The Easily Comprehended General Intelligent Design Model.

Robert A. Herrmann, Ph.D.*
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Abstract: In this article, a basic human "thought" procedure is described. It is employed to demonstrate simple and, yet, significant aspects of the Complete General Grand Unification (GGU) Model and its General Intelligent Design (GID) interpretation. These aspects are related to descriptions for ordinary human experiences. It is shown how these descriptions are translated rationally into the predicted statements that describe the behavior of an higher-intelligence.

1. Brief Glossary.

<u>General Language.</u> (i.e. General Language Description). GID-model descriptions are combinations of symbol strings, and diagrams. These are the major contributions. However, they can also include images or other devices that when considered by an individual yield mental or sensory impressions. This can also include machine duplicating sensory impressions. Thus, in general, an individual's mental or sensory impressions lead to the formation of a description. A description is intended to evoke within the same individual and others the same mental or sensory impression that originally produced the description.

For the Complete GGU-model (the combined GID-model and GGU-model schemes), a description needs to be considered as a general language linguistic **representation** for a design or pre-design. In particular, for our universe, a general language description is a representation for physical-events, physical-like events or other events. However, Complete GGU-model descriptions are often rather vague in character since the Complete GGU-model is a cosmogony. It needs to produce various types of universes including those that would appear to us as completely chaotic in behavior. Thus, it must be physical law independent as well as a substratum model.

For the model, there are predicted objects that behave like descriptions and we can have no detailed knowledge as to their composition. Each general language description can also be represented as a set of descriptions. A general description can be represented by a single constructed entity termed a "word." (The GGU-model, first only in GID-form and then via the GGU-model schemes, is constructed to solve the General Grand Unification Problem.)

<u>GID-Design.</u> GID-design is a form of atemporal "pre-design." When contextually understood, the prefix "GID" is often omitted. GID-design is *represented* by

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* Professor of Mathematics (Ret.), The United States Naval Academy, Annapolis, MD, U. S. A., viXra: 1406.0048, *E-mail* drrah@hotmail.com

<u>rational descriptions via a general language</u>. The term "rational" indicates that the descriptions are produced by rules for rational thought as descriptively defined.

Via the developmental paradigm, each sequential slice of a universe, a universe-wide frozen-frame (UWFF) is composed of physical-systems. Standard GID-design refers to the rational design of each physical-system, the designed rational intertwining of these physical-systems within each UWFF and the designed step-by-step rational production of the sequence of universe producing UWFF as represented by general language descriptions. The GGU-model predicts *UWFF which can contain physical, physical-like or other types of systems. GID-design also refers to additional predicted forms of pre-design as represented by the predicted higher-language and higher forms of rational thought. Further, GID-design includes any described alterations in the configurations that may occur from one *UWFF to another sequentially occurring *UWFF. That is, by comparison, the alterations are considered as GID-designed. Various alterations, relative to the UWFFs, may be predictable via described physical laws.

<u>GID-intelligence.</u> GID-intelligence is composed of the predicted higher-intelligence and, when restricted to the physical universes, the basic human intelligent actions upon which the higher-intelligence predictions are based.

Measurable standard GID-intelligence, relative to the UWFFs, refers specifically to the defined logic-system algorithm that deductively yields the sequentially intertwined physical-system descriptions for each UWFF and the sequentially presented collection of UWFFs descriptions. Other described behavior that, in general, exhibits deduction such as physical laws and the physical law alterations of physical-systems, also satisfy this intelligence definition via any form of the general logic-system and the logic-system algorithm. General logic-system deductions are equivalent to those produced by corresponding consequence operators.

GID-intelligence also includes application of additional rules for rationally presented descriptions. These includes additional aspects of the intelligence necessary to describe physical-systems and their relations one-to-another via a general language. Among these additional rules is the notion of choice. One can accept these rules as additional GID-intelligence features but, except for major aspects of the choice notion, these additional "intelligence" facets may not be representable via a mathematical model.

In general, for the Complete GGU-model and as restricted to the physical world (i.e. standard world), the terms **"rational" and "rational thought"** *refer specifically to <u>described</u> actions human beings employ to produce and manipulate general descriptions. Such actions <u>we apply</u> are, of course, the product of mentally corresponding the describe rules to actual physical actions. Higher-intelligence actions are predicted from these standard actions.*

2. The Infinite.

What does the term "infinite" mean in modern science? Well, without some intuitive idea as to what this means, then modern scientific theories would have little meaning. In Quantum Field Theory is the statement that the quantum field that correspond to "light" can have "infinite range." One can intuitively think of this concept, relative to content, as stating that it has the property of being "greater in content" than the finite notion. It was claimed for a hundred years, by some, that we cannot completely imagine such a concept. But, else, this is not true. (See [3] if you actually want to "imagine" one type of this concept.) Further, there is an additional technical note on the type of infinite being expressed in this article prior to the "References." It is a rather special "infinite" concept that is the major predicted characteristic that differentiates human behavior from that of an higher-intelligence.

3. Thoughts.

In [2], aspects of human behavior are described, where such behavior is characterized by the term "finite" as this term is understood in its most common sense of counting. The physical foundations of all of science is the notion of language. The General Grand Unification Model is based upon this foundation. This is way its results cannot be rationally rejected. But, they can be ignored and prevented from becoming well known.

Human beings "speak" to themselves when they "think," do they not? In the beginning, when we learn to read combined strings of symbols, we are often told to "read to yourselves." If you don't have a special brain or are not a "speed" reader, then does this form of thinking not "sound like" a mental "voice"? Human beings also make mental "images" as well when they "think." One can mentally "see" symbols and diagrams and sometimes rather strange images. The written English language and many others use symbols that represent spoken language-elements. Mathematics uses symbols and often gives them names. The GGU-model uses a representation, **L**, for the general concept of a language. Then it is mathematically modeled, in two different ways. Thus, one can consider **L** as composed of the written symbolic representations for a common written language, as well as collections of diagrams, displayed images and, by the methods of virtual reality, even other human sensory inputs.

The set, therefore, represents aspects of the human brain, where various portions of **L** correspond to this notion of "thinking." One does not continually included the word "representation" when the symbol **L** is used.

There is another aspect of "thinking." "I can't find the words, as yet, to express exactly what I mean. But, maybe this will help, although its not quite right." Such statements as these are very common. If individuals "thoughts" they wish to express, but do not, as yet, have the conscious words or images to do so, then in what form are these unexpressed thoughts? How do we even know that we have such thoughts?

Whatever our brain is doing in these many, many cases, is not the basic type of thoughts we need to presently consider in order to comprehend the GID-model.

Relative to the language L, facts can be informally stated about how a symbolic language represents such thinking. These facts can relate to such mental processes. For example, most "human beings construct meaningful statements from finitely long words." These words represent or model sounds we utter or mentally hear. They do not just correspond to random collections of symbols. It is the "finite" word we hear. It is finite since we "hear" the sound "start and stop." This is a fact whether the word is auditory or purely mental in character. Hence, most "human beings construct meaningful statements from finitely long thoughts." Then we can include mental images. Further, I can mentally see an image and then I mentally "talk about it." Most often images are of finite mental content. But, there are special ways to change this content notion. Thus, this extended language notion can be included in the "thoughts" category.

4. The Simple Descriptions.

The following are examples of varying collections of statements that, today, characterize the standard behavioral foundations for the Complete GGU-model. It is from these statements that the higher forms of behavior are predicted. This first list are observed facts about human behavior. (This is not the entire list employed to obtain the model.)

(**I**)

(1) We, human beings, construct meaningful descriptions from a finite set of finitely long words, where a word is a general language expression.

(2) These descriptions are members of a language **L**.

(3) We perform a finite counting process. This finite counting process is representable by a single rule for rational deduction, modus ponens, applied to a single hypothesis. This rule is applied over a corresponding finite time period. The final counting number obtained has many applications.

(4) By means of rational thought, we, using a finite collection of descriptions, construct meaningful (humanly comprehensible) sets of descriptions that detail specific portions of our universe. These are finite sequences of 3-D slices of a physical-system that are to be assembled to form the entire system.(The finite developmental paradigm concept.)

(5) We construct sets of descriptions, using members of **L** that give specific rules for combining elementary building materials so as to yield these designs.

(6) For our local environment, we change these descriptions into physical entities and physical-systems. (By definition, physical-systems are composed of physical entities or other physical-systems.

(7) By application of the rules for rational thought, we develop descriptions, (i.e. various physical laws), that allow future alterations in physical-systems to be predicted. (Symbolically, at a moment in universe's sequential development, a descriptive representation F(i), for a physical event E(i) occuring within a slice of a universe, "i", (a universe-wide frozen-frame (UWFF)), is descriptively altered, via a descriptive physical law, and the rationally predicted descriptive representation F(i + 1) for physical event E(i +1) within slice "i + 1" is obtained.)

These basic statements can be re-phrased by replacing the notion of "descriptions" by the "thought" concept. (When the mathematical symbols are re-interpreted, the resulting statement might require a slight modification from a previous corresponding statement.)

(**II**)

(1) We, human beings, construct meaningful thoughts from a finite set of finitely long words, where a word is a general language expression.

(2) These thoughts are members of a general language **L**.

(3) We perform a finite mental counting process. This finite counting process is representable by a single rule for rational deduction, modus ponens, applied to a single hypothesis. This rule is applied over a corresponding finite time period. The final counting number obtained has many applications.

(4) By means of rational thought, we, using a finite collection of thoughts, construct meaningful (humanly comprehensible) sets of thoughts that detail specific portions of our universe. These are finite sequences of 3-D slices of a physical-system that are to be assembled to form the entire system. (The finite developmental paradigm concept.)

(5) We construct sets of thoughts, using members of **L**, that give specific rules for combining elementary building materials so as to yield these designs.

(6) For our local environment, we change these thoughts into physical entities and physical-systems. (By definition, physical-systems are composed of physical entities or other physical-systems. For example, the entities - bricks, nails, wallboard: the physical-systems - fireplaces, walls, rooms.)

(7) By application of the rules for rational thought, we develop thoughts, physical laws, that allow future alterations in physical-systems to be predicted. (Symbolically, at a moment in its development, a mental representation $F(i)$, for a physical event $E(i)$ occuring within a slice of a universe, "i", (a universe-wide frozen-frame (UWFF)), is mentally altered, via a mentally understood physical law, and a rationally predicted representation $F(i + 1)$ for physical event $E(i +1)$ within slice "i + 1" is obtained.

The language aspects of these statements are directly related to mathematical symbolism. Then the mathematics PREDICTS other mathematical entities. These predictions can then be interpreted using modifications of the above (1) - (7) statements. Of course, one need not make such an interpretation. There are various GGU-model schemes from which one can choose. These predictions do not come from the standard mathematics used by almost everyone in the world who uses mathematics.

The Complete GGU-model is a cosmogony for generation of universes. Standard mathematics is that used to model our particular physical universe. The mathematics used to produce the Complete GGU-model, as first applied by this author, has been shown to be necessary to model such a cosmogony via a specific substratum in which the universes are embedded. This relatively new mathematics first requires knowledge of standard mathematics and it is an additional feature, an extension, of the standard mathematics. Since this mathematics is rather special, it corresponds to nothing to which most individuals have been exposed. Consequently, individuals may need to trust me and accept the interpreted predictions based upon my expertise in Nonstandard Analysis. Although the basic scientific method employed corresponds to such sciences as physical cosmology, individuals may reject these Complete GGU-model predicted statements based a philosophic stance. Since the general methods I employ satisfy the scientific method employed for such sciences, then the predicted results can only be rejected based upon other criteria. Of course, individuals can reject the general intelligent design features and accept the purely secular GGU-model.

The types of human thoughts being considered above are assumed by physical science to be the results of physical electro-chemical actions. Physical actions that we perform change such thoughts into physical reality. Further, standard training within the physical sciences has yielded some highly successful but possibly imaginary models that predict physical behavior. It may be difficult to eliminate from ones acquired methods the idea that various questions have any meaningful answers relative to our level of intelligence. It seems necessary that before proceeding that individuals not concern themselves with attempting to answer the following two questions. Of what entities are the higher-intelligence thoughts composed? How does an higher-intelligence correlate these thoughts and a GGU-model scheme?

In statements (1) - (7), one can simply substitute, for certain strings of symbols, other strings of symbols and informally describe the behavior of a predicted "higher-intelligence." *However, this does not yield any great comprehension as to actual higher-intelligence behavior.* There is an additional fact that does produce better understanding.

It turns out that there are relationships between the "higher-intelligence" concept and the human being. The (1) - (7) physical statements and the higher-intelligence statements (1) - (7) below yield a **comparative understanding** as to the differences between human intelligence and that of an higher-intelligence. The mathematics shows that the higher-intelligence can do everything that is described various statements listed above. **That is, in various statements, the phrase "human being" and words "humanly" and "human" can be replaced with the phrase higher-intelligence and the statements are essentially predicted by the model.** Then each transformed statement can be compared with previous version.

This yields rationally predicted statements such as "An higher-intelligence can construct sets of thoughts from a hyperfinite set of hyperfinitely long words." Such "words" (i.e. ultrawords) have the same general formation properties as do the actual words that have been appearing on your monitor screen. For the first case, the hyperfinite = finite words and, in this case, they are members of **L** and, under the usual circumstances, they can be humanly comprehended. In a second case, by a special approach, the words might still be humanly comprehended although they are symbolically members of ***L** and not members of **L**. But, for the third and usual case, these hyperfinite words are members of ***L**, not members of **L** and cannot be humanly incomprehensible in their entirety. In general, "hyperfinite" can mean "finite" or a very strong form of the "infinite."

5. Rationally Predicted Higher-Intelligent Behavioral Descriptions.

The higher-intelligence can also do a lot that human beings cannot do. The following statements characterize the "higher" part of the term "higher-intelligence." The following list demonstrates how simple modifications to the terms that appear in the second list of statement, (1) - (7), leads to the predicted higher-intelligence behavioral descriptions. One accepts these statements as "fact" by applying the general rules for various physical sciences such as the science "physical cosmology." *When not restricted to our physical world, they imply that, relative to characterizing properties, the modified noun is exceptionally "greater than" or "more than," etc. the unmodified "finitely" characterized noun. The word "infinite," as here stated, is intended to, at the least, carry this intuitive understanding.*

(III)

(1) An higher-intelligence constructs meaningful higher-thoughts from an infinite set of infinitely long higher-words (ultrawords).

(<u>2</u>) These higher-thoughts are members of an higher-language $^*\mathbf{L}$. The higher-language $^*\mathbf{L}$ includes higher-diagrams and other higher-intelligence comprehensible forms for higher-images.

(<u>3</u>) A higher-intelligence mentally performs a hyperfinite counting process. This hyperfinite counting process is representable by a single rule for higher-rational deduction applied to a single hypothesis. This rule is applied over a corresponding hyperfinite time period. The final hyperfinite counting number obtained has many applications.

(<u>4</u>) By means of a higher form of rational thought, an higher-intelligence, using an infinite collection of higher-thoughts, constructs a meaningful (higher-intelligence comprehensible) set of higher-thoughts that details specific portions of a hyper-universe. These are hyperfinite sequences of 3-D slices of an entire universe composed of designed physical-systems and possibly other types of systems that are assembled to form an entire universe. (The hyperfinite developmental paradigm concept.) There are predicted hidden universes that can be associated with ours and these need not be empty [5].)

(<u>5</u>) An higher-intelligence constructs a set of higher-thoughts, using members of $^*\mathbf{L}$, that give specific higher-rules for combining elementary building materials so as to yield these designs. (By application of special techniques, these specific higher-rules are humanly comprehensible.)

(<u>6</u>) An higher-intelligence changes thoughts into higher-physical entities and higher-physical-systems (often termed as physical-like systems). (By restriction, the higher-physical entities include physical entities and higher-physical-systems include physical-systems. And, as in physical case, higher-physical-systems may be composed of higher-physical entities or other higher-physical-systems. The compositions, by restrictions, can contain physical entities or other higher-physical-systems or physical-systems. Examples, entities - x-tons, propertons: higher-physical-systems - human spirit, invisible universes, photons, electrons, physical-systems.)

(<u>7</u>) By application of the higher-rules for rational thought, an higher-intelligence designs and produces physical-systems in a special manner, which allows human beings to construct descriptions that permits them to predict future alterations in the behavior of the physical-systems.

The model also states that such an higher-intelligence cannot be a member of any of the produced physical universes. Indeed, it cannot be part of any of the Complete GGU-model predicted objects. Further, as a cosmogony capable of producing any of the four types of sequentially produced universes, even the pure secular GGU-model requires a special type of "infinite" processing in order to produce such universes. **From**

these characteristics, it is obvious that the term "higher-intelligence" can be replaced with the term "infinite-intelligence." This type of infinite is termed the "generic infinite" and is only partially characterizable via modern set-theory.

The above collection of statements are not the only way to describe aspects of th Complete GGU-model. The fact that the Complete GGU-model is predicted from observable physical behavior, the data-set, is the major empirical approach used in throughout physical science. There is a vast amount of physically restricted evidence that supports the Complete GGU-model [6]. One of the often cited original examples of empirical science was when Kepler produced his planetary laws of motion. However, his second law is stated in terms of human concepts, where most are not composed, in general, of any observable material entities.

For the GID-model, the term "intelligence" is specifically defined and modeled. The higher-forms are predicted from this. Other terms or specifically named entities may be substitute for these terms and Complete GGU-model rationally predicted statements may correspond to aspects of a named entity. However, many additional defining attributes may need to be expressed in order to fully model the named entity.

Richard Feynman, in his popular lectures on QED, states that he will tell his audience how Nature works but not why She behaves that way. He continues to use the "Nature" and the "She" terminology. If his Nature terminology is extended the Complete GGU-model substratum, then the following are predicted.

(IV)

(1) In general, Nature designs all universe physical entities, physical-systems and their behavior patterns as modeled by the GID-model.

(2) Nature produces all of the physical entities, physical-systems and physical behavior patterns as modeled by a GGU-model scheme.

(3) Nature designs all physical entities and physical behavior patterns as modeled by the thoughts concept.

(4) Human beings make choices.

(5) Nature has pre-designed alternate participator universes to accommodate human choice.

(6) Although Nature pre-designs all possible human life-paths, She does not originate the non-automatic patterns for human physical behavior. Human choice is the original agent that does so.

(7) Nature has constructed successive physical events in a special manner so that by application of the rules for rational thought, we develop descriptions, physical laws, that allow future alterations in physical-systems to be predicted.

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Thus the notion of the "higher-intelligence" is replaced with another term that, if one did not know that such a replacement was made, would appear to be less threatening to the philosophy of atheism. Even a substitution of a term such as Aristotle's "prime mover" might be unacceptable.

Now comes the real problem for atheists and why they apparently are so intent upon putting extreme barriers between my work, in this area, and the rest of humanity. They cannot scientifically counter these results unless they discard all that they claim is the scientific method. Worst still for them is the following additional theological interpretation for the higher-intelligence. It is produced by substituting into the (**I**) statements "God" for the higher-intelligence, as well as substituting for Nature in statements (**IV**).

<div align="center">(V)</div>

(1) In general, God designs all universe entities and their behavior patterns as modeled by the thoughts concept.

(2) God produces all of the physical entities and physical behavior patterns as modeled by the concept of changing thoughts into various realities.

(3) God designs all physical entities and physical behavior patterns as modeled by the thoughts concept.

(4) Human beings make choices.

(5) God has pre-designed alternate participator universes to accommodate human choice.

(6) Although God pre-designs all possible human life-paths, He does not originate the non-automatic patterns for human physical behavior. Human choice is the original agent that does so. It is when such human mental or physical behavior occurs that the associated ethical consequences are realized.

(7) God has constructed successive physical events in a special manner so that by application of the rules for rational thought, we develop descriptions, physical laws, that allow future alterations in physical-systems to be predicted.

In the Bible we find that "The LORD said to Moses . . . ." (Lev.) and He then describes what He considers as sinful human behavior. The Complete GGU-model employs the allowed Biblical concept of "thinking within oneself" as the Hebrew for "said" can be interpreted. This directly corresponds to the Complete GGU-model's design feature. This aspect of the Complete GGU-model is not concerned with any type of process that can influence an individual's specific choice.

The facts are that these and many other **rationally predicted** statements satisfy a strict interpretation for statements that appear in the Bible. Indeed, the GD-model specifically predicates that, for each comparable human attribute, there is an infinitely powerful Divine attribute [7]. Hence, relative to the modeled attributes, the Biblical God is a rational concept. Although, as illustrated, the Complete GGU-model is not based upon the Scriptures, the model does satisfy over 55 Biblical statements. Further, the Biblical God has other facets, not stated in the above forms, and one usually includes these when the term is employed. To the atheists, the public "cannot be allowed to know" that a properly constructed scientific theory could ever predict such properties and have such a correspondence. Indeed, they seem, at present, to have mostly succeeded since, thus far, only a small minority has this knowledge.

In summary,

Observable behavior - the data - (**I**) mathematically predicts
an entity and processes (**III**) that produce universes.

The entity may be re-interpreted so as to correspond to the Biblical God (**V**).

Although there will remain a GID signature that cannot be eliminated but can be ignored, by restricting the observed behavior, the GGU-model establishes that

Observable behavior - the data - mathematically predicts
substratum processes that produce universes.

(This is further technical note on the term "infinite" as employed above. It has been shown that the actual GID-model concept of "infinite" is dependent upon the set-theoretic axioms employed to generate the mathematical structure. For the usual case, the GID-model "intelligence" has a fixed absolute infinite measure. In another case, such an intelligence only has a partial measure, via the mathematics, for its infinite character. However, external to the actual set-theory employed, one might consider a type of upper bound. An in-depth discussion of the second case appears in the paper [1] in the References. Due to these differences, for a measure of the strength of the higher-intelligence, I consider the term "infinite" as a "generic" notion. Intuitively, it is a type of ultimate infinite.

Relative to an higher-language, the actual mathematical model states that members of the higher-language $^*\mathbf{L}$ are composed of hyperfinitely long strings of symbols that are taken from $^*\mathbf{L}$. The symbols are also members of $^*\mathbf{L}$. But, the original alphabet symbols and each word from $\mathbf{L}$ are members of $^*\mathbf{L}$. The "hyperfinitely long" includes the "finitely long" language-elements. Consequently, various predicted statements about an higher-intelligence, also hold when restricted to our specific finite world.)

References

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