## THE SIMPLE MATHEMATICS OF JESUS

The simple mathematics of Jesus

Thomas Colignatus

With thanks to E.F.

The Greek o-mega can be written as ō or oh.

The spelling of English is generally from the UK but instead of "maths" we prefer "math" as in the USA and there can be other cases like that.

The unit of ten is used also in the pronunciation and transcription of numbers. Thus ten·one = eleven, ten·two = twelve, ..., two·ten = twenty, .... See http://thomascool.eu/Papers/Math/2012-04-16-NiceNumbers.pdf

A mixed fraction is written as  $2 + \frac{1}{2}$  (two and a half) and not as  $2\frac{1}{2}$  (two times a half).

For the measurement of circles and angles a longer explanation can be found on p124. Angles can be measured with the plane as the unit of account. A half plane gives an angle of  $\frac{1}{2}$ . A quarter plane gives an angle of  $\frac{1}{2}$ . This can be translated to turns and arcs. Thus 1 turn = 360 degrees. A turn can also be measured as the uma = unit measure around such as for example a circle with a circumference of a meter. A half turn =  $\frac{1}{2}$  uma = 180 degrees, a quarter turn =  $\frac{1}{4}$  uma = 90 degrees.

The circumference of a circle with radius r is  $C = \Theta r$ , with  $\Theta = 2\pi = 6.28...$ , written with Greek capital letter theta, and pronounced as "archi" (from Archimedes). The surface of a circle with radius r then is  $S = \frac{1}{2}\Theta r^2$ .

Thomas Cool uses the name Colignatus for his scientific work, see http://thomascool.eu

The cover is "Ecce homo!" by Antonio Ciseri (1821–1891)
Wikipedia commons http://en.wikipedia.org/wiki/File:Eccehomo1.jpg
Antonio Ciseri's depiction of Pontius Pilate presenting a scourged Christ to the people Ecce homo! (Behold the man!).

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## **Prologue**

When I was 16 my preference was to study archeology: the research into the origin (archè) of civilisation ... Ancient languages and the keys to decipher them ... How the things were discovered that shape our environment ... Alas there was also a tvbroadcast about Biafra that was hit by war and hunger, with the dying of innocent children. Are we actually a civilisation? Mankind is put upon the anvil of violence again and again, against which the innocent are helpless. Politics is often determined by economic conditions and hence my decision was to study econometrics, in which economic theories are translated into mathematical models and tested statistically. Eventually I succeeded in developing an econometric approach such that future Biafra's can be prevented. 1 It is up to voters and politicians whether they are willing to look into this solution approach, and this is beyond my influence. Since this solution approach has been formulated. I have some moral liberty to consider other issues. This essay is a response to that old interest in archeology. Over the years I have at least kept some notes and this essay collects those. I cannot decipher potsherds but I can try to apply some math. My other degree in teaching and didactics of mathematics can be put to good use. Anyhow, by all means: a salute to all who share that original passion. It remains striking that, quite unintentionally, in these collected notes about the archè there still arises something in relation to Biafra, namely that neighbourly love by that Jesus.

<sup>1</sup> http://thomascool.eu/Papers/Drgtpe/Index.html

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## 1. Angel

## Introduction

We can apply mathematics to all kinds of areas such as space, numbers, physics, biology, and so on. This essay applies math to the story of Jesus. We will consider these questions: (1) What math is hidden in the Bible? (2) How did the Bible come about? (3) Has Jesus existed as a historical person or not? These questions are strongly related but also somewhat different.

This book is an essay, an effort at clarifying a subject, not a full study. This essay collects notes and insights that grew on me over the years. These have been ordered and made coherent and consistent such that the whole might be of interest to others as well. The cause for that ordering lies in math and notably in the didactics of mathematics. This essay can be seen in the context of my other books on the latter, *Elegance with Substance* (2009) and *Conquest of the Plane* (2011).

It seems that I may have stumbled on some new insights compared to texts by others. That news is listed on p131. Some final points are in the epilogue, p115.

Whether Jesus is the Son of God is a matter of faith. Everyone must determine this for himself or herself, and every choice can only be respected. This holds actually for any faith, for example also for astrology and homeopathy. However, claims that derive from a faith and that concern reality and views of others will be confronted with reality and those views of others: and then such claims may fail.

Science assumes that there is no *deus ex machina*: there is no god from the machine. There is only nature and what mankind creates. Texts have been written by people. We therefor distinguish:

- astrology: relying on traditional ideas and superstitions (logos = word)
- astronomy: relying on science (nomos = law)
- theology: relying on traditional ideas and superstitions
- theonomy: relying on science (e.g. this essay).

Clearly geology will be a science, thus our distinction applies to these four. For these, we do not mind that "x-ologies" contain all kinds of inconsistencies. We just register what is asserted. Only the "x-onomies" have to be sound.

The references here, such as to Wikipedia, are not intended as evidence. They only provide potential points of departure to look for sources and evidence. A reference can hardly prove something anyway. Real evidence in this matter may only be found with years of study, and some hypotheses seem rather impossible to prove anyway.

The Bible gives the life of Jesus: the announcement by the angel, birth and escape to Egypt, his visit to the Temple when he is 12 and causes amazement with the teachers there, his 30<sup>th</sup> year of life that ends on the cross, and the resurrection. Nothing else. Some historians calculate that Jesus would have died at age 33 or perhaps 37. Here we allow for the possibility that Jesus is a theological concept. The flight by Joseph and Mary with Jesus to Egypt is not without meaning: the theological concept may originate from Egypt.

The essay is divided in the following themes:

- (1) Angel: the core notions required to follow the discussion
- (2) Birth: astronomy and calendar as astro-theological base of the Bible
- (3) Adulthood: the cultural layer above that in Egypt, Canaan and Greece
- (4) Death: recognition of (mathematical) patterns in the above
- (5) Here-after: evaluation and final judgement.

Each page provides a "panel" with key information. As a reader you are free to ask your own questions and decide what you regard as evidence. Only towards the evaluation the essay may impose more strictness on what can logically be accepted.

There is a difference between pure math and applied math. For example engineers and judges have to make practical decisions. Franklin (2001) describes the genesis of the mathematics of probability in the history till Pascal, and in this he focusses on law. Is the defendant guilty or not? Witnesses might not speak the truth. While a scientist has the luxury to maintain doubt forever, a judge really has to make a decision. You as a reader have to decide whether you go to church. Famous is Pascal's wager: to believe seems safer since not-believing comes with the risk of hell. However, there is also Occam's razor, see the concluding remarks at the end of this essay.

The core notions start with the Jewish *midrash*. The New Testament (NT) with the teachings by Jesus arose in the context of the Old Testament (OT), the Hebrew Bible. The Jewish belief already has the tradition that texts require more explanation. It is a relief that not all texts have to be taken literally. This gives the base of the *midrash* or traditional exegesis. This traditional base will be extended with the didactics of mathematics, information theory by Claude Shannon and text analysis, and we will also encounter insights from Theatre Studies. The NT namely looks like a Greek Tragedy. In sociology there is etnomethodology but we keep this approach as something for the future or something for sociologists.

Organised religion arose in the change from hunting-gathering to agriculture and husbandry. Hard math is found in the development of the calendar and astronomy. The heavenly bodies were were observed for travelling and time-keeping, not just for the birthdays of the children but also for sowing and reaping.

When mankind started with star-gazing and the mapping of regularities, the question arose how to describe all of this, and actually remember it. The early astronomers might say "this star such, and that star so" but if you want to make progress in an age without photography then one of the obvious methods is to use metaphors and the techniques of story-telling. A star that announces sunrise, the Morning Star Venus, can be labelled as a goddess that gives birth to the sun. Other people who hear those stories, and who do not understand what they are about, can become impressed about all the knowledge that they contain, and start to regard them as true stories about gods and goddesses who rule in heaven and hell, and who determine the events down on earth. In that manner myths and legends are born.

The mechanism thus is: (1) Astrologers have some real knowledge about the stars,

(2) That knowledge is packaged into stories to facilitate communication and memory, (3) Outsiders hear those stories but do not understand what it is all about, (4) Priests

(3) Outsiders hear those stories but do not understand what it is all about, (4) Priest are tempted to guard a "mystery" vis-à-vis the faithfuls.

Still, there remain the abstract questions of faith. If the soul is an abstract concept then the soul is eternal, just like a circle as an abstract concept has some perfect properties. Next to mathematics for astronomy we apply it for abstraction.

	Man and world	Man and gods
Concrete tangible	Round things such as a ball	Human body
Concrete intangible	Radius drawn with a compass	Consciousness, breath
Abstract	Perfect circle and sphere 2	Soul, psyche (Gr. "breath")

The calendar and the astro-theological base of the Bible can be seen as the **simple math** of Jesus. It would be incorrect to limit the discussion to these aspects only. The story of Jesus is more than just the calendar. Did or didn't there exist a person who preached in that manner about neighbourly love? We then enter the area of guesstimation or **guesstimath** that uses probability theory, statistics, cryptography, chaos theory, information theory and text analysis. We will keep the astronomy and guesstimath simple here, without formula's and with only references. Thus the title of this essay covers the approach here: that the mathematics is simple.

<sup>&</sup>lt;sup>2</sup> Some readers might want to check the appendix on p136. Consciousness gives both a concrete experience and a content that will be abstract like for circle and soul.