



$$e^{i\pi} + 1 = 0$$

$$\Phi = \Phi^2 + e^{i\pi} \text{©}$$

eipiphiny society

[www.eipiphiny.org](http://www.eipiphiny.org)

# eipiphiny Society



## Mission

The aim of the eipiphiny society is to discover and implement ways to enable every child to experience MEHMEs and eipiphinies.

## What do the words MEHME and eipiphiny mean?

MEHME stands for “meaningful, emotional, humanistic, mathematical experience.” It is a play on the word “meme.”

“The term ‘**meme**’ (rhymes with ‘theme’), coined in 1976 by famous evolutionary biologist Richard Dawkins, refers to a unit of cultural information transferable from one mind to another. Dawkins said, *Examples of memes include tunes, catch-phrases, clothes fashions, ways of making pots or of building arches.* [The word “meme” has recently been included in the Oxford English Dictionary where it is defined as “a self-replicating element of culture, passed on by imitation.”<sup>1</sup>] A meme propagates itself as a unit of cultural evolution and diffusion — analogous in many ways to the behavior of the gene (the unit of genetic information). Often memes propagate as more-or-less integrated cooperative sets or groups, referred to as **memplexes** or **meme-complexes**.

“The idea of memes has proved a successful meme in its own right, achieving a degree of penetration into popular culture rare for a scientific theory.

“Proponents of memes suggest that memes evolve via natural selection — in a way very similar to Charles Darwin’s ideas concerning biological evolution — on the premise that variation, mutation, competition, and “inheritance” influence their replicative success. For example, while one idea may become extinct, other ideas will survive, spread and mutate — for better or for worse — through modification.

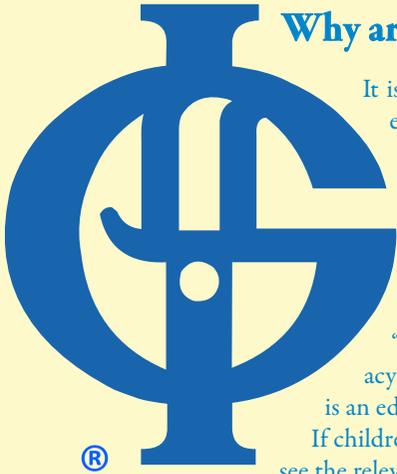
“Meme-theorists contend that memes most beneficial to their hosts will not necessarily survive; rather, those memes which replicate the most effectively spread best; which allows for the possibility that successful memes might prove detrimental to their hosts.”<sup>2</sup>

MEHME stands for a mathematical meme that is a positive, meaningful, emotional, humanistic experience that we wish all children to discover and experience.<sup>3</sup>

## eipiphiny

The term “eipiphiny” is a play on the word “epiphany”. Epiphany is defined as “**a** (1): a usually sudden manifestation or perception of the essential nature or meaning of something (2): an intuitive grasp of reality through something (as an event) usually simple and striking (3): an illuminating discovery, realization, or disclosure **b** : a revealing scene or moment.”<sup>4</sup> It refers to an eureka/ah hah experience.

eipiphiny stands for a “mathematical/stochastic” epiphany. It is made up of the mathematical constants, e, pi, phi, and the imaginary number, i, which if they had not been discovered the modern world as we know it would not exist. e and i also stand for “emotional intelligence” the understanding of which is essential to our mission.



## Why are the words MEHME and eipiphiny required?

It is difficult if not impossible to discuss the subject matter of the essential role of emotions in education if words to adequately represent the subject matter do not exist. Such is the case when we arrive at the need to discuss the essential role of “emotional intelligence” as it relates to the essential need for our children and grandchildren to be mathematically and stochastically literate<sup>5</sup> in order to exist and compete in a world dominated by technology.

We believe that failure to have words such as “MEHME” and “eipiphiny” has contributed to the failure of many educators to have the essential role of “emotional intelligence” and its relationship to mathematical and stochastic literacy adequately and properly addressed despite valiant attempts to do so.<sup>6</sup> The result is an educational system that we believe is failing.<sup>7</sup>

If children can experience MEHMEs and eipiphinies they will grow to love mathematics, see the relevance to their daily decisions, and will be self-confident.

How could the above statement be efficiently made and discussed without the creation of the words MEHME and eipiphiny?<sup>8</sup>

## What is the meaning of “emotional intelligence”?

“Emotional intelligence is the innate potential to feel, use, communicate, recognize, remember, learn from, manage and understand emotions.”<sup>9</sup>

The concept of emotional intelligence is a relatively new subject matter. It appears to have originated in 1985 and has taken on impetus because of the concept of multiple intelligence, and dissatisfaction with only one measure of intelligence. Unfortunately there is not consensus on the meaning but for our purposes the above definition suffices.

## What are some examples of MEHMEs and eipiphinies?

Professor Paul Davies captured the spirit of MEHME and eipiphiny in the following personal anecdote.

In any event theory better suited my temperament and conformed to my long-standing quest for meaning. I had discovered the charm of pure theory some years earlier, while still at Finchley. I had taken a fancy to a dark-haired girl called Lindsay, who was studying only the humanities and so spent long hours in the school library reading English literature. I contrived to sit opposite her one day, charged with the homework task of computing the trajectory of a ball projected up an inclined plane. As I was partway through several sheets of mathematics, the ravishing Lindsay looked across at me with a mixture of admiration and puzzlement. “What are you doing?” she asked. When I explained, she seemed completely mystified. “But how can you tell where a ball will go by writing squiggles on paper?”

Lindsay’s question has haunted me ever since. How is it, indeed, that we can capture the workings of nature using human mathematics? I came to see the equations of theoretical physics as the universe’s hidden subtext. By learning the arcane language and procedures of mathematics, I could access an occult world of forces and fields, of invisible subatomic particles and subtle interactions – a wonderland at my fingertips every bit as compelling as the dark night sky above our heads but somehow more exciting because of its abstract nature. I felt as if I had been inducted into a secret society, where by following a set of special rules I could unveil an alternative reality – in

fact, a deeper level of reality, which somehow came closer to the soul. The soul of the universe, perhaps. I realized then how Galileo must have felt when he wrote that the book of nature is written in mathematical language, and I experienced something of the same thrill: the sense that nature itself was speaking to me in code.  
—Paul C. W. Davies<sup>10</sup>

Professor John Casti captured the spirit of MEHME and eipiphiny in a different manner and used the emotion packed word “beautiful” that will often be found when mathematicians express their emotions about their discipline. In answer to the question, “If you could teach the world just one thing ...” Professor Casti responded,

As a mathematician, I should teach the world a mathematical statement, which is not strictly a scientific concept. My bequest involves just seven symbols, and involves no words. It is **the eighteenth-century Swiss mathematician and physicist Leonhard Euler’s magical expression, linking the five most important constants in mathematics:  $e^{i\pi} + 1 = 0$ .**

This formula links  $e$ , the base of natural logarithms;  $\pi$ , the ratio of the circumference of a circle to its diameter;  $i$ , the square root of  $-1$ ; and the binary numbers 1 and 0; into a single, compact, almost unbelievable expression. Who would have thought that two transcendental numbers ( $\pi$  and  $e$ ), the square root of  $-1$  ( $i$ ), and the minimal set of elements needed to construct arithmetic (0 and 1), could all five be combined in such a compact, elegant, simple formula?

Almost every mathematician alive would vote for Euler’s formula, as the most beautiful result in the history of mathematics. For that reason, I vote to pass it along to the next set of sentient beings.<sup>11</sup>

## How does the eipiphiny society plan to assist as many children as possible to experience the beneficial effect of MEHMEs and eipiphinies?

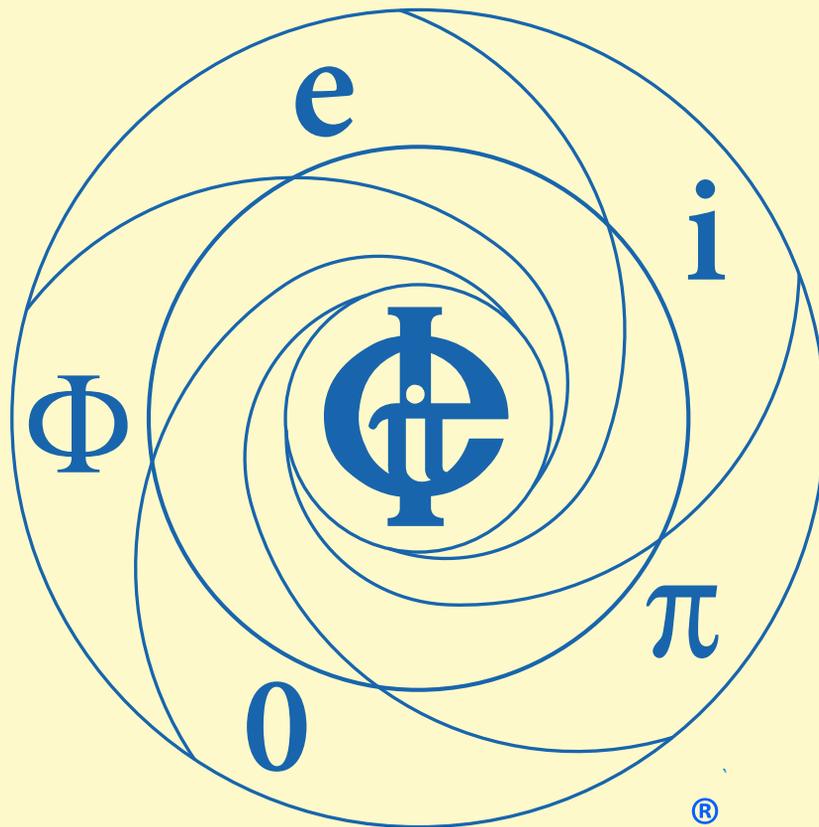
We encourage all of those who have experienced MEHMEs and eipiphinies to record their experiences and openly share them on the eipiphiny Society web site, [www.eipiphiny.org](http://www.eipiphiny.org). Historical examples of MEHMEs and eipiphinies will also be included. The MEHMEs and eipiphinies will be analyzed in order to determine what characteristics they share in common. Once these characteristics become clear they will constitute recommended changes in our education system designed to permit every child to experience the joys of MEHMEs and eipiphinies. By so doing we hope to eliminate some of the major barriers to achieving the necessary scientific, mathematical, and stochastic literacy required for survival in an age of accelerating technological revolution.

## What is the purpose of the eipiphiny logo?

The eipiphiny logo has been designed to artistically capture the emotional spirit of the MEHME underlying Euler’s famous equation/relationship, as expressed by Professor Casti, and much more. In many ways it is an exceptional good luck charm made up of outstanding very lucky numbers.

Mankind has been extremely fortunate to have discovered the very lucky numbers,  $\pi$  (3.14159...),  $e$  (2.71828...),  $\phi$  (1.618033...), 1, 0, and  $i$  (the square root of  $-1$ ). Further it is amazing that mankind discovered that these numbers, that are so important to our existence and progress, are all related.

At some time in history the above lucky numbers elicited MEHMEs and eipiphinies in those playing the game of science, as any study of their history reveals. Unfortunately for many today they are taken for granted and the MEHMEs and eipiphinies are lost. Our educational system does not leave room for introducing the discovery of these numbers historically, so today’s students could at least vicariously experience that which the discoverers experienced as a foundation to enjoying the joy of mathematics and stochastics. We hope to rectify this unfortunate educational deficiency that cripples far too many students today.



Luck played a further role in the design of the eipiphiny logo. By consensus over the centuries it was agreed that certain letters would represent these numbers, otherwise it would be very difficult and very inconvenient to discuss and use these numbers. Luckily the letters chosen lend themselves to being combined in one design. With artistic license the eipiphiny logo contains e, i,  $\pi$ ,  $\Phi$ , 0, 1 as well as the circle that has played an equally cogent role in our history.<sup>12</sup> The letters “e” and “i” can stand for emotional intelligence, which is central to what we want to encourage. Further “i” and “e” can relate to other words that are so important in learning this subject matter. Some examples are, intuition, involvement, ingenuity, enthusiasm, euphoria, eureka, esthetic, and so on.

The eipiphiny logo inverted is also a G enclosing an exclamation mark therein.

The exclamation mark is an efficient and appropriate symbol to represent the eureka and ah hah experience involved in MEHMEs and eipiphinies.

G can represent the first initial of many who in history have experienced MEHMEs and eipiphinies and have contributed so much to others experiencing them, for example Gauss, Gödel, Galton, and Galileo etc. For those so inclined G can represent God. Throughout history one will find constant reference to the question, “Is God a Mathematician?”<sup>13</sup> It is perhaps easy to understand that the amazing and unbelievable effectiveness of these numbers in our lives can elicit such a



question.

There is another major advantage to our eipiphiny logo: it lends itself to constant repetition in correspondence. This is so necessary when trying to make the concept familiar and to overcome major barriers to the education of future generations. The letter “e” is the most frequently occurring letter in the English language. Below are perhaps two appropriate examples using the eipiphiny symbol in place of “e” and its inverted form in place of “g”:

The fairēst thing wē can ēxpēriēncē is thē mysteri-  
ous. It is thē fundamēntal ēmotion which stands at thē  
cradlē of truē art and truē sciēncē. Hē who knows it  
not and can no longer wonder, no longer feel amazē-  
ment is as ēood as dēad, a snuffēd-out candle.

—Albert Einstein<sup>14</sup>

Nēvēr doubt that a small ēroup of thouēhtful, commit-  
tēd citizēns can changē thē world. Indēed, it is thē  
only thing that ēvēr has.

—Margaret Mead

The members of the eipiphiny Society proudly wear the eipiphiny logo as a demonstration of their dedication and allegiance to the goals and purpose of our society. Whenever asked the significance of the insignia members will put forth best effort to find ways to share and explain. By so doing new ways will be discovered to help future generations to experience eipiphinies and MEHMEs.

For those of us who have benefited and been fortunate enough to have experienced MEHMEs and eipiphinies the eipiphiny pin serves as our personal good luck charm and a constant reminder of our good fortune and our desire to bestow this luck on as many future generations as possible. If you wish to become a member and to share your MEHME's and eipiphinies please visit our web site, [www.eipiphiny.org](http://www.eipiphiny.org).

#### Notes

<sup>1</sup> **MemeLab**, [www.memes.org.uk/meme-lab/welcome.htm](http://www.memes.org.uk/meme-lab/welcome.htm)

<sup>2</sup> **Meme**: [www.en.wikipedia.org/wiki/Meme](http://www.en.wikipedia.org/wiki/Meme)

<sup>3</sup> **Keith Devlin**, *Making the Invisible Visible*, [www.math.utk.edu/~ccollins/refs/devlin.invisible.html](http://www.math.utk.edu/~ccollins/refs/devlin.invisible.html)

*The Humanistic Mathematics Network Journal*, [www2.hmc.edu/www\\_common/hmnj/](http://www2.hmc.edu/www_common/hmnj/)

*Humanism and Mathematics Education*, [www.mathforum.org/mathed/humanistic.math.html](http://www.mathforum.org/mathed/humanistic.math.html),

**Philip J. David & Reuben Hersh**, *The Mathematical Experience*, see Google Books, [www.books.google.com/](http://www.books.google.com/).

<sup>4</sup> **Eipiphany**: [www.m-w.com/dictionary/epiphany](http://www.m-w.com/dictionary/epiphany)

<sup>5</sup> **Stochastikon**, [www.stochastikon.com](http://www.stochastikon.com)

<sup>6</sup> **Nathalie Sinclair**, *The roles of the aesthetic in mathematical inquiry*, [www.mth.msu.edu/~nathsinc](http://www.mth.msu.edu/~nathsinc)

Also *Mathematics and Beauty: Aesthetic Approaches to Teaching Children*, [store.tcpres.com/080774722X.shtml](http://store.tcpres.com/080774722X.shtml)

**Robert Root-Bernstein**, *Aesthetic Cognition*,

[www.ingentaconnect.com/content/routledg/cisp/2002/00000016/00000001/art00006](http://www.ingentaconnect.com/content/routledg/cisp/2002/00000016/00000001/art00006)

Also see, the concept of “synosia” in *Sensual Chemistry: Aesthetics as Motivation for Research*, section 5, [www.hyle.org/journal/issues/9-1/root-bernstein.htm](http://www.hyle.org/journal/issues/9-1/root-bernstein.htm)

*International Studies in the Philosophy of Science*, Volume 16, Number 1 / March 01, 2002, The entire issue is dedicated to

“Recent work on aesthetics of science”, [www.ingentaconnect.com/content/routledg/cisp/2002/00000016/00000001](http://www.ingentaconnect.com/content/routledg/cisp/2002/00000016/00000001)

**Paul Thagard**, *The Passionate Scientist, Emotion in Scientific Cognition*, [cogsci.uwaterloo.ca/Articles/Pages/passionate.html](http://cogsci.uwaterloo.ca/Articles/Pages/passionate.html)

*Mathematical beauty*, [en.wikipedia.org/wiki/Mathematical\\_beauty](http://en.wikipedia.org/wiki/Mathematical_beauty)

<sup>7</sup> *Rising Above The Gathering Storm: Energizing and Employing America for a Brighter Economic Future*,

[www.nap.edu/catalog/11463.html#description](http://www.nap.edu/catalog/11463.html#description)

**Bill and Melinda Gates Foundation, Education Initiative**, [www.gatesfoundation.org/unitedstates/education](http://www.gatesfoundation.org/unitedstates/education)

**Stand Up**, national campaign to transform education in America, [www.standup.org](http://www.standup.org)

<sup>8</sup> **Psycholinguistics**, [www.en.wikipedia.org/wiki/Psycholinguistics](http://www.en.wikipedia.org/wiki/Psycholinguistics)

<sup>9</sup> **Emotional Intelligence**, [www.eqi.org/index.htm](http://www.eqi.org/index.htm), [www.danielgoleman.info/blog/](http://www.danielgoleman.info/blog/) **Daniel Golman**, *Working with Emotional*

*Intelligence*, [www.enotalone.com/article/4491.html](http://www.enotalone.com/article/4491.html), **Cary Cherniss**, *Emotional Intelligence: What is it and Why it Matters*,

[www.eiconsortium.org/research/what\\_is\\_emotional\\_intelligence.htm](http://www.eiconsortium.org/research/what_is_emotional_intelligence.htm)

<sup>10</sup> **Paul C. W. Davies**, “Cosmology Calls,” in Brockman, John ed. *Curious Minds: How a child becomes a scientist*, Pantheon

Books 2004, p. 59. 05/01/2010, [www.randomhouse.com/pantheon/catalog/display.pperl?isbn=9780375422911](http://www.randomhouse.com/pantheon/catalog/display.pperl?isbn=9780375422911)

<sup>11</sup> **John Casti**, [www.spiked-online.com/Articles/0000000CA9F3.htm](http://www.spiked-online.com/Articles/0000000CA9F3.htm)

**Euler’s Identity**, [www.en.wikipedia.org/wiki/Euler%27s\\_identity](http://www.en.wikipedia.org/wiki/Euler%27s_identity)

**Paul J. Nahin**, *Dr. Euler’s Fabulous Formula: Cures Many Mathematical Ills*, [press.princeton.edu/titles/8129.html](http://press.princeton.edu/titles/8129.html)

**Euler’s Relation**, [www.justinmullins.com/eulers\\_relation.htm](http://www.justinmullins.com/eulers_relation.htm)

<sup>12</sup> **e Mathematical Constant**, [www.en.wikipedia.org/wiki/E\\_\(mathematical\\_constant\)](http://www.en.wikipedia.org/wiki/E_(mathematical_constant))

**Eli Maor**, *e: The Story of a Number*, [www.press.princeton.edu/chapters/p5342.html](http://www.press.princeton.edu/chapters/p5342.html)

**Paul J. Nahin**, *An Imaginary Tale: i (the square root of minus one)*, [www.press.princeton.edu/titles/6388.html](http://www.press.princeton.edu/titles/6388.html)

**Pi**, [www.en.wikipedia.org/wiki/Pi](http://www.en.wikipedia.org/wiki/Pi)

**Phi, Golden Ratio**, [www.en.wikipedia.org/wiki/Golden\\_ratio](http://www.en.wikipedia.org/wiki/Golden_ratio), <http://goldennumber.net/>

**Mario Livio**, *The Golden Ratio: The Story of Phi, The World’s Most Astonishing Number*,

[www.mariolivio.com/more-books-by-mario-livio/](http://www.mariolivio.com/more-books-by-mario-livio/)

**Priya Hemenway**, *Divine Proportion: Phi In Art, Nature, and Science*,

[www.sterlingpublishing.com/catalog?isbn=9781402735226](http://www.sterlingpublishing.com/catalog?isbn=9781402735226)

**Anton Glaser**, *History of Binary and Other Nondecimal Numerations*, [www.eipiphiny.org/history.shtml](http://www.eipiphiny.org/history.shtml)

**J.J. O’Connor and E.F. Robertson**, *A History of Zero*, [www.history.mcs.st-and.ac.uk/~history/HistTopics/Zero.html](http://www.history.mcs.st-and.ac.uk/~history/HistTopics/Zero.html)

**Charles Seife**, *Zero: The Biography of a Dangerous Idea*, [www.users.cloud9.net/~cgseife/](http://www.users.cloud9.net/~cgseife/)

**Robert Kaplan**, *The Nothing That Is: A Natural History of Zero*,

[www.oup.com/us/catalog/general/subject/Mathematics/?view=usa&ci=9780195142372](http://www.oup.com/us/catalog/general/subject/Mathematics/?view=usa&ci=9780195142372)

**Ernest Zebrowski, Jr.**, *A History of the Circle*, [rutgerspress.rutgers.edu/acatalog/\\_A\\_History\\_of\\_the\\_Circle\\_78.html#8](http://rutgerspress.rutgers.edu/acatalog/_A_History_of_the_Circle_78.html#8)

**MathematiciansPictures.com: everything math**, [www.mathematicianspictures.com/Mathematicians/Gauss.htm](http://www.mathematicianspictures.com/Mathematicians/Gauss.htm)

<sup>13</sup> See [www.aakozzll.com/docs/theology.htm](http://www.aakozzll.com/docs/theology.htm)

**Sarah Voss**, *Depolarizing Mathematics and Religion*, [www.homepage.mac.com/fallentree/pizine/depolarizing.html](http://www.homepage.mac.com/fallentree/pizine/depolarizing.html)

**Teun Koetsier**, and **Luc Bergmans**, ed., *Mathematics and the Divine: A Historical Study*,

[www.elsevier.com/wps/find/bookdescription.cws\\_home/704302/description#description](http://www.elsevier.com/wps/find/bookdescription.cws_home/704302/description#description)

<sup>14</sup> **Albert Einstein**, *The World as I Know it*. Filiquarian Publishing, LLC. (July 6, 2006) pg 14

# Founder of the Society

## Burke Avery Brown

1928 - 2016

Burke Brown was born in Guelph, Ontario, Canada, attended the Guelph Collegiate Vocational Institute for high school and then graduated with a Master's Degree in Psychology from the University of Toronto in 1952. His immediate goal was to work in the private sector in business to earn and save enough money to support his family and return to university as a researcher in human behaviour. His interest was in man's economic behaviour, having written his Master's Thesis on the "Hoarding Instinct in Lab Rats". Spurred on by the words of Sir Maurice G. Kendall\* in his 1960 inaugural address as the president of the Royal Statistical Society, "There has been a feeling that perhaps something analogous to the laws of [the] physical sciences might be found to operate in the behavioural sciences.", Burke set out to find those laws in his spare time, never returning to university to continue his research. During his successful 50-year career in business, Burke came to be known as the "go-to person" for raising capital for smaller technology deals. He was a financial consultant to government, innovators, and inventors and was a founding director of the University of Toronto Innovations Foundation and the Canadian Industrial Innovation Centre, at the University of Waterloo. His lifelong search for a law of human economic behaviour led him to the realization children must be brought up with a love for mathematics and stochastics in order to be better informed citizens. Thus, the eipiphiny Society was born.

\*Kendall, Maurice G. "Natural Law in the Social Sciences", Journal of the Royal Statistical Society, Series A, Vol. Part 1, 1961, pp. 1-19, (The Inaugural Address of the President, Professor M.G. Kendall, delivered to the Royal Statistical Society on Wednesday, November 16th, 1960).