



The Unified-Field Model of Reality

Steven E. Kaufman

ABSTRACT

This work presents a conceptual model of reality which demonstrates that underlying what we experience as the surface phenomenon of physical reality lies a multileveled geometric relational structure composed of absolutely nothing that has become iteratively and progressively structured in relation to itself as a function of its ongoing movement in relation to itself at the speed of light. What this work also demonstrates is that it is the natural and inevitable functioning and evolution of this underlying reality structure that produces what we experience as the behavior of physical reality in general. Specifically, the model makes clear that the interrelations between space, time, energy, and matter mathematically described by Einstein in his relativity theories all exist as a function of relations which arise and exist naturally both between and within different levels of the reality structure that actually exists where we perceive physical reality to be. Evidence that this way of conceptually modeling reality accurately reflects the way in which reality is actually structured and functions, underlying the surface appearance that is physical experiential reality, is presented by using the model to consistently account for the long-sought-for connection between electromagnetic radiation and gravitation, the actual mechanism underlying gravitational attraction, the identity of the gravitational and inertial forces, and what is actually indicated when we use the term “energy.” Ultimately, what this model allows us to understand is that seemingly empty space itself, as well as every form of energy in the Universe, regardless of how that form appears as a physical reality, is actually an interaccommodative binary process composed of some form of absolutely nothing that has become dynamically structured in relation to itself as a function of its ongoing movement in relation to itself at the speed of light.

Key Words: Unified Field, Einstein, Buckminster Fuller, Reality, Model, Structure, Quanta, Energy, Space, Time, Matter, Absolutely Nothing, Speed of Light, Gravity, Inertia, Electromagnetic Radiation

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Introduction

This paper is the third in a series, the purpose of which is to provide science and, therefore, humanity with an overview of the nature of the Universe in which we find ourselves. The first paper in this series provided a solution to the mystery of quantum reality and in so doing made it clear that physical reality is a surface phenomenon which arises from a more fundamental, non-probabilistic, non-physical reality that actually exists where physical reality only appears to be (Kaufman 2018a). The second paper in this series began to define the geometric structure of this more fundamental reality by modeling it, using what was

referred to as the relational-matrix model (Kaufman 2018b). Evidence that such a geometric structure actually exists where physical reality only appears to be was provided by using the relational-matrix model to reveal the nature of both chronological time and mass, as well as to explain why both chronological time and mass exist relative to material velocity. Therefore, based on the rather substantial evidence presented in those first two papers, this third paper will proceed from the perspective and position that physical reality is the product of a relation which is occurring at the level of a more fundamental reality that underlies physical reality.

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The relational-matrix model of reality, which is basically a conceptualization of the underlying structure of this more fundamental reality, is a modification of the geometric model that was used by Buckminster Fuller to visualize how energy must be arranged and move in space as a function of the particular vector geometry intrinsic to the structure that actually exists where empty space only appears to be (Edmondson 1987). However, the structure of the more fundamental reality that underlies physical reality, and that actually exists where we only perceive physical reality to be, cannot itself be known directly either as a physical reality or as a mental reality because the underlying reality is necessarily non-experiential. Rather, the underlying reality, which exists only in relation to itself, creates and conditions what we come to know as any experiential reality. The first paper in this series demonstrated that physical reality is the product of a relation which is occurring at a more fundamental level of reality in order for any physical experiential reality to become known. Furthermore, unless and until more definitive evidence to the contrary is exhibited, it should be considered more likely than not that mental reality also is the product of a relation which is occurring at the same more fundamental level of reality in order for any mental experiential reality to become known. In other words, physical reality and mental reality, insofar as they are experiential, are not separate realities but are both products of a relation that is occurring at a level of reality which underlies them and which can be modeled as a geometric structure. Furthermore, this underlying reality is singular and, though not directly experienceable, becomes known as either physical or mental reality.

If we were to believe that the more fundamental reality must be mental in nature because it is non-physical, this belief would very likely represent falling into two slightly different versions of the same trap twice—i.e., mistaking a reflection for what is actually there where the reflection only appears to be. In this case, however, the reflection that we would be mistaking for what is actually there would be a reflection that is *mental* experiential reality, rather than a reflection that is *physical* experiential reality. Therefore, this paper proceeds from the assumption that the more fundamental level of reality is *neither physical nor mental*, because its nature is non-experiential. In other words, the geometric structure of reality cannot be known

directly as an experiential reality, because that structure is definitely more fundamental than physical experiential reality and almost certainly more fundamental than mental experiential reality and because, as has been clearly demonstrated for physical reality, experiential realities come into existence only as a function of a relation that is occurring at the more fundamental level of reality (Kaufman 2018a).

With all that having been said, the geometric structure of reality can be experienced indirectly, through the behavior of physical reality, and can be mentally represented through conceptual modeling. Even though physical reality is not what is actually there, physical reality is not unrelated to what is actually there, inasmuch as physical reality is the product of the more fundamental reality coming to exist in relation to itself (Kaufman 2018a). Thus, owing to the way in which physical experiential reality is created, physical reality exists as a sort of etching that has been created by using the more fundamental reality as its basis, and as a result physical reality functions somewhat like a thin veil or reflection that covers the underlying reality, such that any movement of that veil or reflection must reflect a movement that is actually occurring at the more fundamental level of reality. Because of the relation that exists between the perceived movement of physical reality and the imperceptible movement that must be occurring at the level of the more fundamental reality, we can play a modified game of connect-the-dots in order to determine the unknown geometric structure of reality on the basis of the known behavior of physical reality. The general way in which this is accomplished is illustrated in figure 1.

As physicist Amrit Srecko Sorli has pointed out, one-to-one, or bijective, correspondence between a conceptual model and some directly observable physical behavior, as opposed to indirectly observable physical behavior, is absolutely necessary if we are to have any assurance whatsoever that the model we are using to explain observed physical behavior actually and accurately represents the underlying non-physical, non-mental reality that is producing those behaviors (Sorli 2018) (Sorli *et al.*, 2018). Specifically, if some new behavior that the model produces as a result of a new factor or feature introduced into the model can be correlated with some directly observable physical behavior or reality, this result indicates that the new factor or



feature very likely accurately represents the underlying reality which is actually producing the behavior. Having said this, the conceptual model of reality presented here fully satisfies Sorli's

bijjective requirement because each feature of the model will be correlated with some directly observable physical behavior or reality.

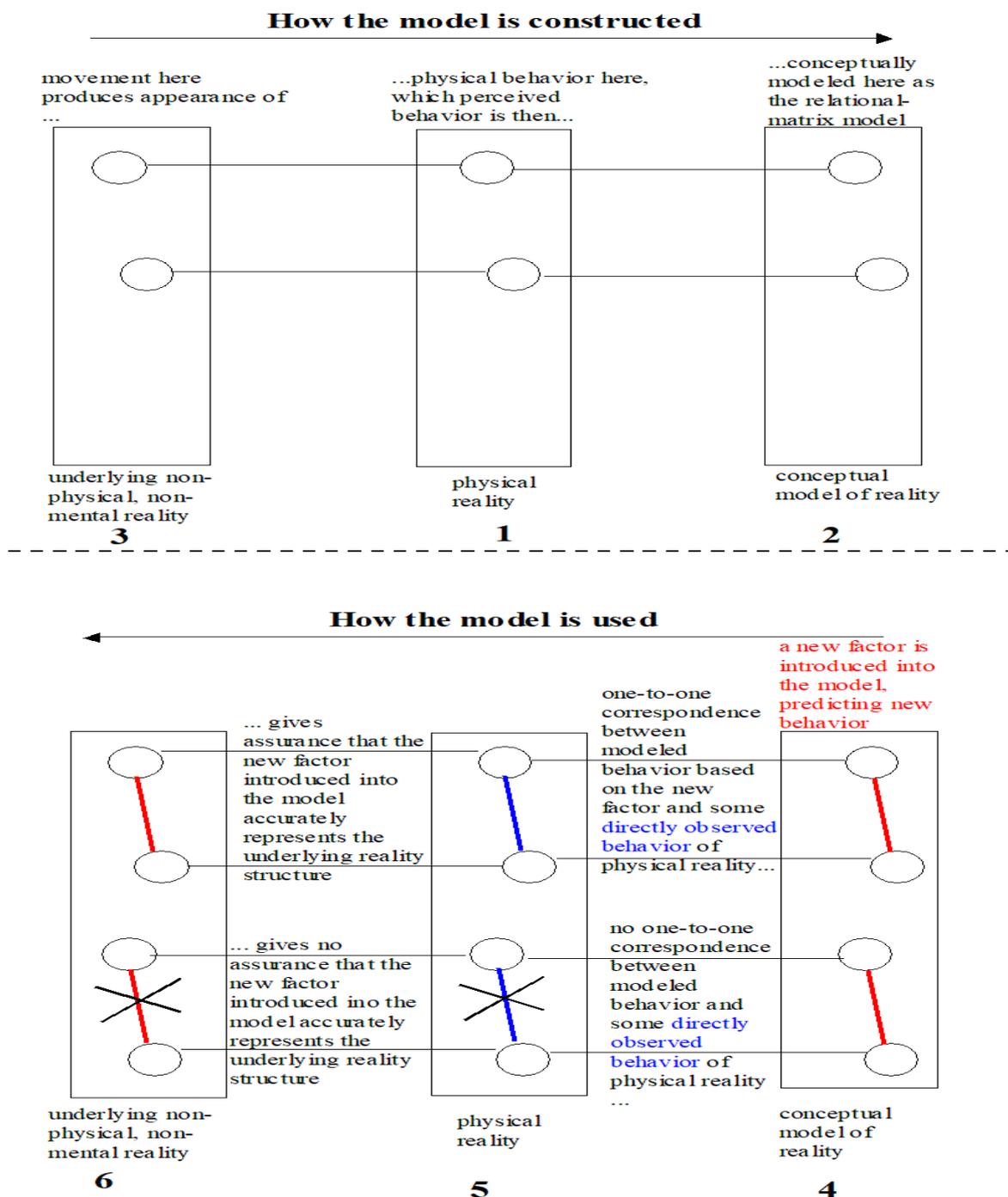


Figure 1. (Top) How the geometric structure of reality is initially modeled on the basis of known physical behaviors. Specifically, known physical behaviors (1) are used to construct a conceptual model of reality (2) that accounts for those behaviors and then is said to represent the underlying non-physical, non-mental reality (3) that actually produces those behaviors. (Bottom) How the conceptual model of reality is then used to uncover or discover additional features of the unknown structure of the underlying reality. Specifically, a new factor or feature is introduced into the model (4), and then it is observed whether the behavior that arises within the model as a result does or does not correspond to any directly known or knowable physical behavior or reality (5), thereby indicating whether or not the new feature does or does not accurately represent the underlying non-physical, non-mental reality (6).



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The goal of this series of papers is the construction of a conceptual model of reality based on directly observable physical behaviors in order to indirectly reveal the underlying more fundamental, non-physical, non-mental reality from which those behaviors actually derive. The first paper in this series established that there has to be an underlying reality, by demonstrating that physical reality as a whole can be consistently accounted for only once physical reality is understood to be a reality which is being created as the product of a relation that must be taking place at a more fundamental level of reality. While the purpose of the second paper in this series was to model and define how the more fundamental level of reality is *geometrically structured*, the purpose of this third paper is to model and define the *dynamic* that is intrinsic to this underlying geometric structure. As stated in the second paper in this series, a constant dynamic is intrinsic to the geometric structure of reality that causes *distortions of reality-cell content* to propagate through the relational matrix at the speed of light. Therefore, in order to understand how this happens, we need to understand this intrinsic dynamic. Once we understand how the intrinsic dynamic functions to produce directly observable physical behavior, we will then be in a position to both visualize and understand the connection between electromagnetic radiation and gravitation for which science has searched for so long.

Methods

How the geometric structure of reality is produced

In order to understand why the geometric structure of reality is intrinsically dynamic, we need to go deep—in fact, as deep as we can go before words become empty of meaning. In order to understand this intrinsic dynamic, we need to both ask and answer the question: *Why does anything exist?* As it turns out, this question does have an answer, and here is where everything begins.

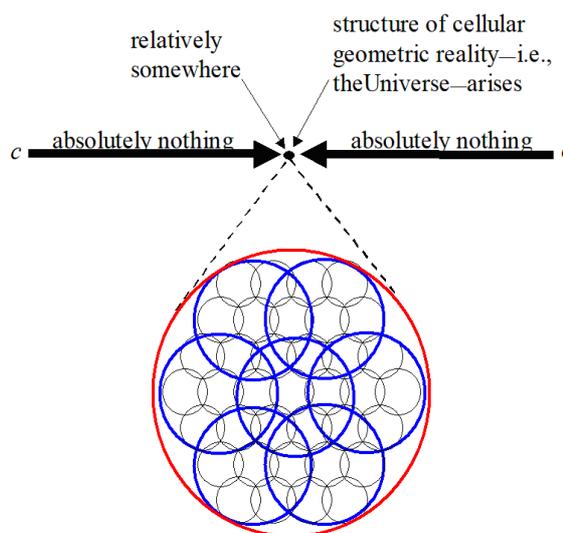


Figure 2. A depiction of the fundamental relation that produces the geometric structure of reality which underlies what we experience as the physical Universe. Absolutely nothing necessarily exists, or is, and so it also becomes inevitable that absolutely nothing will, at some *point*, come to exist or be in relation to itself. What we call the Universe is simply the *point*—i.e., relatively somewhere—at which that inevitability—i.e., the relation of absolutely nothing to itself—occurs or happens. Also depicted is the cellular geometric structure of the more fundamental level of reality that underlies what we experience as the physical Universe, which arises at the interface where absolutely nothing meets itself by moving in opposition to itself at the speed of light.

The reason why anything exists is that, at the very least, there has to be nothing, because even if we eliminate everything, what we are then left with is absolutely nothing; and even if we were able to somehow eliminate that absolutely nothing, we would then still be left with absolutely nothing. Thus, it is simply impossible to get behind or beyond absolutely nothing. Because there at least has to be absolutely nothing, absolutely nothing exists; and because at least absolutely nothing exists, all somethings can arise. To provide evidence that this is, in fact, the case, I will now describe and explain exactly how all innumerable somethings, including the Universe itself, arise and evolve solely as a function of

absolutely nothing iteratively and thus progressively coming to exist in relation to itself. Specifically, what I will show is that the geometric structure of reality which actually exists where physical reality, and so the physical Universe, appears to be, arises where absolutely nothing meets itself by moving in opposition to itself at the speed of light, as illustrated in figure 2. As was the case in regard to the first two papers in this series, evidence that points toward the correctness and accuracy of the initial postulates used to begin the development of the conceptual model of reality presented here will be found in the immense *explanatory power* that derives from the modeled behavior which those postulates produce.

What we call the Universe, reality, or space—which is actually a cellular relational structure composed of absolutely nothing that has become geometrically ordered through a process of iterative and progressive self-relation—arises relatively somewhere at the interface where absolutely nothing meets itself by moving in opposition to itself at the speed of light. Evidence that such an abstract process actually occurs to create the Universe can be found throughout the physical Universe, because the resultant reality structure is *fractal* in nature—as a result of being produced through an iterative process of progressive self-relation (Kaufman 2018b). Specifically, the physical Universe exhibits the fractal property of *self-similarity* (Mandelbrot 1967). Owing to this, geometric patterns repeat themselves throughout the reality structure, because that reality structure is produced as the result of an iterative and thus progressive process, which is the type of process that produces the geometric structures we refer to as fractals. And so, because the geometric structure of reality that actually exists where physical reality only appears to be is fractal in nature, and so exhibits the fractal property of self-similarity, we can observe this same phenomenon of a cellular relational structure arising at the interface where opposing forces meet repeated throughout the geometric structure of reality at various levels of iterative self-relation, and in so doing we can have some assurance that this is indeed the process which creates the geometric structure of reality that actually exists where physical reality only appears to be.

For example, just put some water in a sink and keep the faucet going, so that the water flows out somewhat forcefully, and then observe the cellular relational structure that emerges at the

interface where water meets water. However, perhaps the most dramatic evidence of this fractal pattern repeating itself within the geometric structure of reality is our own existence as organic and thus cellular beings on the surface of the planet Earth. Specifically, at the relatively thin interface where the energy of the Sun meets the energy of the Earth at the Earth's surface, the cellular relational structure that we call organic life emerges. Thus, the very emergence of life on Earth repeats, at a higher level of iterative self-relation, the pattern that is the emergence of a cellular relational structure at the interface where force meets force. This same pattern is then repeated at an even higher level of iterative self-relation within the patterns of organic structure, specifically in the process of organic sexual reproduction, whenever the force of female meets the force of male and a new organic cellular structure is created. Thus, the very process by which organic structures give rise to new organic structures through sexual reproduction is a fractal repetition, at a much higher level of iterative self-relation, of the same process by which the Universe itself arises as a cellular relational structure.

At present, however, our only concern is how absolutely nothing meeting itself while moving in opposition to itself at the speed of light produces the first three levels of the geometric structure of reality that underlies what we perceive as the physical Universe—i.e., the first three levels of reality that correspond to what we physically perceive as space, radiant energy, and matter, respectively—as well as the underlying dynamic that is intrinsic to that structure.

The reason why absolutely nothing meeting itself by moving in opposition to itself at the speed of light produces the geometric structure of reality is that *at each point*—each relatively somewhere—where absolutely nothing comes to exist in relation to itself, a *duality dynamic* is created, with each opposing pole of absolutely nothing simultaneously penetrating and allowing—i.e., interaccommodating—the other pole, because those poles are perfectly matched and ultimately are the same identical reality. Although the direction of motion of each pole of absolutely nothing may be opposed or seemingly dual, that which is moving in opposition to itself is singular, because that which is in motion is the same absolutely nothing. Thus, it doesn't matter that what is opposing itself is absolutely nothing, because “something” still



happens as a result of that opposition, and the “something” that happens is the geometric structure of reality emerging relatively somewhere at the interface where absolutely nothing meets itself by moving in opposition to itself at the speed of light.

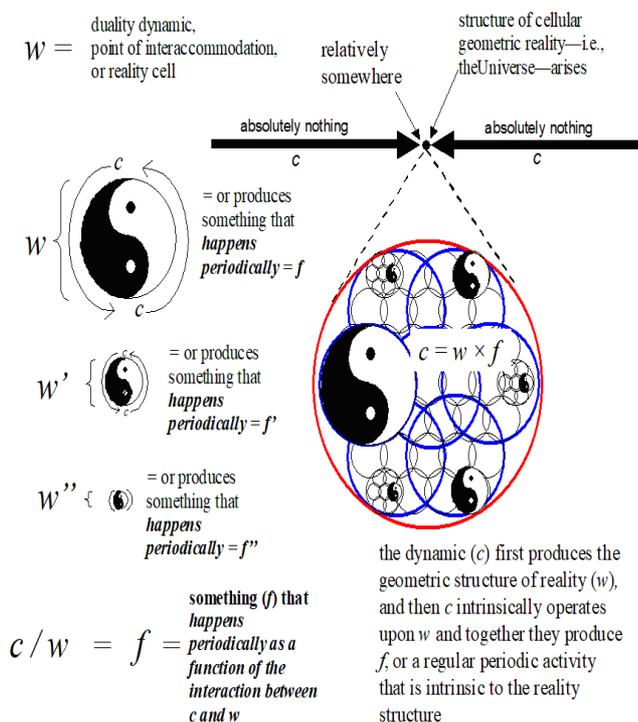


Figure 3. How the self-oppositional motion (c) that produces the geometric reality structure also functions as a dynamic that is intrinsic to that structure, according to the equation $c = w \times f$, where c is the speed-of-light constant, w (wavelength) is the reality cell size, and f (frequency) is the periodicity with which something happens within the reality structure as a function of the interaction between c and w , which represent the *dynamic* and *structural* aspects of the reality structure, respectively. The duality dynamic produced at each point relatively somewhere within the interface where absolutely nothing meets itself by moving in opposition to itself at the speed of light is depicted by the well-known yin/yang diagram, because to use any other drawing or image to depict this duality dynamic, when one so appropriate already exists, would simply be absurd.

The emergent geometric structure of reality can be represented by a *cubic-close-packing arrangement of spheres* because this particular arrangement of spheres represents every point of interaccommodation that comes into existence at the interface where absolutely nothing meets itself while moving in opposition to itself at the speed of light. This emergent cellular reality structure is what actually exists where we perceive the physical Universe to be. Furthermore, this cellular reality structure has an intrinsic dynamic as a function of the fact that the reality structure is essentially composed of a particular arrangement of points of absolutely nothing which are

continuously interaccommodating each other at the speed of light, as illustrated in figure 3.

Figure 3 illustrates that regardless of the size of the reality cell or point of interaccommodation in question, the interaccommodative motion implied by the yin yang diagram is occurring at the speed of light. Again, this is because every duality dynamic, point of interaccommodation, or reality cell is composed of two poles of absolutely nothing interaccommodating each other as they meet by moving in opposition at the speed of light. Figure 3 also illustrates that the mathematical equation or statement $c = w \times f$ —where c is the speed-of-light constant, w (for wavelength) is the reality cell size, and f (for frequency) is the periodicity with which something happens within the reality structure as a function of the interaction between c and w —which is a more general form of the equation $c = \lambda \nu$ used to describe the relations intrinsic to radiant energy—is most fundamentally a statement that describes a relation which exists between the structural (w) and dynamic (c) aspects of the geometric structure of reality, as those aspects interact to produce an event or happening that occurs with regularity or periodically (f) within the first level of the reality structure. Thus, the equation $c = w \times f$ concisely represents the underlying geometric structure of reality as a constant ongoing relation between its intrinsic structural and dynamic aspects.

Understanding how and why f is produced as a function of the interaction between c and w within the first level of the reality structure is the key to understanding why distortions of reality-cell content propagate through the relational matrix at the speed of light, and so is the key to understanding how what we physically perceive as energy moves through space. As described in the second paper in this series, what we physically perceive as energy is actually, at the more fundamental level of reality, a *distortion of reality-cell content* that is propagating through the reality structure at the speed of light (Kaufman 2018b). Also, understanding how f is produced by the interaction between c and w within the first level of the reality structure gives us a glimpse into the process of iterative and progressive self-relation that produces the multileveled relational structure which actually exists where we perceive physical reality to be. Therefore, before we can identify and describe just what is occurring within the first level of the reality structure, as represented by f in the equation $c = w \times f$, we need to examine in detail



how the first two iterations of the process of progressive self-relation produce the geometric structure of reality.

To review, iterative processes—i.e., those that produce fractals—involve feeding back whatever the process produces into the process itself to produce another product, which then is fed back into the process to produce another product, and so on *ad infinitum*. Therefore, the process of iterative and progressive self-relation that is occurring within absolutely nothing as it evolves into the Universe begins with absolutely nothing meeting itself by moving in opposition to itself at the speed of light (c), to produce a geometric structure composed of reality cells, or points of interaccommodation, of various and related sizes (w). The creation or production of w by c represents the first iteration of the process of progressive self-relation within absolutely nothing as it becomes, through its self-oppositional motion, the multileveled relational structure that underlies what we perceive as the physical Universe. This first iteration can be summarized by simply stating that an ongoing self-oppositional movement (c) produces and sustains a point-based, or cellular, geometric structure (w).

However, once that cellular geometric structure (w) exists, a new way in which absolutely nothing can exist in relation to itself then becomes possible. The new way in which absolutely nothing can exist in relation to itself is that, once w exists, c can then exist in relation to w . This relation of c to w is then the second iteration of the process of self-relation. What this second iteration produces is f , or a regular periodic activity that is intrinsic to that cellular geometric structure. In other words, the same movement or dynamic (c) that produces the geometric or cellular structure of reality (w), is now able, once that structure exists, to act or operate upon that now-existent structure from within that structure, through the duality dynamic of which each reality cell is composed, and in so doing produces a periodic process (f) that occurs within that structure.

What has just been described as the first two iterations of the process of self-relation is the basic pattern of movement that absolutely nothing has continuously followed as it iteratively and progressively evolves into the Universe in which we find ourselves. First, absolutely nothing comes to exist in relation to itself and as a result produces a relational structure—which we physically perceive as space—that consists of

absolutely nothing meeting itself by moving in opposition to itself. Once that relational structure has been produced, and because it now exists, absolutely nothing is then able to exist in a new relation to itself and as a result produces a new relational structure—which we physically perceive as energy—that also consists of absolutely nothing meeting itself by moving in opposition to itself. Again, once that relational structure has been produced, and because it now exists, absolutely nothing is then able to exist in a new relation to itself and as a result produces an even newer, more highly iterated relational structure—which we physically perceive as matter—that also consists of absolutely nothing meeting itself and becoming even more progressively structured by moving in opposition to itself. On and on it goes, and where it stops nobody knows, because it doesn't stop anywhere—because if the movement and process being described here was not continuously ongoing, there would be no Universe or us within it because, as I am explaining here, the entire Universe consists of absolutely nothing coming to exist in relation to itself through the iterative and thus progressive structuring of its ongoing movement in opposition to itself.

To summarize, the reason why the equation $c = w \times f$ applies is that it mathematically represents the most fundamental relations of the geometric structure of reality to itself—i.e., the interaction between its dynamic aspect (c), its structural aspects (w), and the periodic process (f) that emerges as a function of a relation that exists between its dynamic and structural aspects, following two iterations of the process of self-relation. Thus, what f represents in the equation $c = w \times f$, as it pertains to the first level of reality, is a periodic process or happening that emerges within the structure of reality, as a feature of that reality, as the product of the second iteration of the process of progressive self-relation that absolutely nothing is undergoing as it evolves into, and so becomes, the structure of reality.

Now that the way in which f emerges as a feature of reality has been explained, the periodic process within the structure of reality that f represents in the equation $c = w \times f$ —as that equation pertains to the first level of the geometric structure of reality—will now be identified as the *periodic exchange of reality-cell content* that continuously occurs between adjacent reality cells of the same size. As described in the second paper in this series, patterns of reality-cell content can be either uniform, maximally distorted, or less



than maximally distorted (Kaufman 2018b). Any perceived or inferred movement or propagation of any type of energy through the reality structure is basically a function of the underlying periodic exchange (f) of distorted reality cell content, as dictated by the dynamic (c) and structural (w) aspects of the reality structure, as represented by the equation $c = w \times f$. What we physically perceive as energy is actually, at a more fundamental level of reality, a propagating distortion of reality-cell content of either the maximal or less-than-maximal type. If the second iteration of the process of self-relation did not produce a periodic exchange of reality-cell content, the equation $c = w \times f$ would not apply because there would be no term f . However, because the second iteration of the process of self-relation involves an interaction between c and w , that interaction produces a periodic exchange of reality-cell content patterns, and so produces f , as illustrated in figure 3.

Now that the term f in the equation $c = w \times f$ has been identified as representing the periodic exchange of reality-cell content, we are one step closer to being able to understand the connection between electromagnetic radiation and gravitation. Before we can begin to define that relation, however, we need to understand both what a *uniform* pattern of reality-cell content is and what a *distorted* pattern of reality-cell content is. Additionally, we need to understand how distorted patterns of reality-cell content propagate through the reality structure as a function of the periodic exchange of reality-cell content (f) that is intrinsic to that structure.

Uniform versus distorted patterns of reality-cell content

In order to understand the difference between a uniform and a distorted pattern of reality-cell content, it will be helpful to continue to trace the evolution of the reality structure through the next two iterations of the process of self-relation that absolutely nothing undergoes as it meets itself by moving in opposition to itself at the speed of light. To review, the first and second iterations of the process of self-relation produce an intrinsically dynamic cellular geometric structure, as represented by the equation $c = w \times f$. However, during those first two iterations of the process of self-relation, no distortions of reality-cell content exist—i.e., no distorted patterns of reality-cell content exist—because all the reality cells have an identical and thus uniform content pattern, and so only that uniform content pattern is initially being

exchanged through the periodic process denoted by the term f . The duality dynamics, or points of interaccommodation, that spontaneously arise everywhere within the reality structure all have the same orientation, having all been produced by the same identical process, which is the first two iterations of the process of self-relation, represented by the equation $c = w \times f$. The general orientation of each duality dynamic as it exists within any particular reality cell is depicted in figure 3 by the direction of spin or motion implied by the yin/yang diagram, which can be visualized as either clockwise or counterclockwise. For the purposes of this discussion, the *uniform* orientation of the duality dynamic that initially exists within the geometric structure of reality after the first two iterations of the process of self-relation is depicted by a *counterclockwise* orientation of the yin/yang diagram.

As already described, the second iteration of the process of self-relation produces a periodic exchange of reality-cell content but no distortions of reality-cell content, which are produced only during the third iteration of the process of self-relation. In other words, once the geometric structure of reality comes into existence as a result of the first two iterations of the process of self-relation, it is inevitable that this now-existent reality structure will at some point come into further relation with itself, because all indications are that *once anything exists, it will necessarily come to exist in relation to itself*. Specifically, distortions of reality-cell content are produced when the reality structure produced by the first two iterations of the process of self-relation then itself undergoes a process of self-relation—i.e., is itself subjected to the inevitable force of self-relation. Specifically, the way in which the geometric structure of reality is able to move in opposition to itself is through a *reversal* of the orientation of the duality dynamic, or of the direction of interaccommodation, at some point within that structure.



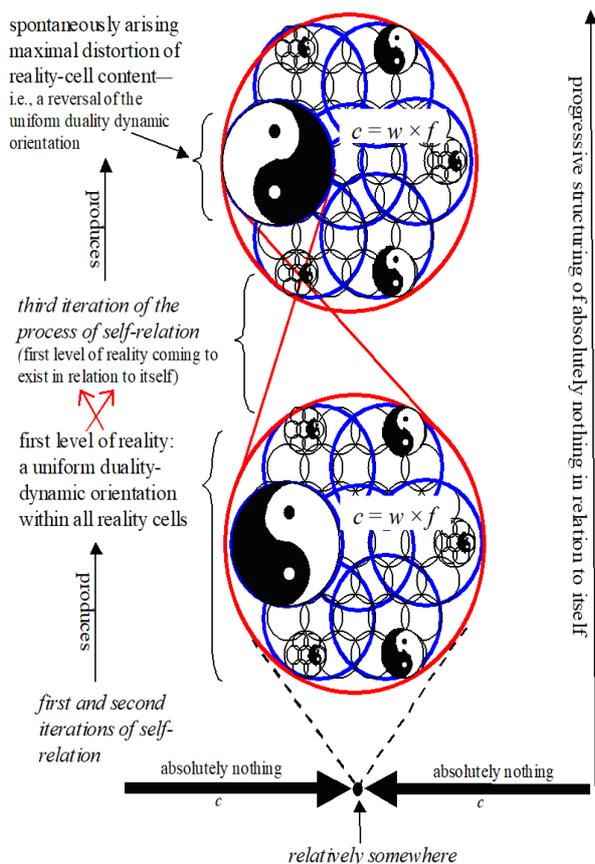


Figure 4. How a reversal of the uniform pattern of reality-cell content spontaneously emerges or arises within the reality structure as a product of the third iteration of the process of self-relation, which involves the reality structure produced by the first two iterations of the process of self-relation coming to exist in relation to itself. In so doing, the reality structure becomes, in effect, twisted upon itself, here denoted by the crossing or intersecting red lines drawn between the reality structure as it exists after the first and second iterations of the process of self-relation (bottom), and as it exists after the third iteration of the process of self-relation (top). Such a reversal of the uniform pattern of reality-cell content is designated a “distorted pattern of reality-cell content,” a “maximal distortion of reality-cell content,” or a “distorted duality dynamic.”

This distortion of reality-cell content places the reality cell that contains a reversed duality dynamic in an *opposite relation* to the rest of the reality structure. To some degree, the emergence of this distortion of reality-cell content is analogous to taking an immensely large rubber band and then at one end making the smallest twist possible, so that a relatively tiny part of the rubber band then exists in an opposite relation to the rest of the rubber band. As illustrated in figure 4, such distortions of reality-cell content emerge or arise naturally and spontaneously, as a product of the third iteration of the process of self-relation that occurs naturally and spontaneously within absolutely nothing as it evolves into, and so creates, the multileveled geometric structure of

reality that underlies what we perceive as the physical Universe.

Because the distorted patterns of reality-cell content that emerge or arise naturally and spontaneously within the reality structure as products of the third iteration of the process of self-relation all consist of reality cells that have a duality-dynamic orientation that is the opposite of the uniform duality-dynamic orientation, each of *those distortions is a maximal distortion* of reality-cell content, which was defined in the second paper in this series as a pattern of reality-cell content that is the exact opposite of the uniform pattern. However, once a maximal distortion of reality-cell content has been produced in this way, that maximal distortion does not exist independently but as a pattern of reality-cell content within an intrinsically dynamic geometric structure that functions to exchange patterns of reality-cell content between adjacent reality cells of the same size, represented by the term *f* in the equation $c = w \times f$. Therefore, any maximal distortion of reality-cell content that spontaneously emerges within the reality structure must propagate through that structure as a function of the intrinsic structural and dynamic aspects of that structure. In other words, once the third iteration of the process of self-relation has occurred, and once a maximal distortion of reality-cell content emerges or arises at some point within the relational matrix or reality structure, that maximal distortion of reality-cell content then behaves in accordance with the underlying dynamics of the reality structure out of which it has emerged and within which it exists, as represented by the equation $c = w \times f$, resulting in a particular distorted pattern of reality-cell content propagating through the reality structure at the speed of light (*c*).

However, although the distortions of reality-cell content that inevitably, naturally, and spontaneously emerge within the reality structure as a product of the third iteration of the process of self-relation first emerge as *maximal distortions* of reality-cell content, such maximal distortions do not then propagate through the reality structure as maximal distortions of reality-cell content but as exponentially diminishing, *less than maximal distortions* of reality-cell content, owing to the significant dilution of the pattern of maximal distortion that must occur as a spontaneously emerging, maximally distorted reality cell exchanges content patterns with the 12 reality cells of the same size (*w*) that are adjacent to it,



which themselves are also simultaneously exchanging content patterns with the 12 reality cells of the same size (w) that are adjacent to each of them, 11 of which have the uniform duality-dynamic orientation and only 1 of which has a reversed, or opposite, duality-dynamic orientation.

The reason why the “clockwise” duality dynamic that is a maximal distortion of reality-cell content becomes diluted, or less than maximal, as a function of the periodic exchange of reality-cell content occurring continuously within the reality structure, in accordance with the parameters expressed by the equation $c = w \times f$, is that this dilution is a function of the recursive nature of the reality structure, as described in the second paper in this series (Kaufman 2018b). This recursive nature reflects the fact that all reality cells, or points of interaccommodation, except for the theoretically smallest reality cells or points of interaccommodation—the dimensions of which are in some way represented by the Planck length—are composed of some fixed number of smaller reality cells. Because all reality cells, other than the theoretically smallest, are composed of numerous smaller reality cells, some of the smaller reality cells of which a larger reality cell is composed can have duality dynamics that are oriented like the “counterclockwise” uniform pattern, while others can have duality dynamics that are oriented like the “clockwise” distorted pattern, so that the larger reality cell then contains an overall distorted pattern of reality-cell content that is neither maximal nor uniform, but is instead a hybrid uniform/distorted pattern, here designated as a less-than-maximal distortion of reality-cell content, as illustrated in figure 5.

Figure 6 illustrates exactly what happens when a spontaneously arising maximal distortion of reality-cell content propagates within the dynamic reality structure in which it arises for just one cycle or period of content exchange (POCE), which is represented, for a given size of reality cell (w), by the term f in the equation $c = w \times f$.

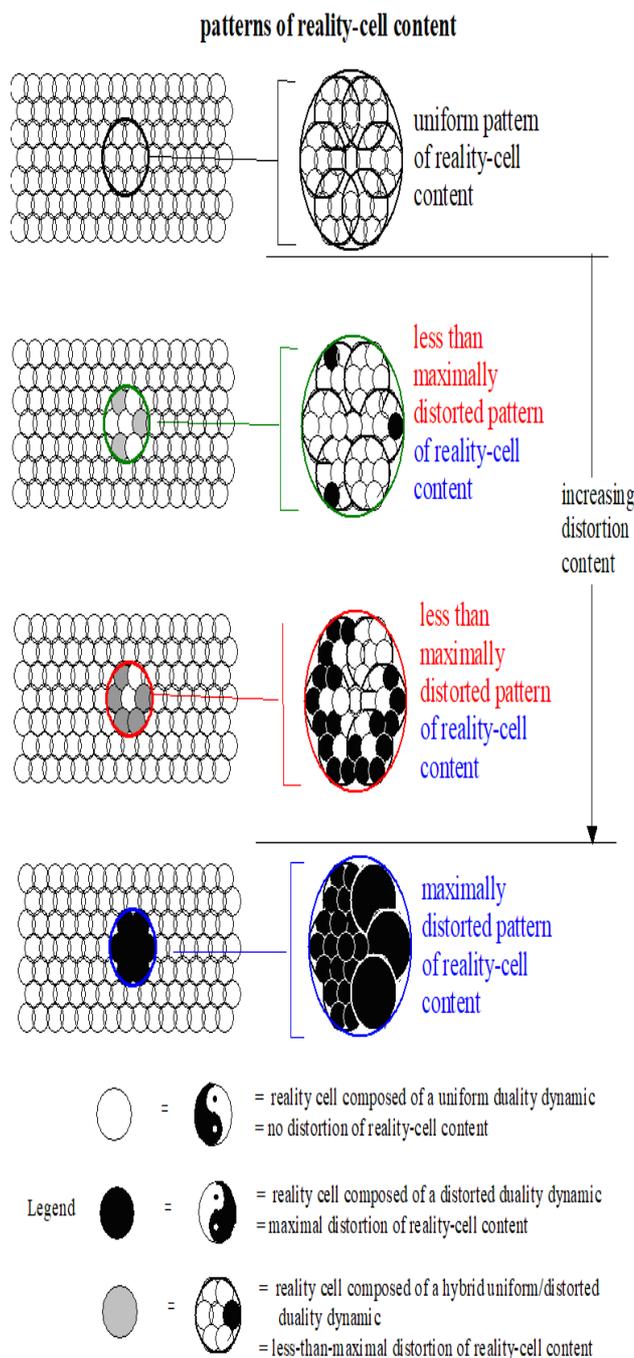


Figure 5. The recursive nature of the reality structure enables a reality cell to contain a less-than-maximal distortion of reality-cell content, even though there exist only two different duality dynamics, or interaccommodative relations—i.e., one that corresponds to a uniform pattern of reality-cell content and another that corresponds to a maximally distorted pattern of reality-cell content. Thus, since each reality cell consists of smaller reality cells, the presence of a distorted duality dynamic within any smaller reality cell, at any relational level of reality, would also represent some degree of distortion of the larger reality cell of which that smaller reality cell is a part. As shown here, a reality cell with a content pattern that is less than maximally distorted contains within itself some smaller reality cells with a counterclockwise, uniform duality-dynamic orientation, as well as some smaller reality cells with a clockwise, distorted duality-dynamic orientation, giving the larger reality cell as a whole an overall content pattern that is neither uniform nor maximally distorted but is instead less than maximally distorted.



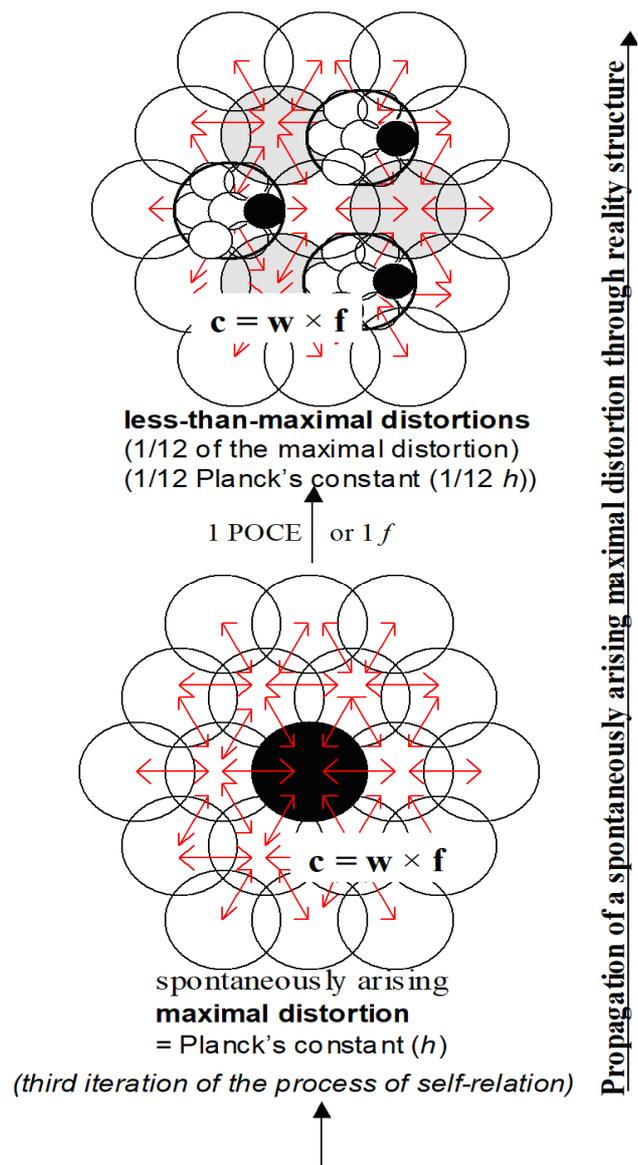


Figure 6. What happens to a spontaneously arising maximal distortion of reality-cell content, as represented by the equation $c = w \times f$, after a single period of content exchange (POCE), where $POCE = f$ for any given size of reality cell. The maximal distortion is reduced by 11/12 as it propagates into an adjacent reality cell that is exchanging content with 11 other reality cells which have only the uniform content pattern. Thus, only 1/12 of the content of the adjacent reality cells contain a distorted duality-dynamic pattern after that one POCE, giving those adjacent reality cells a hybrid uniform/distorted pattern, which is defined as a less-than-maximal distortion of reality-cell content.

Thus, after a single POCE, the spontaneously arising maximal distortion has been reduced by 11/12 as it propagates into, and so exists within, the 12 reality cells that are adjacent to the spontaneously arising, maximally distorted reality cell. Since a distorted pattern of reality-cell content has been described as what actually exists where we perceive physical energy to be, we can see here that even though the

maximal distortion has been reduced to a less-than-maximal distortion as it propagates into adjacent reality cells, as represented by the equation $c = w \times f$, there is nonetheless complete conservation of the total distortion content, and so complete conservation of that which underlies what we call energy. It's just that the total distortion content, which taken together still equals a maximal distortion and which in the second paper in this series was shown to be what is represented by Planck's constant (h), is now distributed among 12 reality cells instead of being contained within just 1 reality cell. Given that the total reality-cell content of a maximal distortion equals Planck's constant (h), we can then know that after a single POCE, the less-than-maximal distortion content of any one adjacent reality cell equals 1/12 of Planck's constant, or 1/12 h .

Things get increasingly complicated with each subsequent POCE, in terms of calculating the amount of distortion content, as a percentage of Planck's constant, in a given reality cell after each subsequent POCE for a spontaneously arising maximal distortion. Nonetheless, given the underlying dynamics of the reality structure as defined and described so far, it is clear that from the point of origin of a spontaneously arising maximal distortion, as a function of the periodic exchange of reality-cell content (f) that is intrinsic to the reality structure within which that maximal distortion itself arises, an exponentially diminishing, less-than-maximal distortion of reality-cell content will radially propagate away from its point of origin at the speed of light.

The linear-radial distortion complex

As just described, the third iteration of the process of self-relation within absolutely nothing produces both spontaneously emerging maximal distortions of reality-cell content and less-than-maximal distortions of reality-cell content, as the spontaneously emerging maximal distortions naturally propagate through the reality structure as a function of the dynamic aspect of that structure. In other words, the third iteration of the process of self-relation spontaneously produces maximal distortions directly, and less-than-maximal distortions indirectly, as the maximal distortions propagate through the reality structure as a function of the periodic exchange of reality-cell content (f) intrinsic to that structure. Since both maximal and less-than-maximal distortions of reality-cell content are produced by the third iteration of the process of self-relation, those



products are then fed back into the process of self-relation to produce a fourth iteration of that process. What is produced as the result of the fourth iteration of the process of self-relation, as the result of the stable interaccommodative relation that naturally occurs between maximal and less-than-maximal distortions of reality-cell content, is a binary interaccommodative process that will be referred to here as a *linear-radial distortion complex*, as illustrated in figure 7.

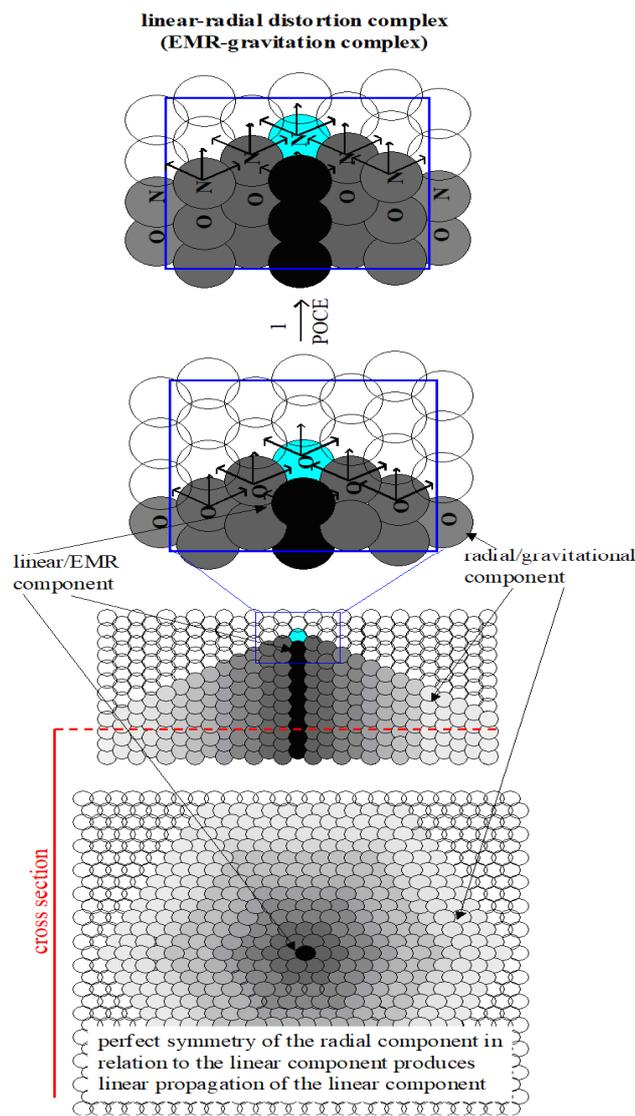


Figure 7. A linear-radial distortion complex, which is a binary interaccommodative process that emerges within the reality structure as a function of the fourth iteration of self-relation occurring within absolutely nothing. A linear-radial distortion complex (EMR-gravitation complex) forms between a maximal distortion of reality-cell content (black spheres) and adjacent less-than-maximal distortions of reality-cell content (gray spheres), such that a maximal distortion creates, with each POCE, radially propagating, less-than-maximal distortions, which in turn simultaneously re-create the maximal distortion in the next reality cell in linear progression (light-blue sphere), assuming perfect symmetry of the radial component.

As discussed in the second paper in this series, as a linear-radial distortion complex propagates through the reality structure, even though the maximal distortion content exists in only one reality cell at any one moment, in order to facilitate understanding, the figures shown here illustrate the reality cells through which the maximal distortion has previously propagated as still containing a maximal distortion. Additionally, the same convention is used with regard to less-than-maximal distortions—i.e., the reality cells are depicted as still containing the less-than-maximal distortion that they contained in a previous POCE—to facilitate visualizing the radially distributed and exponentially diminishing distortion content of the radial component. As illustrated in figure 7, the product of the fourth iteration of the process of self-relation is a *binary distortion process* composed of a linearly propagating, maximal-distortion component and a radially propagating, less-than-maximal distortion component, both of which propagate through the reality structure as represented by the function $c = w \times f$, meaning that they both propagate at the speed of light.

Note that the linear-radial distortion complex exists in the same way as the rest of the reality structure, which is as a function of an ongoing process of interaccommodation in which each pole of the binary process in question creates an environment that allows the other pole of the process to also exist, and thereby re-creates the basis for its own particular way of existing. Thus, the fourth iteration of the process of self-relation produces an interaccommodative process that occurs as a stable self-perpetuating relation between a maximal distortion of reality-cell content and less-than-maximal distortions of reality-cell content. The emergence of such a binary distortion process within the reality structure, which is itself a binary interaccommodative process, represents the evolution of the reality structure into a new level of reality with the same structural and dynamic aspects as the preceding levels of reality. In other words, the first binary interaccommodative process that results from absolutely nothing meeting itself while moving in opposition to itself at the speed of light is the geometric structure of reality itself, as represented by the equation $c = w \times f$, whereas the second binary interaccommodative process that results from absolutely nothing meeting itself in opposition to itself at the speed of light is the



linear-radial distortion complex, also as represented by the same equation.

Thus, the linear-radial distortion complex is a secondary binary interaccommodative process, or secondary relational structure, that emerges within the primary binary interaccommodative process, or primary relational structure, that is the geometric structure of reality. As such, the linear-radial distortion complex must then behave in accordance with the underlying dynamic of the reality structure, as represented by the equation $c = w \times f$, since the linear-radial distortion complex exists only as a function of the reality structure itself.

In any case, now that the linear-radial distortion complex has been identified and defined within the context of the relational-matrix model, we are able to relate the linear-radial distortion complex to what we experience physically as electromagnetic radiation (EMR) and gravitation.

The connection between EMR and gravitation

As illustrated in figure 7, the connection between EMR and gravitation is nothing else than the interaccommodative process occurring between the linear component and the radial component, respectively, of the linear-radial distortion complex. In other words, EMR and gravitation are not two separate processes but are, in fact, two aspects of what is actually a single binary interaccommodative process, with EMR as our physical experience of the linearly propagating, maximal-distortion component and gravitation as our physical experience of the radially propagating, less-than-maximal distortion component.

The second paper in this series defined the linear, or EMR, component of the linear-radial distortion complex as the linear propagation of a maximal distortion of reality-cell content at the speed of light through the reality structure, as represented by the equation $c = w \times f$. As already noted, however, the radial, or gravitational, component of the linear-radial distortion complex must also propagate according to the same parameters, since those parameters are a function of the reality structure in which all distortions of reality-cell content arise and propagate. Thus, as Einstein predicted via his calculations, what we experience as gravitation must also propagate at the speed of light, because gravitation is actually just the propagation of a different type of reality-cell distortion through the reality structure, and all distortions of reality-cell content propagate

through the reality structure at the same rate—i.e., the speed of light—as a function of the underlying dynamic (c) that is simultaneously both intrinsic to that structure and its source.

Here I will provide further evidence that the linear-radial distortion complex is the secondary relational structure, or secondary binary interaccommodative process, that actually exists where what we physically experience as EMR and gravitation appear to be. First, however, we need to consider the fifth iteration of the process of self-relation, in which the products of the fourth iteration—i.e., linear-radial distortion complexes—come to exist in relation to each other, producing the compound, or repetitively interacting, linear-radial distortion processes that we physically experience as and call matter.

The emergence of matter within the structure of reality

Once linear-radial distortion complexes arise and exist within the reality structure, as a function and product of the fourth iteration of the process of self-relation, it then becomes inevitable that, at some point, those products will themselves in some way be fed back to produce a fifth iteration of that process. Thus, the product of the fifth iteration of the process of self-relation must reflect some relation that occurs between the products of the fourth iteration of self-relation—i.e., linear-radial distortion complexes. Indeed, what we find is that the fifth iteration of the process of self-relation involves two or more linear-radial distortion complexes meeting to form a stable relation that is also repetitive and therefore periodic. Thus, the *fifth iteration* of the process of self-relation produces what will here be referred to as *compound distortion processes*, which is a third level of reality, or tertiary binary interaccommodative process, composed of two or more repetitively interacting linear-radial distortion complexes. As already mentioned, these compound distortion processes are what actually exists, at the level of the reality structure that underlies what we experience as physical reality, wherever we perceive matter to be.

Specifically, as described in the second paper in this series, what we experience as matter is the linearly propagating maximal-distortion components of linear-radial distortion complexes, as those linear components repetitively interact so as to propagate nonlinearly through the reality structure, as a function of the binary interaccommodative relation that they have



formed with each other. That binary interaccommodative relation, like all such relations, is one in which each component of the binary process creates an environment that itself sustains the relation which exists between the components of that binary process. However, as illustrated in figure 8, what we physically experience as the force of gravitation will now be shown to be none other than the radial component of the linear-radial distortion complex, as that component interacts, from the outside in, with the linear, or EMR, components of another material system.

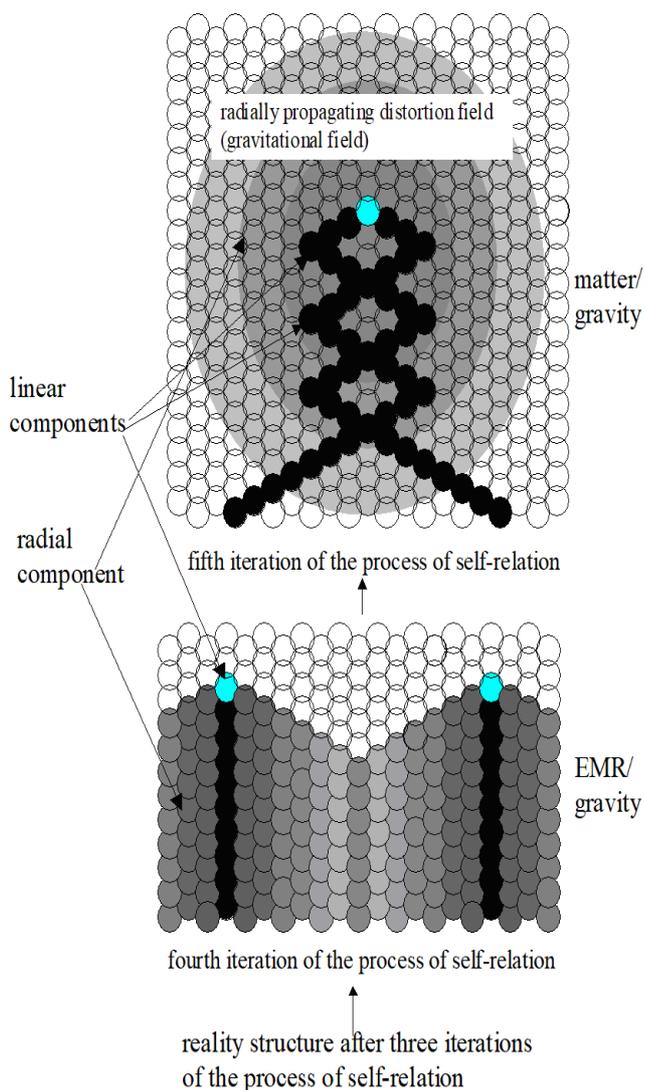


Figure 8. Two linear-radial distortion complexes (bottom) interacting to form the most basic compound distortion processes, or most basic bit of matter (top). Matter always exists in association with a gravitational field because what exists as matter is actually only one aspect of what is actually a binary interaccommodative process that is interacting to form what we physically perceive as matter—i.e., the linear aspect of a linear-radial distortion complex.

When the linear components of two or more linear-radial distortion complexes repetitively and nonlinearly interact to form the tertiary binary interaccommodative process that is a compound distortion process, the compound distortion process must, as a material system, propagate through the reality structure at less than the speed of light, while the radial components continue to propagate radially away from their point or axes of origin at the speed of light. As a result, as illustrated in figure 8, the material system becomes surrounded externally by radially propagating, exponentially diminishing, less-than-maximal distortions of reality-cell content radiated by the linear components of the material system. In this way and for these reasons, material systems always exist in association with a radially distributed, exponentially diminishing, less-than-maximal distortion field. When one material system meets such a radially propagating, exponentially diminishing, less-than-maximal distortion field radiating from another material system, that externally applied radial distortion field then interacts with the first material system as a gravitational field, or by the force of gravitation, so as to accelerate that material system.

How the radial component affects the linear component

In order to understand how an externally applied radial distortion field—i.e., a gravitational field—is able to accelerate a material system, we first need to understand how the radial component of one linear-radial distortion complex is able to interact with the linear components of other linear-radial distortion complexes, regardless of whether or not those linear components are functioning as parts of a material system, or compound distortion process. In fact, the linear and radial components of a linear-radial distortion complex are inseparable aspects of a binary interaccommodative process and as such are *mutually cocreative*—i.e., each functions to reproduce the other. As was illustrated in figure 7, *in the absence of any externally applied distortion field*, the linear component of a linear-radial distortion complex is surrounded by a less-than-maximal distortion field that is *completely symmetrical* in terms of its distribution of distortion content. However, when one linear-radial distortion complex meets the radially propagating, less-than-maximal-distortion field—i.e., the gravitational field—of another linear-



radial distortion complex, because such an externally applied gravitational field always exists in a gradient, given the exponentially diminishing way in which the radial component propagates, the linear component of the first linear-radial distortion complex is no longer surrounded by a symmetrical radial component but instead by a radial component that increases, in terms of distortion content, in the direction of the source of the externally applied, less-than-maximal-distortion gradient. Because the radial component of the linear-radial distortion complex surrounds and functions to re-produce the linear component, the radial component is no longer symmetrical once the linear-radial distortion complex meets an externally applied gravitational field, and so *the way in which the linear component is re-produced by the radial component must change*, because the linear and radial components of any linear-radial distortion complex are two inseparable, mutually cocreative aspects of what is actually a single binary interaccommodative process.

What this means is that when the radial component of a linear-radial distortion complex becomes *asymmetric* with respect to its linear component, as a result of meeting an externally applied radial distortion field, then the other aspect of that same binary interaccommodative process—i.e., its linear component—must also become in some way asymmetric, given that the two components of the distortion process—i.e., the linear and the radial—continuously reproduce each other. The way in which the linear component of a linear-radial distortion complex becomes asymmetric, as a result of the asymmetry induced in its radial component by meeting an externally applied radial distortion field, is that *its direction of propagation becomes no longer perfectly symmetrical*. How the direction of propagation of the linear component becomes asymmetric, as a result of meeting an externally applied gravitational field, is that the maximal-distortion component no longer is first re-created in the next adjacent reality cell in linear progression but instead is first re-created, and so propagates into, an adjacent reality cell that is *not* in linear progression. The adjacent reality cell not in linear progression in which the maximal distortion is asymmetrically re-created, as the result of meeting an externally applied gravitational field, is always the adjacent reality cell in the direction from which the externally applied radial distortion field is propagating. Given the exponentially diminishing way in which

the radial component propagates, the direction from which the externally applied field is propagating is always the one, relative to the linear component, in which the radial component has a greater distortion content—i.e., the direction in which lies the reality cell adjacent to the already maximally distorted reality cell that will first reach a state of maximal distortion, as the maximal distortion propagates from reality cell to reality cell, as represented by the equation $c = w \times f$.

At this point, the main thing to understand, with regard to how an externally applied radial distortion field is able to change the direction of propagation of the linear component of a linear-radial distortion complex, is that *the first reality cell* adjacent to a reality cell which already contains a maximal distortion *itself reaches a state of maximal distortion* and, as a result of the propagation of the maximal distortion into all adjacent reality cells, *then becomes the new setpoint from which the linear-radial distortion complex*, as a binary interaccommodative process, *continues to propagate* through the reality structure. Thus, owing to the introduction of asymmetry into the radial component, the propagation of the linear component of the linear-radial distortion complex also becomes asymmetric, or no longer perfectly linear, inasmuch as the distortion gradient is able to cause an adjacent reality cell not in linear progression to become the setpoint from which the linear-radial distortion complex continues to propagate, as a result of meeting an externally applied gravitational field.

Thus, the presence of relatively greater, but less-than-maximal, distortion content on one side of a linear component simply causes the reality cell not in linear progression, but in the direction of relatively greater radial distortion, to become maximally distorted somewhat *prematurely*, ahead of the adjacent reality cell that is in linear progression. As an analogy, it's as if we have two cups of coffee, of which one is already half full and the other is empty, and we simultaneously pour more coffee into each cup at exactly the same rate, so that the cup which was already half full will fill up before the other. Similarly, reality cells in a gravitational field, which is none other than a less-than-maximal distortion gradient, are like cups of coffee that have already been partially filled, so that as a linear-radial distortion complex meets such a less-than-maximal distortion gradient, the reality cells in the direction of relatively greater radial



distortion have already been relatively more “pre-filled” with distortion content than those in the direction of relatively lesser radial distortion. For this reason, as a new maximal distortion is being re-created by both the original maximal distortion and the less-than-maximal distortions, as illustrated in figure 7, it is a reality cell not in linear progression, but in the direction of relatively greater radial distortion, that first “fills up” with distortion content, so to speak, and so becomes a maximally distorted reality cell. That new maximally distorted reality cell then becomes the setpoint from which the linear-radial distortion complex continues to propagate through the reality structure as a binary interaccommodative process, according to the equation $c = w \times f$.

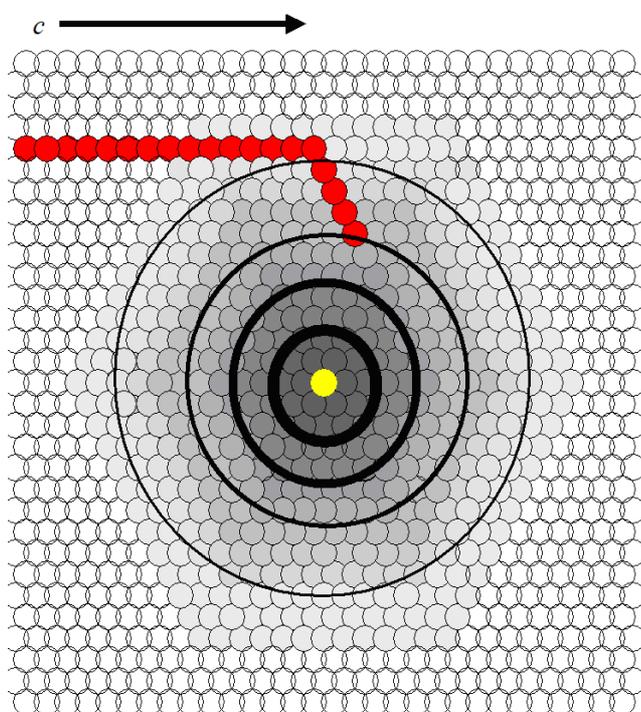


Figure 9. The functional curvature of space that is created by the radially diminishing distribution of a gravitational field around matter. (Top left) No externally applied gravitational field is met by the linear/EMR component (red) of a linear-radial distortion complex, and so it propagates through space linearly, with no bending or curvature of its path, until it meets an externally applied radial distortion field (top center), thereby introducing asymmetry into its otherwise-linear path of propagation. (Note that the radial component of the linear-radial distortion process is not shown.) Exponentially diminishing distortion content (progressively lighter shades of gray) is radially distributed around a material system (yellow), as denoted by superimposed black circles of decreasing thickness. Note that these circles do not represent any curvatures of the reality structure but only degrees of radially diminishing distortion content, as that distortion content is distributed in a radially diminishing pattern.

What has just been described is the underlying process, and the actual mechanism,

that makes light, which is basically a linear-radial distortion complex, appear to be bent by a gravitational field. Light is not bent by a gravitational field because space or the reality structure has somehow been bent; rather, light is bent in a gravitational field because by meeting such a field, the propagation of the radial component of the linear-radial distortion complex becomes no longer perfectly symmetrical, thereby changing the direction of propagation of the linear component and thereby causing the light to appear to have be “bent” by the force of gravitation. As illustrated in figure 9, gravitation causes space to appear *as if* it were curved, owing to the occurrence of radially propagating, exponentially diminishing, less-than-maximal distortions in the reality structure. The fundamental underlying structure of space, as represented by the equation $c = w \times f$, is in no way altered by a gravitational field because the geometric structure of reality, which is a binary interaccommodative process, is producing a secondary binary interaccommodative process of which the gravitational field is but one aspect or component. It is simply impossible for a binary interaccommodative process that is being produced by a more fundamental binary interaccommodative process to alter the more fundamental process that is its source, because to do so would undercut the basis of its own existence and thereby eliminate its own ability to cause any change.

The three different levels of reality being described here—i.e., the reality structure represented by the equation $c = w \times f$; linear-radial distortion complexes, or EMR/gravitation complexes; and compound distortion processes, or matter—are really just progressive processes and patterns of what ultimately is exactly the same motion, which is none other than absolutely nothing meeting itself by moving in opposition to itself at the speed of light, continuously from one level of reality to the next. Although that continuous motion may occur in a different pattern at each level of reality, as a new binary interaccommodative process emerges, no line or boundary exists where that movement can be divided or separated from itself as absolutely nothing comes to exist in a new relation to itself at each new level of reality and in so doing becomes a new, more highly iterated reality structure. The idea that a higher-order binary process could somehow change or affect a lower-order binary process that is its basis can arise only from the



delusion that the movement causing all of this to happen is somehow truly divisible from itself once it exists as a particular dynamic relational structure or in a particular binary form. Once we understand and are able to visualize that continuous movement, as it iteratively and progressively evolves into different binary forms, it becomes clear that a higher-order binary process cannot change a lower-order binary process, because any change in the lower-order binary process would simultaneously also be a change in the higher-order binary process itself, since a higher-order binary process is just a lower-order binary process coming to exist in relation to itself at a higher level of reality.

To some degree, this inability of a higher-order binary process to actually affect a lower-order binary process is like trying to strangle oneself with our own bare hands: it simply cannot be done because the undertaken action would eliminate the structure that is the basis of the action, and so the action can never be completed. For this reason, higher-order binary processes cannot in any way fundamentally alter the lower-order, more fundamental binary processes on which they depend and of which they are themselves composed. Thus, the secondary and tertiary binary processes that emerge from the primary binary process that is the geometric structure of reality cannot possibly alter that primary binary process in any way, and so cannot make space actually bend. Einstein used curved geometry simply as a mathematical convention to model the way gravity appears to function.

That a gravitational-distortion gradient can cause one reality cell to reach a state of maximal distortion faster than another reality cell, as a function of the periodic exchange of reality-cell content represented by the equation $c = w \times f$, raises the question of why light, or a linear-radial distortion complex, cannot propagate any faster than the speed of light. If a maximal distortion can be induced in an adjacent reality cell before the completion of one full POCE, and so somewhat prematurely, as the model seems to indicate, then why cannot that maximal distortion be continuously re-created in such a reality cell in the same way—i.e., prematurely—so that less “time,” or the aperiodic movement of absolutely nothing, is needed for its propagation, and so it would then, in effect, propagate faster than the speed of light (c)? The answer lies in the fact that the maximal distortion is just one component of a binary interaccommodative process, which is an inherent

function of the geometric structure of reality, in which all distortions of reality-cell content propagate and by which reality-cell-content patterns emerge in accordance with the equation $c = w \times f$. For this reason, regardless of what happens to any single reality cell, the binary process that is a linear-radial distortion complex always functions according to the equation $c = w \times f$, because that function is the only reason why the linear-radial distortion complex even exists as a binary process.

So, the presence of an externally applied, less-than-maximal distortion field is able to change the content of the reality cell in progression that first reaches maximal distortion, and so is able to change the setpoint from which the linear-radial distortion complex continues to propagate, thereby changing the direction of propagation of its linear component and thereby that of the binary process as a whole. However, that change in the direction of propagation of the linear or maximal-distortion component does not and cannot change the rate at which the linear-radial distortion complex as a whole propagates through the reality structure, or space, because that rate of propagation is solely a function of the intrinsic structural and dynamic aspects of the reality structure, represented by the equation $c = w \times f$. For this reason, gravitation can change the direction of movement of light, or cause it to appear to bend, but not cause light to move faster than the speed at which absolutely nothing is moving in relation to itself as both the cellular geometric structure of reality and as all the secondary and tertiary binary interaccommodative processes that arise or emerge within that structure. In the final analysis, all motion or change is just some type of the movement of absolutely nothing in relation to itself, which is always occurring at the speed of light. *As described here, what we call reality is ultimately not other than that singular and universal movement of and within absolutely nothing, as it has become geometrically ordered through iterative and progressive self-relation into the first-, second-, and third-level binary interaccommodative processes that we physically experience as space, energy, and matter, respectively.*

In any case, the description of the mechanism by which the radial component of a linear-radial distortion complex affects the direction of propagation of the linear component is completely consistent with the previous



description of the linear-radial distortion complex as a mutually cocreative and coexistent binary process. Therefore, we are now in a position to understand exactly how gravity accelerates matter; and once we are able to understand the mechanism by which gravity accelerates matter, we will then be in a position to understand, as Einstein recognized, the basis for the identity of the gravitational and inertial forces.

How gravity accelerates matter

In order to understand how gravity accelerates matter, we first need to understand how an externally applied, exponentially diminishing, radial-distortion field affects the linear component of a linear-radial distortion complex that is part of a material system, or tertiary binary process. If an externally applied, exponentially diminishing, radial-distortion field cannot, under any circumstances, accelerate the secondary binary process that actually exists where we physically perceive light to be, but can change only the direction of propagation of that secondary binary process, then how can gravity accelerate matter, given that matter is composed of interacting secondary binary processes that cannot themselves be accelerated? The answer is, *by changing the underlying structure of matter*. As described in the second paper in this series, the rate at which a particular bit of matter moves through the reality structure is solely a function of the interactive structure of the tertiary binary process that exists where we physically perceive matter to be (Kaufman 2018b). Thus, the ability of an externally applied, exponentially diminishing, radial-distortion field—i.e., a gravitational field—to alter which reality cell in progression next becomes maximally distorted is what gives a gravitational field its ability to alter the structure of matter in such a way as to always cause a material structure to move through the reality structure at a faster and thus accelerated rate.

How does the asymmetric, nonlinear, somewhat premature production of a new maximal distortion within a material system, or tertiary binary process, change the structure of that material system in such a way that its rate of motion increases as the result of that material system meeting an externally applied gravitational field? This behavior derives from the fact that, as described in the preceding section, when a new maximal distortion arises in an adjacent reality cell not in linear progression, that new maximal distortion becomes the setpoint from which that

linear-radial distortion complex, as a secondary binary process, then continues to propagate through the reality structure. When this happens to a secondary binary process, however, that secondary binary process has only its *direction* of propagation altered, but not its *rate* of propagation (*c*) through the reality structure.

On the other hand, when the same thing happens simultaneously to all of the secondary binary processes that compose a material system or compound distortion process, the new nonlinear, maximally distorted reality cells, rather than becoming just the new propagational setpoints for each secondary binary process of which the compound distortion process is composed, instead become the new propagational setpoints for *the material system as a whole*. Thus, as a result of the material system meeting an externally applied gravitational field, the material system as a whole then moves through the reality structure on the basis of those new propagational setpoints. As illustrated in figure 10, the way in which those new propagational setpoints are established—which is always in the reality cells that lie in the direction of the source of the less-than-maximal radial-distortion field—alters the underlying structure of the material system in such a way as to increase its linear velocity through space relative to other material systems. In other words, the ability of gravity to change the underlying structure of matter, and the consistent way in which that structural change occurs when a material system meets an externally applied gravitational field, is what causes gravity to accelerate matter.

Note that the changes in the underlying structure of matter induced by a gravitational field affect only the propagational linearity of the material system as a whole, and thereby its linear velocity, but have no effect whatsoever on the interactive structure of the material system. The propagational linearity of the material system determines its rate of motion through space relative to other material systems, whereas the interactive structure of the material system—i.e., the precise way in which the secondary binary processes of which it is composed interaccommodate each other—determines the geometry of the matter and thus its physical properties. As luck would have it, so to speak, it seems that only the propagational linearity of material systems is altered by a gravitational field. This limitation enables matter to retain the particular and specific geometric or interactive



structure that gives each material system its particular and specific physical properties, while still allowing each material system to undergo the structural changes necessary to “force” it to accelerate or decelerate.

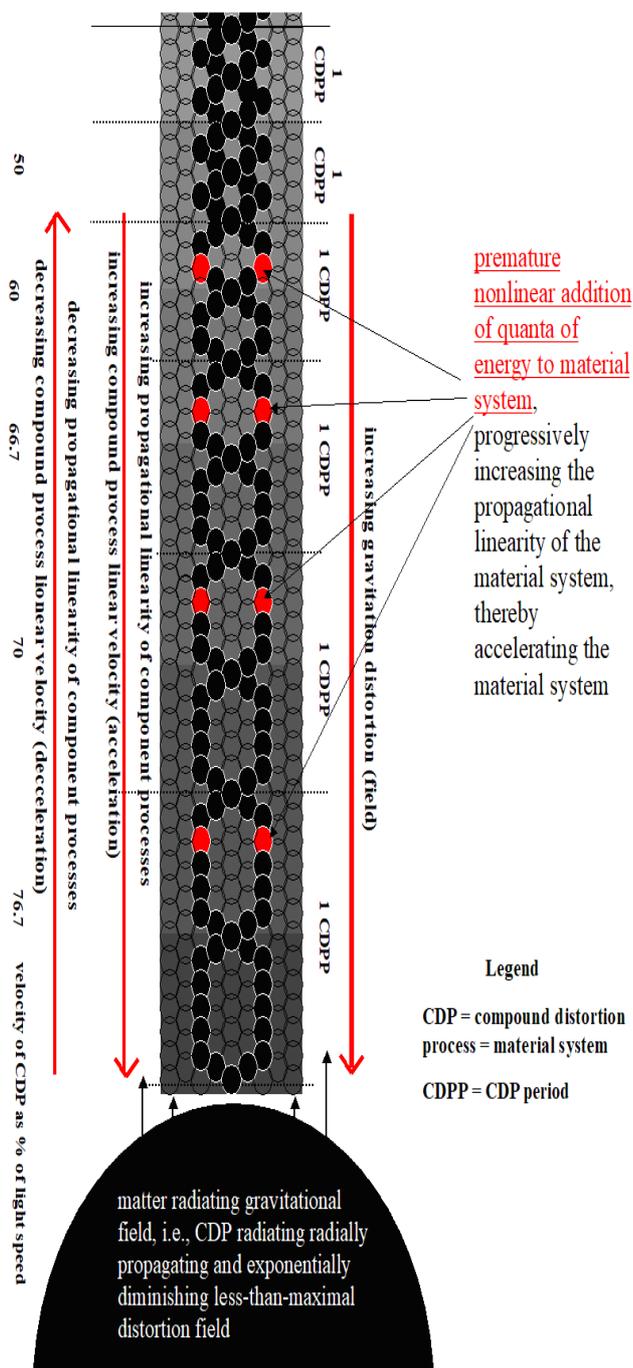


Figure 10. How gravity accelerates matter by progressively changing the propagational linearity of a material system, or compound distortion process (CDP), in such a way as to increase the linear velocity of that material system through space relative to other material systems. An externally applied gravitational field adds quanta of energy to the material system by simultaneously inducing a premature and thus nonlinear maximal distortion in the linear components of the linear-radial distortion complexes of which the CDP is composed, as denoted by the red spheres.

As illustrated in figure 10, an externally applied gravitational field causes the simultaneous and premature arising of maximal distortions in adjacent reality cells *not in the usual progression* for a particular bit of matter moving through space at a particular linear velocity—but always in the direction of the source of the field—thereby creating a new propagational setpoint for the material system as a whole, and thereby accelerating the material system *by changing its tertiary binary structure*, even though that new propagational setpoint has no effect whatsoever on the rate of propagation of the secondary binary structures of which the tertiary binary structure is composed. It’s quite a trick—accelerate the tertiary binary process in the absence of the ability to accelerate the secondary binary processes of which the tertiary process is composed. The asymmetric and radial way in which the gravitational field is distributed, thereby causing asymmetric and premature maximal distortions to arise in the secondary binary processes of which matter is composed, in combination with the inseparable relation between the propagational linearity of a material system and its linear velocity through space, makes it possible for this trick to be pulled off.

The most important part of this trick, as it were, is the “sleight of hand” pulled off by gravity acting as the mechanism by which prematurely produced, asymmetric maximal distortions *become added to a material system as quanta of maximal distortion, or photonic energy*, as illustrated in figure 10. To some degree, the trick that gravity pulls off to cause matter to accelerate is analogous to sliding an extra card into a deck while no one is paying attention. “Woah! How did gravity do that? The matter is accelerating; where’s the energy coming from? It’s like magic!” Yes, the matter is accelerating; and yes, it does seem somewhat magical, inasmuch as the operating force is completely invisible as a physical force outside of producing some effect on another form of energy; but now we can know exactly and precisely how the trick is done.

The exact and precise way by which gravity is able to pull off the trick of material acceleration, in a Universe composed of interrelated binary processes that are all intrinsically driven by movement that only ever occurs at the speed of light, is that the gravitational force “sneaks up on” the material system and, because of the radially propagating and thus pervasive nature of the field, is able to



simultaneously slip additional quanta of radiant energy, or maximal distortion, into the linear component of each and every linear-radial distortion complex of which the material system is composed. By so doing, gravity simultaneously alters the propagational setpoints of the secondary binary processes of which the material system is composed, and thus alters the geometry of the material system as a whole by increasing its propagational linearity and thereby also its linear velocity, as illustrated in figure 10, and thereby literally “forcing” the material system to move through space at a relatively faster rate, given the new binary structure that the material system now possesses, as a function of the additional quanta of energy that were all simultaneously inserted into it by the sneaky gravitational force.

The identity of gravity and inertia

Now that we understand how gravity is able to accelerate matter, we can use that understanding to explain the identity and equivalence of gravity and inertia. To understand inertia, we must first understand how gravity causes matter to accelerate by changing its geometry. Matter, as a tertiary binary process, is composed of the interaction of two or more secondary binary processes—i.e., two or more linear-radial distortion complexes. As just described, matter is accelerated by a gravitational field as the asymmetric increase in radial distortion causes a reality cell not in the usual progression to prematurely reach a state of maximal distortion, which then changes the underlying structure of the material system in a way that always increases its propagational linearity, and thereby its linear velocity, in the direction of the source of the externally applied gravitational field, for reasons that were explained by use of the analogy of the simultaneous filling of two cups of coffee. However, in order for the structure of a material system as a whole to change in a way that causes it to accelerate through space, every single linear component of which a particular bit of matter is composed needs to have an additional quantum of energy added to it, because each linear component traces a sort of spiral path through the reality structure, as it repetitively interacts with other linear components to form a particular material system. Thus, each linear component functions as an integral part of the overall structure of the material system, and so must itself be altered in some way if the motion of the material system as a whole is to be altered. In other words, because

material systems, like all systems in the Universe, are fundamentally binary processes, no matter how complex they may seem, no aspect of a material system can be altered without altering every other aspect of the system, because all its aspects are interaccommodative and so mutually coexistent and cocreative.

What this means is that, all else being equal, the more linear-radial distortion complexes of which a particular bit of matter is composed—i.e., the more *mass* the matter has—the more maximal distortions, or quanta of radiant energy, need to be added to that material system in order to alter the direction of propagation of every linear component of which that particular bit of matter is composed, so that the modified material structure then moves through space at a faster rate. *Inertia*, then, is simply the total number of maximal distortions, or energy quanta, that must be added to a material system so that every linear component receives an additional quantum and so that the linear velocity of the material system as a whole will then increase and the material system as a whole will then be accelerated. Thus, the gravitational force functions by adding a specific number of quanta of energy to a given material system in such a way as to change its structure so that it must then move faster through space—i.e., accelerate—and inertia is nothing more than the specific number of quanta of energy that must be added to the material system for its structure to change in such a way that it will then move at a faster rate through the reality structure—i.e., from being at rest to being in motion.

What I have just described as the way in which gravity functions to accelerate matter explains why the gravitational force and the inertial force are identical, as recognized by Einstein. Because once all the smoke clears, leaving us able to understand the actual mechanism underlying what we perceive as the force of gravitational attraction—i.e., the addition of a specific number of quanta of energy to a material system in such a way as to increase its linear velocity in the direction of the source of the gravitational field—it then becomes possible to understand that inertia is just a different way of looking at the same situation: in other words, how many quanta of energy must be added to a particular material system in order to set it in motion. The same number of quanta that set a given material system in motion, and so overcome its inertia, is always the same as the number of quanta that accelerate it in a gravitational field,



because both situations—i.e., either going from rest into motion or accelerating—require the exact same change in the structure of that material system and so require the exact same number of quanta of energy to be added to the material system in order to effect that change. Again, owing to the fact that what we perceive as matter is actually a binary and thus interaccommodative process, the material system as a whole must change in order for there to be a change in its linear velocity through the reality structure. In terms of overcoming inertia or the force of gravity, it's all or nothing—i.e., either all the linear components are simultaneously modified in a way that increases the propagational linearity of the material system as a whole, thereby accelerating it; or not all of the linear components are simultaneously modified, in which case the propagational linearity of the material system as a whole does not change, and the material system does not accelerate.

The all-or-nothing nature of acceleration means that a minimum amount of energy is needed for a material system to go from being at rest to being in motion, that a minimum amount of energy is also needed to accelerate that same object, and that those two amounts of energy are always the same because they are a function of the same identical underlying process, which is that a minimum number of quanta of energy need to be added to the material system in order to increase the propagational linearity of the material system as a whole, thereby “forcing” it to move through the reality structure at the increased rate dictated by its modified structure. When an object is at rest and is then set in minimal motion, we call this overcoming inertia; and when an object is dropped and falls at an accelerating rate, we call this the force of gravitation. In both cases, each phenomenon—i.e., overcoming inertia or gravitational acceleration—is a function of the same underlying mechanism, which is the alteration of the structure of the material system through the addition of a specific number of quanta of energy, in a specific way, into that system.

As with gravity and inertia, so for all physical experience, as explained in the first paper in this series: a single underlying process, which occurs at the level of the geometric structure of reality, appears as two different physical experiences (Kaufman 2018a). In this case, the single underlying process that occurs at the level of the nonphysical geometric structure of reality

does not appear as the opposite wave and particle realities, nor as the opposite position and momentum realities, nor as the opposite realities of hot and cold, but as the seemingly opposite gravitational and inertial forces: gravity appears as the force that sets objects in motion, and inertia as the force that prevents objects from being set in motion. The acceleration or deceleration of a material system requires that the matter literally be “forced” to adopt a new structure. If it does, it accelerates or decelerates; and if it does not, it neither accelerates nor decelerates. This is the level at which physical reality actually operates, and this is the level of the single “force” from which the duality of physical-force perception arises, appearing as both gravity and inertia.

Discussion

Modeling reality and Sorli's bijective function

In explaining the identity of gravity and inertia, the basic mechanism by which all material systems exchange energy at the quantum level has also just been explained. That basic mechanism is the insertion and removal of energy quanta in ways that alter the propagational linearity—and thereby the linear velocity-of material systems without altering their interactive structure, and also without changing the rate of propagation of the secondary binary processes of which those material systems are composed. This explanation was accomplished without introducing a single abstract mathematical equation but only by using the other type of language that humans possess—i.e., verbal—which as we have seen, is not only just as capable of providing an accurate description of reality as is mathematics, but also is potentially understandable by anyone, not just by those relatively few people who happen to speak the elite language of abstract mathematics.

By successfully using primarily verbal, nonmathematical language, in this way, we may safely conclude that the abstract language of mathematics is not required to either discover or understand the fundamental nature of reality. Thus, the delusive idea that seems to have taken root in modern science—i.e., that only the abstract language of mathematics and so, by extension, only those who speak that language are capable of describing the fundamental nature of reality—has just been dispelled once and for all. Furthermore, the equally delusive idea in modern science that reality is somehow fundamentally mathematical in nature also needs to be abandoned, because it's just another trap. As demonstrated here, reality



can be modeled simply as a series of iterative and progressive binary processes composed of absolutely nothing becoming structured in relation to itself by moving in opposition to itself at the speed of light. Mathematics is a language, and as such it's the best tool we have to precisely and objectively describe the realities, dynamic relational structures, binary processes—whichever term one prefers—that actually exist where matter and energy only appear to be. At no point, however, in any mathematical description, no matter how elegant or sophisticated, does the mathematical description itself become the reality that is being described. Believing otherwise is a clear case of mistaking the map for the terrain, as usually occurs only after we have spent far too much time looking at the map and little or no time exploring the terrain itself. Unfortunately, modern science has become immersed in its abstract mathematical equations and models and has left off checking whether those equations and models actually correspond to the hidden underlying realities that they purport to represent.

Mathematics is a useful descriptive tool, but only insofar as the conceptual models derived from that tool are continually tested against directly observable, experimental or experiential physical evidence. As the physicist Amrit Srecko Sorli has pointed out, unless there exists a bijective, or one-to-one, correspondence between a conceptual model of reality and some *directly observable physical evidence*, we have no way whatsoever of actually knowing, and so of proving, whether or not the conceptual model does indeed accurately represent the hidden underlying reality (Sorli 2018; Sorli *et al.*, 2018). Nonetheless, as Sorli points out, the current trend in modern science is to bestow on mathematical models the title of being "proven" solely on the basis of *indirect physical evidence*. As a result, according to Sorli, modern science's mathematical models are becoming increasingly untethered from whatever hidden underlying reality they are purported to represent. For reasons that will now be explained in detail, if a conceptual model of reality cannot satisfy Sorli's *bijective function*, then what such a model most likely represents is nothing more than a structure that exists nowhere else than in the minds of scientists themselves, and so exists as nothing other than a purely internal or mental reality, with no correspondence whatsoever to any external physical reality—i.e., any structure or process that exists outside of the mind.

The language of mathematics, like verbal language, is conceptual in nature, which means that mathematical language is a *mental function made physical* through the externalization of internally generated mental forms. The interesting thing about concepts, whether mathematical or verbal, is that they are not required to correspond to any external reality structure which is capable of producing, through impactive relation, a physical, non-conceptual experience. For example, we are free to imagine that unicorns roam the Earth, but because they actually do not, we will never encounter or see a unicorn—i.e., we will never have a *direct physical experience* of a unicorn—because no external reality structure actually exists that is able to produce such an experience. A unicorn is therefore a purely internal reality structure that exists only in the individual mind and so not in any way that can create a direct physical experience.

Someone may claim to have had a direct physical experience of a unicorn, and may believe that they did have such an experience, but they will never be able to present any directly observable physical evidence, nor will their experience be repeatable other than by other random individuals, who also will never be able to present any directly observable physical evidence of the purely internal reality structure that we refer to as a unicorn. Such directly observable physical evidence requires that the internal reality structure actually correspond one-to-one to an external reality structure that can produce the physical, non-conceptual experience of a unicorn when an observer forms an impactive relation with that reality structure.

Having understood that an internal reality structure need not correspond to any external reality structure that can produce a direct physical experience, no matter how much we may believe otherwise, the problems that arise when *indirect physical evidence* is allowed to stand as proof of conceptual models of reality will now be fully explained. To begin, let us imagine that a theoretical physicist has constructed a mathematical model to explain some heretofore-unexplainable physical phenomenon. However, it just so happens that in order for their model to be able to explain the phenomenon, the physicist has to assume that unicorns roam the Earth—i.e., the model contains an *unproven assumption*. And so, in order to prove the accuracy and validity of his or her model, the physicist now needs to find an actual unicorn. Of course, no unicorns can ever be



found because they do not actually exist, other than as a concept in the mind of the physicist. Since the physicist really believes in their model, he or she *needs* unicorns to actually exist, so that he or she can “prove” that their model is accurate and valid.

At one time in the land of science, the inability to find any directly observable physical evidence of a significant element of a conceptual model of reality would mean that the model had not been proved to accurately represent whatever hidden underlying reality it was purported to represent. However, when people get desperate, they start to cut corners, and modern science apparently became desperate for progress because it started to cut corners, according to Sorli, by no longer requiring that mathematical models demonstrate directly observable physical evidence of the modeled behavior or phenomenon in order to be considered as “proven.” Instead, modern science gradually loosened its rules of evidence, by beginning to assign the label of “proven” even to those mathematical models for which there was, is, and remains no directly observable physical evidence but only indirect physical evidence. In order to fully understand why this degradation of the rules of evidence that are required to establish proof of a conceptual model of reality has created so many problems for science, and so for humanity, we need to elaborate further on the unicorn analogy.

To recap, in the land of modern science, when a mathematical model is constructed that requires unicorns to exist, the scientist goes in search of unicorns but finds none because they do not actually exist, other than as an internal reality structure. However, because the scientist is certain of the correctness of their model, he or she is undeterred by their inability to actually ever encounter or see a unicorn, as predicted by their model, and so they keep looking. And although he or she never finds an actual unicorn, what the scientist does find while roaming about looking for unicorns is all kinds of footprints. Eventually, he or she comes across the footprint of an animal that he or she does not recognize and that no one else can recognize either. Now, in desperation for evidence of the accuracy of their mathematical model, the scientist declares to have found indirect physical evidence that unicorns actually exist, and so *indirect proof* that their model is accurate, because he or she makes the *assumption* that this unknown footprint must be, and therefore is, the footprint of the supposedly no-longer-mythical unicorn for

which he or she has searched for so long. Direct physical evidence would be observing the body of a living or dead unicorn; indirect physical evidence is observing some other physical evidence that the scientist then *assumes* was produced by a unicorn.

Now, just for the sake of argument, maybe the footprint actually was produced by a unicorn, and so maybe the scientist’s model is accurate. On the other hand, it’s just as likely that the footprint was not actually produced by a unicorn but was simply produced by a different animal, other than a unicorn, that has yet to be identified. The distinct possibility of the incorrectness of the assumption used to connect the indirect physical evidence to the mathematical model brings us to the most vital point to understand in all of this: if this assumption is incorrect—i.e., if the footprint is not actually the footprint of a unicorn—then there still exists no direct physical evidence whatsoever—i.e., zero or 0, depending upon which language you prefer, verbal or mathematical—of the accuracy of the mathematical model, with regard to actually representing the hidden underlying reality that the model is purported to represent.

Having explained how indirect physical evidence can still leave us with a conceptual model that lacks any degree of proof whatsoever with regard to the accuracy of that model, we can now at least begin to agree that it is completely unscientific to allow indirect physical evidence to stand as proof of a conceptual model’s accuracy. Indirect physical evidence is not a proof of anything; by itself, indirect physical evidence does not and cannot prove anything. In order to reach a conclusion with indirect physical evidence, we *always* need to make an *assumption* that is itself completely unproven, because an assumption is, by its nature, a statement that has not been proved. Therefore, a conceptual model that contains within itself an unproven assumption cannot actually ever prove anything, unless and until the assumption itself has been proved and so is no longer just an assumption.

Yet, even though it’s not difficult to understand how indirect physical evidence cannot establish proof of a conceptual model, as with the “unicorn model of reality,” this is the same process by which, according to Sorli, many modern scientific mathematical models have been declared “proven,” which is why so many modern scientific theories with regard to the fundamental nature of reality are quite frankly incredible: they have become almost completely, if not completely,



untethered from the hidden underlying reality they are purported to represent. And so, as a result of the desperate and unscientific policy of allowing indirect physical evidence to stand as proof of a conceptual models' accuracy, modern science has become filled with what can plausibly be referred to as *unicorn concepts and models*, because they are reality structures that exist nowhere else than in the minds of scientists—i.e., they do not correspond to any external physical reality. Nonetheless, because scientists fully believe that their conceptual models actually do correspond to some external physical reality, when they can find no directly observable physical evidence to support their models, they decide to "fudge" what seems to be just a "little bit," by lowering the bar with regard to the evidence required to establish proof, so that they then can claim the "proof" they are so desperate to find in what is only indirect physical evidence.

However, what scientists do not seem to have realized is that when it comes to proving that mathematical or conceptual models correspond to some hidden reality, there is no "little bit" of fudging, since either you have proof or you do not. And so, when scientists use indirect physical evidence to stand as proof of a mathematical model's accuracy, what they actually end up with is not a proven model but *a lie that is then believed to be true*—perhaps not an intentional lie but a lie nonetheless.

The same criticism also applies even when Nobel prizes are awarded for "proving" the validity of a particular mathematical model based on indirect physical evidence—i.e., the awarding of a prize, no matter how seemingly important and prestigious, does not somehow magically transmogrify something that has not actually been proved into something that has been proved, except in the minds of those who believe the lie by pretending that indirect physical evidence, which requires an unproven assumption, can prove anything. After all, what if the unproven assumption is wrong? What if the unknown footprint is not the footprint of a unicorn but just the footprint of another, non-imaginary animal that has not yet been identified? This is how a scientific delusion is perpetuated. A lie is created: an unproven model is labeled as proven through the use of indirect physical evidence, and then an external truth—i.e., an award or prize—is attached to the lie, giving the lie even more of the appearance of truth, even though it still remains a lie.

One horrible consequence of all this unscientific fudging with regard to the rules of evidence required to establish proof of a conceptual model, and why this loosening of the rules of evidence has created so many problems with regard to scientific advancement, is that every young scientist who is indoctrinated into these conceptual models gets their minds filled with unicorn concepts, because they've been told that the models are proven and so they are true, when in fact what they are is only elaborate lies dressed up to appear as true. Then, young scientists are told that these unicorn concepts can be used as a basis for building new conceptual models. But guess what: the new conceptual models built using these supposedly "proven" concepts as their basis also don't work—i.e., they also don't satisfy Sorli's bijective function, because they fail to correspond to the hidden underlying reality. Now, however, we're dealing with second-generation unicorn concepts and models, as once again, out of desperation, indirect physical evidence is presented and accepted as proof, thereby paving the way for third-generation unicorn models, which then also can be declared "proven" only through indirect physical evidence—and on and on it goes. Thus, theoretical scientists and mathematicians, in constructing their conceptual models of reality without tethering them at every point to directly observable physical evidence, have inadvertently left the realm of physical reality and actually are operating solely upon and within what is only a mental or internal reality that no longer has any one-to-one correspondence to any external physical reality or relational structure which can actually produce a physical experience.

The likely reason why modern science has come to rely more and more on indirect physical evidence to stand as proof of its conceptual models is so that it could at least appear to be making progress in terms of understanding the nature of reality. Today, however, this loosening of the rules of evidence has allowed science to wander so far off the reservation with its conceptual modeling of reality—i.e., the models it comes up with deviate so far from the hidden underlying reality that actually produces what we experience as physical reality—that it has simply become no longer possible to obtain any directly observable physical evidence to support those models, many of which are nothing more than a stupefying progression of unicorn concepts, all of which have been declared "proven" by indirect



physical evidence but none of which has actually ever been proved at all. It's a bit like making a wrong turn while traveling, but convincing oneself and everyone else in the car that we have "proof" that we have made the right turn, based on indirect physical evidence, and so we just need to keep on going in that direction, believing that we will eventually get to where we want to go. However, we never actually get there because we've been going in the wrong direction the whole time!

Another horrible consequence of all of this unscientific fudging with regard to the rules of evidence required to establish proof of conceptual models is that when someone actually does come up with an accurate conceptual model and takes a turn that's going in the right direction—i.e., in the direction that will actually take us to where we want to go—their conceptual model will necessarily conflict with the already-accepted-as-"proven" unicorn model. And so what usually happens is that the new and accurate conceptual model of reality will be rejected without even being considered, as long as the old and inaccurate unicorn model continues to be taken, or rather mistaken, as proven.

In this way, by loosening the rules of evidence to allow indirect physical evidence to stand as "proof" of a conceptual model's accuracy, modern science has basically painted itself into a corner. As long as modern science remains fully committed to continue going in what turns out to be the wrong direction, the right direction will always look like the wrong direction. As the unicorn concepts and models proliferate, the truth never even gets a decent hearing, because it can't compete with the unicorn concepts and models—i.e., with the accepted-as-true lies—as long as those unicorn concepts and models remain in place—on the throne of authority, as it were. In other words, not only does the use of indirect physical evidence to prove the accuracy of conceptual models of reality lead to a progression of unicorn ideas and models with no basis in directly observable physical evidence, but this practice also eventually stifles any attempts to actually get at the "facts of the matter," by effectively excluding any accurate concepts and models from consideration or even entering into the awareness of scientists.

By cutting its tether to external physical reality by no longer requiring directly observable physical evidence as proof of its conceptual models, modern science has inadvertently fallen

into a trap from which the only real way out appears to be heading in the wrong direction. *Once a lie has been mistaken for the truth—i.e., as proven—the actual truth then must appear as a lie.* Thus, as Sorli has pointed out, modern science remains stuck believing in internal reality structures that actually correspond to no external reality structures whatsoever. Modern science's adoption of all its unicorn concepts and models has blinded it to so many actual truths of the world that true scientific progress, in terms of understanding the nature of reality, has become all but impossible. This is no longer a metaphor—this is an honest assessment of what has happened to theoretical physics as a consequence of relying on mathematical models that have no demonstrable basis in directly observable physical evidence.

In constructing conceptual models of reality, whether mathematical or verbal, what we're trying to do is visualize, through concepts and images, that which is, by its nature, non-conceptual and invisible. The only way we can be sure that our models are accurate is to *directly* "connect the dots" between the conceptual model by using some directly observable physical evidence, and the hidden underlying reality that is being modeled, by using some directly observable physical evidence, as illustrated in figure 1. Indirect physical evidence does not and cannot provide any direct connection between a conceptual model and the hidden underlying reality that the model is purported to represent. Thus, validating a conceptual model of reality by using anything less than directly observable physical evidence must always involve making assumptions, which can never actually constitute proof, regardless of how many clever and otherwise-reputable scientists believe otherwise.

The whole point of this critical exercise is to underline that the conceptual model of reality being presented in this series of three papers fully satisfies Sorli's bijective function because each element of the relational-matrix model has a one-to-one correspondence to some directly observable, experimental or experiential physical reality. I have constructed the model in this way because it was clear to me from the outset that any other approach would be a waste of my time, if my goal was to assure myself of accurately representing the underlying reality hidden beneath physical experience, through the process of conceptual modeling.

Modern science will eventually find its way again, but only once scientists return to being



human beings who are more concerned with finding the truth than with being right. When all we care about is the truth, then we're willing to change our beliefs in order to find the truth; but when all we care about is being right, we tend to cling to whatever beliefs seem to make us right. When the beliefs to which we cling are false, then our clinging to those false beliefs cannot do other than continuously obscure the truth. Modern scientists cling to a plethora of false beliefs that they have been misled into believing to be proven facts, and that consequently are actively obscuring the truth from their view. This obscuration of the truth occurs unavoidably with their adoption of the unscientific practice of allowing indirect physical evidence to stand as proof of the accuracy of their conceptual models, thereby forcing indirect physical evidence to appear as something that it cannot ever actually be—i.e., proof.

As mentioned in the second paper in this series, the relational-matrix model is constructed in such a way as to be completely intolerant of input errors, while simultaneously embracing correct input at every level. This feature was referred to as a *negative and positive butterfly effect* produced by the model with regard to input and output, as a function of the fact that what the model represents is an iterative and progressive process of self-relation whereby input, whether correct or incorrect, is progressively magnified at the more highly iterated levels of reality, or binary processing. For this reason, input into the relational-matrix model, whether correct or incorrect, is tested against Sorli's bijective function not only at a single level but also at every subsequent level, all the way up the chain of iterative and progressive self-relation. For example, in the second paper, Planck's constant was stated to represent a maximal distortion of reality-cell content, establishing a one-to-one correspondence between one element of the model—i.e., maximal distortions—and a quantity derived from directly observable physical evidence—i.e., Planck's constant. However, that one-to-one correspondence was required to produce bijective and meaningful results not only at the level at which it was introduced but also at higher levels of the relational matrix.

And so, owing to the iterative and progressive nature of the fundamental process of self-relation, incorrect input into the relational-matrix model is magnified and so produces output that becomes increasingly difficult to correspond to physical experiential reality. Most people can

easily understand this negative butterfly effect, which is expressed most succinctly by the familiar statement "garbage in, garbage out." However, since correct input is also magnified throughout the relational-matrix model, there is also a positive butterfly effect, which can be expressed by the opposite statement "truth in, truth out."

That the relational-matrix model, by its very nature, treats input in this way—i.e., produces either a positive or negative butterfly effect, depending on the accuracy or inaccuracy, respectively, of the input and output—is one of the main reasons why I have been so successful using this model to conceptually "etch," and so reveal, the otherwise-invisible, non-experiential, dynamic geometric structure of reality that underlies both physical and mental experiential reality, as the actual creator and source of those experiential realities. Although it may not seem so right now, especially if this is the first time you're reading all this, "once the smoke clears" it will become clear that not all that much is really happening at the fundamental level of reality which underlies physical experience, but that what little does happen, happens a whole lot, which is what creates the apparent complexity of physical experience. That apparent complexity is the very smoke that must clear before we can see the fundamental simplicity of the underlying process as a whole—i.e., the endless repetition and progressive elaboration of just a few classes of binary processes—and so realize what little is actually happening, at least in terms of the underlying structure and dynamic. Once that fundamental simplicity is visualized and understood, it becomes relatively easy to more accurately explain any particular physical phenomenon or behavior—i.e., to find the correct input to produce the modeled behavior that satisfies Sorli's bijective function. The creative options are so finite because there's actually not that much of a conceptual palette to choose from in terms of modeling options. But this is a good thing, once we accept that whatever is happening in physical reality must somehow be produced by this hidden reality structure, because both physical and mental experience are only the *surface appearances*, whereas the underlying multileveled dynamic geometric structure of reality is what's actually there where those two experiential realities only appear to be.



The actual nature of energy

In order to provide additional evidence for the accuracy of the conceptual model of reality being presented here, with regard to its correspondence to the hidden underlying reality it is purported to represent, as well as to further demonstrate its immense explanatory power, I will now use the relational-matrix model to explain the actual nature of energy.

We talk endlessly of energy, but we know next to nothing of what energy actually is. Like most everything we say with regard to such fundamental matters, all we really know is a word, a particular series of letters, but nothing whatsoever regarding the hidden underlying reality for which the word “energy” is but a label. The goal now, however, both for science and for humanity, is to move beyond these purely *surface appearances*, so that we can begin to deal with reality as it actually exists, underlying what we experience as physical reality.

Basically, the relation between physical experiential reality and the reality structure that is actually there where physical reality only appears to be is like the relation between a reflection and the mirror in which that reflection arises. If a person believes that their reflection in a mirror actually exists where it only appears to be, then this belief will prevent them becoming aware of the underlying reality structure that is actually there where physical reality only appears to be. Thus, assigning the concept of “what is actually there” to physical reality causes the reality structure that is actually there to become conceptually invisible, even though the hidden underlying reality is still what is actually there, just as some underlying reflective material has to exist wherever a reflection appears, or else there would be no reflection at all. Thus, the conceptual obscuration of the reality structure by the *belief* in physical reality as “what is actually there” is no different than the obscuration of a mirror by a reflection, as a result of the mistaken *belief* that the reflection actually exists where it only appears to be. However, that conceptual obscuration persists only as long as we continue to believe that physical reality is what is actually there where it only appears to be—i.e., it is not the *appearance* of physical reality that obscures what is actually there, but our *belief* in physical reality as “what is actually there,” because physical reality continuously appears to be what is actually there, and so is continuously *perceived* to be what is actually there, only as a function of that belief.

Therefore, if we simply change our belief so that we see physical reality as only a reflection of what is actually there, then the geometric structure of reality—the mirror—must reappear.

That we are unable to see a mirror as long as we believe that a reflection in the mirror is what is actually there, is direct and incontrovertible evidence not only that our belief affects perception but also that a false belief can distort our perception in such a way as to cause what exists in plain sight to be functionally invisible. This is why our belief in physical reality as “what is actually there” must be dispelled—“seen through”—if we are to be able to even conceive of the geometric structure of reality as what is actually there. Just as it is impossible to *perceive* something as true when we hold a belief that is in complete opposition to that perception, so it is impossible to *conceive* something as true when we hold a belief that is in complete opposition to that conception. In order to see beneath the surface reality, we need to believe that something exists beneath and beyond the surface reality; but first we need to believe, and so become aware, that what we are perceiving is actually only a surface appearance and not what is actually there. As long as we continue to believe that the surface appearance is what is actually there, that belief delimits both our perception and our conception, and so confines us to perceiving and conceiving only *surface realities*.

With that having been said, what will now be described is exactly what we are referring to, with regard to the geometric structure of reality, when we use the word “energy.” Everything physical is *not* just a form of energy. What we call energy—i.e., the ability to do work or induce change—is simply the way in which the ultimately formless and timeless movement of absolutely nothing in relation to itself expresses itself physically, once that movement takes on form—i.e., becomes a binary process—and so becomes something with both structural and dynamic aspects.

As already described, the reality structure consists of three iterative and progressive levels of binary processes or binary processing. The primary or first level is represented by the reality structure itself, which we physically perceive as *empty space*; the secondary or second level is represented by the linear-radial distortion complex, which we physically perceive as *EMR and gravity*; and the tertiary or third level is represented by compound distortion processes,



which we physically perceive as *matter*. These three levels of binary processing of which the Universe is composed are ultimately not other than absolutely nothing becoming structured in relation to itself by moving in opposition to itself at the speed of light. Thus, the three levels of binary processing consist of *relational structures* whose very existence depends on that ongoing motion, giving each level of binary processing, and every binary process at each level, an *intrinsic periodicity*. The periodicity of any particular binary process is the *relative frequency* with which that particular binary process is being continuously re-created and re-produced by the formless and timeless interaccommodative movement of absolutely nothing in relation to itself. Thus, every binary process that arises within the geometric structure of reality has both a structural and a periodic or dynamic aspect. The *structural aspect* is the particular way in which the formless and timeless movement of absolutely nothing in relation to itself becomes structured in order to *function* as a particular binary process, and the *periodic or dynamic aspect* is the periodicity at which a particular binary structure or binary process is being re-created and re-produced, and so *fully emerges*, within the reality structure.

In order to describe the nature of reality, new concepts need to be introduced; and in order to understand the new description of reality, those new concepts must be defined and understood. With that in mind, before we proceed to specifically define energy within the context of the relational-matrix model, and in so doing satisfy Sorli's bijective function with regard to energy and the model—i.e., a one-to-one correspondence between the direct physical reality of energy and the relational-matrix model as a whole, so as to assure that no unicorn concepts have been introduced into the model—I will first explain exactly what it means for a binary process to “fully emerge” within the reality structure. We cannot understand what the physical and thus surface reality that we experience as energy actually is, at the level of the geometric structure of reality, without understanding what it means for a binary process to periodically fully emerge within the reality structure. As will be demonstrated, the amount of energy that we physically perceive in the linear component of second-level binary processes varies as a function of the periodicity or relative frequency at which those linear components fully emerge within the reality

structure. Once we have applied the concept of “full emergence” within the reality structure to understand the way in which second-level binary processes—i.e., EMR and gravity—express themselves physically as energy, we will be in a position to explain and describe the way in which third-level binary processes—i.e., material systems— express themselves physically as energy.

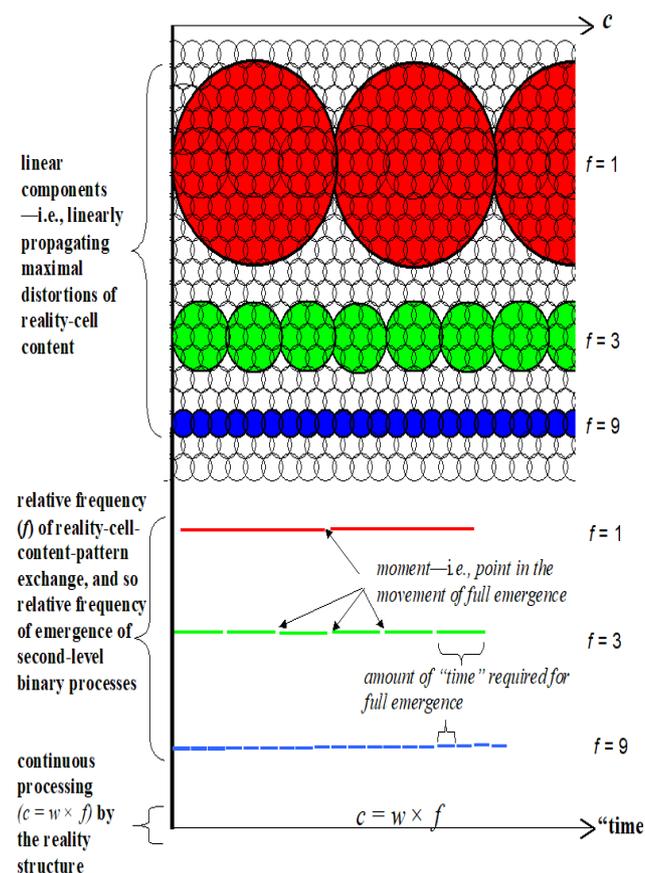


Figure 11. The relation between the constant and timeless movement (upper arrow c , for the speed-of-light constant) that is intrinsic to the reality structure and the periodicities or relative frequencies of full emergence, of the linear components of three different second-level binary processes (red, green, and blue), with their “moments” of full emergence depicted as breaks in each of their “time” lines. Thus, a reality cell that is 3 times larger takes 3 times as much of the constant movement, or “time,” in order to complete a full period of self relation; and a reality cell that is 9 times larger takes 9 times as much of the constant movement, or “time,” in order to complete a full period of self relation. Thus, what this figure allows us to visualize, by juxtaposing the broken lines of a second-level binary process’ periodicity with the continuous and unbroken line of the constant movement of non-chronological and non-periodic “time” (lower arrow) that drives that periodicity, is that the periodicity or relative frequency of a second-level binary process is actually and always nothing more than a relative measure of how much “time”—i.e., what fraction of the constant movement intrinsic to the reality structure it takes for a particular second-level binary process to fully emerge within the reality structure, relative to other second-level binary processes.



As stated in the second paper in this series, the second- and third-level binary processes that arise within the Universe, or the reality structure, do not exist within a single instant but are caused to exist periodically over some variable amount of “time,” where the word “time” indicates not chronological or clock time but the constant and timeless movement (c), the speed-of-light constant, intrinsic to the geometric structure of reality. Thus, each second- and third-level binary process that arises within the reality structure requires some fraction of that constant movement—i.e., “time”—so that it can, as a binary process, complete one full period of self-relation, at which point it then, and only then, “fully emerges” within the reality structure, as illustrated in figure 11.

As noted at the bottom of figure 11, the first-level binary process that creates the reality structure is *continuously processing*—i.e., “calculating”—the distribution of reality-cell content patterns in the second-level binary processes that arise within the reality structure according to the equation $c = w \times f$. This underlying dynamic is how the full and yet periodic emergence of second-level binary processes within the reality structure translates into our physical experience of those binary processes as possessing particular amounts or quanta of what we call energy—i.e., the ability to do work or induce change in other binary processes.

That the underlying reality structure is continuously “calculating” the distribution of reality-cell-content patterns according to the equation $c = w \times f$ means that in any moment, the reality structure is registering the reality-cell-content pattern of each and every reality cell that exists within the reality structure in that moment—where the term “moment” here means a specific point in the continuous movement of “time”—on the basis of what that content pattern was in the previous moment. However, owing to the nature of the reality structure, and the fact that reality cells of different sizes have different periodicities, or different relative frequencies of full emergence within the reality structure, the reality structure needs to *change* its content-pattern calculation for a particular reality cell only as often as that particular reality cell *fully emerges* within the reality structure, according to the equation $c = w \times f$. Thus, in each and every moment, the content pattern of each and every reality cell is being continuously calculated by the

reality structure in order to determine reality-cell-content patterns in the *next* moment, when the calculation is completed. Note, however, that the content pattern of any particular reality cell is being factored in *differently*—i.e., as a different content pattern—only at the moment when that reality cell *fully emerges* into the reality structure.

What this means is that every “calculation” of a reality-cell-content pattern during the “time” when a particular reality cell is still emerging is based on the content pattern registered within that reality cell in its previous moment of full emergence. Then, when the reality cell again fully emerges, its new content pattern is what gets factored into the “calculation” being continuously performed by the reality structure until the next moment of full emergence—i.e., the completion of one binary-process period. Once a particular reality cell fully emerges, then its content pattern will be different if that reality cell, or any of its adjacent reality cells, contains or contained any distortion content whatsoever. Owing to the way in which reality-cell-content patterns are being continuously exchanged, when only reality-cell-content uniformity exists in a particular reality cell and all its adjacent reality cells, then the calculation with regard to that central reality cell never changes—i.e., its content pattern always remains the same. However, when the central reality cell or any of its adjacent reality cells contains any distortion content whatsoever, then after the full exchange of content between those reality cells, the central reality cell will always have a content pattern that is *different* from what it was before that exchange of content. When the content pattern within a given reality cell is different upon its full emergence within the reality structure, then the distortion content that reality cell contributes to the calculation being continuously done by the reality structure will also be different, thereby changing the outcome of that calculation.

We can now begin to describe the physical quantity that we call *energy* as a function of *the ability of second- and third-level binary processes to affect the outcome of the reality-cell-content pattern-calculation being continuously done by the reality structure*. Either the more or the more often a binary process affects that calculation—i.e., the *more* change it produces in the continuous calculation of the reality-cell-content patterns that arise within the reality structure—then the *more energy* that binary process will be physically perceived to possess. Conversely, either the less or



the less often a binary process affects that calculation—i.e., the *less* change it produces in the continuous calculation of the reality-cell-content patterns that arise within the reality structure—then the *less energy* that binary process will be physically perceived to possess. Thus, the physical quantity that we perceive as energy is actually a relative measure of the ability of a particular binary process to affect the outcome of the reality-cell-content pattern calculation continuously being done by the reality structure, and the degree to which a particular binary process is able to affect the outcome of that calculation is the exact degree to which that particular binary process is said to possess the physical experiential reality that we call energy.

Thus, there are two ways in which the outcome of the continuous calculation of reality-cell-content patterns by the reality structure can be affected by a binary process, and so register that binary process as possessing more or less energy. One way involves a binary process fully emerging with either more or less distortion content, and thereby affecting the outcome of the reality-cell-content-pattern calculation to a greater or lesser degree and in that way being physically perceived as possessing either more or less energy, respectively. The other way involves a binary process emerging either more or less often within the reality structure and thereby affecting the outcome of the reality-cell-content-pattern calculation to a greater or lesser degree and so in that way being physically perceived as possessing either more or less energy, respectively. With that having been explained, what will now be described is exactly how second- and third-level binary processes express themselves in terms of the energy they are physically perceived to possess.

The energy associated with the *linear component* of a linear-radial distortion complex—i.e., a second-level binary process—varies solely as a function of the relative frequency of full emergence of a maximal distortion, since that distortion content (Planck's constant h) is constant. Thus, the *energy-equivalent expression* for the linear component is $E = h \times f$, where h is the maximal distortion and $f = c/w$. On the other hand, the energy associated with the *radial component* of a linear-radial distortion complex requires a slightly more complex energy-equivalent expression, because the reality cells that compose the radial component do not all contain the same distortion content but instead contain something

less than the content pattern defined as a maximal distortion. For this reason, the energy content of a single reality cell in the radial component with a less-than-maximal distortion varies as a function of both the relative frequency of full emergence of that reality cell, represented by the term f in the equation $E = h \times f$, and the specific distortion content of that reality cell. Because this distortion content will always be some percentage of the maximal distortion—i.e., less than 100 percent but greater than 0 percent—it will be represented by $\%h$ rather than h . Because the linear and radial components are two aspects of what is actually a single binary process, the general way in which each component expresses itself physically as energy is the same, and so the form of the two energy-equivalent expressions for those two components must reflect the structural and dynamic aspects of the binary process that is periodically producing what we physically experience as energy. Therefore, since the energy-equivalent expression for the linear component is $E = h \times f$, the energy-equivalent expression for the radial component must be $E = \%h \times f$.

The equation $E = \%h \times f$ is simply a mathematical statement that expresses how much relative change a given level of less-than-maximal distortion in a given reality cell is able to induce in the continuous calculation being done by the reality structure, as that calculation continuously and yet still only periodically, i.e., moment to moment, accounts for the reality-cell-content pattern of every reality cell within the reality structure. The relatively greater is $\%h$, the relatively greater is the change a particular reality cell that contains that $\%h$ contributes to the outcome of the overall reality-cell-content-pattern calculation, and so the more gravitational energy that reality cell, or area of space, is physically perceived to possess.

Notice that by using the relational-matrix model to formulate a mathematical statement which describes, in terms of the reality structure, the way in which both EMR and gravity express themselves physically as energy, we have just succeeded in *mathematically unifying* EMR and gravity within the context of a single field. In other words, both EMR and gravity have now been shown to be, at the level of the geometric structure of reality, slightly different physical expressions of the exact same underlying process—i.e., the periodic exchange of reality-cell-content patterns according to the equation $c = w \times f$. Albert Einstein spent the latter part of his life looking for a



“unified field” that would allow him to accomplish this—i.e., to unify the electromagnetic and gravitational forces. Thus, it would appear that in uncovering the hidden reality structure which underlies what we perceive as physical reality, we have just stumbled across Einstein’s no-longer-just-mythical unified field!

Precisely because Einstein knew, at a deeply intuitive level, that such a field must exist and that it had to have some structure, he was never completely taken in by *the illusion of probability* presented by quantum reality—i.e., the surface appearance that reality is fundamentally probabilistic. Einstein could never have derived his relativity theories if he did not believe that, at some level, reality has an underlying structure. As has been demonstrated here, *Einstein’s relativity theories are descriptions of the relations that naturally arise and exist within the geometric structure of reality which actually exists where physical reality only appears to be*. Therefore, in order to come over to the side of the quantum physicists—i.e., to see reality as inherently probabilistic—Einstein would have had to disavow the very belief that enabled him to create his relativity theories. Since he was apparently unwilling to deny that belief, he was therefore never able to believe or see as true the concept that reality is fundamentally probabilistic. Because of his belief in the truth of an underlying reality structure, the opposite belief—i.e., that there is no underlying causal structure to reality but only amorphous probability—always had to appear to him as false. Thus, the depth of intuitive understanding and knowledge that Einstein possessed kept him tethered to this correct belief about reality, and simultaneously prevented him from adopting the new and ultimately false belief that reality is fundamentally probabilistic and so unstructured, owing to *conceptual uncertainty*—i.e., the inability to simultaneously know opposite concepts as both true and false, or as neither true or false.

In any case, it has now been explained that the energy associated with the linear component of a linear-radial distortion complex is primarily a function of its relative frequency of emergence within the reality structure, since the distortion-content component h is constant, whereas the energy associated with the radial components is a function of both their relative frequency of emergence and their amount of distortion content, since the distortion content component $\%h$ is variable. But what about the energy associated

with a compound distortion process—i.e., matter? If energy is fundamentally the ability of a binary process to affect, in one of two ways—i.e., either through its relative frequency of emergence or through changes in its distortion content—the outcome of the reality-cell-content-pattern calculation being continuously done by the reality structure, then in which of these two ways do third-level binary processes affect the outcome of that calculation and so express themselves as the physical reality we call energy?

Changes in the quantity of energy possessed by third-level binary processes do not directly involve changes in the periodicity or relative frequency of emergence of those processes, as is the case for second-level binary processes because the reality structure is *directly* processing only second-level binary processes and is only *indirectly* processing third-level binary processes, since third-level binary processes are just a particular pattern of interaction of second-level binary processes. Therefore, how relatively often a material system fully emerges within the reality structure does not *directly* affect the continuous content-pattern calculation in the same way as for a second-level binary process. However, as will now be described, changes in the periodicity of a material system do *indirectly* affect the continuous content-pattern calculation because, as we now know, any change in the relative frequency of emergence of a material system within the reality structure must involve a change its total distortion content, and so must change what we physically perceive and measure as the energy associated with a particular material system.

There are two ways in which the total distortion content of a material system can change, both of which are a function of the two different ways in which the structure of a material system can be altered so as to increase or decrease its distortion content, while still maintaining the underlying interactive structure that makes it appear physically as a particular type of matter. One way is by simply adding to or taking away from that material structure, analogous to either fusing two pieces of clay together or pulling a single piece of clay apart, respectively. The other way is by changing the propagational linearity and thus the linear velocity of a material system through physical acceleration or deceleration, as illustrated in figure 10.

As already described, the propagational linearity and thus the linear velocity of a material



system increases or decreases as *quanta of energy* are either added to or removed from the material system in such a way as to cause it to either accelerate or decelerate, or move relatively either faster or slower, through the reality structure. In this way, changes in the periodicity of a material system indirectly and inversely relate to changes in the energy possessed by that system, as a function of the structural changes that must occur in order to change its linear velocity or rate of propagation through the reality structure. Specifically, as the propagational linearity and thus the linear velocity of a material system *increases* as the result of the *addition* of a specific number of quanta of energy to that material system—as described above in the section on “how gravity accelerates matter”—its periodicity decreases, while its total energy content increases.

Conversely, as the propagational linearity and thus the linear velocity of a material system *decreases* as a result of the *removal* of a specific number of quanta of energy from that material system, its periodicity increases, while its total energy content decreases. Thus, changes in the energy content of matter primarily involve changes in the total distortion content of a binary process—i.e., of the linear-radial distortion complexes of which it is composed—as a function of the two types of structural change that a material system can undergo while still maintaining the same underlying interactive structure that causes whatever third-level binary process is actually there to appear physically as a specific type of matter.

The movement that occurs in seemingly empty space

This explanation of how the second- and third-level relational structures or binary processes that exist at the fundamental level of reality translate into our physical perception of energy provides further evidence and corroboration that anything we physically perceive as energy is, at the level of the reality structure, simply a propagating distortion of reality-cell content—i.e., *wherever any distortion of reality-cell content exists, there is at least the potential for us to perceive the physical reality that we call energy*. On the other hand, where no distortion of reality-cell content exists, there is no potential for us to perceive the physical reality that we call energy, because in the absence of some distortion of reality-cell content, that part of the reality structure cannot form an *impactive relation* with either our physical senses or some

experimental sensor, and so there is no possibility whatsoever of that *area of space* being perceived as containing what we call energy.

We fail to perceive energy in areas of space where no distortion of reality-cell content exists not because no motion is occurring in those areas but only because, unless distortion content exists in a particular area of space, the structured motion that is always and intrinsically occurring there, in the form of a first-level binary process, simply cannot be physically perceived as energy. Regardless of the binary form that structured motion takes, that binary form must be able to impact—i.e., change the configuration of—the third-level binary processes that make up either our physical senses or our experimental sensors, in order to be physically perceived as possessing energy. If an underlying binary process or relational structure cannot form an impactive relation with either our physical senses or some experimental sensor that we have devised, then that underlying binary process, even though it exists, simply cannot produce a physical experience. Therefore, even though such binary processes just as surely and certainly exist, and so are ultimately just as real as those binary processes that can produce physical experiences, those binary processes that cannot form an impactive relation with either our physical senses or our experimental sensors are not physically perceptible and so do not appear in the “etching” that we call physical experiential reality. As described in the first paper in this series, what we experience as physical reality is not what is actually there; rather, what we experience as physical reality is a *boundary* that arises where one relational structure meets and impacts another relational structure, analogous to the way in which a line arises where the tips of two fingers meet and impact each (Kaufman 2018a).

Therefore, wherever a binary process exists, but where that binary process or relational structure nonetheless cannot form an impactive relation with either our senses or our sensors—as is the case for the universal binary process that constitutes the first level of the reality structure, in those areas of space where only uniform reality-cell content exists—no energetic physical reality can be perceived, even though such physically imperceptible binary processes are just as real a structuring of the motion of absolutely nothing in relation to itself as are the second- and third-level binary processes that can form impactive relations and so can be perceived as physical realities, and



in so doing become part of the overall “etching” that we call physical reality. What this discussion demonstrates is that not only is physical reality just an etching of what is actually there, as opposed to being what is actually there, but also is only a partial and incomplete etching of what is actually there. The only components of what is actually there that even appear to our minds as physical realities are those components of the reality structure that are able to cause configurational changes in the material systems or third-level binary processes that make up either our physical senses or our experimental sensors, and in so doing produce what we perceive as a physical experience from something that possesses a certain amount of what we call energy.

And so, for the reasons just explained, areas of uniform reality-cell content in the reality structure, even though they are actually in motion, are unable to form impactive relations with either our physical senses or our experimental sensors, and so register only as a physical experiential void, or as what we perceive as and call “empty space.” However, as evidenced by the following quote, physicist David Bohm knew that seemingly empty space is not actually empty: “It is being suggested here, then, that what we perceive through the senses as empty space is actually the plenum, which is the ground for the existence of everything, including ourselves. The things that appear to our senses are derivative forms and their true meaning can be seen only when we consider the plenum, in which they are generated and sustained, and into which they must ultimately vanish” (Bohm 2005). Einstein as well, as evidenced also by the following quote, understood that seemingly empty space is not actually empty: “I wished to show that space-time isn’t necessarily something to which one can ascribe a separate existence, independently of the actual objects of physical reality. Physical objects are not in space, but these objects are spatially extended. In this way the concept of ‘empty space’ loses its meaning” (Einstein 1961).

As we ourselves also now know, not only is space not empty, but at every point within seemingly empty space a binary process is occurring that is intrinsically moving at the speed of light, or processing at the speed of light—whichever way we want to put it—according to the equation $c = w \times f$. However, unless an area of the reality structure becomes distorted—i.e., unless a reality cell or cells contain(s) a pattern other than the uniform pattern—the motion that

is intrinsic to the reality structure in that area of space cannot be physically perceived. On the other hand, if an area of the reality structure becomes distorted, then the area of space corresponding to the area where a distortion of reality-cell content now exists can appear to contain some amount of what we call energy, but only if the binary process in that area of the reality structure is able to form an impactive relation with either our physical senses or some experimental sensor.

Conclusions

This work has demonstrated that underlying what we experience as the surface phenomenon of physical reality there lies a multileveled geometric relational structure which is composed of absolutely nothing as it has become iteratively and progressively structured in relation to itself as a function of its ongoing movement in relation to itself at the speed of light. What this work has also demonstrated is that it is the natural and inevitable functioning and evolution of this underlying reality structure that produces what we experience as the behavior of physical reality in general. Specifically, the model makes clear that the interrelations between space, time, energy, and matter mathematically described by Einstein in his relativity theories all exist as a function of relations that arise and exist naturally both between and within different levels of the reality structure which actually exists where we perceive physical reality to be. Evidence that this conceptual model of reality accurately reflects the way in which reality is actually structured and functions, underlying the surface appearance that is physical experiential reality, was presented by using the model to consistently and bijectively account for the long-sought-for connection between electromagnetic radiation and gravitation, the actual mechanism underlying gravitational attraction, the identity of the gravitational and inertial forces, and what is actually indicated when we use the term “energy.”

Ultimately, what the conceptual model of reality presented here allows us to understand is that seemingly empty space itself, as well as every form of energy in the Universe, regardless of how that form of energy appears as a physical reality, is actually an interaccommodative binary process, or some aspect of an interaccommodative binary process, that is itself composed of some form of absolutely nothing that has become dynamically structured in relation to itself as a function of its ongoing movement in relation to itself at the speed



of light. To reiterate, evidence that this conceptual model presents an accurate “etching” of the otherwise invisible and hidden reality structure it is purported to represent has been provided by ensuring that each element of the model satisfies Sorli’s bijective function, which requires that each element in the model correspond to a directly observable physical reality.

The only element of the model not bijectively accounted for yet is absolutely nothing itself—i.e., the only element of the model that has not been related to a directly observable physical reality is absolutely nothing. However, although absolutely nothing, by its very nature, cannot be directly related or linked to a directly observable physical reality—inasmuch as physical reality is always a something—absolutely nothing can be related or connected to a non-physical, non-mental reality that it is possible for us to know directly.

As stated early on in this paper, at the very least, there has to be nothing, because even if we eliminate everything, what we are then left with is absolutely nothing; and even if we were able to somehow eliminate that absolutely nothing, we would then still be left with absolutely nothing. Thus, it is simply impossible to get behind or beyond absolutely nothing. The physicist Max Planck was quoted as saying something very similar regarding consciousness; “I regard consciousness as fundamental. I regard matter as derivative from consciousness. We cannot get behind consciousness. Everything that we talk about, everything that we regard as existing, postulates consciousness” (Planck 1931). Therefore, I would postulate that since both absolutely nothing and consciousness are

completely formless, and yet both are in some way fundamental to everything we consider to exist, that we should begin to consider the very real possibility that the terms absolutely nothing and consciousness both point toward the same formless actuality out of which the Universe has evolved and of which the Universe is ultimately composed.

Absolutely nothing cannot itself be known as an object, but it can be known as the formless foundation out of which the unified field arises, and within which unified field all objects arise and exist. Likewise, consciousness cannot be known as an object, but it can be known as the formless space of awareness within which all objects that are known arise and exist.

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