

## Numerology

### **Abstract**

People are always seeking for meaning with their lives. They desire a sense of significance hidden below and within what they interact with every day. Numbers, objects invented to represent states in reality, have been claimed to possess supernatural qualities that extend their meaning beyond our initial assignment. These fallacious claims are bound together and referred to as “Numerology”. With a fatal tendency to ignore ulterior ascriptions to patterns, Numerology places itself under the category of pseudoscience.

### **Introduction**

Throughout many pseudosciences, and in some cases sciences, Numerology has played a role. In Astrology, it is believed that each of the numbers 0 through 9 is ruled by a planet in our solar system. In acupuncture, it is believed that each blood vessel that circulates blood and air within the body corresponds to a river flowing toward the Central Kingdom and the practices goes as far as to divide the body into 365 individual parts based on the calendar year. Even in Physics, Paul Dirac posited a relationship between the length of the universe and the strength of gravity (Stenger).

### **Hypothesis**

As a result of this pervasiveness, it is important to be able to properly label and identify numerology as it may unjustly serve arguments in making their claim. This may be done by

mathematically analyzing the foundation of claims that appear numerological, and subsequently relegating the cause of such claims to either casual or mathematical coincidence.

**Methods**

The sources of data and evidence for this examination include an article, which compiles data from various sources, on howstuffworks.com by Tracy Wilson, the site director. They also include an article on the Skeptical Inquirer called “Acupuncture, Magic, and Make-Believe” by George A. Ulett who is a clinical professor of psychiatry. An article from the same magazine called “Coincidences: Remarkable or Random?” from the same magazine by Bruce Martin, a professor of Chemistry at the University of Virginia. An article from the University of Colorado by Victor J. Stenger entitled “Is the universe fine-tuned for us?”. And finally a book called “Numerology or what Pythagorus wrought” by Dudley Underwood who holds a PhD from University of Michigan and a bachelor’s and master’s from Carnegie institute of Technology all in mathematics.

Source	Affiliation	Degree held	Supposed Credibility
Victor J. Stenger	Colorado University, UCLA	Ph.D and master’s in Physics	Due to the degrees held from respectable universities, it can be concluded that such a source is reliable.
Tracy Wilson	howstuffworks.com	Unknown	Because of the lack of viability of degrees, the reliability of this source is somewhat questionable.

Source	Affiliation	Degree held	Supposed Credibility
Dudley Underwood	University of Michigan, Carnegie Institute of Technology	Ph.D, master's, and bachelor's in mathematics	Because of the impressive number of degrees in a relevant and respectable fields, this is a reliable source.
George A. Ulett	Skeptical Inquirer, University of Missouri School of Medicine	Ph.D in clinical psychiatry	Due to the degrees held in relevant subject matters (where sourced for information), this is a reliable source.
Bruce Martin	Northwestern University, University of Rochester, California Institute of Technology (Cal Tech), Harvard University	Bachelor's in Chemistry and Ph.D in photochemistry.	Because of the plethora of affiliations with some of the top universities, this is certainly a reliable source.
Unknown Author	The Skeptic's Dictionary	Unknown	It's very difficult to judge the reliability of this source by doing anything but referring to the references it makes. Considering it references Dudley Underwood's book and a book by John Allen Paulos (a mathematician with a Ph.D), we can conclude that this is reliable.

## Results and Analysis

Modern numerology is based on the supposed fact that one's name and birthday correspond to a concrete aspect of their persona (skepdic.com). While an examination on this correspondence would be a more accurate investigation into the veracity of Numerology, it's not possible to prove or disprove such a relation and therefore our attention will be relegated to analysis of the tools modern (and in some cases, Ancient) Numerologists use in their practice. Gematria (the process of turning words and characters into numbers) has no standard basis and

therefore any Numerologist can obtain a desired result through simple arithmetic manipulation (Dudley, 46). For example, the word “Hitler” can be beasted (that is, represented by the ominous number ‘666’) by adding 99 to value of each character in the english alphabet (originally A=1, B=2...Z=26, now A=100, B=101...Z=125). Adding the values corresponding to the characters in “Hitler” will result in the number ‘666’. The process varies by the count of characters in the word (it’s simpler for words with 6 characters), and each alteration in correspondence between character and number may be justified by some manipulation of the current year, subject’s birthday, or some other numerical property of the person (Dudley, 47).

The spectacle through which Numerology is commonly judged (the eyes of the participant) is highly subject to selective attention. That is, when interpreting a reading that refers not to physical or measurable attributes of a person, the observer (especially if the reading is positive) is more likely to evaluate the reading based on the information that was in line with their self-image. This credulity is only enhanced by the general outlook by the innumerate that numbers hold a sort of “mystical authoritativeness” (skepdic.com).

A secondary reinforcer of the mysticism of numbers is the psychological concept, first termed by psychologist Carl Jung, of synchronicity (Martin, 1). This is similar to the notion of selective attention with the exception that it applies less to a confined set of information, but rather the entirety of data and events that are encountered every day. In their daily bombardment with events and information, humans naturally find patterns, and numerologists exploit this fact by giving a certain number salience and when the individual perceives to encounter this number frequently, they think that the numerologist was correct about this number having significance. In actuality, humans naturally forget information that they did not deem to be significant. This

fact results in individuals perceiving to have seen this number far more frequently than others (Martin).

## **Contradictions**

Evidence for Numerology being based on something more than the exploitation of widespread human innumeracy is scarce as the claim cannot be proven. Rather than providing concrete evidence, it's more appropriate to fight back with merit just as is done with the original claim. Nobel prize physicist Paul Dirac posited that the observation that the order of magnitude of the ratio of the electromagnetic force to the gravitational force (the square root of what is now called Eddington's number) was identical to the order of magnitude of the ratio of a typical star's lifetime to the time required for light to travel across the radius of a proton had some sort of cosmological meaning (of the numerological variety). Such a claim is worth considering as the man who made it was one of the greatest physicists who even lived (and therefore, his conjectures should be of equal worth as those of the sources sites in this paper). Although Dirac was correct that this observation had meaning, it was entirely scientifically plausible, if not required, as heavier elements (such as carbon) would not have existed if these ratios were not of equal magnitude (Stenger).

## **Deviation**

Therefore, Numerology's tragic flaw is more pervasive than it's practice: it's claims and methods have not been verified, nor standardized, which not only makes its methods unverifiable

due to inconsistencies, but also renders its claims unscientific due to their lack of basis in fact and experiment.

### **Conclusion**

It must then be concluded that Numerology is a pseudoscience unless the field is accompanied by a body of evidence stating that a standardized method of Gematria does have some real world correspondence with human personalities, or enough relations between physical constants exist that it would be unscientific, that is, highly improbable, to ascribe their existence to anything but cosmic mysticism.

## **Bibliography**

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