



**Religious , History and Physics 43**

**Origins: A Dialogue Between  
Scientists and Humanists**

**Spring 2014 “Time, Beginning and  
End”**

## **Professor Tutino's lecture on the history of time.**

The transformation of time into a commodity which can be an abstract value.

The minimum wage or “a living wage”

A surgeon's time

“Do you have time to see me.”

Related to this transformation is “labor” which is also given an abstract value and the coupling of time and labor, led Marx to his famous analysis of alienation in 1844 (in *Das Kapital* he substitutes “surplus value” for alienation).

The church steeple is replaced by the factory whistle which announces the beginning and end of work shifts.

Cyclical or liturgical time

Eli on Number

Pythagoras (6-5<sup>th</sup> centuries BCE) saw something more in numbers than “counting”

**Number and nature**

Iamblichus (245 – 335 C.E.)

Finding order in the universe

Harmony through number

*De mysteriis* – “a master textbook on theurgy”

Using number to establish identity

The sacrifice of Isaac (1) as prefiguring the sacrifice of Christ (2)

1 = 2    simultaneity

Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (1983/1991). **Definition of the nation:** “It is an imagined political community – and imagined as both inherently limited and sovereign.”

past and future become simultaneous with the present

The importance of the novel and the newspaper in the 18<sup>th</sup> century

simultaneity

simultaneous time is nation-state time

Cosmic time

Social time – Georges Gurvitch, *The Spectrum of Social Time* (1958). He sets out 26 different forms of social time (e.g. “obligatory time,” “reciprocal time”).

Important idea – human beings have the ability to participate and experience multiple forms of time simultaneously.

Cyclical time

Linear time

Commodification of time

Nation-state time

Cosmic time

Social times

## **Biblical Ideas of Time**

Psalm 90:1-5

A prayer of the Moses, the man of God.

O Lord, You have been our refuge in every generation,  
Before the mountains came into being,  
Before You brought forth the earth and the world,  
From eternity to eternity (*me-olam ad-olam*) You are God.

You return man to dust

You decreed, "Return you mortals!"

For in Your sight a thousand years

Are like yesterday that has passed,

Like a watch of the night

You engulf men in sleep

At daybreak they are like grass that renews itself;

At daybreak it flourishes anew;  
By dusk it withers and dries up.”

### **Cyclical and linear conceptions of time:**

Prophetic traditions: There will be a new heaven and a new earth

The “Day of the Lord”

“Strike the capitals until the thresholds shake,  
and shatter them on the heads of all people;  
and those who are left I will kill with the sword;  
not one of them shall flee away,  
not one of them shall escape. (9:1)

Too bleak? The add verses (11-15) which hold out the promise for the restoration of the Kingdom of David – “In that day, I will set up again the fallen booth of David: I will mend its breaches and set up its ruins anew...I will restore My people Israel. They shall rebuild ruined cities and inhabit them; they shall plant vineyards and drink their wine...”

Eschatology or the doctrine of “last things” (Greek *eskhatos*)

The “Völuspá” of the *Elder* or *Poetic Edda*

Baldr and Odin and the Yggdrasil

*ragnarök*

Mayan and Aztec myths of the end

Zoroastrian myths of the end

Buddhist and Hindu myths of the end of time – slow degeneration

A non-cyclical concept of time

Knowledge of the end is irrelevant – the break-through is the most important

Jacob Taubes’ *Occidental Eschatology* (1947; rpt. 1991 and 2002)

Apocalypticism

Daniel and the prophesy of the four kingdoms

Jim Morrison got it right – This is the end

The German train schedule and the remnant

**The Jewish Year** – 5775 (which dates to creation)

Lunar calendar or more precisely, a lunarsolar calendar

Intercalation (adding a thirteenth month)

*Shemittah* year (every 7<sup>th</sup> year)

Exodus 23:10-11 – “Six years you shall sow your land and gather in its yield; in the seventh you shall let it rest and lie fallow. Let the needy among your people eat of it, and what they leave let the wild beasts eat. You shall do the same with your vineyards and your olive groves.”

The *heter mechirah* and *otzer bet-din* – transferring land to a non-Jew so that the crops can be harvested.

*Yovel* (after 7 *shemittot*; the 50<sup>th</sup> the *yovel* is the jubilee year)



Jewish new years – Rosh Ha-Shanah (*hirat-olam*); new year of kings; new year of trees; new year of domesticated animals.

Counting the days of the week - first day, second day, third day, fourth day, fifth day, sixth day, and Shabbat (Sabbath)

### **The Christian Calendars.**

Gregorian Calendar (Pope Gregory XIII in the 16<sup>th</sup> century)

Julian Calendar (Orthodox Christianities). Exceptions – Armenian Orthodox Church has followed the Gregorian calendar for nearly a century, except in Jerusalem where the Julian calendar is followed.

Protestant countries resisted adopting the Gregorian calendar because they believed that it was the calendar of the Catholics.

Revolutions – first and foremost, new calendars or new structures of time.

The French Revolution – renaming of the months so that they reflected natural phenomena: *Vendémiaire* when the grape harvest began; *Thermidor* for Summer heat. [1793 to 1805] Ten-day week.

Church of the Latter Day Saints of Jesus Christ – two calendars – one in the *Book of Mormon* and one in *the Book of Doctrines and Covenants*

When is the beginning? Passive acceptance of time from creation until the birth of Jesus; life, death and resurrection of Jesus marks the beginning; B.C. and A.D.

When is the end?

Calculations and speculations

Harold Camping's calculation – the world will end on 21 May, 2011  
[Family Ministry]

Popularity of Tim LeHaye and Jerry Jenkins' *Left Behind series* (12 volumes)

Counting the days of the week – Sabbath, Monday, Tuesday, Wednesday, Thursday, Friday [a mini-Good Friday], Saturday

### **The Calendar of Islam.**

12 month lunar calendar based on the direct observation of the hilal or crescent moon. 29.5 days; a 30th day is added when there is no direct observation.

Only 12 (no intercalation) – 11-12 days of fluctuation

Since 2007, major Islamic bodies in US, UK and Europe agreed to use calculations so that the first of every month could be determined and thus the festivals could be standardized.

*Hijri* Calendar which dates from the Muhammad's departure or *hijra* from Mecca to Medina (first year is 622).

2013/2014 is 1435 AH

Muhammad's birth 53 BH

Counting the days of the week: Day of the Sabbath (Saturday), First Day, Second Day, Third Day, Fourth Day, Fifth Day, and Day of the Gathering (Friday).

The way one structures religious time immediately separates religious communities.

Calendation is always problematic because someone will introduce a “new” calendar. New calendars often cause people to be excised from the community.

**Albert Einstein – A modern Spinoza?** Letter written to Eric Gutkind in January, 1954  
(for sale at auction -- \$12,000 -- \$16,000)

“The word God for me is nothing more than the expression and product of human weakness, the Bible a collection of honorable but still primitive legends which are nevertheless pretty childish...For me, the Jewish religion like all other religions is an incarnation of the most childish superstitions.”

“The Jewish people to whom I gladly belong and with whose mentality I have a deep affinity have no different quality for me than all other people. As far as my experience goes, they are also no better than other human groups, although they are protected from the worst cancers by a lack of power. Otherwise I cannot see anything ‘chosen’ about them.”

Expressions of wonder at the universe – cosmic religious feeling.

William James’ *The Varieties of Religious Experience* (1902) – The religion of healthy-mindedness vs. the sick soul.

Oceanic feeling that characterizes some mysticisms

“I do not believe in the God of theology who rewards good and punishes evil. My God created laws that take care of that. His universe is not ruled by wishful thinking, but by immutable laws.”

An intelligence that works in nature (but not a conventional theistic or personal God)

“Science and Religion,” *Nature* (November, 1940).

Religion and science are two different spheres of human thought.

Religion and Science have a reciprocal relationship:

“Science without religion is lame; religion without science is blind.”

There is no conflict between religion and science.

The present day conflict arises from religion holding to a personal God.

Religion can aid science (pp. 226-227)

Stephen Jay Gould’s *Rocks of Ages: Science and Religion in the Fullness of Life*.

“I do not see how science and religion could be unified, or even synthesized, under any common scheme of explanation or analysis; but I also do not understand why the two enterprises should experience any conflict. Science tried to document the factual character of the natural world, and to develop theories that coordinate and explain these facts. Religion, on the other hand, operates in the equally important, but utterly different realm of human purposes, meanings, and values – subjects that the factual domain of science might illuminate, but can never resolve.”

## The Principle of NOMA – Non-Overlapping Magisteria

*Magisterium* – “is a domain where one form of teaching holds the appropriate tools for meaningful discourse and resolution.”

equal status of the magisteria

independence of the magisteria

NOMA “cherish the separate status of science and religion – regarding each as a distinctive institution, a rock for all our ages, offering vital contributions to human understanding.”

## The Case of Baruch d' Espinoza or Baruch Spinoza (1632-1677)

1600 (?) Espinosa family emigrates from Portugal to Nantes and then to Amsterdam.

24 November, 1632 – Baruch d' Espinosa is born in Amsterdam.

1638 – The founding of the great Portuguese Synagogue of Amsterdam and Spinoza is enrolled as a student in the Hebrew School.

1654 – Spinoza begins to meet with a group of “churchless Christians” in Amsterdam.

27 July, 1656 – Spinoza is banished from the Jewish community in Amsterdam; he begins his study of the humanities, Latin, philosophy, and theater at the school of ex-Jesuit Van den Enden.

Why was he put under the ban of *cherem* or more technically, *niddui* or “defiled”?

Do we know why Spinoza was excommunicated from the Jewish community?

Could it have been for his aberrant ideas about God?

“The Senhores of the Mahamad make it known that they have long since been cognizant of the **wrong opinions and behavior** of Baruch d’ Espinoza, and tried various means and promises to dissuade him from **his evil ways**. But as they effected no improvement, obtaining on the contrary more information every day of **the horrible heresies which he practiced and taught, and of the monstrous actions which he performed**, as they had many trustworthy witnesses who in the presence of the same Espinoza reported and testified against him and convicted him; and after all this had been investigated in the presence of the rabbis, they decided with the consent of these that the same Espinoza should be excommunicated and separated from the people of Israel, as they now excommunicate him with the following ban: ...” (27 July, 1656)



Steven Nadler, *Spinoza: A Life* (1999)

Spinoza's view of the soul, God, and the Bible.

Alternative: Alienation and Independence.

What were the causes of alienation from the Jewish community?

“The Marrano Problem” and Jewish identity

The case of Uriel Acosta (1590-1647)

*A Specimen of Human Life*

Alienation was perhaps the result of skepticism.

Spinoza's radical independence of thought and action.

“Letter to Albert Burgh” (1675)

Albert Burgh (c. 1650—c.1700) – Convert to Catholicism from Calvinism.

“But you, who presume that you have at last found the best religion, or rather the best men, on whom you have pinned your credulity, ...since you can GIVE NO REASON FOR THE FAITH THAT IS IN YOU? But you will say that you acquiesce in the inward testimony of the Spirit of God, while the rest of mankind are ensnared and deceived by the prince of evil spirits. But all those outside the pale of the Roman Catholic Church can with equal right proclaim of their own creed what you proclaim of yours.”

Spinoza feels that his friend has given up his individuality and his reason by becoming a Catholic. Does this mean that Spinoza dislikes Roman Catholicism? No, he objects to Burgh giving up his individuality.

1660 – Begins work on the *Short Treatise on God, Man and His Well-Being*.

1662 – Begins work on the *Principles of Cartesian Philosophy and Metaphysical Thoughts*, and completes Part I of the *Ethics*.

1664 – Second Anglo-Dutch War begins which renews a struggle between the conservative and the liberal factions of Dutch Calvinism.

1665 – Completes Parts II and III of the *Ethics*.

1666 – Anglo-Dutch War ends.

1670 – Spinoza publishes anonymously and in Latin the *Theological-Political Treatise*. Condemned by Catholics and Calvinists. Both describe the writer as an atheist. Dutch edition in 1671.

1672 -- Liberal Regent of Amsterdam, Jan de Witt and his brother are murdered by a mob probably inspired by Calvinist clergy.

1673 – States of Holland publish formal condemnation of the *Theological-Political Treatise* and other “heretical and atheistic writing” including Thomas Hobbes.

1675 – Completes and circulates the *Ethics*, but declines to publish it. Begins work on the *Political Treatise*.

1676 – The synod of the Hague orders in inquiry into the authorship of the *Theological-Political Treatise*.

21 February, 1677 – Death of Spinoza. Friends edit and publish the *Opera Posthuma*. The political and Calvinist authorities condemn all writings of Spinoza.

So, why was everyone, Jews and Christians, so frightened about the *Theological-Political Treatise*?

1. Freedom of opinion is absolutely necessary for the good health of a republic. He raises the question to the reader: Why should there be freedom of opinion?
2. Distinction between true religion and superstition.
3. Superstition is the result of fear in times of crisis. Humans derive knowledge through crude forms of induction from experience.
4. Tyrants use superstition in times of crisis.
5. The true republic can only live by the diversity of opinions within itself. The true republic is a natural body which channels opinion and antagonisms.

6. Thomas Hobbes' "private vices can become public virtues."
7. Fear and force are the worst guarantors of the republic; the life of the republic is therefore precisely the differences of opinion and creeds.

Argument against the "rational" theologians who attempt to find or to read philosophical truths into the Bible. They assume that the Bible is a philosophical or scientific text and this is plainly incorrect.

His argument put in the simplest form is that the Bible only contains moral truths and a political constitution for a primitive people which has no relevance for today.

Spinoza is perhaps the first to attempt a science of biblical criticism. For him, an objective examination (or a scientific examination of the Bible), without any philosophical preconceptions will find historical images suited to a particular people.

The Bible can only be understood against the background of its time – deep contextualization of the meaning of the text.

He was scandalized by the use of the Bible in 17<sup>th</sup> century Amsterdam and he would find our use of the Bible an abuse.

Use the Bible for individual meditation and moral development.

Use the Bible for historical or “scientific” purposes to understand the past.

Deuteronomy 1:1 – “These are the words that Moses spoke to all Israel beyond the Jordan – in the wilderness, on the plain opposite Suph, between Paran and Tofel, Laban, Hazerot, and De-Zahav.’

The three great commentators:

Rabbi Shelomo Yitzhaki or RASHI (1040-1105) -- all of these places are places where the Israelites did things that caused God’s anger; he overlooks the most obvious, troubling aspect of the verse – *be’ever ha-yarden*, “beyond the Jordan.”

Rabbi Moshe ben Nachman or RAMBAN (1194-1270)

Abraham ibn Ezra (1088-1167)

“These are the words that Moses spoke to all of Israel beyond the Jordan...’ (Deut. 1:1). ‘Beyond the Jordan.’ If you understand the secret of the twelve, and ‘Moses wrote,’ and of ‘and the Canaanite was then in the land’ and of ‘In the mount where the Lord was seen’ and of ‘Behold his bedstead was a bedstead of iron,’ then you will discover the truth.”

What is the truth?



## **Ibn Ezra's Introduction to His Commentary on the Torah**

### Introductory Prayer

In the name of the Great and Awesome God,  
I shall begin expounding the meaning of the Torah.  
I beseech Thee, Oh God of my father Abraham,  
Deal mercifully with Thy servant, Abraham.  
And let it come to pass that the opening of Thy words enlighten  
Thy servant, son of Thy servant, Meir.  
And from the salvation of Thy countenance let substance come  
To the son of Thy hand-maiden, he whose name is ben Ezra.  
This is the Book of the straight path by the poet,  
Abraham  
Bound by the cords of true grammar.  
To be deemed fit by the eyes of knowing judgment.  
And make happy all those who uphold it.  
Thus saith Abraham the Spaniard,  
Who is mindful of the **five** paths taken by the Torah commentators.

## The First Path

The first path is long and wide, far above the contemporary mind. If truth be compared to the central point of a circle, then this path must be like the circumference, or like a thread surrounding it from the start. Within it have trodden the great sages who were yeshivah scholars in Muslim realms. An example is Rav Isaac, who compiled two complete books on the text *'In the beginning'* [Genesis 1:1] up to *'and were completed'* [Genesis 2:1], yet he himself did not complete them, on account of the number of issues [discussed in them]. [In his commentary] on the verse, *'let there be light'* [Genesis 1:3], he mentioned the belief in the powers of light and dark, yet he himself was walking in the dark without knowing it. In his comments on the verse *'and the earth brought forth'* [Genesis 1:12], he himself brought forth words from his own mind, speaking of trees and vegetation, small and large. Moreover, in his comments on the phrase *'living souls'* [actually singular: Genesis 1:20, 21, 24 and 30], he even cited gentile wisdoms.

Even Rav Sa' adiah, the Gaon of the Diaspora, pursued the very same route. He introduced non-Jewish ideas into his comments on *'let there be luminaries'* [Genesis 1:14], in order to inform us about the measurements discussed by astronomers. Similarly, Rav Shmuel ben Hofni had only *'gathered wind in his fists'* in commenting on the phrase *'and Jacob went out'* [Genesis 28:10], due to his plethora of details. He mentioned every [biblical] prophet by name, how many times he was exiled from his place, and the benefits of traveling on the path. Yet his commentary itself has no benefit and its only merit is its length. His comments on the phrase *'and he dreamed'* [Genesis 28:12] aspire to be nothing less than a full interpretation of dreams, and [an exploration of] why people see things while they slumber. **However, anyone who wishes to acquire insight into the secular sciences is better advised to study them from books by experts in the subject.** Only then will they be able to weigh up their evidence and arguments, as to their validity. The Ge'onim, however, cited such opinion in their books without evidence. Some of them were even ignorant of the methods of the ancient [non-Jewish] sages, as well as the sources whence they derived their knowledge.

The second path – Against the Karaites who reject any tradition of interpreting the written text of the Torah.

The third path – Those who reject the literal or plain sense of the text for some secret or allegorical meaning. He is probably referring to Christian interpreters of the biblical text.

*peshat vs remez and sod*

The fourth path – *derash*

Example: *bereshit* is read as *bara shet* or “he created six things (Torah, the patriarchs, the souls of children, the angels, the throne of glory, and the idea of Israel).

There is no end to these and the meaning of the text disappears.

The fifth path – “The fifth path [is the one] upon which I shall base my commentary. It is right in my eyes in the sight of the Lord, who is the only One I fear. I shall be no respecter of persons when I explore the Torah text, but shall thoroughly, and to the best of my ability, seek the grammatical form of every word. Then I shall do my utmost to explain it. You will find an explanation of every word whose meaning you seek, the first time it appears in the commentary.”

His method includes comparative grammar and linguistics and he seems ready to use Aramaic and Arabic in order to interpret the text.

Chapter 7 of the *Theological-Political Treatise*, “On the Interpretation of Scripture.”

Only Scripture can interpret Scripture.

Scripture must be interpreted like nature (like nature Scripture does not provide us with definitions of the things of which it speaks).

Knowledge of Hebrew is essential (for both Hebrew Bible and the New Testament).

Avoid have our own prejudices influence our reading of Scripture.

Scripture is historical

What did the author of Scripture mean when he said that “God is fire” or that God is “jealous” (and thus has human emotions).

Reconstruct the lives of the writers of the books – their character and their pursuits; what occasioned things to be written down?

Moral content of Scripture.

Rejects the tradition of the Pharisees and the idea that Pope’s interpretation is infallible.

He argues that Scripture cannot be altered easily.

Problems with Hebrew – It is very difficult to reconstruct the meaning of Biblical Hebrew (meanings of verbs and nouns are disputed; phraseology is unclear, etc.)

Certain letters seem to have the very same sound; multiple meanings of conjunctions; verbal tenses are confined to past, present and future.

The use of the *vav* to convert past to future and future to past

No vowels and no punctuation.

We do not know the authors of many books or their time periods.

Scripture can only be interpreted in the natural light of reason

Those who say that reason is insufficient and that something more is needed

They are wrong on two counts:

1. failure to complete a historical study of the Bible
2. inspiration

### **Albert Einstein – A modern Spinoza?**

Letter written to Eric Gutkind in January, 1954 (for sale at auction -- \$12,000 -- \$16,000)