top on the surface, where the gravitational curvature would be the greatest.

Note: Above the surface of any object, both gravitational theories would make essentially the same predictions, unless the gravitational field strength approached or exceeded the amount needed to form a Black-Hole [C-R].

Gravitons:

Gravitons are supposedly massless particles, which would travel only at the speed of light. When these particles were intercepted, and re-exchanged, gravity would be the intended result.

Somewhat similar to the way that our eyes would detect the presence of light by observing photons (which are the carrier packets of light), the gravitational attraction between masses would be the result of the emission of gravitons. The more massive the

---

[1]Most scientists and individuals would predict this too. Such is the power of our earthly experience. Note: the density of the earth increases substantially with depth. This non-linear density is why the C-R theory would explain that a penny tossed into a well on earth can fall kerplunk, into the water down below. Otherwise, the penny should remain at the top of the well, trapped at the surface.

So powerful is the direction down - falling link that this may be the most difficult forecast of the C-R theory for the layman or the scientist to accept-- at least until an experiment can be performed or improvised to prove or disprove our hypothesis.

object, the more gravitons which it would emit, and the more gravity which would be detected between masses.

Due to the massless nature of gravitons, the force of gravity could extend it's influence to infinite range. The electrical force would also be infinite in range, due to the masslessness of photons. In contrast, using very large massive particles (compared to the distances involved), the nuclear forces of the weak force and the strong force would have very short ranges. Once outside of the region near the nucleus, the strong and weak forces could just about be disregarded.

What the C-R theory says about gravitons:

The C-R theory predicts that gravitons cannot exist, for a variety of reasons. Most of the reasons involve probable conflicts with the Law of Conservation of Energy. The C-R theory predicts that, if gravitons exist, violations of the Law of Conservation of Energy will almost certainly occur. Please see Chapter 1, and the thought experiment file in the appendix, point #1, for the best and most complete explanation of why C-R rejects gravitons. Appendix, __,___

Briefly, a condensed version of the objections come from some thought experiments. For gravity to exist outside of a conventional black hole, there are only a few likely possibilities. Three of them involve the use of gravitons. One is that gravitons are immune to gravity. If the gravitons red-shifted before they exited from a black hole, there should be no electromagnetic energy left when the escape velocity is equal to or greater than "c", the speed of light.

A second possibility is that gravitons travel faster than the speed of light. This would free the gravitons to escape easily even with the escape velocity equal to "c", the speed of light. For a sufficient density of mass to raise the escape velocity much higher than "c", there is the chance that gravitons could still be trapped inside the black hole, and that the gravitational influence outside of the conventional black hole will decrease. This complication also arises: how could gravitons still interact with ordinary matter if they traveled faster than the speed of light?

Another possible solution is that the gravitons use a method of tunnelling from the conventional black hole. The problem which exists here is that random tunnelling is highly unlikely to maintain 100% of the external gravitational field. Even if gravitons were permitted to tunnel from random distances inside the Schwarzschild radius [or if they tunnelled only from the exact center, at a singularity], the gravitons would have a random spread of energies. Some percentage of gravitons would not succeed in tunnelling. (It would seem unlikely that 5 times as many gravitons {500% of the full-gravity amount} would be banging their heads against the seemingly impenetrable Schwarzschild radius to exactly equalize the number emitted for a hypothetical 20% success rate. If the gravitational field falls short by any amount, conservation of energy would surely be violated.

The C-R theory has an easy-to-use, easy to account-for, alternative strategy.

The C-R theory says that gravitons do not exist. The “force” of gravity is entirely the result of the curvature of spacetime, and the effect of the time-inactivation releasing some of the real-time potential energy which matter possesses. Since this curvature is geometric in nature, and exists because of the mass, there is no need for any

hypothetical gravitons to violate conservation of energy. The gravitational field outside the Black-Hole [C-R] will remain at exactly the same strength as the pre-collapse gravitational field. Even with the matter-energy turned-off, de-activated, or sleeping soundly in the Neutral Zone [C-R], the property of matter to generate the curvature geometrically remains the same. By this method, conservation of energy is allowed to reign supreme.

After all, it would seem to be a shame to link many of the basic conclusions about the laws of physics solely upon conservation of energy, and then throw away those laws at every encounter with every conventional black hole. Of course, the C-R theory conclusions will differ somewhat from other theories which demand some other laws to remain true (entropy, for example), and sacrifice conservation of energy.

H:

Hubble Expansion Constant:

The Hubble expansion constant was proposed by the Astronomer Edwin P. Hubble, based on his meticulous observations of red-shifts in the universe. Hubble noted that as the relative distance from earth increased, the red-shifts apparently increased in proportion. The Hubble constant supposed that as the distance from earth increased, the velocity of outward expansion increased in the same proportion.

No coupling or causative mechanism was ever discovered, but the Hubble constant is generally accepted as true by the majority of scientists and theories. The C-R theory proposes a totally different explanation for the Hubble constant. Co-incidental illusion.

The C-R theory maintains that the appearance of red-shifts increasing with the distance from earth has nothing to do with the outward velocity of expansion. The C-R theory suggests that the red-shifts appear because, as one approachs the outer edges of the universe, time actually slows-down.

Since the time would slow down evenly for all objects inside a circular/spherical shell at the same distance from the center of the universe, all objects in this shell should have the same measure of red-shift. This would be so, since the rate of real-time would be the same for every object in this shell.

Towards the outermost edges of the universe, the objects would appear dimmer. Eventually, as the objects grow so dim and so red-shifted that we can't observe signals from here that weak and that low in frequency, we would expect to cease observing or detecting anything at all.

The nature of the universe would be the actual explanation for the appearance of the Hubble constant. The Hubble constant would simply appear to relate the age/size/distance of objects we could see.

The implications for the universe are enormous, and substantive in nature. For a Hubble-constant defined universe, that universe is expanding rapidly everywhere, not just at the outer edge, with no apparent lack of impetus to affect a slowdown. Such a universe would likely continue to expand forever, and never be this energetic or concentrated again timed clear into infinity.

The C-R universe, however, appears to be red-shifted as an indication of the time slowdown property created by the gravitational curvature in the universe. The objects at

the outer edges would appear to be dimmer, and slower in time, because they really were dimmer and slower in time. The measurement of time becomes dependent on the location of the observer in the universe.

Other than the mindboggler question, how did everything in the universe get here in the first place, the C-R universe appears to be much more humanly understandable, and user friendly/protective. There is no mysterious cause to require an explanation of events, and no strange new basic forces of the universe are required, either. Indeed, the C-R universe could almost be called a W.Y.S.I.W.Y.G. (What You See Is What You Get) Universe.

I:

IB^3 (Insulation boundary, isolation boundary, information boundary)

Starting in 2006, the author of the C-R theory has decided to add IB^3 as a description before almost every occurrence of the term Schwarzschild radius. The term IB^3 is both easier to pronounce and remember, and less intimidating than Schwarzschild. The additional reason is that Schwarzschild radius is an existing, commonly used term, but the C-R theory adds some important new uses in addition to the older original idea. Therefore, I have elected to start adding this new term IB^3 this year.

Imaginary time:

Imaginary time could be viewed as a strictly bookkeeping notion, introduced by the C-R theory, to explain the slowdown in time. The slowdown in time, gravitationally, would be similar to the Fitzgerald-Lorentz contraction for travelling at near-light-speeds. The slowdown could also be compared to the notion (and notation, too) of an imaginary voltage or current flowing in a totally reactive electrical circuit.

When spacetime was warped, bent, stretched, twisted, etc., the effective path length which a lightbeam (or energy, or matter at resonance) takes would be increased. To an external observer this would appear as a slowdown in time. To the particle or observer participating in the slowdown, events “there” would seem to occur normally, in their own localized timeframe.

The extra time taken to complete the journey would be termed imaginary time. This imaginary time would figure in the calculations as the extra amount of time involved in the slowdown, but would not directly be measurable by an external observer (unless that observer could detect a four dimensional timewarp).

The situation with time would be similar to the situation faced in real electronic circuits, where the imaginary factor, i[1], was used to keep track of the phase relationships

---

[1] [i] in this case is equal to the square root of -1. As previously defined mathematically in two and three dimensions, in a four or more dimensional universe, the time vector would be at a right angle to each of the three normal dimensions. The figure i would let us keep track of the phases (angles) of a rotating object.

Imagine a ball rotating inside a circle. Move the circle in a straight line. The path that the ball would take would be similar to the shape of a stretched-out Slinky, laid out on the ground. We could (but

(continued...)

between voltage and current flows in an impedance-resistance circuit.

In a four dimensional sense, the extra path-length created by the more convoluted geometry will cause real-time interactions to become slowed down. In the event that the geometry becomes so convoluted that the path curves back on itself, the time will be 100% imaginary. This will always be the case immediately inside the Black-Hole [C-R], in the Neutral Zone [C-R]. This increased pathlength will be the preferred position by both matter and energy. The gravitational analogue would be, more intense gravity, and more intense curvature.

The addition of imaginary time will not be locally noticeable by an observer or a particle. An external observer who is not capable of viewing the situation four (or more) dimensionally, will only detect an apparent time slowdown on the part of the particle or observer proceeding into a more intense curvature.

The particle undergoing a gravitational time slowdown should notice all other events occurring with an unexpected blueshift. At a total real-time slowdown, time will be 100% imaginary. A local particle or observer will detect no occurrences, and will undergo no interactions while the total-imaginary-time restriction is in effect. There can be no continuing chemical bonds, no continuing positional relationships (such as above a carbon atom, or below a magnesium atom), and no knowledge of any neighboring matter or energy. The particle will be essentially, asleep and oblivious to any events nearby.

From a quantum mechanical standpoint, at total gravitational curvature (and 0 time, too), the probability of interaction equals exactly zero. All of the matter and energy in this Neutral Zone[C-R] will be in their lowest possible (timewise) energy state. From a four dimensional viewpoint, the matter-energy resonance packet, (comprising one possible interpretation of the state of matter-energy in a time-less state) would appear to be folded flat, probably to a dimension of one Plank constant in width. The resonance-energy would be completely contained within this dimension, with no possibility of leakage of this resonance-energy by radiation. This would be the case since, with no existing real-time, no excess energy can occur.

Isotropic Space:

The theory of relativity has proposed that space is without a preferred reference frame, or isotropic. This means that space has identical properties in every direction.

The C-R theory has proposed that this idea is CLEARLY and VISIBLY false!! As far as one can see, in every direction, objects are red-shifted more the further they are from earth. Additionally, in one direction, objects are blue-shifted with respect to us, up to a maximum at a location dubbed “The Great Attractor”. Supposedly, our local group of galaxies is being “attracted” towards this region at up to 600 km/second. An enormous mass, for which there is little evidence, is required to create this “pull”.

As an alternative, the C-R theory proposes that “The Great Attractor” is actually the CENTER of our universe. As the center of all the mass within this CLOSED universe, the Great Attractor is actually the least-curved, least-gravitationally slowed-down spot in

---

[1](...continued)
I won't) use mathematics involving [i] to describe the path travelled by the ball.

our universe. As such, the clocks “there” run faster than here, on earth, and indeed, faster than anywhere else within the universe.

Proceeding outward, in any direction, one ultimately encounters the outer edges, a Schwarzschild radius, where the curvature (or the escape velocity) equals the speed-of-light. With varying concentrations of matter, the result would be a nearly linear progression of red-shift steadily increasing from the center. (Remember, earth is slowed-down compared to the center, so to us, the center appears blue-shifted.) Although well-intentioned, scientists in the 1920's and 1930's interpreted the red-shifts as Doppler shifts attributable to rapid recession. There was never any serious consideration that some other mechanism might be the cause!

With the discovery of the black body 2.7 K microwave radiation in the 1960's, predicted to be the highly-diluted remnant from the original big bang, the big bang theory virtually knocked-out the competition, the steady state theory, from further consideration. While the C-R theory does acknowledge that we are all still looking at the same universe, the C-R theory re-interprets the meaning of the data in a new and exciting way.

J:

K:

2.7 K background radiation:

From the time it was discovered in the mid ‘60's, the detection of the 2.7 K background radiation, virtually identical from all directions, has been acknowledged as the proof of the big bang. It was predicted to exist beforehand (although theoreticians were looking in the 7-15 K range) as the highly diluted, red-shifted remnant from the original big bang. The other leading contender at the time, the steady state theory, could not provide a good explanation for the 2.7 K radiation, and didn’t need it.

Although the C-R theory doesn’t particularly NEED to detect the 2.7 K radiation, as the big bang does, I believe C-R can provide a reasonable explanation, an alternative to proof of the big bang.

To be totally honest, I (the author) originally was in the camp of the big bang believers, and I thought the C-R theory would easily explain the source, or root cause for the start of the big bang. I thought the initial start would be smaller than the universe now, but larger than any singularity. I would agree that the C-R theory can easily provide the impetus, or the driving principle, the energy and matter so energetically enriched, and with a natural property to allow it to be explosively released. The only SMALL problem was one conventional gravitational theories never had trouble with, that is getting the universe to collapse in the first place.

The C-R theory maintains that matter at the outer edges of this universe is already at a lower energy position NOW than matter closer to the center, such as matter here on earth. That means that matter there would have to GAIN energy in order to collapse inward!! Among the anti-Black-Hole [C-R] phenomenon from the C-R theory, the nova, the supernova, quasars, and gamma ray bursts represent very energetic releases of the contents trapped in the Neutral Zones [C-R] of the above events. Since many more of these

occur near the outer edges, it would not be too surprising if these events "averaged-out" over time. The 2.7K temperature represents the individual ex-Black-Hole [C-R] events, averaged out over a long long time, and smoothed-out until the sky is nearly uniform everywhere. Rather than one big bang, there is some continuous activity almost always going on.

L:

Light, speed of:

New for 2006, the C-R theory has added the likelihood that the speed-of-light changes with location, specifically the distance from the center of the universe (the "Great Attractor"). This also represents a measure of the relative energy content of matter, with matter at the "Great Attractor" worth more energy than matter here on earth, and with matter worth even less energy as one gets closer to the outer edges of our universe.

In short, our universe has a preferred reference frame imposed upon it. This means that, contrary to the theory of relativity, space is no longer isotropic, or the same in all directions.

Claim: If we took 1 Kg. of lead, and could convert it entirely into energy, at the center of the universe (the "Great Attractor"), it would be worth more energy there than anywhere else in the universe. At that location, the speed-of-light would possibly measure higher than here on earth.

When we moved that same 1 Kg. mass to earth, we would notice that it was worth less energy. However, the amount of difference in energy would be exactly less by the amount of kinetic energy freed-up from transporting that same mass! Note: this means that GRAVITY is no longer responsible for creating the difference in energy in a mass. Rather, the mass takes it's energy with it, something like you taking your car with a full gas tank or an empty gas tank.

By the time we take the same mass out to a 90% red-shift area (as compared to earth), it would be worth even less energy. Again, the difference would be directly different by the amount of kinetic energy freed when moving the mass. The C-R theory predicts that, either the real speed of light will be less here, or the "distance" travelled will increase by the time slow-down amount.

M:

Mass:

Conventional (Newtonian) theories would define rest-mass as a fixed property of matter. In a gravitational field, a larger mass would have a larger weight, and a tendency to accelerate if dropped. There would also be inertia, a tendency to remain at rest if already at rest, and to remain in motion if in motion (offset by friction and drag here on earth).

New for 2006, the C-R theory now proposes that mass, as a measure of potential energy content, will vary with position. In simple words, a 1 kg mass here on earth would have more potential energy than the same mass moved near the outer edges of our universe. The difference would be exactly equal to the amount of energy used to move the mass (or freed-up from moving the mass) into a different strength gravitational field.

This would also mean that a 1 kg pizza on a table here on earth would be worth less potential energy than that same pizza, lifted-up 1 meter above the table. Significantly, the difference would be exactly the amount of energy needed to lift-up the pizza, 1 kg/meter or 1 newton. (The difference is way too subtle to measure, so it would never show-up in an experiment to measure the mass. The error bounds of the experiment would vastly exceed the difference.)

Technically speaking, this might also be interpreted as the same pizza-mass existing in more real-time, by $E=mc^2$ by the difference in energy gained by the mass from the difference in real-time at the two locations. Although this difference would not show up easily here on earth, by the time one reaches the outer edges of the universe, the time difference amount IS SIGNIFICANT. Note: conventional theories maintain that this red-shift, or time slowdown, comes from ACCELERATION AWAY from earth (and everywhere else, too), with NO KNOWN cause, and no known source of energy to drive the acceleration.

HINT: If the time-slowdown at the outer edges is caused by gravitational means, we here on earth should also be somewhat slowed-down unless we are at the exact center of the universe. This means that anything closer to the center of the universe than earth SHOULD BE blue-shifted with respect to us. We are not ACCELERATING towards it, and it is NOT PULLING us towards it.

VERIFICATION: Although verification is relatively easy, it would not be quick, and it is not something that could be done within the foreseeable future. To verify the C-R theory claims, just travel to any area which appears red-shifted to us. Look at earth. If earth is also red-shifted by the same amount, the C-R theory is wrong - period. If earth appears blue-shifted, by the same amount that area appeared red-shifted when viewed from earth, the C-R theory view is correct.

The perceptive reader may notice, yes the test is simple to do, but unfortunately, it would not be quick, and just the expense and logistics of the travel required, plus the slow-speed “sub-light-speed” travel times would be prohibitively long for thousands of human lifetimes to make a round trip. I cannot rule out some future technical breakthroughs, or contact with other beings who have wider knowledge of conditions encountered. Within our lifetimes, the test seems impossible to accomplish.

N:

(Time) Neutral Zone $^{C\text{-}R}$:

This hitherto unexpected zone, or shell-boundary, or volume consists of the total volume contained between the shell inside of the outermost IB^3 Schwarzschild radius, and continuing inward towards the inner IB^3 Schwarzschild radius, (if any)[1].

This Neutral Zone $^{C\text{-}R}$ would be a newly predicted phenomenon, exclusively from

---

[1]A newly formed Black-Hole $^{C\text{-}R}$ may only have an exactly critical Active Zone $^{C\text{-}R}$. In this limited case, there will be no neutral zone. As soon as the Black-Hole $^{C\text{-}R}$ consumes some matter, this matter will entirely be concentrated inside the Neutral Zone $^{C\text{-}R}$. In theory, nothing requires each Black-Hole $^{C\text{-}R}$ to have a Neutral Zone $^{C\text{-}R}$, but in practice, it would be very rare, and highly coincidental, to find a Black-Hole$^{C\text{-}R}$ without some extra mass trapped in a Neutral Zone $^{C\text{-}R}$.

the C-R theory. If the Neutral Zone [C-R] exists, then all matter and energy swallowed or trapped by a Black-Hole [C-R] will accumulate within this zone. Real time will not "occur" for the entire contents anywhere in the volume of this zone. All of the contents of this zone will be totally inert (neutral) to all electromagnetic interactions. Every property of matter-energy, except momentum and mass, will appear to be "sleeping". This is especially true for electrical charge repulsions and attractions.

Everything in this zone will appear to be electrically neutral, both to anything else trapped inside the Neutral Zone [C-R], and to anything located both inside and outside of the Neutral Zone [C-R]. This interactive ban will be valid as long as the particles are time-inactivated.[1]

The Neutral Zone [C-R] will still produce and maintain it's contribution to the geometric equivalent of the pre-collapse intensity of the gravitational curvature. This curvature produced directly from inactivated masses will not decrease (or change) at all from the geometric warping of an equivalent amount of time active mass. This demonstrates that gravitational radiation, and the predicted subatomic particles called gravitons, do not need to exist.

One other advantage of the Neutral Zone [C-R] is that a singularity can no longer be expected (or demanded) to form at the center of a Black-Hole [C-R]. 100% of the surrenderable real-time energy will have been lost (i.e., traded for kinetic energy and collisions, or surrendered to the Neutral Zone [C-R]) by matter upon it's entry into the Black-Hole [C-R]. The effect resulting from the de-activation of matter, which we term gravity, will no longer have the power or the ability to collapse matter any further. This neat little principle will easily prevent a singularity, with all of it's hyper-relativistic contradictions, from appearing.

---

[1] As pure speculation only, here are a few possibilities. One: All of the matter and energy in this zone would behave ethereally, or ghostly. The matter-energy would pass right through everything else without interacting and without caring. If this indeed is the case, then there would be no hope of exact restoration for some brave soul daring to enter a Black-Hole [C-R], to see what's on the other side. All chemical bonding information, and positional memory would be forever scrambled, and inalterably non-recoverable.

Another possibility is that the matter-energy behaves somewhat like perfect, hard billiard balls. Nothing interacts with anything, and nothing tolerates more than a surface contact with anything else. Positionally, if we considered a literal description of "no-real-time", all matter and energy would be so frozen that no mixing or shuffling could occur.

If absolute, total freezing of the contents does occur, this would suggest a very remote chance that some information, such as chemical composition, undestroyed chemical bonding energies, and the spatial integrity of all mass in proximity could be recovered from an individual person stupid enough or unlucky enough to encounter or enter an active Black-Hole [C-R].

An additional possibility would be to consider multi-dimensional loops or knots. These "knits" in the fabric of time could remain connected, string-like, during their confinement. It would be more likely that these individual loops practiced an extreme version of existentialism; existing by themselves, with themselves, and never knowing about or connecting to anyone or anything else.

While each of these possibilities seems to leave some logistical and logical questions, none of them are intellectually more satisfying, or so clearly superior to the others that it must be the only correct choice. Nevertheless, the beneficial properties acquired from the use of a Neutral Zone [C-R] seem to outweigh the difficulties in selecting from the choices. If any inside information is maintained, or if it is irrevocably lost, the Black-Hole [C-R] does seem to demand a Neutral Zone [C-R].

Since the C-R theory has had to adopt some different assumptions from standard theories, the possible burden of proof may be on the C-R theory. If these simple, C-R inspired assumptions are true, and Black-Holes [C-R] do behave as the C-R theory predicts; many difficult to account for phenomenon would have a relatively simple, straightforward explanation. The appearance of the universe today would flow easily out of the pathways provided by the C-R theory.

Note: By re-establishing an ABSOLUTE quantity, as in absolutely NO real-time, the Neutral Zone [C-R] can ultimately recycle matter and energy with (near?) 100% efficiency. It is important to note that in this respect, the absolutes from classical mechanics were certain, but the "iffiness" of uncertainty haunts the precision of results that can be achieved from quantum mechanics.

There is no uncertainty about the "OFF state" and the neutrality of ALL electromagnetic interactions inside the Neutral Zone [C-R]. It is ABSOLUTE!!

Neutrinos:

Neutrinos are very small and non-interactive, electrically neutral particles of matter. Neutrinos were first predicted, then discovered slightly after the first fusion reaction was created. The neutrino particle was called upon to account for all of the missing mass, energy, and atomic spin which was detected from the aftermath of the fusion reaction. The neutrino has either a very small mass, or no mass (no mass has yet been assigned to the neutrino, but current experiments predict that if the neutrino has mass-energy, it will be below 12 e.v.). The neutrino also has a property called atomic spin.

The neutrino is very non-reactive. If a beam of neutrinos passed through a mass consisting of a sheet of lead one light-year in thickness, it has been predicted that at least 50% of the neutrinos would remain. Since capturing any specific neutrino is so difficult, scientists have not been able to conclusively demonstrate whether the neutrino has any mass. Originally, theories predicted that the neutrinos could travel only at the speed of light, and to do this they had to remain totally massless. Recent theories have predicted that neutrinos may indeed have some mass. The upper limit has been established at an energy equivalent 12 e.v., or electron volts. (This would be the equivalent energy an electron would acquire if it passed through an electrical field with a potential of 12 volts.)

(Lack of) Neutrinos:

Since the energy output of the sun is known rather precisely, scientists have predicted the rate at which neutrinos should be created as the byproduct from the ongoing fusion reaction. At most, the amount of neutrinos which have been detected as coming from the sun can be no more than 1/3 of the predicted level.

One recent explanation (read: invented excuse) is that the fusion reaction inside the sun occurs intermittently, with on and off cycles as the density changes. To explain this would require that ongoing measurements were just coincidentally and currently going through a null point in the fusion cycles. The resulting lack of neutrinos would be ascribed to this inconsistency in the fusion rate.

Another recently proposed conventional explanation for the paucity of neutrinos is contingent on the fact that neutrinos are composed of a combination of theoretical particles called quarks. Because there could be ongoing oscillations in the resultant

character of the neutrinos due to the shifting nature of two of the component quarks. If the neutrino was the detectable type only 1/3 of the time, this would prevent 2/3 of the predicted stream of neutrinos from being detected. This reduction in the neutrino flow would proceed from the presumption that the character of the quarks would be continually shifting with time, and the only easily detectable phase (or most interactive phase) of the neutrino would occur only 1/3 of the total time.

What the C-R theory predicts:

The C-R theory would account for this lack of observed solar neutrinos by predicting that a Black-Hole [C-R] at the center of the sun creates most of the observed radiant energy. Only a smaller fraction of the radiated energy, (as yet undetermined, but 1/3 sounds like it would be as convenient a fudge factor as any) would be available to create neutrinos by fusion. Fewer neutrinos would imply that fewer opportunities for fusion occurred due to local conditions not favoring fusion.

In an offshoot rhetorical question, comparable to Oblers' Paradox, the C-R theory would also ask: why is the sky not full of neutrinos[1]? If every suspected visible and hidden star thought to exist in the universe has been creating neutrinos by fusion for all of their multi-billion year old lifespans; there should be an incredible number of neutrinos traversing through space from every conceivable direction. Even when the expansion of the universe is taken into account, there should be many more neutrinos detectable than present experiments indicate.

The C-R theory could conceivably allow some neutrinos to be created as unintended byproducts created by ongoing amounts of solar fusion. Some neutrinos could also be leftovers spilled out at the lesser events, kind-of small scale big bangs.

The C-R theory does predict that some of these free-flying neutrinos could be stored up inside a Black-Hole [C-R] for eventual release[2]. This slow entrapment, then rapid release would account for a large burst of neutrinos detected from a nova in the Milky Way. Within a fraction of a second, a burst of neutrinos was detected from a direction near the center of our galaxy. Shortly thereafter, within a few hours of the burst, the apparent increase in magnitude of a hitherto unremarkable star was noticed. From the moment when the burst of neutrinos was recorded, it took the light several hours to increase sufficiently in magnitude to the point where it was noticed. Within a few more

---

[1]This would be especially true if the universe is static and not expanding, yet is filled with ongoing matter, some of which is undergoing fusion. The proportion of energy in the universe provided by fusion may be vastly overestimated, especially if most stars energy outputs occur due to gravitational energy surrendered to a Black-Hole [C-R] at their center. Note: the energy output from gravitational infall into a Black-Hole[C-R] is much more efficient than the “meager” 0.7% of rest mass liberated by fusion from hydrogen into helium.

Even if this is not the case, with many Black-Holes [C-R] in the universe, each one is capable of capturing then confining any neutrinos passing through the Neutral Zone [C-R].

[2]Actually, since neutrinos are possibly massless, there is no good reason why they shouldn't be allowed to tunnel away from the clutches of a Black-Hole [C-R] at the center of the sun. This equivalent to reflection or re-emission of neutrinos from the sun could explain why there are so many MORE neutrinos detected emerging from the direction of the sun than the C-R theory could need. (This provides another possible source for a good, probable fudge factor.)

hours, the difference in the brightness from the star was easily detectable.

The reduced neutrino emission scenario above could be produced by strictly invoking the scientifically accepted stellar reaction, powered only by fusion, and occurring during the nova phase. However, the C-R theory seems to provide an equally viable alternative explanation for this event.

Neutrons:

Neutrons comprise at least one half of the critical components of an average atom's nucleus. The neutrons help by providing the binding force "glue", which causes the mutually repulsive protons to stick or bind together, rather than attempting to break apart the nucleus.

Other than the fact that the neutrons are also massive and will be readily consumed by an active Black-Hole [C-R], there is no new or radically different behavior exclusively for the neutron which the C-R theory would predict. The C-R theory view of gravity, and it's root cause will describe the collective behavior of a large conglomeration of neutrons to be different.

In a conventional theory of gravity, the tremendous mass of a compacted neutron star might allow the density of the mass to increase to the point where the neutrons are no longer capable of resisting gravitational collapse. If this is the case, the already-compacted, crushingly dense neutrons will either collapse into an 'order-of-magnitude' denser "quark soup", or else, totally collapse into a singularity.

The C-R theory has no objection to neutrons collapsing into denser blobs, up to but not more massive than pure quark-soup. Whether this collapse event is needed or is even possible remains for future theorists to model (muddle) over.

The C-R theory will predict that all matter, however densely compacted, will fully resist collapse into a singularity. Please see Gravity: see Singularity: or see Collapse: for a expanded expoundment.

Nova:

The term, nova, which is Latin for new, originally was coined to describe what was thought to be a new star in the heavens. Nowadays, it is recognized that the star which undergoes the nova is not new. Photographic records always seem to show that the star in question has existed for some time. It is simply that during the nova, the star becomes momentarily brighter than thousands, maybe millions or billions of normal stars.

The present day theories account for this temporary brightness increase with the explanation that the star has undergone the last fusion of it's hydrogen to helium. In some cases, the star will even have finished its conversion of helium into heavier elements. Present-day theories explain that this is the cause of the nova: As the star nears the end of its useful life, the supply of lighter elements still available for fusion decreases. The temperature at the core decreases from the less plentiful fusion reactions. The hot ball of gaseous elements starts to collapse as it "cools-off", as the result of the inexorable pull of gravity. This collapse rapidly creates a thermal shock wave at a lower layer, and this locally increases the density and temperature around that layer of the star. Therefore this compression greatly multiplies the fusion reaction rate, and this

compressed, ignited layer virtually explodes.

Spending it's last available amounts of fusion fuel, this surging thermonuclear reaction scatters the concentrated mass from the star. Along with the brilliance created from this last catastrophic process, in the violence of the nova, the star undergoes it's final death throes.

If enough unfused matter still remains, the reaction may yet continue. The star may undergo the nova stage more than once if conditions are favorable.

This last dying act of the star will leave a luminous shell or ring of material scurrying away from the vicinity. At the center, where the star used to exist, there will be a rapidly spinning, incredibly dense remnant of concentrated neutrons.

This collapsed neutron remnant is named a pulsar. The name, pulsar originated due to the almost perfectly timed pulses it emits[1]. Scientists now know that the pulses from the pulsar will slow down over time. Ultimately, a nearly dead, very low energy blob of neutrons will be left. This collection of low-energy, densely concentrated matter could be termed a brown dwarf.

If the pre-nova star started off with more than (the best current guess is) 2.5 times the mass of our sun, then an even more violent, and spectacular event, called the supernova, can occur.

The C-R theory predicts a possibly more straightforward account of a star undergoing a nova[2]. By the C-R theory: If any star has a Black-Hole [C-R] at it's center, it would be this, not fusion, powering the star. After an extended lifetime, the massive accumulation of positive charges and neutrons in the Neutral Zone [C-R] allows some external event to trigger the anti-Black-Hole [C-R] phenomenon. Whatever allows the contents from this Neutral Zone [C-R] to escape, only this can provide the source of the incredible energy output available to cause the nova of each star.[3] Naturally, the output

---

[1]The pulses from the pulsars were so regular, scientists at first thought that they were astronomical beacons, used as reference markers by extraterrestrial civilizations. With the passing of time, the slowdown in the pulses became apparent, and the natural origin of the pulses was proposed somewhat later.

[2]Most, if not all of the stars observed to undergo a nova appear to have a companion star. While nothing in the above scenario would prevent this, nothing in the above scenario would remark on the possibility of coincidences. Is it only a coincidence that stars with companions have been observed to go nova?

Let us see what the C-R theory has to say for itself.

[3]From a theoretical standpoint, the overall proof of the C-R theory would be greatly aided if every star had a Black-Hole [C-R] as the source of it's power. The C-R theory could still hold true and accomplish the total recycling of the universe even if most (or all) stars did not derive their energy from a Black-Hole [C-R] at the center.

The C-R theory could still succeed if only the centers of galaxies and remnants of supernovas incorporated Black-Holes[C-R]. Concocting or explaining the availability of materials ready to undergo the recycling process would be more challenging.

On the other hand, if any one instance of Black-Hole [C-R] energy and charge storage should be

(continued...)

of both the nova and the supernova would be highly ionized, and this provides the source of the energy and the rapid and accelerating outrush (glowing ionized ring or shell).

Any star-centered Black-Hole [C-R] eventually accumulates a great imbalance of positive charges. Continuously swallowing protons and neutrons, while releasing many, if not all electrons increases the severity of the magnitude of the release. The vicinity all around the star will abound with excess electrons, and we should detect and expect a negatively charged solar wind.

The trapped positive charges and their neutron pals are totally time-inactivated. These particles, and anything else stored in the Black-Hole [C-R] (Neutral Zone [C-R]) are prohibited from undergoing any interactions including mutual repulsion, while the time-inactivation remains valid.

To spring the trap, the C-R theory would require the presence of some time-active, external or internal trigger. Potential candidates could include:

1. Tidal drag, or gravitational timewarp boundary shifting, which might occur from an orbiting companion star.
2. Tidal drag caused by a relatively large, nearby planetary mass.
3. A gravitational disturbance by a comet or an asteroid.

Upon the action of one or more of these sources, some of the time inactivated positive charges might be allowed the opportunity to re-enter active time. The energy to mutually repel the positive charges will be provided from some of the energy stored up due to the gravitational collapse. As soon as any real-time activity is restored, the positive charges will again detect their fellow protons, and these ex-jailbirds will mutually repel each other.

This trapped particle parole program creates a local decrease in the density of the matter-energy trapped in the Neutral Zone [C-R]. Suppose that there is a sufficient amount of a disturbance, which releases a large quantity of pent-up positive particles. This allows a reduced curvature ripple effect to spread through some or all of the time inactivated matter. If this occurs, some or all of the matter and energy trapped inside the Neutral Zone [C-R] in this Black-Hole [C-R] could become freed from their prison. This matter and energy released will need to expend some stored-up energy to overcome the effect of the total time-slowdown of the Neutral Zone [C-R].

Notice that the re-activation of some matter from the contents of the Neutral Zone [C-R] in the Black-Hole [C-R] does not necessarily imply that all of the matter trapped within will have the opportunity or the ability to re-activate itself. Notice also that, however much of the trapped matter-energy is released from the Neutral Zone [C-R]; there may not be enough of a release to affect in any way the contents of the inside Active Zone [C-R] of the Black-Hole [C-R]. This inside Active Zone [C-R] will still possess enough mass compacted to a density sufficient to allow the total curvature of spacetime to zero-real-time at it's Schwarzschild radius boundary.

The release of all of the matter and energy trapped inside the Neutral Zone [C-R]

---

[3](...continued)
true, all levels of Black-Hole[C-R] recycling become much more probable. Nature seems to enjoy multiple re-use of any cyclical energy recovery schemes, especially on grander scales of magnitude.

could not affect the inside Active Zone [C-R], unless there also was some tidal shifting of spacetime in that vicinity. This tidal shift would allow: either a realignment of the Schwarzschild radius; or some of the activated matter-energy contents to leak into the formerly closed inside Active Zone [C-R].

Some of the novas which occur may not have sufficient energy or sufficient total-gravitational collapse interruption to allow the liberation and re-activation of the entire contents of the Neutral Zone [C-R] on the first try. In this way, more than one nova is possible from any given star.

Since the nova frees large quantities of very energetic and densely concentrated atomic nuclear material, it would not be surprising if heavier elements were created from, and detectable in the aftermath of the nova. After releasing many of the accumulated positive charges, it is also possible that some very dense structures composed primarily of compacted neutrons were left behind.

O:

Oblers' Paradox:

In the 1800's, the German astronomer Wilhelm Oblers posed this classic question: If there are infinitely many stars, in every direction you look, you would see a star. If so, the sky should be as bright at night as it is in the day. Then why is the sky dark at night?

Oblers realized that only a few logical answers were possible.

One answer was that the number of stars was not infinite. The amount of stars in the universe, though large, was not unlimited.

Another possibility was that the universe was expanding. This was rejected as absurd, because any 19th century astronomer could see and feel that the earth, and the stars around us, were not rushing anywhere.

The final possibility considered interstellar dust was present, which would block and absorb the starlight.

(There is the unstated possibility that events elsewhere in the universe are simply not identical to events near the earth. This was not even thought-of, much less, considered.)

Oblers chose the final explanation, and concluded that too much dust existed in the universe. This dust prevented some of the light from far-away stars from reaching us.

Modern astronomers have rejected Oblers' conclusion. The second law of thermodynamics[1] states: If the interstellar dust absorbs all of the excess starlight, it will get hot, and radiate. Even if a huge amount of dust existed, that dust would eventually become warm, if not hot, and would itself become a luminous source of measurable radiation.

Modern astronomers have chosen the second option, the expansion of the universe, as the answer to Oblers' paradox. From the available red-shift information, they

---

[1]No complaints with the second law here, folks. This energy absorption/re-radiation situation is what the second law was intended to cover. See extended definitions on the Second Law of Thermodynamics for some potential problem areas.

have concluded that the outer portion of the visible universe is receding by at least 90% of the velocity of light. This rapid recession is supposedly the reason that the sky remains dark outside whenever we turn out the lights at night.

We here at the C-R theory have no quarrel with the assumption that: if the universe is expanding, this expansion would account for the darkness at night. What we may pick to quarrel with are two parts to the assumption the universe is expanding.

First, if the universe was contained inside the Active Zone [C-R] of a large Black-Hole [C-R], we would expect that the timeframe of reference nearer the outer edge of the universe will be slowed down. Therefore, events occurring nearer to the outer edge will be, by the nature of spacetime itself, slowed-down. This real-time slowdown will produce identical appearances, most of the time, to the receding universe option.

Secondly, the C-R theory predicts: Some Black-Holes [C-R] may indeed absorb excess starlight. By the C-R theory, active Black-Holes [C-R] must only consume, or store up energy. These (C-R brand) Black-Holes [C-R] naturally accumulate energy without incurring the same warmup in their "measurable" surface temperature which would be suffered by second-law-bound bits of dust. Black-Holes [C-R] are forbidden from re-radiating any of their energy diet[1].

Open Universe:

The term open universe refers to a universe which has no physical or practical barriers to it's continued expansion. If the universe is indeed open, then the universe can continue expanding forever. If the universe cannot expand forever, then some barrier must exist to prevent the expansion.

Normally, conventional theories would declare that the opposite to an open universe would be a closed universe. The closed universe would have a sufficient mass so that the contents of this universe would eventually collapse upon itself after some given period of time.

The C-R theory would propose a third alternative. An exactly balanced critical-mass universe. Such a universe could appear to be on the threshold of expansion forever, but would be closed at some boundary. (An outer Schwarzschild radius.)

The C-R theory does not allow the universe to be open. Since we observe the red-shift at the outer edges of the universe; can the cause of that red-shift be the gravitational time-slowdown. The C-R theory should easily be able to explain why there is more curvature at the edges of the universe. Most of the curvature-producing mass in this universe resides further inward from this boundary. If we can allow the universe, by definition, to have exactly enough mass to close off (or curve to the maximum)

---

[1]Conventional black holes are not so lucky. Conventional black holes are forced to theoretically obey the second law of thermodynamics. Stephen Hawking proposed that a black hole will favorably consume the proper anti-particles which it would need to dissipate itself out of existence. Please see the C-R rebuttal of Hawking radiation, or see the comments on the Second Law of Thermodynamics.

spacetime[1]: then this universe is inside a very large Black-Hole C-R. Therefore, the universe is prevented from expanding forever. Also, since matter near the outer edges of the universe is already at a LOWER energy state than matter further inward. This means that matter near the outer edges would have to GAIN energy to collapse.

See also Closed Universe.

P:

Protons:

Protons are the positively charged subatomic particles generally residing in the nucleus of all atoms. The number of protons determines the atomic number of an atom for each element.

The proton is almost identical in mass to the mass of the neutron. Protons are also the main component of the most energetic cosmic rays, sometimes called alpha particles. Protons by themselves could be considered as the nucleus of a singular hydrogen atom. The protons in any heavier nucleus are bound together by the strong atomic force, together with an equal or greater number of neutrons.

In conventional theories of the universe, the proton provides much of the energy which we can detect. To surrender it's energy, the proton can be brought together and combined with other protons and electrons to be fused into heavier elements. Generally starting with hydrogen, the fusion reaction will occur favorably up until atomic number 56, or the element iron. The energy released when this binding occurs is substantial; it is the same type of energy released during a hydrogen bomb blast.

Conventional theories also predict that the entire energy output of the sun is presently due to the fusion reaction occurring at the center. In this reaction, four hydrogen atom nuclei (4 protons) and two electrons are combined at very high temperatures and pressures into one helium atom, i.e., two protons and two neutrons. In the process of the fusion reaction, there will be two neutrinos produced (because two hydrogen nuclei were converted into neutrons).

By the C-R theory, the proton takes on an entirely different and very profound role in the overall course of the universe.

To generate the incredible energies which we observe coming from our sun and

---

[1]This is not the quite the low-probability coincidence that the situation might suggest. The C-R theory predicts that every Black-Hole C-R will have an Active Zone C-R inside, and every active zone will be exactly critical. If the Active Zone C-R expands, more matter residing in the Neutral Zone C-R will be liberated, and if the Active Zone C-R decreases in size, more formerly active matter will suffer de-activation. As matter is de-activated, the size of the Active Zone C-R will decrease, and the Active Zone C-R will maintain it's exactly critical nature.

Of course, the intelligent reader asks, Why doesn't the entire universe collapse into the center? Counter-intuitively, the answer is simple, but sounds stupid, too. The matter at the edge of the universe is already at a LOWER energy state, real-time-wise, than the matter further inward. (The gravitational curvature is more intense there.) Since the matter would have to GAIN energy to fall inward, and the energy needed is not there, the matter is trapped.

The time-surrendering nature as the basis of the gravitational attraction presents it's greatest triumph here. It allows our universe to exist without a mandatory collapse.

other similar stars, the C-R theory predicts that Black-Holes[C-R] are really the cause for most of the energy output. Without proving it first, let us imagine any old Black-Hole [C-R] at the center of any old star.

Any Black-Hole [C-R] surrounded by matter will swallow the massive protons (and neutrons) far more readily than it will be able to trap the less massive, whizzing electrons. The total gravitational collapse of spacetime will permit the Black-Hole [C-R] to store-up the protons in a time-inactivated, effectively electrically neutral state. The protons will still possess their positive charge, but they will be rendered temporarily incapable of undergoing any electrical interaction.

Eventually, an unstable condition may occur which will permit the release of the inactivated contents stored inside the Black-Hole [C-R], from the Neutral Zone [C-R]. At this time, all of the stored-up electrical charges and energy which the Black-Hole [C-R] has trapped over time will have an opportunity to escape.

Because the C-R theory predicts that the Black-Hole [C-R] can only store-up matter and energy without any being released from the Black-Hole [C-R]; the Black-Hole [C-R] will play a part in the overall scheme of things in the universe.

It is in this context: providing a recognized means for matter inside the Black-Hole [C-R] to overcome the local gravitational curvature, that the proton comes into its own. The critical link in the recycling of the matter trapped in a Black-Hole [C-R] is provided by the proton, and it's unique nature of relatively large mass, and an active positive charge.

It may indeed be ironic that nature has selected one of the smallest but most abundant sub-atomic particles to enable the pathway for the recycling of the largest known object, our universe. How suitable that one of the smallest detectable objects has special characteristics that profoundly enable the universe to recycle, and defeat entropy.

Q:

Quantum Mechanics:

Quantum mechanics could be defined as a branch of physics which covers any physical phenomena occurring in discreet packets, intervals, or quanta. The events and phenomenon in this atomic-scale quantum universe would yield a non-continuous, choppy result when compared to the description of events as predicted by classical physics, i.e., continuous smoothness.

Quantum mechanics takes into account the particle-wave "duality" of sub-atomic particles. The particles, or the resonant energy packets have an inherent indistinctness about them. By observing a particle, we must disturb at least one of its physical properties to detect it. In doing so, we forever alter some pre-event physical information about the particle. We can never know both the after-interaction state and the pre-interaction state.

Consider an electron, orbiting a hydrogen atom (proton). The quantum effect would require the electron's orbit either to remain stable or to change in discreet amounts of energy. These discreet amounts of energy change would create or absorb photons. There is a limited number of allowable frequency (or energy level) photons. These photons represent the minimum possible division of light-energy (or another frequency of electromagnetic radiation).

This restriction of created or absorbed photons to discrete energy transitions would account for the characteristic spectrum emitted or absorbed. An example would be when a gas was heated and ionized, the spectrum is emitted in discrete frequency bands, as in a neon sign. This quantum effect also explains why, by absorbing only certain frequencies, an elemental gas could be detected and therefore, proved to be present.

Each element has it's own characteristic spectrum, for both emission and absorption. Because of the actions of the chemical bonding, chemical compounds have a different characteristic spectra when heated. Other effects of quantum mechanics come into play with interference patterns, due to the wavelike nature (duality) of individual sub-atomic particles or photons. Curiously, these interference patterns will still occur even when each photon or particle is individually released. This self-actualized interference proves the inherent waveness of particles, and the particleness of waves. Modern electronic circuits, such as transistors, diodes, integrated circuits, and the like also exploit the quantum nature of the electron.

In higher energy interactions, even the nucleus of the atom will start to behave in strange ways. The explanations of why the nucleus undergoes these changes have only been successful by using the quantum mechanics methods. Additionally, many sub-atomic particles have also been detected, and all have thus far obeyed the rules of the distinct quantum nature.

With particles of matter and events on our large (macroscopic) scale, the effects of the quantum nature of the sub-atomic world can be nearly 100% ignored. Once we decrease the scale to the sub-microscopic world, where minuscule amounts of matter and energy are dealt-with, quantum effects are the rule, rather than the exception.

An interesting spin on quantum mechanics, unique to the C-R theory, is the limitation on the photon. Once the photon is emitted, the C-R theory maintains that the photon DOES NOT change its frequency, or its emitted energy value. Rather, the energy timeframe that the photon is compared-in changes as the photon travels around the universe.

The C-R theory says that there is NO possible mechanism to allow gravity, or changes in the gravitational field, to interact-with, or affect-a-change in the value of the photon. Note: nature went to a great deal of trouble to restrict the photon's energy level to specific values (quanta) of energy. This encompassed a specific fraction of "resonant energy" of the electron's orbit. Indeed, the QUANTUM part of quantum mechanics acknowledges this limitation.

The C-R theory therefore limits this photon, travelling at light speed, to the emitted value, and the emitted value only. Thus, the photon carries with it a measure of the timeframe it came from. The C-R theory firmly believes that the photon thus cannot be held hostage by external changes to "gravity". Note: spectrographic records of photons passing through regions of greater and greater "time-activity" would be C-R theory compatible. The difference is in the interpretation of the data.

As a sidenote, although not scientifically provable, I have read that there are something like a billion photons in the universe per every hadron (the family of massive particles starting with protons and neutrons). If every photon in motion could continually change its energy value, I could seriously imagine a challenge even for an all-knowing creator, to keep-track-of the value of each photon. Additionally, I personally doubt that nature has the time, or the inclination, the ability, or the energy reserves, to continually

adjust, or fine-tune, each photon.

For the interested reader, I will challenge you: How can a photon, travelling at light-speed, possibly interact with something, at any possible angle of "encounter", locally sensing the gravitational strength, and "know" whether to add or delete energy accordingly. Even if YOU CAN conjecture some method to do so, compare that to the C-R theory version, DO NOTHING to the photon once it is emitted. Which of those two possible scenarios do YOU think nature would choose to do? Hint: Consider the principle of Occams razor. (For those of you who don't know, Occams razor says that when choosing between two choices, or two principles, nature virtually ALWAYS picks the simplest, least complicated of the two.)

Quasars:

Conventional theories are mostly mystified by the objects now known as quasars. The name quasar, was shortened from the original mouthful, quasi-stellar radio objects.

The first quasar was detected by the output of energy in the radio band. This radio energy was later found to be extremely red-shifted light. The spectral patterns from the elements measured suggested that some quasars were red shifted by at least 90%. The quasi part referred to the seemingly star-like nature of the object, even though the frequency of the energy output from the quasars was shifted way-down into the radio band.

Conventional theories ascribe to these quasars the honor of being the brightest objects in the sky. This conclusion was based on the measure of the redshift (up to 90%-95%), and the Hubble constant. The Hubble constant states that the farther some object is from us, the faster it recedes. By virtue of their 70%-90% recessional velocity, the various quasars have been proportionally assigned an age and distance rating anywhere from 1 billion to 10 billion years old, and the same distance away in light years.

If these age and distance calculations are correct, then the relatively dim appearance of these "stars" is even more spectacular, considering the enormous distances involved.

Astronomers and cosmologists startlingly concluded that these little objects, less than one light year in diameter[1], outshine all the billions of stars in any nearby galaxy. This conclusion provides the quasar with the reputation of a most inexplicable energy output.

Conventional theories turned to several alternatives.

One alternative explanation is that the quasar represents a white hole; the other end, if you will, of a conventional black hole. What matter and energy goes into a black hole - somewhere; comes out at the quasar, somewhere else.

Another possibility mentioned is that the quasar represents a recurrence of

---

[1]Some quasars have been observed to vary their output in a matter of days, if not hours. If this is so, then these objects must measure not too much larger than X number of light-days or Y number of light-hours. This is because there is no known coupling mechanism which would allow these quasars to change brightness across their surface at a rate faster than the speed of light.

some of the starting conditions left over from the big bang. Present theories lack the proper understanding to account for these objects. The snag seems to be that the initially predicted smoothness of the big bang leaves matter too energetic, and too smooth to collect and concentrate in such obvious lumps as quasars in the short amount of time after the big bang.

Some theories suggest that the quasars represent something like a miniature version of the big bang. While not exactly accepting the same reasons that conventional theories would use, the C-R theory suggests that this scenario is probably the closest to reality.

Using the C-R theory to explain what quasars are:

One of the nicest benefits accruing from the C-R theory is that: from the nova, to the supernova, to the Seyfert galaxy, the quasar, to the gamma ray burst (for 2006, the C-R theory now doubts the ultimate: the big bang itself); only an increase in the size or magnitude of the event is required. We might imagine a quasar as a more-outlying phenomenon, cosmologically, than a supernova. The quasar would shine with a more intense illumination, and with a greater amount of matter and energy released. One could reasonably imagine the young quasars acting as the fountain-like source of the materials for the later stage of cosmological evolution; the building-up of galaxies and star clusters.

The quasars are NOW releasing extra quantities of matter and energy trapped by the parent Black-Hole [C-R] and appearing like a smaller version of the original concept of the big bang. These quasars could be viewed as miniature “big bangs”, occurring continually in every direction, and averaging-out to the 2.7 K radiation which has been interpreted as the evidence of the original big bang.

The real-time inactivation properties of the Neutral-Zone [C-R] can be put to work in no better way than to explain the energy- and ion- rich conditions of the ejecta from the quasar, the supernova, and the nova.

By the C-R theory: matter which has been swallowed by a Black-Hole [C-R] will be time-inactivated, then held in the portion of the Black-Hole [C-R] which C-R calls the Neutral-Zone [C-R]. This “neutral” matter will consist mainly of protons and neutrons, with some trapped energy, neutrinos, and misc. cosmic "driftwood" unlucky enough to get caught. These particles and photons could be considered “turned-off” by virtue of an escape velocity greater-than or equal to the speed-of-light.

A simple disturbance might eventually suffice to trigger the re-activation of the contents of a Neutral-Zone [C-R]. Once this occurs; matter which has been, in essence, held in a paralyzed position, is once again allowed to experience real-life adventures.

The protons, sensing a bit too much overcrowding for their newly re-awakened sensibilities, mutually push and repel each other from the vicinity of the release-site with all of the freed-up electrostatic energy each proton can muster. Some of the lower dwelling denizens of the mass-pile, as well as some of the gravitationally de-energized neutrons may well be content or condemned to spend a considerably longer time squished together. A blob of densely compacted neutrons may well serve as the full core

of the Active Zone C-R nucleus of the same Black-Hole C-R [1].

R:

Real-time:

Real time would consist of any time which could be measured from any reference frame external to a Black-Hole C-R [2]. Real-time exists for any particle or energy if their existence could be detected, and/or their light speed could be measured. Even when the space-time fabric is bent or warped, as long as any object could detect other objects and/or events, that object would be existing in real time.

Absolute (or uncurved) real-time could be defined as the fastest, or most rapid, time-frame. This time-frame could be selected from an infinite number of candidates. The winning timeframe would measure all other non-accelerated timeframes as slower than itself. (Assuming that all timeframes were not in motion as compared to all other timeframes used.)

This least-curved spacetime reference frame should occur at a minimum of once, at the exact center of mass of this universe. In this universe, the "Great Attractor"[3] would fit that definition. A second absolute minimum timeframe could also exist external to our universe, at some point as far from any mass as possible, or at the center of mass of yet another, larger universe[4], of which our universe is one Black-Hole C-R portion of the whole.

---

[1]Actually, if this nucleus described here was dense enough to form a Black-Hole C-R, it would still have an Active Zone C-R in the middle. This Active Zone C-R might only contain nothing else but an exactly critical dense ball of concentrated nuclear matter, or it could be considerably less dense, but sufficiently larger in diameter to have the necessary critical mass needed to create a Black-Hole C-R. Generally, the Active Zone C-R will not experience any effects from events occurring in the Neutral Zone C-R.

New for 2006, the C-R theory may re-consider both the creation-of new Black-Holes C-R and the likelihood of the extermination of existing Black-Holes C-R. The Black-Hole C-R may be as near to infinitely old as would be protons and neutrons..

[2]This would be the case even if the time occurred inside of an Active Zone C-R. The time itself could be measured outside the Black-Hole C-R, but the physics would forbid the inside of an Active Zone C-R communicating with the outside of the same Black-Hole C-R.

[3]As the "new kid on the block", the C-R theory has chosen to use the existing terminology of the Great Attractor to identify the same object or location. Ironically: the Great Attractor is not attracting anything, it is merely running "less-slowed-down" than anywhere else in the universe. This is directly attributable to it's being the exact center of the mass of this universe.

[4]If there is a center of mass to an external universe external to our universe, it's minimum curvature timeframe would be even faster or more blue-shifted, than our "Great Attractor". However, it would not be detectable from inside our universe. It might be possible, by linking observers stationed at 6 cardinal points near the outer edges of our universe, to detect extra curvature added from outside the universe,

(continued...)

Spectrally, this absolute real-time reference-frame would measure all of the other stationary reference timeframes as redshifted compared to itself. (This could not be said if the redshifting was due to motion away from the observer.)

While not initially obvious, the appearance over time of the two reference frames would differ. The reference frames which were redshifted due strictly to motion-away would be required to dim in relative brightness much faster than objects which were redshifted due only to a difference in the rate of time-flow. Measurements continued over a billion years or so should suffice to resolve the differences.

In a universe where the redshift observed occurs only due to the gravitational slowdown, communications between the outermost and near-central observers would disclose something odd. The outermost observers would detect their farthest neighbors as totally unshifted in time, and they would detect the innermost, center-of-the-universe neighbors to be strangely blueshifted, if the measurements were due entirely to time-frame slow-down, and not relative (recessional) motion. Over a few billion year's time, there would be almost no perceptible change in the overall appearance. Individual items would change, but the overall, systematic appearance would be remarkably consistent.

In a receding (expanding) universe, the conditions would vary considerably from the above case. Observers stationed at our “outer edges” in the universe would detect everybody as redshifted. They might even detect themselves to be the center-of-the-universe. In all directions, they might observe others as redshifted by the same amount. The red shift would be at least 90%. Additionally, observers stationed yet farther away, would appear to be red-shifted even more substantially.

Compare that scenario above to an observer at the outer edge of the C-R theory-type “centered” universe. One there should see over 50% of everything in the universe as blue–shifted, some near the center by at-least 1000%, or a factor of 10 (up to 20) times.

Red shift:

The property of red shift is measured in the spectral output from stars, galaxies, quasars, etc. Normally expressed in %, the red shift is a measure of the difference in the spectrographic appearance of certain atomic-level transitions. These energy-jumps only occur at well-known, specific, characteristic frequencies. For instance, if we would take the light produced at a standard pressure and temperature by a neon sign, then split and measure the frequencies by a spectrograph; the identical frequencies would always appear with the same relative intensities.

A classic analogy to the red-shift of light (or electromagnetic energy) would be the Doppler shift of sound. An experiment last century used a horn player, seated on an open flatcar of a moving train. A stationary observer, by the side of the tracks, would listen to a constant note played by the moving musician. The stationary observer would measure the note as high when the train approached, and as low once the train passed.

In a similar manner, light produced from known, pure gasses would be emitted with an identifiable spectrum. The spectrum produced while the source was approaching us

---

[4](...continued)
and to pin-point it’s direction.

would measure as noticeably blue. The same spectral light would appear to be red-shifted if the source was moving away from us.

Scientists concluded that the objects in the universe producing a red-shifted spectra were rapidly receding from our present position. Most distant objects in the universe showed a substantial red-shift. The objects, which showed up as fainter and dimmer, presumably farther away, were measured to have an increasing redshift.

From this set of measurements, Hubble assumed that the universe was expanding, and the predicted rate of expansion increased as objects were farther and farther distant from us.

The C-R theory would agree: If the universe is expanding rapidly, this could cause the redshift. However, the C-R theory has a (not so?) small monkey wrench to throw into the carefully calculated precision concerning the assumption that the redshift is caused only by the expansion of the universe.

The C-R theory states that "gravity" is produced only from the action of the curvature of spacetime. This means that the amount of the observed real-time slowdown could also be an indication of warped spacetime, independent from the amount of motion. If this, indeed is the case, then any object residing in a more intense gravitational field will also produce a time slowed-down spectral signature.

To complicate the resolution of the two alternatives mentioned above, the C-R theory suggests that both the speed of recession (or expansion) and the gravitational curvature of spacetime will contribute to the overall redshift. Unfortunately, there is no easy, immediate way to tell the difference between, or the proportional contribution from either alternative.

To assess the situation, given billions of years, we could send out observers to many faraway locations in the universe. We could instruct them to measure their “time” intervals, and broadcast, using their local reference-time, the standard time-interval report to every other observer. Each observer measure every other observer, then would relay their observations to a centralized location. Waiting around a few billion more years for the replies from the farthest-out observers to come in, then a few hours or less of computational time later; we could finally determine the proportional red-shift contributions from both the relative-time slowdown, and the recessional velocity.

In short, the C-R theory predicts that almost all, if not all of the measured red-shift from the outer regions of the universe may be due only to the curved nature of spacetime. C-R predicts that the gravitational curvature warps the normal spacetime based on one’s position within our universe. At the outer edges, this can measure-up to a total time-shutdown mode at the lB^3 Schwarzschild radius.

Note: The C-R theory is not at all dependent on the restrictive beginning conditions that start-off a strictly expanding (receding) universe.

The C-R theory conditions simplify the assumptions needed to derive a workable model of the universe based on current observations. A C-R universe would expect the observed time-slowdown should appear to be more complete among the outer portion of the mass in the universe. This region is subdued under the greatest curvature, added-up (compounded from the total mass located in the central areas).

Objects closer to the outer edge of the universe would be more completely slowed-down in time. Any objects at a 90% red-shift would naturally appear to be ageing-slower and dimmer since they would be both ageing only 1/10 of our rate of time, and

dimmer, since they would output their energy at 10% of our time-referenced energy rate.

What this means is; if the observed amount of red-shift is caused by time slowdown, one cannot make any accurate or absolute determination of the age of, or the size of the universe. For example; if a quasar were slowed-down to only 1% of our reference time, but it was also approaching us at 90% of the speed of light, it could still appear to us to be 10% time shifted.

A preliminary assumption in all conventional, relativity-based theories supposes that everywhere else, time-wise, is identical to us, here on earth.[1] All of the relative calculations have been based on the premise that the energy-output, spectral temperature profile of identical stars would be identical at vast distances. In the simplest terms, that "there" is the same as "here". The technical term is ISOTROPIC. (The same in all directions.) The C-R theory argues; since the time-base used by these two stars might vary by a factor of at least 10 [100% to 10%], the absolute brightness of stars which appear to be identical could be in severe error.

Because the comparative brightness (absolute magnitude) of distant cephid-variable stars was measured, calibrated, and computed against the near-by, non (time-shifted) red-shifted type of cephid-variable star, the calculation for recessional velocity may be in considerable error. Since this recessional velocity was used to compute: all of the distances in- and the age of- the universe, and the time from the big bang, all of these interrelated items must be considered in error.

Reference Frame (over the universe): (A new claim added in 2006)

The theory of relativity has predicted that there is no preferred reference frame within this universe, and that space is isotropic, or the same in all directions. The C-R theory disagrees strongly!! Even the most cursory glance at this universe shows that "there" is NOT LIKE "here". However, contrary to the data actually measured (in red-shifts and blueshifts), the EXPECTATION of an expanding universe led scientists and theoreticians to explain and attribute the measurements as due to Doppler shifts created either by the expansion of most of the universe away from us (as a red-shift) or by the "attraction" to a central mass (as a blueshift).

In the true nature of the original "scientific" method, the C-R theory claims an alternate explanation. Space is not isotropic, or the same in all directions!! Rather, our universe has minimum curvature and maximum energy at it's center, a.k.a., "The Great Attractor". Curvature increases somewhat as one nears the vicinity of our earth, and the gravitational curvature becomes nearly complete where we measure the "origin" or "source" of the 2.7 K radiation. Some distant quasars measure 90 to 95% time-slowed-down.

New for 2006: The C-R theory now expects that, by it's very nature, the universe has a reference frame imposed upon it. Minimum curvature at the very center, and proceeding up to full curvature everywhere, in every direction, at the outer edges. Every

---

[1] In an ultimate irony, when the "experiment" was performed, and far-away objects were measured (observed) by Hubble (and others) as highly red-shifted, or slowed-down, with respect to us, the ultimate "conclusion" was to believe the Theory of Relativity, and DISCARD the actual visual evidence!!!!!!!! The C-R theory (actually, me, the author) wonders, what happened to scientific objectivity? I am reminded of a Chico Marx quote, from a movie I saw many years ago (and I don't remember which one it was.):"Who are YOU gonna believe, ME or your own two eyes?"

location inside the universe will fall-in-line somewhere between minimum and full curvature, where the escape velocity finally reaches the speed-of-light, and there is no real-time measurable. Thus, a default reference frame is imposed on all matter contained within. In C-R theory terms, our universe is a giant-sized Active Zone C-R.

Author's note: It was observation of the properties visible in this universe that led this author to EXPECT there to be an Active Zone C-R at the center of every Black-Hole C-R and how to prevent the Black-Hole C-R from collapsing into a singularity.

S:

(IB^3) Schwarzschild radius: (The IB^3 term is a new addition starting 2006)[1]

The term Schwarzschild Radius honors the mathematician Karl Schwarzschild, who was the first to actually calculate the necessary density of matter which would be required to boost the escape velocity (from that same mass) to the speed of light. The Schwarzschild radius is defined as the radius at which either the inner or outer boundaries of the Black-Hole C-R would start. The Schwarzschild radius is also the distance (radius) (from the center of the Black-Hole's C-R mass) at which the escape velocity first and exactly equals the speed of light. The density of mass trapped inside the Black-Hole C-R would be exactly sufficient to raise the escape velocity to the speed of light limit at this radius. Outside this radius, the real-world conditions would prevail. From either side of this speed-of-light cutoff boundary, both the inside and the outside regions would be insulated and isolated from all knowledge and communication[2]

---

[1]The term, IB^3, stands for insulation boundary, isolation boundary, and information boundary. It was added starting 2006 by the C-R theory to highlight (or differentiate) the additional properties that the C-R theory adds or requires. Adding the IB^3 term allows C-R to feature the unique differences and benefits achieved using the Schwarzschild radius.

[2]There is a slight theoretical possibility that deliberate, human mass distribution/manipulation modulation could be used to communicate from the inside Active Zone C-R to the outside of the Black-Hole C-R. The shape and distribution of the mass inside the Active Zone C-R could be manipulated over time into an unnatural, non-symmetrical shape. Shapes such as a peanut shape, or a triangle shape, either changed or rotated over a period of time, could communicate by modulating the gravitational field detected outside the Black-Hole C-R. Note: The larger the Neutral Zone C-R, the less-effective the modulation will couple through.

The maximum rate of data exchanged by this method would be frustratingly slow, but it would qualify as interceptable communication. The necessity of moving multiple galaxy-sized masses to communicate either a 1 or a 0 could deter even the most obstinate, stubborn, and patient civilizations. The important point is: If this ONE exception is possible, are higher-speed technical tricks also possible?

Additionally, the inside and the outside of the Black-Holes C-R cannot positively establish whether there exists an inside rotational velocity (Unless there is a non-symmetrical manipulation of the inside mass.). This may make synchronization of the inside and outside signals difficult or impossible to achieve.

It seems unlikely that the size of the mass under manipulation could be notably reduced, to prevent any inherent background modulation from mimicking or covering-over the intended data. The random background gravitational "noise" could be bothersome, with numerous, pesky supernovas and galactic collisions occurring hither and yon.

Given the past record of humanity faced with seemingly hopeless dreams or tasks, technology may yet allow a breakthrough. Previous societies have also had their "barriers", which were supposed to be insurmountable. As civilization has progressed, people have proved incredibly resourceful at such

(continued...)

C-R theory predictions about the IB^3 Schwarzschild Radius

The C-R theory predicts that, in addition to the readily accepted, and conventionally acknowledged (outer $IB^{3)}$ Schwarzschild radius, there will be another inside boundary, a second, inner IB^3 Schwarzschild radius. Between these two Schwarzschild boundaries, the inner and outer radii, there will be a filled shell, or a dense volume, or a zone, which the C-R theory has termed the Neutral-Zone $^{C\text{-}R}$.

Once we move-in closer to the center of the mass, located even further inside of this shell (the Neutral Zone $^{C\text{-}R}$), we will cross the inside IB^3 Schwarzschild radius and there will be what the C-R theory has termed an Active-Zone $^{C\text{-}R}$. On the inside of this Active-Zone $^{C\text{-}R}$, all matter will again be in a time active state.

About this Neutral Zone $^{C\text{-}R}$:

Between the inner and outer Schwarzschild radii, the C-R theory proposes the existence of a Neutral Zone $^{C\text{-}R}$. This zone is so named since any real-time activity is forbidden, turned-off, or non-existent within this zone.

This Neutral Zone $^{C\text{-}R}$ is really the "active heart" of the Black-Hole $^{C\text{-}R}$. The Neutral Zone $^{C\text{-}R}$ is what gives the Black-Hole $^{C\text{-}R}$ its fearsome reputation. The Black-Hole $^{C\text{-}R}$ would not be very important if the Neutral-Zone $^{C\text{-}R}$ did not exist. Only in the Neutral Zone $^{C\text{-}R}$ does the density of matter EXCEED the necessary density required to create the speed-of-light escape velocity.

Because of the overabundant (excessive, more than is needed, overwhelming, ... get the picture?) curvature, real time electro-magnetic interactions become totally forbidden, shut-down, and turned-off. The threshold of re-activation, compared to the speed “c” and the interaction energy available would vastly exceed anything that the matter and energy could muster.

Imagine matter confined, tied so tightly in knots (or loops of knots) that any energy for- or probability of- the matter interacting would be impossible. This is why the C-R theory states that EVERYTHING, while it is trapped inside the Neutral Zone $^{C\text{-}R}$, behaves as if it were neutral to all interactions. Any interaction which occurs because of any light-speed moderated or interacting force is forbidden.

Note that this prohibition of interaction only occurs while the curvature remains equal-to or greater-than the speed of light. If external events allow, and the curvature un-warps or decreases until the escape velocity becomes less than “c”, then, all interactions are again permitted. Once the “explosion” starts, the density decrease could un-warp the entire Neutral Zone $^{C\text{-}R}$.

The C-R theory speculates that the symmetry of positive and negative electrical mutual repulsions permits the long-term reversibility of the co-isolation and co-insulation

---

[2](...continued)
"impossible" tasks as travel to the moon, travel to the bottom of the ocean, talking clear around the world (and being clearly heard) without even shouting, seeing objects too small and too faint to be seen with our eyes, and...

of the ions[1]. The dual "attraction of opposites" and "repulsion of likes" properties of electrical fields allows this period of separation to occur "temporarily", while the Black-Hole C-R exists, without necessarily violating Conservation of Energy. (See thought Experiment #??, in the appendix.)

Due to the geometric-folding, trap-like nature of spacetime in the Neutral-Zone C-R, tunnelling from- and any interparticle interactions in- the Neutral Zone C-R must be forbidden as well. Since all particles and all energy within are each confined in their own, legal (and binding) whole-loop[2], the real time energy available to allow any probability of quantum-tunnelling is zero.

All Neutral Zone C-R phenomenon associated with quantum interactions must be considered as "put-on-hold". Geometrically, the particles or energy trapped here could be referred to as a "packet in a pocket". If the particle-energy "packet" even considered interacting, the only proper mathematical response would be,"Let me reflect upon that, perfectly."

Especially Important: Please notice, external to both the Neutral Zone C-R, and the Black-Hole C-R, the GEOMETRIC nature of gravity. Gravity (i.e., spacetime curvature) is still allowed to emanate from the Black-Hole C-R. The level of gravitational "force" felt by an object outside of the Schwarzschild radius will not be required- or even permitted- to diminish or change by the most minuscule or feeble amount.

From the C-R theory, this maintenance of the gravitational "field" CAN occur WITHOUT violating conservation of energy, or the nothing faster than the speed-of-light interaction ban from the Theory of Relativity. The same CANNOT be said for any coupling-through of electromagnetic, (and presumably) the strong and weak nuclear forces. This 100% pure continuity of gravity exists only due to the unique geometric nature of gravity, as predicted by Einstein, and recognized in it's practical significance by the C-R theory.

Seyfert Galaxies:

Seyfert galaxies would represent a transitional stage in the evolution of the universe. Seyfert galaxies would be younger than quasars, appearing in time after a full fledged quasar and yet, earlier than the formation of galaxies. Gradually, between the

---

[1]In simpler language, electrical separations are permitted and reversible. If we separated the protons from their electrons, time-froze and isolated all the protons, then un-froze and re-exposed the protons, the collective charges would be allowed to reunite and to de-ionize themselves, and conservation of energy would be preserved. The source for the energy of separation comes from the gravitational potential energy possessed by the protons, themselves. This energy is also conserved from beginning to end, although initial appearances may suggest otherwise.

Importantly, this is not the case with the gravitational attractions. If gravity outside the Black-Hole C-R becomes time frozen, the havoc wreaked on conservation of energy becomes unimaginably complex.

[2]In this manner, the legal whole-loops are the exact opposite of lawyers legal loop-holes. Whereas the whole-loops keep one confined indefinitely, the legal loop-holes get people unconfined indefinitely.

ancient quasars and our modern day galaxies, the Seyfert galaxies take on an intermediate role.

In our part of the universe, the formation of most galaxies was long ago completed. These far away Seyfert galaxies would showcase events and times after the pioneering quasars, but previous to the completed establishment of the structure of galaxies in our part of the universe.

By the C-R theory, a quasar evolves into, and becomes a Seyfert galaxy, then later, a fully established galaxy. The Seyfert galaxy essentially is to cosmological structure of galaxies what the teens are to humans.

The C-R theory predicts that some of the Seyfert galaxies we are seeing now may still be in existence, due to the gravitationally slowed nature of the edges of the universe. The relatively "baby" quasars which we can see may now be aging, and evolving to enter their adolescent (cosmologically speaking) stages.

The transitional forms, from the quasars at edge of the universe, to our "fully formed?" Milky Way galaxy are open for viewing by any interested observer. Just as one can tell about the history of a family by viewing their photographic albums, one who is interested in the history of our universe need only look at the Milky Way's younger sibling galaxies, Seyfert galaxies, and quasars to see the progression of "nebular evolution".

One of the hallmarks about Seyfert galaxies is that they contain multiply-ionized elements, specifically both oxygen and nitrogen, up to Fe^{+23} .

Singularity (non C-R theory only):

Conventional physics theories and astronomical theories are saddled with the possibility that the entire contents of a black hole (non- C-R) can overpower the resistance of matter with intense gravity, and collapse that matter into a singularity.

Most theories speculate: the conventional gravity of a large-dense mass can overcome the nuclear pressures generated by protons and neutrons. This forces matter towards a gravitational collapse, with the infinitesimally small singularity as the predicted result.

The gravitational singularity is predicted to be a unique catastrophe. Most present theories about black holes predict the singularity will be the ultimate destination, and fate of any matter-energy unlucky enough to be trapped within, or sucked into a black hole (non C-R type).

This predicted singularity would be infinitely dense[1], and also, immeasurably small.

---

[1]Current gravitationally based theories give little reason to hope that the collapse into a singularity could be avoided. As to the final size of the singularity, no current theory (other than C-R) has a sound theoretical basis on which to suggest a minimum size.

In one accepted view, the collapse will proceed down to the Planck level. This Planck level would be the smallest discernable distance, and the minimum possible division of time. Nothing smaller or quicker than this would exist, leaving no way to measure any lesser intervals. The Planck time would be about 10^{-42} seconds, representing the time for the speed of light to cross the smallest distance, about 10^{-35} meters.

Because the density of matter in this singularity should create an escape velocity vastly greater then the speed of light, the present theories fall down. These theories have no guidance what to do when the curvature vastly exceeds that with which relativity can relate. (i.e., c and below.)

(continued...)

Because the internal conditions would soar totally over the well-understood range of the speed-of-light escape velocity and electromagnetic light-speed interaction limit, all of the present, relativity based theories and laws which we have would be rendered useless.

There is a generous overabundance of speculation as to the ultimate fate, and the permitted behavior of a singularity[1].

Conventional Theories and Singularities:
or
A One of an (un)Kind Phenomenon.

Singularity: Case #1

One of the currently proposed ideas suggests that with the not quite infinitely-dense curvature of the matter-energy trapped in the singularity, the "sheet" of spacetime which composes the fabric of the universe could be literally torn or folded away. This tearing or folding would occur something-like soap-bubble style. When the soap bubble is stretched too much, and curves in upon itself, a separate bubble is sometimes created. This bubble carries-off some of the original soap film.

Singularity: Case #2

In a similar fashion, imagine the properties of the universe, so severely twisted, bent, or curved that the material literally curves itself totally out of the universe. This unconnected, loose blob of mass and energy floats until it can reconnect or be merged into: someplace else, sometime else, or even into a co- existent, parallel universe.

Singularity: Case #3

By this space-time fabric pinch-off/ reconnecting idea; other theories suggest that the path created by the ex-black hole singularity could produce a "Wormhole" effect, i.e., a tunnel or a shortcut from one region in space-time to another region in spacetime.

Singularity: Case #4

Some other theories speculate that the singularity will collapse into the smallest possible dimension, at the Planck limit, or 10^{-35} meters. At this miniscule limit, they speculate, the barrier against all interactions forbidden by conventional theories may no longer apply.

Esoterically, if for no other reason, there is something intellectually uncomfortable

---

[1](...continued)

An even worse dilemma is this: theorists and practicing physicists must invent a way for matter and energy to escape this trap. So far, only the flimsiest of speculations, or the whimsiest of guesses give any idea what to do. {Matter and energy are all scrunched-up with nowhere to go.}

[1]Hint: If you find some areas of the C-R theory somewhat unbelievable, please peruse our listing of the assumptions and results from our competition. {Authors note to self, try to find analogies and parallels from nature, too.}

in the assumption[1] that the entire contents, including the mass-energy contingent of the known universe, originated in such a small, seemingly insignificant, volume of space.

The C-R theory alternative

The C-R theory is saddled with no such dilemmas. The C-R theory predicts[2] that no singularity can ever occur. This is due exclusively to the nature of gravity. We speculate that gravity can only collapse and attract matter by decreasing the local time.

This time decrease, or partial gravitational collapse could be geometrically envisioned as somewhat similar to the shape of the skin of an orange while the whole orange was being juiced. As the amount of active, real-time which the particle experiences is decreased, the kinetic energy (speed or acceleration) released appears as an effect caused by gravity.

Once the total amount of active, real-time which the particle can experience is decreased to zero, gravity can no longer exert any affect over matter. This simple conclusion totally prevents the occurrence of a collapse into a singularity.

A Singularity Alternative:

As an alternative to the center of the black hole singularity, the C-R theory instead predicts that around the center of every Black-Hole $^{C\text{-}R}$ (C-R type), there will be a time active zone. C-R has termed this central region the (inside) Active Zone $^{C\text{-}R}$. This active zone is located on the inside of the Black-Hole $^{C\text{-}R}$.

To create, and then maintain the Black-Hole $^{C\text{-}R}$, this Active Zone $^{C\text{-}R}$ must have exactly enough mass at exactly the right density to produce the necessary spacetime curvature. Proceeding inside from the Neutral Zone $^{C\text{-}R}$, passing the speed-of-light

---

[1]Does it not seem ridiculous that a group of scientists could see a universe believed to be ten to twenty billion years old, spreading out to a sprawling wilderness, ten to twenty billion light years in diameter, and say, without a rational academic challenger to contest the matter, "Aha, I bet this thing fit into a space 1/10000000000000000000000 (give or take a few zeroes) of the diameter of a proton." Comparatively, a trillion camels, side by side, should more easily fit through the eye of a needle.

[2]To evaluate this prediction, we used a parallel situation to the classical physics dilemma of the electron orbiting the proton. Classical physics demanded that any moving charged particle radiate energy. For large scale systems, this prediction behaved nicely, and explained almost everything. Considering the proton and electron in a singular atom, the theory predicted (wrongly, I hope) that the entire universe should have collapsed within 1/5 of a second.

The quantum electron, by virtue of it's wavelike nature, was found to resonate comfortably at a minimum energy position. (The "s" orbital for hydrogen). By restricting sub-atomic matter to discrete energy levels, and discrete transitions, the quantum theory explained why matter did not collapse.

The very nature of matter itself conveniently arranged (or conspired) to prevent the total collapse of electrons into the nucleus. Thereby, the entire universe was saved from a fate equal to death; the ultraviolet catastrophe.

This simple, discreet energy change limit assumption of quantum physics knocked classical physics irredeemably off it's throne. Could it be that history (and nature) repeats itself? Read on.

escape velocity at the IB^3 Schwarzschild radius, this defines the Active Zone's [C-R] outer periphery.

That the Active-Zone [C-R] is exactly critical in it's density is not quite as coincidental as it would at first seem. If the Active Zone [C-R] had more mass or a higher density, the resulting Active Zone [C-R] would be smaller, and the amount of matter trapped in the Neutral Zone [C-R] would be increased. If the density of the matter in an Active Zone [C-R] were to decrease, some of the matter which had been totally deactivated at the inner edge in the Neutral Zone [C-R] could be released.

Consider the case where there would be no remaining inactivated matter left in the Neutral Zone [C-R]. Therefore, a minimal disturbance in the amount of matter or the density in the Active Zone [C-R] could become insufficient to maintain the IB^3 Schwarzschild radius curvature at the speed-of-light limit. At this very instant, the Black-Hole [C-R] as we knew it, would cease to exist. At this time, the matter and energy, which had been trapped inside this Black-Hole [C-R] in the Active Zone [C-R], would be able to be re-united with it's long-lost matter and energy family relatives residing outside of the Black-Hole [C-R] [1].

Space-time:

From the theory of relativity, space and time were found to be interwoven and inseparable. Space cannot be defined without a consideration of time. The measured rate of the passage of time will be slowed-down by the warping of space-time.

Gravity could be defined as the effect from the curvature of spacetime. Spacetime could be defined as the difference between a perfectly Euclidian (i.e., straight line, right angle, checkerboard grid) type of universe, and a curved or slightly bent reference frame. (Hint: Try drawing only perfect, 90° squares to completely cover the surface of an orange, or of a basketball. The geometric results suggests how curved spacetime differs from linear, or straight space.)

A useful analogy would be: imagine the shortest path between two dots painted on the surface of a ball. Unless the dots were on any perfect diameter, located at the exact opposite sides of the ball, there would be many different-lengthed paths between those two points. There will be at least one path on the surface of the ball which is the shortest. Many curved paths could exist which would eventually connect the two dots. To a dot or a period travelling along any given path, the shortest path may not be very obvious.

If we would enlarge the size of the ball, and shrink the distance between the two points, the ratio of path-length curvature to straight line-through the ball path-length would decrease. The surface curvature would exist until the two points merged or until the surface of the sphere flattened out totally. In a similar way, the shortest path which we can chose in our local "almost-flat" space-time would still possess some space-time curvature if a gravitational field existed anywhere in the universe.

---

[1] Of course, the actual end of a Black-Hole [C-R] may not seem nearly so casual as the C-R theory describes it. There could well be an exit of highly energetic protons, and stored-up energy which would go out with a pretty good bang. (A big enough event might even produce a universe-sized big bang.)

See the Extended Definitions sections, or the chapters covering the nova, supernova, Seyfert Galaxies, and quasars for possible end-of-a-Black-Hole [C-R] related phenomenon.

Just for comparison purposes, consider the ratio of curving or of warping of a diagram drawn on the surface of a ball compared to the same diagram drawn flat on an uncurved 2 dimensional sheet of paper. View the drawing on the ball from an external 3D (3 axes) reference frame then view the 2 dimensional flat diagram. Imagine a straight line "short cut" through the body of the ball, directly between the two ends of the diagram. This path, in this real-life situation would symbolize the difference in our imagination between the path of a real-time light beam passing through curved vs. uncurved spacetime.

Although the short-cut, in this situation, would be obvious to a person situated in our 3 dimensional existence, to any period confined on the surface of the ball, the barrier to fully understanding the nature of the curvature would be almost insurmountable. In addition, the curvature of the "two-dimensional" surface of the ball would be unsuspected and almost undetectable if the sphere size encompassing the curvature was greatly increased.

In our universe, the slowdown in time could be attributed to the warping or the bending of space-time. The increased (or out- of-dimension) path length a ray of light would need to traverse in "bent" space-time would be analogous to our example above using two and three dimensions. To a four dimensional (or more) being, the path could be checked, and gravitationally curved (or time- warped) lightbeam pathlength would be found to be slightly longer than a similar distance in a section of space-time with no gravitational curvature[1].

The hypothetical, multi-dimensional dwelling beings could view our situation in our gravitationally-spacetime-curved "3-dimensional" universe as an increase in the effective volume of spacetime occupied by a fixed amount of our matter-energy. If we keep the total energy content constant, and spread-out the energy contents into the larger, 4 (or more) dimensional volume, our only alternative is to effectively decrease the apparent "3-dimensional" energy in our volume of space(time). Since we cannot detect this increased (hyper)volume, we would conclude (and rightly-so, from our vantage point) that the 3-dimensional energy in the volume of spacetime which we can detect, had decreased.

The three dimensional viewpoint in the above situation cannot be short-changed, thanks for the most part, due to the law of conservation of energy. From our limited 3 dimensional viewpoint, we will detect the kinetic energy of the matter increasing by the same amount of energy it "apparently" loses due to 4-dimensional dilution.

Steady State:

In the early 1960's, the previous co-contender for the title of "The most successful explanation of everything" by a theory of the universe would have been the Steady State theory. This theory, proposed by Fred Hoyle, declared that the universe was constantly expanding. To compensate, it was continually adding the necessary hydrogen through

---

[1]The best, and most amusing account of multi-dimensional beings trying their best to comprehend other lesser- and greater-dimensional beings would be the mathematical novella "Flatland", by Edwin Abbott Abbott. The story was written well before the Theory of Relativity, and before many people had ever heard of anything over three dimensions.

spontaneous creation. Using this steady-state method, the relative size and appearance of the universe would have remained constant. The steady state theory assumed that the universe always looked the same as it does today, and it would always continue to look the same in the future.

The steady state theory did successfully explain the observed expansion of the universe. From the standpoint of the law of conservation of energy, it was not esoterically pleasing to think that matter had to be created from nothing, continuously, to expand and fill the vacuum or void created by the expansion. The steady state theory required that only a very small amount of extra matter would be needed each year, something on the order of one hydrogen atom per cubic light year, to maintain the current appearance of the universe.[1]

In the early to mid '60's, the steady state theory was considered to be in contention for the "Best theory", competing with the big bang. One of the most attractive of the proposed benefits was that the universe would not have need for a theoretically complicated ending or a beginning. The portion of the big bang theory that made some scientists cringe was the requirement that everything we see now, somehow came instantly into being, without any prior existence.

The Steady State theory met it's doom, however, when the very smooth, and extremely redshifted remnant of what was thought to be the big bang radiation was detected. This "black body" type of radiation was detected by Arno and Penzias, two employees of Bell Telephone.

Arno and Penzias were investigating microwave transmission and reception. When a very large, and very sensitive antenna was aimed anywhere in the sky, they were surprised to learn that there was a uniform source of microwave noise coming from every direction. After resoldering and recalibrating all of their equipment, and with no improvement in the amount of noise they encountered, Arno & Penzias at last accepted that this noise was extraterrestrial in origin.

When a team of astronomers searched for just this type of radiation, they were surprised that it had been detected several years prior to their search by someone who wasn't looking for it. This radiation, which occurs with it's peak at about 2.7 K was later suspected of being the time-weakened, long-sought, theoretically-predicted remnant of the big bang explosion.

Once this radiation from the sky was verified by other teams of astronomers; scientists and theorists also took note of it. This one observation of the red-shifted, incredibly smooth background energy effectively knocked out the Steady State theory from cosmological contention.

---

[1]Among the theories of the universe which require matter or energy to be created from absolutely nothing, the Steady State theory was less unreasonable. The Steady state theory only needed a small, almost imperceptible amount of matter to be created at any one time. Compare this to the big bang theory which seems to need everything in the universe to be created very suddenly, possibly from the same source of nothing.

After all, if you were pumping water from an empty well (full of nothing), would it not be more reasonable to pump a drop of water a day to fill a bucket every thousand years for forever, than to pump an entire Pacific Ocean in an eyeblink? (Even better yet, could some enterprising individuals come up with an even less demanding, more reasonable scenario?)

The universe was not so kind or considerate to allow an explanation of the universe to be so simple. On the other hand, now we do not have to contend with the universe sneaking hydrogen atoms into existence throughout all of eternity. This would have proved frightfully demeaning and demoralizing to the rule of Conservation of Energy.

Supernova:

The explanation for the class of occurrences comprising the supernova would be very similar to, and of the same type as the C-R theory predictions made for the Nova.

Conventional theories would ascribe the properties of the supernova mostly due to the expiring of the ongoing fusion reaction at the center of a star, denser and heavier than our sun. Those theories claim the resulting supernova would be the final show at the end of the energy-output life of a star. As the star exhausted it's last nuclear hydrogen available for fusion into helium, the only remaining nuclear fuel would be helium and heavier elements, up to iron.

As the nuclear fuel runs out, the star finally fuses heavier elements into either iron or lead. Eventually, the energy output from the fusion reaction dwindles, and the outward push on the star's gas-plasma cloud from the heat-energy of fusion drops off. The extended ball of gas-plasma cools, it shrinks, retracting inward.

The infall of this heavier, condensed matter collapsing on the outermost layer of the star creates a shock wave. At this layer, the temperature and pressure skyrocket and one last burst of the fusion reaction creates its last great flash of energy. The compression from the collapse would combine the remaining, heavier, less reactive elements to produce a very brief, but extraordinarily brilliant spectacle, the supernova.

In a fraction of a second, the supernova would expend more energy than an entire galaxy of stars. The entire outer portion of the parent star's mass would be expelled at a tremendous velocity.

The shock wave would also force the remaining elements to collapse inwardly. As the pressure and the gravity would intensify, the core's elements would be less able to retain any further loose-packing. Afterwards, the only expected object remaining where the star had been would be a super dense, rapidly spinning, neutron star.

What the C-R theory says about supernova's (and their cause):

By the C-R theory, the events leading up to the nova would also take place in the supernova. The primary difference would be in the size and the scale of the events. (See Nova:)

In the aftermath of the supernova, the C-R theory would predict the release of a very sharp burst of extremely energetic, positively charged particles. We would also expect a momentary increase in trapped neutrinos being freed. This neutrino burst would be released to coincide with the moment that the gravitational trap around the outer portion of the Neutral Zone$^{C\text{-}R}$ collapsed.

Unfortunately, the initial observed differences predictable between the C-R theory and conventional theories would not be too obvious. A possibility exists that the initial

surge of positive charges freed by the re-activation of the Neutral Zone [C-R] should continue accelerating by their mutual repulsion. This will occur until a sufficient number of the positive charges meet up with enough of their long lost electron companions to allow friction, or attraction, rather than repulsion to predominate.

The C-R theory provides a very simple causative mechanism for the many, high energy cosmic rays coming from all directions in space. Due to the exclusive use of combined mutual positive repulsion, the C-R theory might predict that the energies achieved by the cosmic rays (i.e., accelerated protons) from a Black-Hole [C-R] powered supernova source would exceed those energy levels available to accelerate protons due strictly to a fusion reaction.

One additional easy prediction from the C-R theory would entail finding multiply-ionized ions in the ejected remnants. I have read of Fe^{+23} ions discovered by their spectra. Observers would also notice nitrogen, oxygen, and other ions with multiple levels of ionization.

Notice: The C-R theory does not forbid that any fusion occurs, or require that fusion plays no part in the nova or the supernova reactions. What the C-R theory expects is that any fusion reaction in a supernova occurs as a side product, not as the root cause of the nova-supernova phenomenon. The final mix, or proportion of elements measured in the output, is not nearly as sensitive for the C-R theory as for the fusion-caused supernova. If there was a large amount of positive ions encountered this should justify the C-R theory, but would be an unexpected inconvenience for the fusion-caused supernova to explain.

Supersymmetry:

The concept of Supersymmetry hopes to relate all of the known forces, as well as all matter and energy into a unified, understandable system.

The basic assumption is that all four forces[1], and all matter and energy emerged together from a common origin, at one time. The properties of the universe at this origin were so energetic, compact and dense that this would allow the four forces to be equivalent and equal in strength at that time. As the universe cooled and expanded, the symmetry between the four forces froze out, or became hidden in seemingly everyday realities.

Supersymmetry seeks to re-establish or at least detect (guess) the relationships which existed between the four forces.

---

[1]The four forces are gravity, electromagnetism, the strong force and the weak force. Gravity is infinite in range, and attracts matter throughout the entire universe. Electromagnetism is also infinite in range, but usually affects charged matter nearby. The strong force is what binds the protons and neutrons to the nucleus. The weak force affects the breakdown of the nucleus, and other low-probability events. Both the strong and weak forces
are very limited in their effective ranges. With shorter distances, the strong and weak forces become very powerful.

Supersymmetry also seems to predict that there will be entire families of exotic and very massive particles, corresponding to a more energetic and massive generation in the particle families.

Another prediction from the supersymmetry theory is that the proton should decay. The basic lifetime of this particle, which had been assumed to be stable, would have to be over 10^{31} years. Experiments which have been running recently have disproved this hypothesis. The half-life of the proton must be significantly greater than the first attempts of Supersymmetry seem to allow.

See symmetry also.

Symmetry:

The property of symmetry is that, in one or more directions, any action or interaction will occur equally, whether to the right or to the left (or up and down, backwards and forwards, in and out.) A reflection of that image will appear to behave the same as the original object would in the same situation.

The property of symmetry need not be valid in all directions, only in certain preferred directions. For instance, with a typed "O", the O would have the same properties and shape if it were reflected or rotated 180 degrees on it's X axis, its Y axis or its Z axis, as measured from it's exact center.

If we offset the "O" at some distance from the center, such as standing on top of the X axis, the object shape remains the same after a complete rotation, but the position of the "O" would be affected. From the sense of shape, we would say symmetry was upheld, but from the same criterion, we would say that position would not be symmetrical with a 180 degree change. For an object resting on the X axis, a 360 degree rotation would bring both the object and the position back into it's original position and location.

If we were to place an equilateral pentagon centered on a point, we could rotate the pentagon clockwise or counterclockwise in increments of 72 degrees, and it would be restored to its equivalent original shape and position. Rotating the pentagon on some axis other than a clockwise-counterclockwise direction, would not restore it to it's original position and location.

We could say that the symmetry of the original was lost, or disguised when the shape or position of the original object was found to be changed at it's final resting position.

In a somewhat similar way, everyday events which don't appear to be symmetrical, such as pushing a car to the right or to the left, and also uphill and downhill, will not produce apparently symmetrical results. If the car, and the hill were located on a merry-go-round, so that with a 360 degree rotation of the merry- go-round or of the car in a circle, then the "hidden symmetry" of this situation could be observed. In this way, from the initial description of the event, the underlying symmetry could be disguised, and hidden in a temporary situation which looked like symmetry had no bearing on this particular event.

In the same way, scientists have speculated that symmetry may play a greater role than we humans have heretofore expected or even imagined. Some have speculated that the four basic forces were joined, at some great and distant time in the past, and that the inherent simplicity and symmetry of the universe was obvious for all to see. As the universe expanded and cooled, the situation became more complex, and the symmetries

between the four forces disappeared, hidden in the apparent complexity of our current, low density, low energy, vastly expanded universe.

By contemplating matter and energy in densities and energies presently, if not forever, outside our grasp, scientists hope to find clues which will reveal some of the suspected underlying symmetry. See the description for Supersymmetry, too.

T:

Time: (Some important new content added 2006)

The C-R theory has something different from other theories to say about time. Einstein figured out that time slows down in a gravitational field. The C-R theory takes this one notion further, and states that it is this difference in the rate of time, and the difference in the "quantity" or value of energy which "keeps the books" -so to speak- on the energy contained within a mass in a gravitational field. This is a newly realized, or embraced concept for 2006.

The C-R theory predicts an overall reference frame, superimposed over matter in this universe. Contrary to the theory of relativity, which needs space to be isotropic, or identical in all directions, the C-R theory now claims that this universe IS the inside of a giant-sized Active Zone [C-R], inside a universe-sized Black-Hole [C-R].

The center, defined as the least slowed-down place in this universe, will be the most blue-shifted with respect to earth (and everywhere else, too). The area is known as "The Great Attractor", but ironically, is not attracting anything!! Rather, this center of our universe represents the minimum gravitational curvature, the minimum slowdown, and also the highest energy (most active) place in the universe.

We on earth are further out from the center, somewhat more slowed-down, but less slowed down than everywhere else further from the center. Those areas can be identified by their increasing red-shift.

Eventually, further out, we on earth see objects red-shifted by 90-95%. Ultimately, we measure the 2.7K residual temperature, virtually identical from all directions.

Conventional theory maintains that we see all these far-out, red-shifted items, nearly identical from all directions, because the universe is expanding rapidly and evenly, everywhere. The C-R theory claims that, instead, the red-shift is caused by a gravitational time-slowdown, with, possibly, no contribution from recessional speeds.

It is possible, our universe might be much closer to the mid '60's version of the steady state universe (but without any required expansion), with all the red-shift caused by the highly-curved, lower energy nature of matter residing nearer the inner Schwarzschild radius, at the outer edges of our universe.

A new idea, unique to the C-R theory (to the best of my knowledge), is the realization that, at the outer edges of our universe, matter is already at LOWER energy values there. This means that, this matter CANNOT collapse inward WITHOUT gaining energy. This concept is so foreign to our thinking, and so contrary to what we've always been taught, that I (the author) do not expect you, (the reader), to believe it upon first hearing or reading about it.

Another new realization for 2006, if we could transport 1 kg of lead (or any other mass) from earth to either the "Great Attractor" or to the vicinity of the most red-shifted

quasar, the equivalent energy value would no longer be identical. Rather, the 1 kg of lead at the "Great Attractor" would have more energy as $E=mc^2$ by exactly the same amount of gravitational potential energy we would have expended to transport (lift) the mass to there.

At the most red-shifted quasar, we would find that the energy value of $E=mc^2$ would be decreased by exactly the value of the gravitational potential energy which would have been freed "dropping" the mass to there.

Notice: Either the value of c^2 could be regarded as different at each location, in direct proportion to the gravitational energy value (i.e., the reference frame), or C-R could postulate the technical value of m changes with the amount of active time. If one "chose" to keep "c" fixed as the same value, by definition, then the mass would have to change (if energy did indeed differ. On the other hand, if one allows the value of "c" to vary with the energy value of the reference frame, it provides a very neat and convenient way of accounting for the potential energy difference for a mass in any gravitational value.

Conventional theories must somehow rely on gravity itself to provide the energy difference for matter in a varying gravitational field, if they regard space as isotropic. (The same everywhere.) Since there is no preferred reference frame, how can one account for a gravitational difference in potential energy?

The C-R theory claims that real time would "exist more" at "The Great Attractor" than here on earth, but would exist more here than at a 90-95% red-shifted quasar. We, on earth, would see red-shifted objects as younger, dimmer, slower than on earth because they actually were younger, dimmer, and slower than on earth. Conventional theories would maintain that the objects there were identical to objects here, but we were seeing them as they were, billions of years ago, also Doppler shifted because of their rapidly receding velocities.

In the current interpretation of the Cephid-variable vs. distance data, astronomers believe that not only are distant objects receding away from us, but that the objects are receding at an accelerating pace. The C-R theory would claim that, instead, the greater gravitational curvature, there, causes the full amount of the observed time slow-down. Indeed, because the time there IS NOT IDENTICAL to the time here, but is decreased by the exact value we see, that (mis)assumption is the source of the error. I would predict that the notion of the expanding expansion will disappear completely if the difference in real time is accounted for.

Some other ideas about time

Of all of the curiosities in the Universe, time is the most baffling. Einstein used time as something like a fourth dimension when considered in a diagram with the other three dimensions. In theory, the rate, or flow of time is different for almost all observers. Practically speaking, in most instances near earth, the differences are infinitesimal.

The reference frames of time can flow at different rates for different observers, depending on their speed, and on their location in a gravitationally curved field. The notion of time is familiar to us all, but describing how time works, or how we perceive the passage of time, is yet another task.

Physicists right now don't know what causes time, when or if time began, or if it always existed somewhere. Other than relating time to some phenomenon occurring at the speed-of-light, for the best accuracy, very little is absolutely known. Physicists don't

know whether there is a minimum interval of time, below which time would be undefined.

Recent developments in superstrings and the T.O.E., or theory of everything may suggest that more dimensions exist than are readily apparent to the eye. If these dimensions, rather than being macroscopic, or big enough to see, were sub-microscopic, and curled up, could represent the reason certain cosmic constants recur regularly. Any hidden dimensions may even hold a clue to the nature of time itself.

If multiple dimensions are curled up, somewhat like an incandescent lightbulb filament of tungsten thread is curled up, then curled up in loops, then curled up in larger loops, the mystery of certain preferred constants may be explained.

The sub-atomic reoccurrence of Planck's constant, the speed of light, c, and the values of atomic spin, electric charge, and the reason for identical properties in sub-atomic particles may all be explained as "resonances" or "oscillations" or "vibrations" of combinations of these loops. Our notions of time itself might even change if time becomes grainy, or choppy.

The presumption is that, at 10^{-35} meters or so, which is defined as the Planck distance, time, distance, and continuity may all lose their smoothness. There may be a minimum definable distance or a minimum measurable time. There simply would be nothing we could ever use to define or measure anything smaller if these "building blocks" behaved as blocks, or chunks. Since no interactions could be quicker, or distances shorter, and no smaller intervals could be measured, the absolute limits of knowability would be reached.

There has been a proposal that if time really comes in measurable packets, these be referred to as chronons. This would represent the minimum measurable amount of time. The chronon of time would roughly be equivalent to the photon as the minimum possible measurable amount of energy (ight).

At this scale, a 1 or a 0 would be all we could tell, full or empty, yes or no. With nothing smaller to measure with than another similar object, comparisons would be limited. Comparatively, we could use an analogy as an on-off switch half-on, or less than fully on. The increase in precision over a pure yes/no, on/off choice would yield no understandable information.

Tunnelling:

In quantum mechanics, tunnelling is the standard mechanism that a particle uses to escape (travel) from one energy level, through an area (or forbidden barrier) of higher energy back into a lower energy area. This will occur even if some zone located in the pathway has yet higher energy, representing a barrier to the particle. (In classical mechanics the barrier would have been impossible to surmount, or forbidden to cross.)

The basis for tunnelling is this: The Schroedinger equation predicts the probability that a particle can be found in a certain location, or that the particle will have a certain energy level. Over a given period of time, that probability is high enough that the particle can tunnel out of a trap, even though the particle had insufficient energy by the classical mechanics physics theory to overcome that trap.

In another, equivalent way of describing and understanding the tunnelling phenomenon, the wave/matter duality of a particle comes into play. The particle could be

thought-of, instead, as an energy-wave packet, at resonance. The particle would be described something like a cloud of mist, but composed of energy. The energy would be continually resonating in some preferred directions {orbitals}, re-enforcing the zone-like or shell-like (lobes) presence of the energy.

The energy-mist cloud could be said to occupy a preferred orbital, either circular or mostly in one direction. Like a cloud of mist, this energy would have no definite shape or solidity, but could be pulled, pushed, or tugged by nearby neighbors.

The probability that the particle (electron-cloud) must exist is always 100%. Physically, the particle-cloud is spread out over time. We could say at some moments, the matter-energy-cloud could reside far enough away from it's supposed location that it could tunnel away, through a barrier.

Effectively the particle behaves like the present location where it is supposed to exist is next-to or connected to a lower energy location. The particle tunnels right through whatever barrier existed as if the barrier was not present. (Always at less than 100% efficiency.)

Note that the barrier in this case was also composed of real matter-energy. This barrier also has a nature so that at very small wavelengths, it too behaves like it is fuzzy or indefinite at times.

In electronic circuits, tunnel diodes do exist, and that they are useful in circuits where the tunnelling effect is exploited. In addition, modern transistor and I.C. chips use these same quantum barrier tunnelling effects to accomplish their modern electronic tricks.

The C-R theory has no problem accepting or using the above mentioned type of atomic-scale tunnelling. C-R does, however find that some modern cosmologies distort the use of tunnelling in such a way as to elicit the proverbial question "Are you sure that the Emperor has on his new clothes?"

By the C-R theory, tunnelling cannot provide an adequate explanation for most of the expected black hole (non C-R) effects found in the universe. The barriers are millions, billions, trillions,... of times thicker than the “real world” barriers of a few atomic widths.

See chapter 13, page __ for the best description of why the C-R theory feels that this tunnelling hypothesis will create more problems than it will solve. Briefly, C-R believes on a macroscopic[1] level, any reduction in strength (or quantity) by tunnelling of gravitons or other particles from the singularity will violate conservation of energy.

U:

Ultraviolet Catastrophe:

The ultraviolet catastrophe was the theoretically predicted result, in the early

---

[1]For arguments sake, the C-R theory will define macroscopic as anything over 100 atomic widths. Certainly macroscopic would qualify for black holes (non C-R) with the outside Schwarzschild radius over 1 km. in diameter. To suggest atomic scale tunnelling could be valid over these distances stretches credulity.

1900's of the collapse of everything into something close to a singularity. Maxwell's equations predicted that a single electrical charge which was moving should radiate away energy continuously. On that basis, the electron orbiting the hydrogen atom at the "s" orbital, at absolute zero, should have collapsed into the proton within 1/5 of a second.

This should have caused everything in the universe to collapse.

Quantum mechanics "rescued" everything in the universe, theoretically speaking, by recognizing a "new nature". By requiring energy to be emitted in packets, or quanta, this quantum nature allowed the hydrogen atom (and all other matter in the universe) to remain stable.

As the author of the C-R theory, I freely admit that I used the example as the basis and blueprint, or role model, for how the matter inside the Black-Hole $^{C\text{-}R}$ avoids collapsing into a singularity.

V:

W:

W.I.R.D.A.R.D. Principle:

The W.I.R.D.A.R.D. principle stands for, When In Rome, Do As (the) Romans Do. The principle refers to the seemingly casual ease with which light re-adapts it's speed to whatever media it happens to be travelling through.

When light travels through water, it travels at the speed of light in water; conveniently adapted for the local temperature, salinity, and density. When light travels through air, light conveniently adapts to whatever mix of gasses and whatever temperature and pressure light would normally travel in that instance.

Since light is so easily adaptable, the C-R theory speculates that light will easily adapt to any new medium, regardless of past speed memory (if any existed.) In the famous Michaelson-Morely experiment, which was reputed to have been the experimental verification or vindication of the theory of relativity, lightspeed was carefully measured by an interferometer.

This interferometer was positioned so that it could be rotated in a full circle. The device was rotated as a candle flame was observed. The experimenters expected the candle flame's appearance to change as the device was rotated. This appearance change was expected because the experimenters assumed there was an ether, or a medium to carry the light.

Because the earth travels around the sun, Michaelson and Morely expected that this speed difference would show-up in the ether, and produce a measurable confirmation of it's existence. Unfortunately, for their part, the ether refused to cooperate and exist. The failure of the experiment to detect any difference in lightspeed in any direction, at any time of the year, night or day caused complete consternation in the world of physics.

The arms of the interferometer were at right angles to each other, and should have picked up the slightest light-speed difference, if any had existed. Experimentally, Michaelson and Morely had shown there was no difference in lightspeeds.

From this, light was interpreted to travel at only one speed in a vacuum, regardless of local motion of the observer. One interesting thing to notice: The candle itself was not

moving with respect to any portion of the interferometer. Only the motion of the earth through the supposed ether would have shown-up.

The C-R theory theorizes that the lightspeed of light emitted from distant objects may well be slowed down to whatever fraction of lightspeed the object indicates. For instance, if we have an object redshifted to only 10% of it's original time-speed (or 90% redshifted), then the object's light may only reach us travelling at 10% of lightspeed velocity.

Before the rubber jackets are brought out, and before you (our reader) remind me that, O.K., silly, everybody knows that light can only travel at lightspeed, allow a simple explanation. Legitimately, the skeptical reader will ask: if this, indeed is the case, why hasn't anyone ever measured light at any speed but lightspeed. Simple: use the C-R theory answer, the W.I.R.D.A.R.D. principle.

The W.I.R.D.A.R.D. hypothesis:

In every experiment (so far) ever performed upon light, light easily (and instantly?) adapts it's speed to whatever media it happens to be travelling through. When light travels through the glass of an aquarium, it adapts amicably to a characteristic speed for light through that type of glass. Upon entering the water, light again loses it's previous identity, and adapts to lightspeed for water, with compensations for temperature, salinity, depth, and pressure.

Upon entering any solid and transparent object (such as glass), we would expect light to re-acquire it's characteristic speed for that material. Upon exiting the glass, and returning to either air or a vacuum, this light (having a terrible memory) forgets that it ever went slow! We would expect this light to re-acquire it's characteristic speed for air, never remembering any lesser speed in a vacuum.

Assume this instant adaptability (suggestibility) of light is the correct explanation. Note well: the observed facts fit the adaptability assumption like a glove. In most instances, relativity and the C-R theory would yield the same observational experimental data when measuring lightspeeds, with entirely different causes behind each. We should notice that, as long as light passes either through glass, or is reflected off of some non-moving material with respect to us (the observer), we always would expect to measure the speed of light as EXACTLY ="c".

This re-normalization of lightspeed to exactly "c" happens entirely due to the co-incidence of light passing through some fixed, non-moving object with respect to us (as observers). C-R would expect that this re-normalization to "c" should take place even if the "c" entering the solid, fixed object was slowed-down to 10% of real lightspeed. Those "dumb" old photons, even after travelling halfway across the universe at a speed of 10% of lightspeed, would forget how fast (slow?) they really travelled, and resume "our lightspeed" as if they had travelled that speed since they were created.

The C-R vs. Relativity Challenge: Which will win?

This renormalization (to "c") of light-speed hypothesis from the C-R theory "W.I.R.D.A.R.D." suggests a simple (proverbially speaking) experiment.

We would need access to the near-perfect vacuum of outer space. We could

chop-up light using a toothed or slotted disk, to create packets of light. We would use light from a very distant, substantially red-shifted source. By performing the experiment in a nearly total vacuum, before the light was renormalized, we might be able to successfully measure a lesser speed for light.

For control purposes, we would rotate a half disc of plexiglass or glass in between the source and the chopping disk. If the C-R hypothesis is correct, when the plexiglass would serve as the control. Only during this glass-pass, re-normalized half of the time, would we expect to measure light at exactly "c".

Mandatory conclusion of this experiment:

If any velocity for light other than strictly "c" was measured (in a vacuum), we would have to set aside the theory of relativity as partially incorrect in at least one area.

Notice: The C-R theory outlook overall does not hinge on this outcome or this assumption, but a finding in the affirmative would be regarded as a definite plus.

X:

Y:

Z:

Zero time (gravity-wise)

When Albert Einstein came-up with his theory of relativity, he discovered that gravitational curvature can slow-down time in a more-curved field. That he never fully grasped that significance by applying it to the entire universe might just show how ingrained Newtonian-type-thinking is, and how hard it is to overcome ones training.

The C-R theory maintains that the action of gravitational curvature upon matter creates gravity by “squeezing-out” energy from matter. Therefore, the greater the curvature, the more energy is released from matter. Matter will “seek-out” the lowest energy configuration possible. In a Black-Hole $^{C\text{-}R}$, matter will be consumed, and at the IB^{3} Schwarzschild radius, the ultimate collapse HAS occurred. ALL the extractable energy from matter has been freed, and the mass is now at it’s lowest possible energy configuration.

The C-R theory predicts that there is a Neutral Zone $^{C\text{-}R}$ for nearly every Black-Hole $^{C\text{-}R}$.[1] This Black-Hole $^{C\text{-}R}$ is not permitted to collapse matter any further because the matter has already surrendered all of it’s available energy, and the Black-Hole $^{C\text{-}R}$’s gravity cannot have any further effect on the matter. Additionally, the Black-Hole $^{C\text{-}R}$ already has a fully critical Active Zone $^{C\text{-}R}$ at it’s center.

---

[1]The only exception will be a brand new Black-Hole $^{C\text{-}R}$ which has not yet developed it’s Neutral Zone $^{C\text{-}R}$