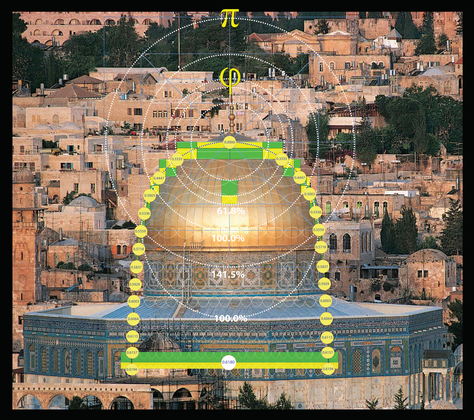
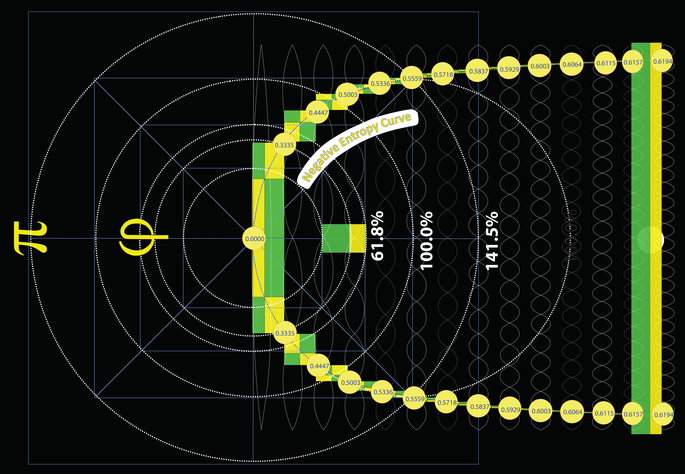
Dome of the Rock 700 CE close

built by the Umayyad caliph Abd al-Malik ibn Marwān
in the late 7th century ce. It is the oldest extant Islamic monument.



Pythagoras *"all is number"* ~500 BCE

Pi:Phi:Phi-Curve:Harmonic Series

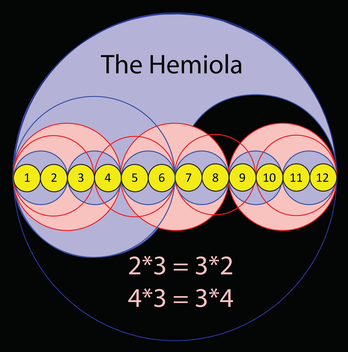


°Tao Te King Lao Tse ~ 600 BCE

From One comes Two

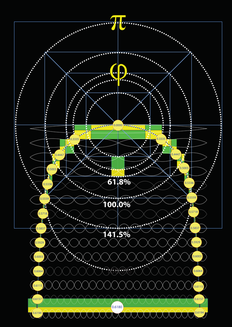
From Two comes Three

From Three comes the 10,000 things



The US Capitol Dome very close

The US Capitol Hill Dome is another close architectural
eg of the Pi:Phi:Phi-Curve:Harmonic Series *"E pluribus Unum."*



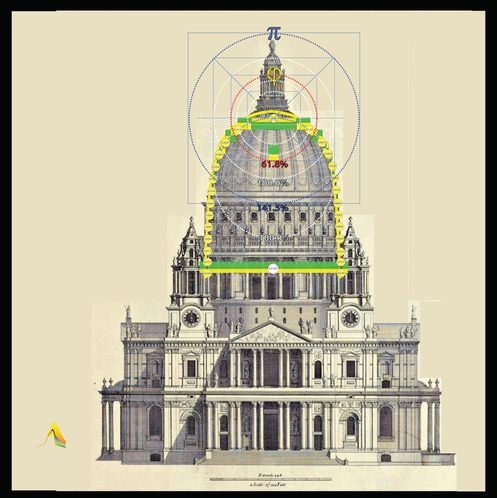
St Paul's Cathedral Dome very close

St Paul's Dome London (1672) is an early architectural
example of the Pi:Phi:Phi-Curve:Harmonic Series.

Started 1672 after the
Great Fire of London in 1666

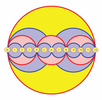
Height 111 Metres
Survives the Blitz 1941

By the time Sandringham is underwater
10 meters sea-level rise sees St Paul's like this.



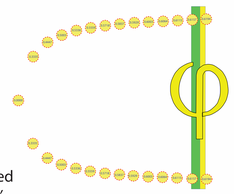
Fundamental Harmonic Series, Pi, Phi-Curve (neg entropy curve) & the Golden Angle, Hemiola (2 Groups 3 = 3 Groups 2) & Primes 1+13 3+11 5+(3*3) 7+7 etc sum to 14 . . .

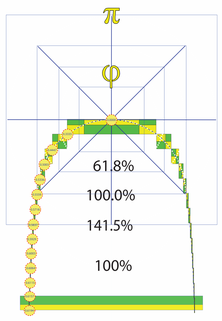
Tao Te King - From One comes Two
Lao Tse - From Two comes Three
From Three comes The 10,000 things



Primary *'Hemiola'* where
Two Groups of Three = Three Groups of Two

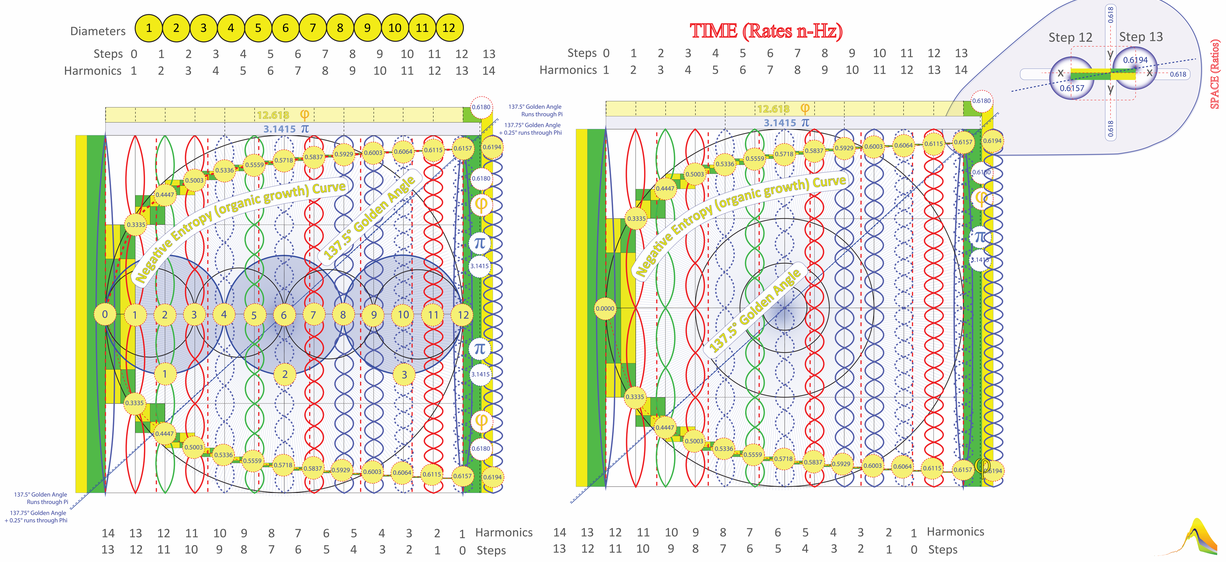
Through *'Sympathetic Resonance',* all subsequent harmonics arising are reinforced
in proportion to the instances (frequency of repetition) of the Primary *'Hemiola'* .





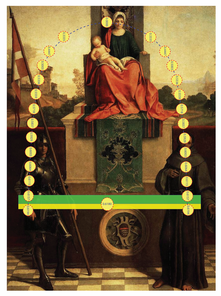
Rates:Ratios (space-time) integrated/united on (x/y axis) at Pythagorean comma 0 to Phi-derivation point at 12.618

https://vimeo.com/529846856

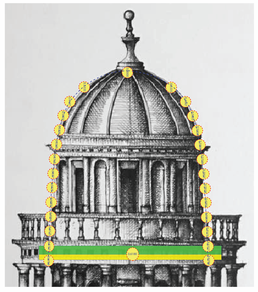


A function of fundamental Harmonic Series, Phi-Curve is ubiquitous

Giorgione 'Pala'



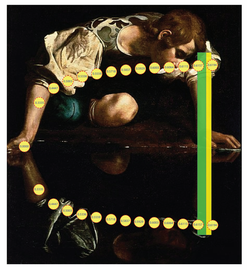
Bramante 'Martyrium'



Michelangelo 'Cupola'

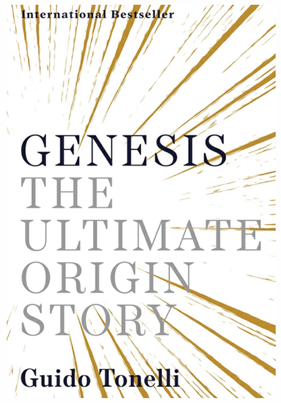
Emily Noether
'Conservation of Momentum'

Caravaggio 'Narcissus'



The Higg's Boson . . .

We have reached one hundredth of a billionth of a second after the Big Bang, and from this moment onwards things become clearer. Ever since we discovered the Higgs boson and were able to measure its mass, this part of the story has kept few secrets. The new-born universe is already pretty imposing. It has reached the not inconsiderable dimension of a billion kilometres. Suddenly, when the temperature decreases below a certain threshold, the Higgs bosons which until a moment ago had been roaming freely, now begin to congeal and crystallise. At these temperatures, which are freezing for them, they are unable to survive and are hidden away in the comfortable sepulchre of the void. It will require a great deal of patience before they are seen again. It will take 13.8 billion years in fact, before on planet Earth someone will manage to engineer collisions of energy of such magnitude as to bring them back to life, if only for a fraction of a second, an amount of time sufficient for them to leave indelible traces of their presence. The field associated with them acquires a specific value that radically transforms the properties of the void. Many elementary particles are subject to a sizeable interaction while crossing it, and as a result their speed diminishes, allowing them to acquire a mass; others that travel without being disrupted remain impervious and can continue to move at the speed of light. With the Higgs field the perfect symmetry that had characterised the primeval universe fractures and the weak interaction completely separates from the electromagnetic force. Some particles become so heavy they are rendered unstable, and immediately disappear from the rapidly cooling universe. Others will crucially acquire mass but retain a lightness that will prove fundamental for soon moving to a quite special organisation of matter. The newcomer, the Higgs field, acting with a light touch, has constructed multiplicity (variety and complexity) following a clear and simple rule. The elementary particles which remain as if entangled in the field, distinguish themselves from one another depending on the intensity of the interaction, and by so doing they end up acquiring irreversibly different masses. Their gentle operation resembles that of the demiurge in Plato's Timaeus, the master craftsman who, through the mediation of numbers, converts the formless pre-existing matter into something dynamic and vital. Everything will be born from this delicate touch that crucially changed things forever. But we mustn't get ahead of ourselves: it is still early. The second day has just ended and only 10–11 seconds have passed.



The Enchantment of Narcissus

When you see the canvas for the first time, you can't help but be spellbound before the perfect circle that holds the two figures: that of the elegantly dressed youth leaning over the water, and his reflected image that he is ecstatically admiring.

Caravaggio's solution to presenting the myth of Narcissus is one of pure genius. It is based on the classic version of the story in Ovid's Metamorphoses. Having rejected the advances of the nymph Echo, an exceptionally beautiful young man is condemned to fall madly in love with the image of the one person he can never possess: himself.

In the painting we see him reaching out his left hand towards his reflected image, hoping to touch his beloved but able to do nothing more than wet his fingers as they break the water's surface. The circle that frames the two figures emphasises the reflection symmetry which unites them.

This celebrated painting in the Palazzo Barberini in Rome is one of many masterpieces that have used symmetry as a key to explaining the nature of beauty. The literal meaning of the Greek word from which symmetry derives is 'with proper measure', recalling the concepts of proportion and harmony that were accorded so much space in the aesthetic and philosophical discourse of antiquity.

For the Greeks and Romans, for a work to be beautiful it must necessarily contain symmetry, with elements and volumes in mathematical relationship with each other.

Tonelli, Guido. Genesis (p. 69). Profile. Kindle Edition.

https://link.springer.com/content/pdf/10.1007/JHEP07(2018)127.pdf

A search for the exclusive decays of the Higgs and Z bosons to a φor ρ meson and a photon is performed with a pp collision data sample corresponding to an integrated luminosity of up to 35.6 fb−1^{−1}−1 collected at s=13 \sqrt{s}=13 s =13 TeV with the ATLAS detector at the CERN Large Hadron Collider. These decays have been suggested as a probe of the Higgs boson couplings to light quarks. No significant excess of events is observed above the background, as expected from the Standard Model. Upper limits at 95% confidence level were obtained on the branching fractions of the Higgs boson decays to γ and ργ of 4.8 × 10−4^{−4}−4 and 8.8 × 10−4^{−4}−4, respectively. The corresponding 95% confidence level upper limits for the Z boson decays are 0.9 × 10−6^{−6}−6 and 25 × 10−6^{−6}−6 for φγ and ργ, respectively.