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# Alphabets, Numbers, Punctuation *profess* Micro Graph Theory

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**ABSTRACT**

*Seemingly trivial circumstances sometimes give birth to great ideas. In most sciences, one generation tears down what another has built and what one has established another undoes. In Mathematics alone, each generation builds a new story to the old structure.*

*The terms of probability and experiment convey a broad sense of referring to any observable phenomenon such as relationships like the origin of the Universe with Sound, Light , Heat, of the solar system with the human's spoken and written languages, of the betweenness system of alphabets - numbers - punctuation ( ANP) and of the last but not the least important confusion of the Scientists & Mathematicians that Science without Religion is lame as well as the Religion without Science is blind on the strengths of their own reasons and logics at a time in the 21$^{st}$ Century of ours when we all designate ourselves as modern rational men & women of modern Science in order not to accept any religious scripture which says in the best possible non-mathematical and social manner that the Earth is beautiful, the World is flat and the Universe came from her own Golden Egg !*

*This Research Paper focuses on the intrigue mechanisms, i.e., the ANP with their long running and high jumping self-reliant cosmical transformations with scientific relevance to turn things and affairs into simple and steady results assuring the hopes of earthlings in the midst of wave compressions and rarefactions, electromagnetic waves and molecular kinetic energy connecting with research and development as opposed to the ancient scriptures of all sorts.*

**Key Words:** *Golden Egg, Flat , scriptures, Earth, compressions, ANP, micro graph theory.*

### Introduction

*Assorted Sweets of Alphabets, Numbers, Punctuation (ANP)*

We use local and organic ingredients as much as possible. Choice of pastry, cakes and tarts will vary according to season, availability of produce and the whims of the pastry chef.

$35 minimum order, Orders must be placed by 4 pm, 72 hours in advance. We may not have some "assorted sweets" items available

If you have any questions regarding our products or would like place an order please go ahead!

Readers, please laugh, please laugh & laugh ! Oh! Ha! Ha!

Assorted consists What?

A haphazard assortment of different kinds, assorted sizes, a mixed program of sundry sciences commonly known as social; of many different kinds purposefully arranged but lacking any uniformity, "assorted sizes". Unlike in natural or form or degree. "took different approaches to theproblem". The ultimate combination of all consisting of various kinds mixed together.

In real life which we are all living away as at the moment of my preparing this Paper and your reading the same latter on , the situation is known as worldly assorted in existence consisting of Writers, Readers and Publishers of different kinds as the ultimate combination mixed together. This analogy is derived from the above

explanation of assorted sweets which really matter very much in our daily life conditions and one appreciates at least that sweets make up our lives most significant and relevant to one another seen of scenes as a child ages to become father of a man. How sweety a thing it is or a talk-about for mankind !! A child , A Father & A Man -- assorted sweets of LIFEHOOD in its EVOLUTIONARY GAINS !

Such assorted sweets of various denominations come in many consignments of life's progressions or switchovers from birth to studentship to adulthood to scholarship to professorship to higher order research-scientists.

Let us consider one such denomination of Alphabets, another of Numbers and yet the other of Punctuation in the real-world- situation of Education from kindergarten to University level. Grouping the three denominations, we can label the group as 'assorted sweets' consignment in an academic context or simply, an assortment without which there would have been no alternative except chaos between the mankind and the most powerful clues of the existence of the mankind in reality. In other sense, it can be put as it (assortment) is as if the 'idea' of the alphabets, numbers & punctuation must somehow permeate the genome (mankind) that gives rise to it and that there is no better organizational principle.

The mankind are divided into categories of the general and the particular by changes in the combinations, substitutions and transpositions of the alphabets, numbers and punctuation which are put together to form an assortment or assorted sweets of the genome to accomplish specific tasks and to convey specific meanings. Today, functionally integrated information-processing systems are nothing but intelligent sources making use of these. For example, a computer code or a software language consisting of alphabets, numbers & punctuation arranged in a specific sequence or take your own computer password or user login codes made up of these alpha-numeric-punctuation permutations and combinations stop-kiss- keys worthy of your

personal knowledge, secrecy and applications of success that can be distributed openly on your single command ability.
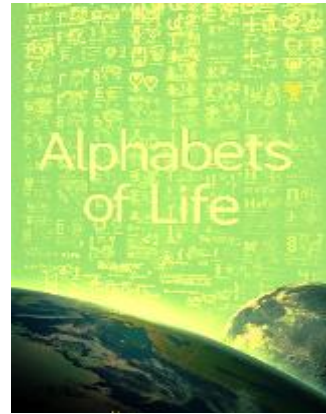


>> fig > Alphabets of Life is about origins of alphabet out of scope of this Paper .

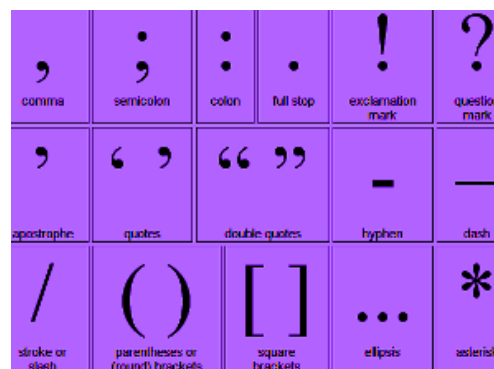### Discrete & Discreet Properties of ANP

It is not only necessary but also essential to be in the know of the scholastic knowledge well-spread globally that the *ANP* are both discreet and discrete in their very formal, academic and conventional existence.



>>Numbers



>>Alphabets



>>>
Punctuations & controls

Many may get confusion easily owing to lack of touch despite frequent light and heavy reading and writing hours and practice sessions or training programs that the two words, viz, discreet and discrete are different words that sound alike but are truly different in meaning, spelling or both that can be very misleading to the acme of confusion and in fact, confusing. Discreet means that it is a show of reserve & prudence in speech or actions especially in order to avoid causing offence or to gain an advantage while discrete means something quite separate, unrelated and distinct. Hence these two words are called pair of homophones. Picturesquely, seen below with the help of a mnemonic device for distinguishing between the two words that can be derived from the position of the e's: in "discreet" two e's meet or both the e's are embedded together with the boundaries of the word and thus hidden from the outside world of the word whereas in discrete, they are separated, distinct and unrelated.
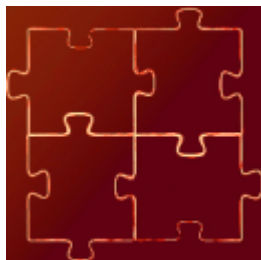


< e's embedded >

< e's unrelated >

Discreet          fig. Mnemonic Pattern
          Discrete

The discrete property of *ANP* is that they command obviously distinct and separated values when positioned in niche depending upon the context whether it is language or modulus or a stop. The discreet property of *ANP* is that they command an absolutely applied attribute such as to attract little notice in the vast knowledge of theory and practice of most modern applied technologies via electrical, electronically and solar energy contexts using mediums of alphabets, numbers, punctuation in the education of science for meaningful structures.

A few examples are provided hereunder without elaboration due to the limited relevance to the scope of this Paper.

### 1. The vintage Telegraph

The Morse Codes are applications of *ANP*. Morse code is designed way of representing information in the old days of the telegraph.

## 2. Modern computers

All the information on computer- text, images, computer program, is stored in coded form (sequence of 0s and 1s).

American Standard Code for Information Interchange (ASCII) is designed with 128 characters. The ASCII assigns numeric values to *ANP* marks and control characters to provide compatibility between computers and peripherals.

Hence, 128 different *code words* based on a *code alphabet* consisting of 0 and 1.

Tabulation below shows the number, binary code word and actual character for characters numbers 32 to 127. (characters 0-31 are special "non-printable" characters, not shown here). The character "A", for example, is number 65, and the character "a" is number 97.

| No. | Code Word | Character | No. | Code Word | Character | No. | Code Word | Character |
|-----|-----------|-----------|-----|-----------|-----------|-----|-----------|-----------|
| 32 | 0100000 | SPACE | 64 | 1000000 | @ | 96 | 1100000 | ` |
| 33 | 0100001 | ! | 65 | 1000001 | A | 97 | 1100001 | a |
| 34 | 0100010 | " | 66 | 1000010 | B | 98 | 1100010 | b |
| 35 | 0100011 | # | 67 | 1000011 | C | 99 | 1100011 | c |
| 36 | 0100100 | $ | 68 | 1000100 | D | 100 | 1100100 | d |
| 37 | 0100101 | % | 69 | 1000101 | E | 101 | 1100101 | e |
| 38 | 0100110 | & | 70 | 1000110 | F | 102 | 1100110 | f |
| 39 | 0100111 | ' | 71 | 1000111 | G | 103 | 1100111 | g |
| 40 | 0101000 | ( | 72 | 1001000 | H | 104 | 1101000 | h |
| 41 | 0101001 | ) | 73 | 1001001 | I | 105 | 1101001 | i |
| 42 | 0101010 | * | 74 | 1001010 | J | 106 | 1101010 | j |
| 43 | 0101011 | + | 75 | 1001011 | K | 107 | 1101011 | k |

## 3. Digital Aerial Surveys by digital air cameras

In small computer systems, to translate from keyboard characters to computer language, for representation of the *ANP*, binary digits or bits of 0, 1 are used. One such 7-bit code is also the American Standard Code for Information Interchange (ASCII) which is extensively useful as seen 2 above.



>> the 7–bit code

Since this 7-bit code represents letters as well as numbers, it is known as the *alphanumeric code* additionally.

## 4. Digital Representation

Everything is represented by numbers only. This is called Digital Representation. Bits, Bytes and representation of information. The sequence of something (sound, pictures, text, instructions,) is converted into numbers by a mechanism. The numbers can be stored, retrieved, processed, transmitted. The numbers might be reconstituted into a version of the original for sound, pictures and other real-world values , make accurate measurements, convert them to numeric values. So, digital means discrete values. Only a finite number of different values. A change in something results in sudden change from one discrete value to another. Thus, values are represented as numbers. Letters and other symbols are inherently discrete. Encoding them to

represent as numbers is just assigning a numeric value to each one, without any intrinsic meaning . The ASCII uses better representation, Hexadecimal notation (hex) because binary numbers are bulky.  The hexadecimal notation is like shorthand. It combines 4 bits into a single digit written in base 16 – a more compact representation of the same information. The hex uses the symbols A B C D E F for the digits 10 .. 15 [ 0 1 2 3 4 5 6 7 8 9 A B C D E F ] .

(0 : 0000) ( 1: 0001) ( 2 : 0010) ( 3: 0011) ( 4: 0100) ( 5 : 0101) ( 6: 0110) ( 7: 0111)
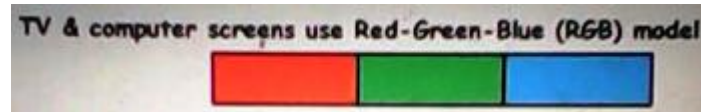( 8: 1000) (9 :1001) ( A : 1010 ) (B : 1011) ( C : 1100) (D : 1101) (E : 1110) (F : 1111)



### 5. Colour Representation

Color TV (television) & computer screens use Red-Green-Blue (RGB) model. Each color is a combination of red, green, blue components.

 R+G = yellow,

R+B = magenta,



B+G = cyan,

R+G+B = white

 For computers, color of a pixel is usually specified by three numbers giving amount of each color, on a scale of 0 to 255. This is often expressed in hexadecimal so the three components can be specified separately (in effect, as bit patterns) – 000000 is black, FFFFFF is white. Printers use cyan-magenta-yellow[-black] (CMY[K])                                                      :



### Discrete ANP & Discrete Mathematics

The idea of Discrete Mathematics underlie in Science and Technology of the Computer Age.

Recent computing machinery with electrical and electronics engineering as base for computers and computerization of operations of civil functions globally owe a debt of gratitude to Discrete Mathematics as the core knowledge.

Discreet Mathematics is a pointer to multiple mathematical disciplines that study discrete structures and phenomena. By discrete structures, one suggests the linear order of natural numbers and the set of cities and towns in a Country together with the roads between them because these consist of separable and discretely arranged objects with gaps as opposed to the continuous structures known for lack of gaps or densely filled. Theory of Sets and Relations, Mathematical Logic, Number Theory, Graph Theory and Automata Theory come under the Discrete category mainly for practical experience in field of their own structures and importance.
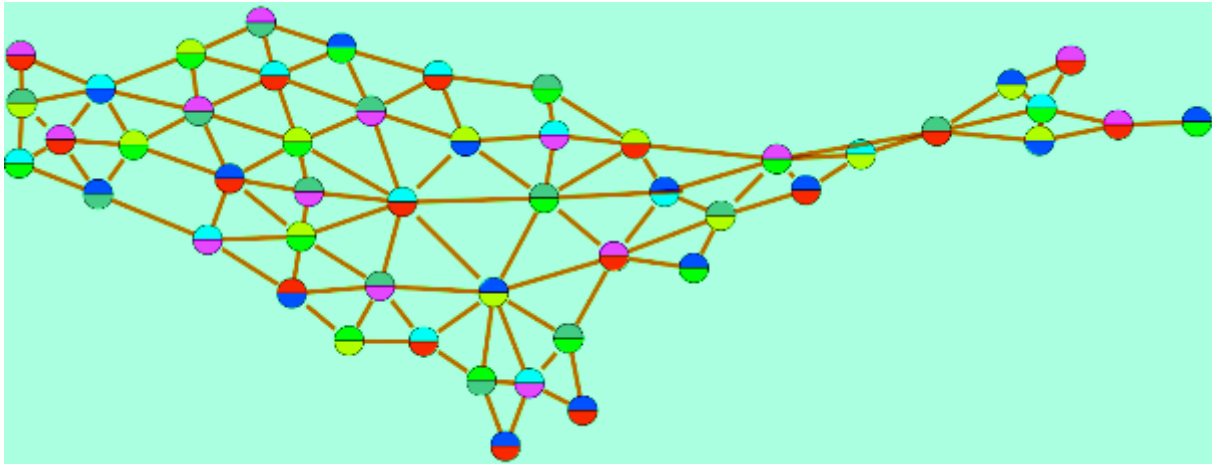
**Fig.** The States of the United States of America as nodes with regions adjacent on common border in the above Graph can be seen.

The structures of Alphabets, the structures of Numbers and the structures of Punctuation conform to the structures of what came to be known much later as the Graph Theory based on the study of structures called Graphs which are very pleasant objects to work with, being easy to visualize and to apply, if need be, geometrical intuitions. Truthfully so are the objects of Alphabets, objects of Numbers and objects of Punctuation to visualize and to apply non-geometrical intuitions to work upon while considering to treat them with properties within the scope of the already developed and available Graph Theory offered on a platter.

One needs a reminder at this juncture that prior to Graph Theory, magnitudes and geometrical figures of objects were principally concerned with. The basic concern of this Paper is the relationship between the elements of the figures of objects of *ANP* but not the sizes of any of them. The immediate objective is to see how basic terminology of Graph Theory is applicable to the figures of the type represented by *ANP* so that that would suffice the incorporated

obligation in the title role of this research paper -- *professing* played by the *ANP* in so far as Graph Theory and Applied is cornered with .

A bit more of this intuition is carried forward to say that inscrutable are the ways of Graph Theory & Applied such that the *ANP* could be the categorically non-striking ones to neglect and so negligible to be overlooked. Hence out of sight in order to be invisible but materially treatable and presentable micro graph structures are these appealing to a discernible thinker –scholar's mind and falling within the reach of his / her microscopic faculty of foresight and minute scrutiny. This is the provocation which made this Paper as much as possible a self-contained research output through a self-directed manuscript scribbled as a rough draft firstly. But, thereafter , refined into a final fair draft assumingly for an answer in annual university examination seeking mathematical maturity of the examinees to a choice-based question on' Graphs and Micrographs' instead of the familiar and recurring 'Graphs and Networks'. The latter are used to be easily thought of and run across one's subtle non-researching and answer-writing-time-limit -mindset only capable of visualizing the Macro (Large) graphs within the near grasp and memory practices forming constrained and hands tied perceptibility in examination heat.

### *Macro ( Large) Graphs VS Micro Graphs 'ANP'*
Engineers and applied Mathematicians stirred-up a potential surge of interest and activity in graph theory particularly with clean evidence of their own strength and points of emphasis put into solving practical problems in electrical network analysis, circuit layout, data structures, operations research, PERT, flow problems, assignment problems, identification of a chemical compound, topological analysis, printed –circuit board,

airline routes, electricity and water supply networks, delivery routes for goods, postal services and social sciences almost always resulting into and leading to macro (large) graphs which are virtually impossible to analyze without the aid of Computers. An Engineer frequently finds that those real-life problems which can be modeled into graphs small enough to be worked on by hand are also small enough to be solved by means of aids other than graph theory. In this aspect, the advent of high speed digital computer contributed for the dynamic interest in graph theory. The help of a digital computer or high-speed electronic computer for handling macro (large) graphs is now-a-days common with algorithms and their efficiencies in place. It is called the Theory of Graphs: A Basis for Network Theory and also the Graph Theory with Applications to Engineering and Computer Science. Therefore, computational aspects of graph theory emerged on the lines of computer programs with graph-theoretic algorithms. A few examples of Macro (Large) Graphs are the finite graphs of the Internet graph, Social networks, Biological genomes & human brain networks and the Universe.
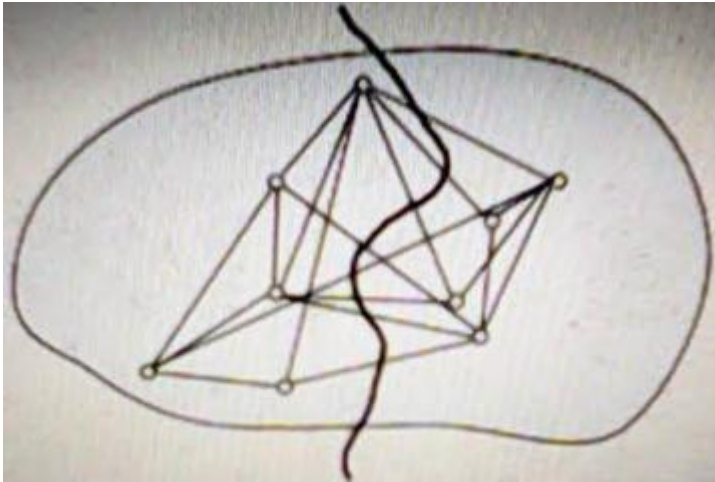

>A Large Graph .


Bridges of Königsburg
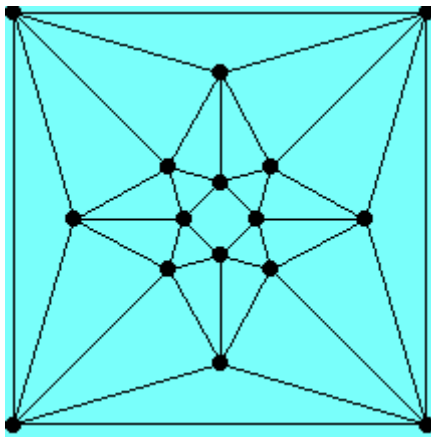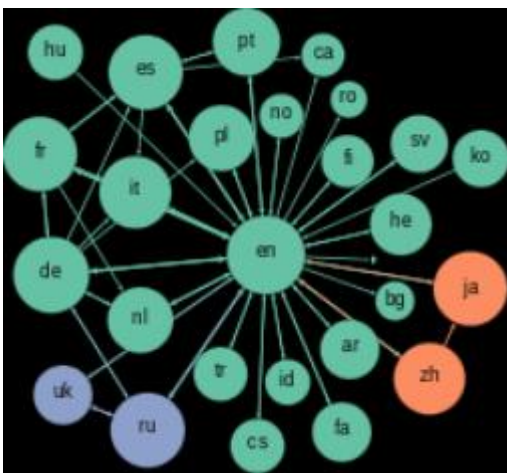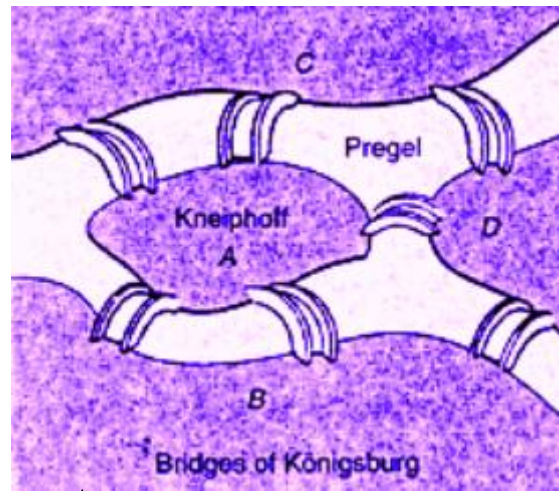

> A Network graph
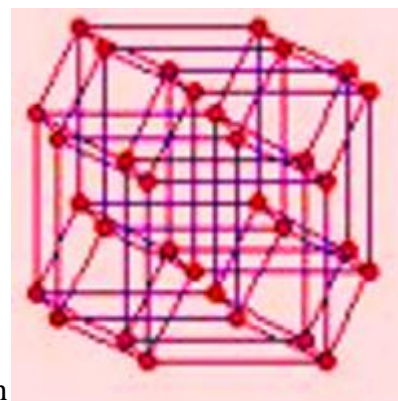

>cube

> A Large Graph with Cut on a potato

From the above, it is comprehensible that graphs facilitate to visualize any shape. In Graph theory, underlying structures of objects and events with relative position and direction do matter to the conceptual framework of relationships, if any, between such entities.

Graph theory has developed to its present state of sophistication subject to two broad divisions in the development of Graph Theory. One division is the study of graphs in terms of the objects (dots and line segments) of graphs exclusively. The second one is the study of application of the graph theory to other kinds of sets of objects or systems. Theoretically, these two divisions have been developed separately, each in its own bone of contention. This is called separative development but gradually weakened not to be permanent feature to stay on in the long run. Rather, the attacking symptoms grew up with theoretical results, applications, problems and theoretical research-studies forming the modern cyclical trend. The *ANP*, under efforts painstakingly to search the interplay of theory and application, promotes understanding tocorrelate the *ANP* with graph theory of dots and line segments in an obvious fashion of their connectedness or shapeliness emphasized in our daily needs of recognizing the ANP in reading and writing, looking to the dots, lines or both. In the case of the vintage telegraph's *ANP* morse codes above mentioned, for example , these are devoid of the graph theory's necessary and essential condition of representing connectedness by lines

joining two dots. Also, the morse codes are the *ANP* codes of dots and line segments disassociated with the true audible sounds of the *ANP* as found relevant in reading and writing patterns.

Considering the *ANP*, a corner is represented by a vertex and a side of a shape as an edge, the *ANP* graphs come into being for visualization of non-geometrical liberal meaningful customary patterns or sound-shapes as the sole objects of concern representing a collection of line segments terminated by dots which is the visual objectivity and without properties of their own. No line length or curvature or point content or position of line segments is material to the free-hand-drawn shapes of the *ANP* which are useful to profess a separate graph theory by the *ANP* and of the *ANP* in a micro fashion vis a vis the prevailing macro (large) graphs aforementioned. Hence called the micro graph theoretical study and the graphs by themselves to constitute *ANP* micro graphs

A study of the manner in which these line segments and dots can be indeed in inter-relationship is truly redundant in the *ANP* micro graphs constitution for the reason of the already pre-determined audio character or property in association with the permanent visibility drawings of *ANP*. In other words, *ANP* micro graphs are also collection of dots and line segments that may or may not be connected to one another as in the instances of the exclamation mark (!) of punctuation made up of one line segment and one dot placed in relation without

joining for connectedness as well as the full stop mark (.) of punctuation made up of the only one dot. It does not matter how big the dots are, how long the lines are, or whether the lines are straight, curved or squiggly. Sometimes, the dots don't even have to be round. All that matters is which dots are connected by which lines. Thus, the *ANP* micro graphs are otherwise stated to be the noticeable audio-reserved shapes and patterns inside other shapes and patterns giving rise to a graph the way a graph theorist chances upon studying the innumerable shapes and patterns of objects to take forward connection aspects on one hand and the best set of graph equations on the other hand. Some of the graph theory fundamentalists already knew the usual loop and node equations as the graph equations familiar in the preparation of electric network analysis based on the connection aspect.

Mere perception does not constitute knowledge and insight of the *ANP* to profess micro graph theory. It must be coordinated and interpreted by reference to some underlying entity, a thing in itself which may not be an object of direct physical observation.

Therefore, it is the spirit of this Paper to bring to light that the *ANP* will take the graph theory and applied to new heights to profess micro graph theory as a separate branch of knowledge which might give the clue to the massive belief that the Universe is born out of a big bang comprising collective strength of audio elements or particles or waves or compounds or sound-born graphical structures or bits or bytes and what not prevailing at the time just before the cause of the big bang Obviously, the mystery of big bang unresolved even today perhaps holds the key of the safe-vault of micro graph theory and research requires not only searching what has been done before but also thinking what others have not thought of in earlier life-times for the reason of universal safety but not to confront a contingent liability to tackle at great costs of interplay between the known and the unknown connection aspects still debated with the help of ancient available archived records when Science of today was not born and unable

to fix the truth and fiction in their respective mix of proportions in its own honest attempt to thwart the other kinds of forces like the Religions in the hard core trees of beliefs with elements of metaphysical character in solidarity with observable facts as the ultimate source of notions and constructions. Innermost essence of the Universe or big bang or big crunch might be tacitly radically different from the ultimate science of truth about which modern thinking is a typical universal scientific attitude working even today.

## Conclusion

If there is a new theory which is better than an old er theory, we believe for sure that the newer theory describes reality more correctly.

This is called an inter theoretic reduction because the terms of the old theory can be reduced to the terms of the new one. For instance, our historical understanding about the *ANP* is today the Language, Mathematics and Grammar respectively.

These terms which are identified with each other a re called inter-theoretic-identities. When an old theory and a new one are parallel in this way, we can conclude that we describe the same reality only more completely. However, the *ANP* and the origins of the Universe connectedness as described in the sacred texts (out of place here for a mention) supplement our understanding on the micro-graph theory.



>>>> Sage Vishwamitra & his pet Universe as per sacred scriptures , Vedas & Upanishads seen below.
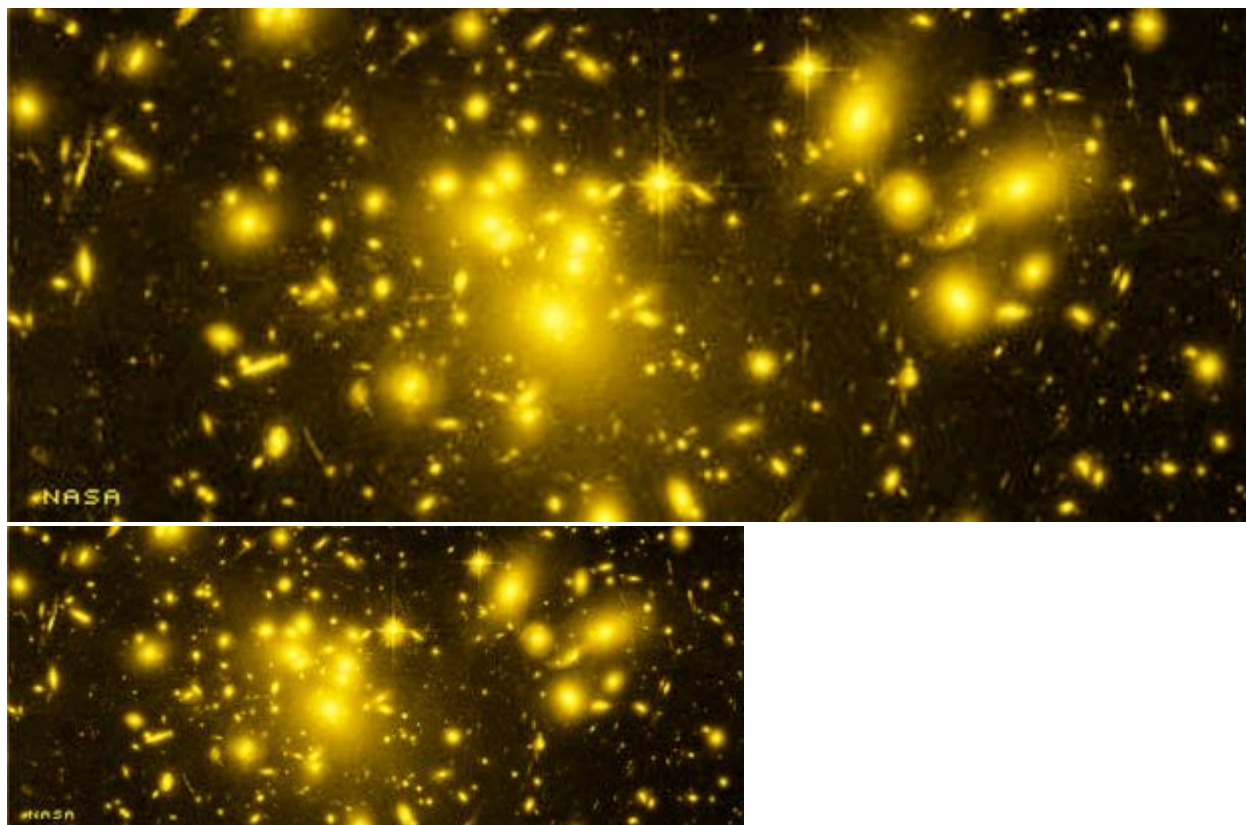
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## Author Profile



The Author passed his Pre-Ph.D Course with Examination in the field of Graph Theory at the Andhra University, Andhra Pradesh State, in the year of 1981 at the Department of Applied

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