

The problems of historical chronology

“One often comes across accounts of a steel chisel found in the external masonry of the Great Pyramid of Cheops (Khufu, the beginning of XXX century B.C.); however, it is indeed most probable that said tool got there during a later age, when the pyramid stones were pillaged for building purposes.”

Michele Giua. *The History of Chemistry*.
Moscow, 1975, page 27, comment 23.

1. ROMAN CHRONOLOGY AS THE FOUNDATION OF EUROPEAN CHRONOLOGY

Let us give a concise preliminary account of the current state of ancient and mediaeval chronology. The importance of chronology for historical science is all the greater since this discipline allows for the determination of the time interval between the historical event and the current era (provided it can be adequately translated into terms of contemporary chronology, that is to say, it is given a corresponding B.C./A.D. dating). Nearly all the fundamental historical conclusions depend on the dating of the events described in the source that is being studied. An altered or imprecise dating of an event defines its entire interpretation and evaluation. The current global chronology model has evolved owing to the labour

of several generations of chronologists in the XVII-XIX century and has Julian calendar datings ascribed to all the major events of ancient history.

The datings of events referred to in some freshly discovered documents are predominantly based on the Roman chronology, since it is considered that “all the other ancient chronological datings can be linked to our calendar via direct or indirect synchronisms with the Roman dates” ([72], page 77). In other words, Roman chronology and history are the “spinal column” of the consensual global chronology and history. This is why Roman history shall have to enjoy our very special attention.

2. SCALIGER, PETAVIUS, AND OTHER CLERICAL CHRONOLOGERS The creation of contemporary chronology of the ancient times in the XVI-XVII century A.D.

The chronology of ancient and mediaeval history in its present form had been created and, for the most part, concluded in a series of fundamental works of the XVI-XVII century that begins with the writings of Josephus Iustus Scaliger (1540-1609), called “the founder of modern chronology as a science” by the modern chronologist E. Bickerman ([72], page 82).



Fig. 1.1. Portrait of the chronologer Joseph Scaliger. The caption in [35] reads as follows: “Portrait of Iosephus Iustus Scaliger (1540-1609), the famous philologist and critic of the XVI-XVII century. Engraving from the book by Johannes Mercius titled *Athena Batavia*, page 167.” Taken from [35], ill. 8.

The mediaeval portrait of I. Scaliger can be seen on fig. 1.1. This is an etching from *Athena Batavia*, a book by Johannes Mercius ([35], page 25).

Scaliger’s principal works on chronology are as follows:

- 1) Scaliger I. *Opus novum de emendatione temporum*. Lutetiac. Paris, 1583, [1387].
- 2) Scaliger I. *Thesaurum temporum*. 1606, [1387].

For the most part, the body of Scaliger’s work was concluded by Dionysius Petavius (1583-1652). The best-known book of the latter is titled *De doctrina temporum*, Paris, 1627 ([1337]). Figs. 1.2, 1.3, and 1.4 show the title page of his *Rationarium Temporum*, published in 1652 ([1338]), and the titles of the first two volumes.

Gerhard Friedrich Miller (1705-1783) “revised” Russia’s history and chronology in the XVIII century in accordance with Scaliger’s scheme. His portrait can

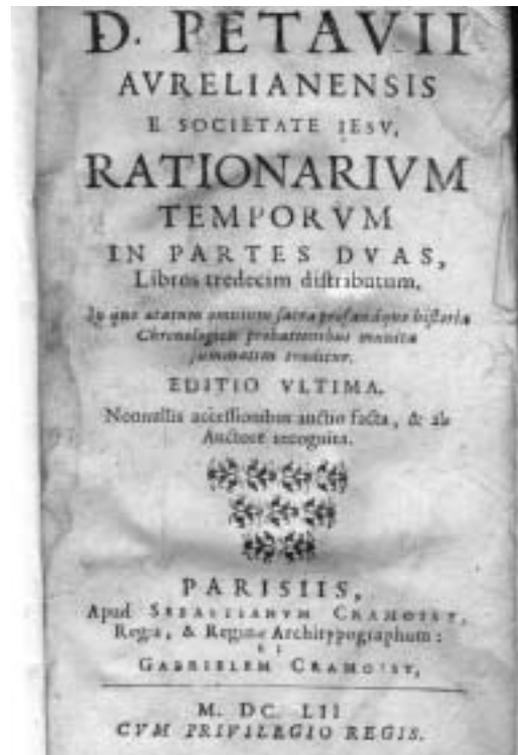


Fig. 1.2. The title page of *Rationarium Temporum* by D. Petavius, published in 1652. Taken from [1338]. Mark that the Latin letters *U* and *V* were often subject to flexion in XVI-XVIII century texts.

be seen on fig. 1.5. See more about the endeavours of Miller and his German colleagues in CHRON4.

Let us mention the works of the XVIII-XIX century, which contain a great array of factual chronological data, such as [1155], [1205], [1236] and [1275]. They are of great value to us since they provide a snapshot of the state of chronology during the epoch of a greater proximity to Scaliger and Petavius. This material is thus of a more primordial nature, not “painted over” by latter cosmetic layers. It must be noted that this series remains incomplete as well as several other similar chronological works. To quote the prominent contemporary chronologist E. Bickerman: “*There has been no chronological research ever conducted that could be called exhaustive and conforming to modern standards*” ([72], page 90, comment 1).

Hence it would be correct to call the modern consensual chronology of the Classical period and the



Fig. 1.3. The title of the first volume of *Rationarium Temporum* by D. Petavius, published in 1652. Taken from [1338].

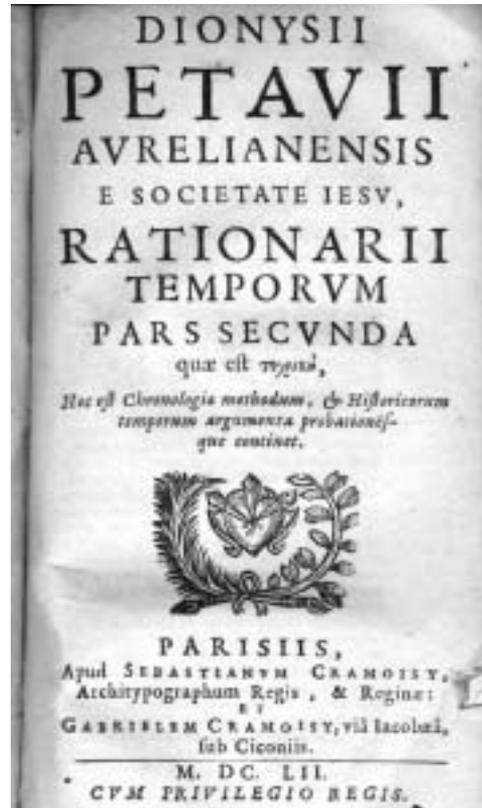


Fig. 1.4. The title of the second volume of *Rationarium Temporum* by D. Petavius, published in 1652. Taken from [1338].

Middle Ages, the Scaliger-Petavius version. We shall simply refer to it as “Scaligerian Chronology”. As will be pointed out, this version wasn’t the only one existing in the XVII-XVIII century. Its veracity has been questioned by eminent scientists.

The groundlaying works of Scaliger and Petavius of the XVI-XVII century present the ancient chronology as a table of dates given without any reasons whatsoever. It is declared to have been based on ecclesiastical tradition. This is hardly surprising, since “history has remained predominantly ecclesial for centuries, and for the most part, was written by the clergy” ([217], page 105).

Today it is believed that the foundations of chronology were laid by Eusebius Pamphilus and Saint Hieronymus, allegedly in the IV century A.D. On fig. 1.6 we have a mediaeval painting of Eusebius Pamphilus of Caesarea dated 1455 ([140], page 80).

It is worth noting that Eusebius of Caesarea is painted in typically mediaeval attire of the Renaissance epoch. Most probably because he had lived in that period of time and not any earlier.

Despite the fact that Scaligerian history ascribes Eusebius to the IV century A.D., during the years 260-340 ([936], vol. 1, page 519), it is interesting to note that his famous work titled *The History of Time from the Genesis to the Nicaean Council*, the so-called *Chronicle*, as well as the tractate by St. Hieronymus (Jerome) weren’t discovered until very late in the Middle Ages. Apart from that, historians say that “the Greek original (of Eusebius – A. F.) is only available in fragmentary form nowadays, and is complemented by the ad libitum translation made by St. Hieronymus” ([267], page VIII, Introduction). Mark the fact that Nicephorus Callistus attempted to write the new history of the first three centuries in the XIV century, or “revise” the *History* of



Fig. 1.5. Portrait of the German historian Gerhard Friedrich Miller (1705-1783). Taken from the *Russian Academy of Sciences Courier* ([129], page 880).

Eusebius, but “he could not do more than repeat that which was written by Eusebius”; ([267], page XI). However, since the work of Eusebius was only published in 1544 (see [267], page XIII), that is, much *later* than the writing of Nicephorus, one has reason to wonder: Could the “ancient” Eusebius have based his work on the mediaeval tractate by Nicephorus Callistus?

On fig. 1.7 we can see a painting by Cesare Nebbia and Giovanni Guerra that was allegedly created in 1585-1590. According to historians, it depicts a scene “of St. Jerome and his pet lion visiting the library of Eusebius (whose *Chronicle* was translated by Jerome) in Caesarea” ([1374], page 45). What we see here, however, is a typically mediaeval scene of the Renaissance epoch, or maybe even the epoch of the XVI-XVII century. The library shelves are filled with books that look basically the same as those of the XVIII-XIX century,



Fig. 1.6. “Eusebius of Caesarea, the Chronicler and the Companion of Constantine the Great. A fragment of the mural by Piero della Francesca in the Cathedral of St. Francisco (Frezza, Italy). 1455.” ([140], page 80). One should note that the gap between the Scaligerian dating of the life of Eusebius (the alleged IV century A.D.) and the time of the portrait’s creation exceeds a thousand years. This is most probably a result of a chronological shift by roughly 1053 years that transferred Eusebius of Caesarea, who lived in the XV century, into the phantom IV century. Taken from [140], page 80.

in hard covers with wide fastening straps. The artists of the XVI-XVII century have most probably painted recent mediaeval events and characters that were cast into the “dark ages” by the latter XVII-XVIII century chronologists of the Scaligerian tradition.

It is assumed that Scaligerian chronology was based on the interpretations of assorted numeric data collected from the Bible. Certain “basis dates” that were used as reference points originated as results of scholastic exercises with numbers. For instance, according to the eminent chronologist J. Usher (Usse-rius), the world was created on Sunday, 23 October 4004 B.C., in the small hours of the morning ([76]). Mind-boggling precision. One is to bear in mind that the “secular” chronology of the present days is largely based on the scholastic biblical chronology of the Middle Ages. E. Bickerman, a contemporary histo-

rian, is perfectly right to note that “the Christian historians have made secular chronography serve ecclesial history... The compilation made by Hieronymus is the foundation of the entire edifice of occidental chronological knowledge.” ([72], page 82).

Although “I. Scaliger, the founding father of modern chronology as a science, had attempted to reconstruct the entire tractate of Eusebius”, as E. Bickerman tells us, “the datings of Eusebius, that often got transcribed erroneously in manuscripts (! – A. F.), are hardly of any use to us nowadays” ([72], page 82).

Due to the controversy and the dubiety of all these mediaeval computations, the “Genesis dating”, for instance, varies greatly from document to document. Let us quote the main examples:

5969 B.C. – the Antiochian dating according to Theophilus, see other version below;

5508 B.C. – the Byzantine dating, also known as “The Constantinople version”;

5493 B.C. – Alexandrian, the Annian era, also 5472 B.C. or 5624 B.C.;

4004 B.C. – according to Usher, a Hebraic dating;

5872 B.C. – the so-called “dating of the seventy interpreters”;

4700 B.C. – Samaritan;

3761 B.C. – Judaic;

3491 B.C. – according to Hieronymus;

5199 B.C. – according to Eusebius of Caesarea;

5500 B.C. – according to Hippolytus and Sextus Julius Africanus;

5515 B.C., also 5507 B.C. – according to Theophilus;

5551 B.C. – according to Augustine ([72], page 69).

As we can see, this temporal reference point, considered fundamental for the ancient chronology, fluctuates within the span of 2,100 years. We have only quoted the most famous examples here. It is expedient to know that there are about two hundred various versions of the “Genesis date” in existence. On fig. 1.8 you can see an ancient painting of the seventy Bible translators commonly referred to as “the seventy interpreters” today.

The “correct Genesis dating” issue was far from being scholastic, and had been given plenty of attention in the XVII-XVIII century for good reason. The matter here is that many ancient documents date events in years passed “since Adam” or “since the Genesis”. This is why the existing millenarian discrepancies between the possible choices of this reference point substantially affect the datings of many ancient documents.

I. Scaliger together with D. Petavius were the first ones to have used the astronomical method for proving – but not examining critically, the late mediaeval version of the chronology of the preceding centuries. Modern commentators consider Scaliger to have ipso facto transformed this chronology into a “scientific”



Fig. 1.7. Painting by Cesare Nebbia and Giovanni Guerra allegedly dated 1585-1590. Depicts St. Jerome visiting the library of Eusebius Pamphilus in Caesarea. We see a typically mediaeval scene of the Renaissance epoch or, possibly, of an even later age. Modern history assures us that all of this happened about a thousand years earlier, in the alleged IV century A.D. Taken from [1374], page 45.

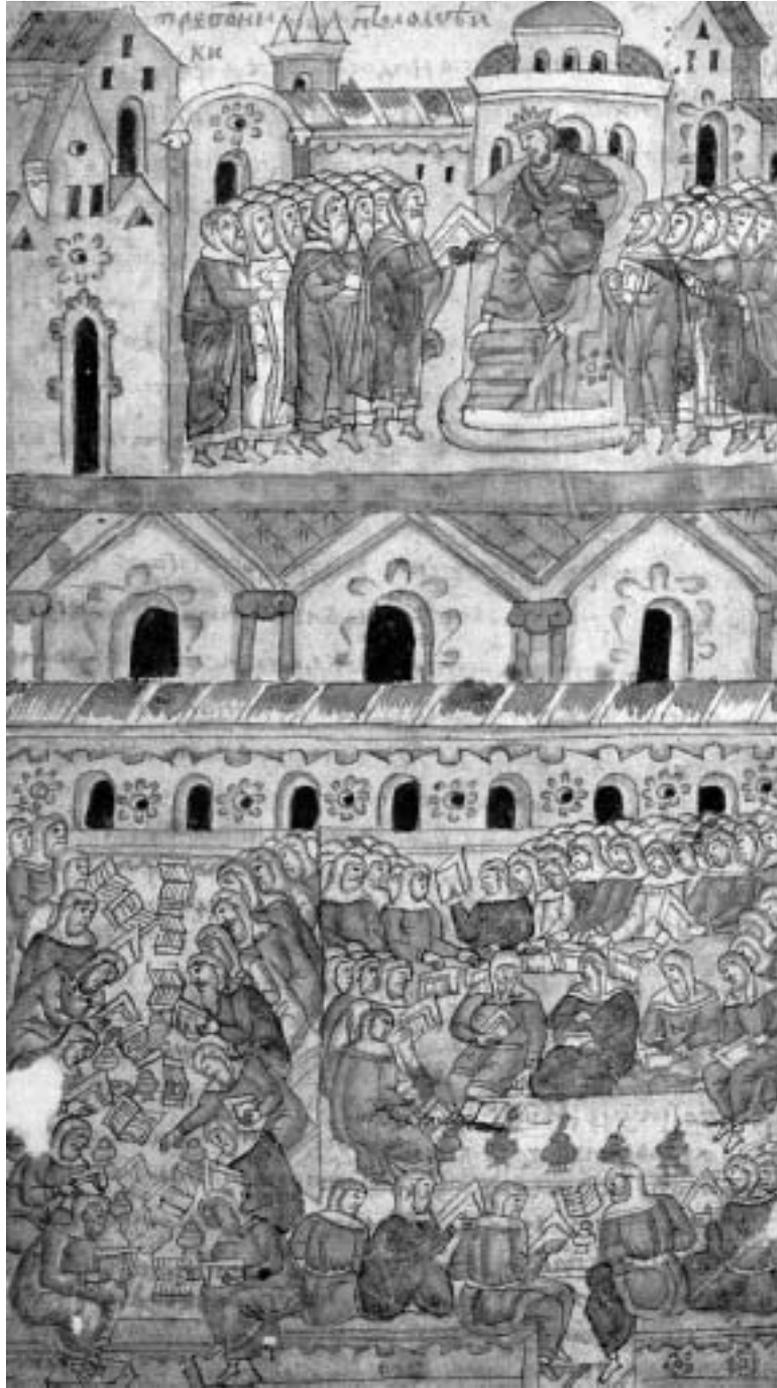


Fig. 1.8. Ancient miniature from the Ostrog Bible, allegedly dated 1581, showing the Bible's translators and interpreters, commonly referred to nowadays as "the 70 interpreters." It is assumed that they were responsible for dating Genesis to 5872 B.C. Taken from [623], page 165. Also see [745], Volume 9, page 17.

one. This “scientific” veneer proved sufficient for the chronologists of the XVII-XVIII century to have invested unquestioning belief in the largely rigidified chronological date grid that they had inherited.

It is very significant that Scaligerian chronology was initially created within the paradigm of the Western European Catholic Church, which had remained in its firm control for a great amount of time. A. Oleinikov wrote, “The mediaeval theologians had often tried to calculate the age of the Earth interpreting assorted data contained in the Holy Writ.” On having studied the text of the Bible, *Archbishop* Hieronymus had come to the conclusion that the world had been created 3,941 years prior to the beginning of modern chronology. His colleague Theophilus, the *Bishop of Antiochia*, had extended this period to 5,515 years. St. Augustine had added another thirty-six years; whilst the Irish *Archbishop* James Usher, who had obviously nurtured a fondness for precise numbers, had made the assumption that the world had been created in the early morning hours on 23 October 4004 B.C. ([616], page 8). Many eminent Western European chronologists of the XVI-XVII century have belonged to the clergy. I. Scaliger (1540-1609), for instance, was a theologian; Tischendorf (1815-1874), the founding father of paleography, was a Doctor of Divinity; Dionisius Petavius (1583-1652) – a Jesuit and an author of several theological writings ([82], page 320, comment 5).

Their absolute trust in the infallibility of what the ecclesial chronology told them, determined their entire Weltanschauung. Hence their attitude to the data offered by other disciplines was determined by whether or not it could serve the advocacy of this a priori assumption or the other, invariably based on the mediaeval ecclesial chronology that was later rechristened “scientific”.

The fact that the clerical chronologists of the Occidental church have deified the endeavours of their predecessors of the XV-XVI century, excluded the very possibility of criticizing the foundations of chronology in any way at all, even minutely.

I. Scaliger, for instance, could not even conceive of such heresy as running a check on the chronological materials of the holy fathers (Eusebius and others): “Scaliger calls this work by Eusebius (the *Evangelical Preparation* – A. F.), *divine*” ([267], page VIII, Introduction). Trusting the authority of their predecessors

unconditionally, the chronologists reacted at external criticisms very bitterly. The same I. Scaliger makes a perfect demonstration of his attitude toward objective scientific criticisms in the following episode: “The eminent philologist Joseph de Scaliger, the author of the chronology that has received such high scientific acclaim, had turned into a keen quadraturist” ([458], page 130). Let us remind that a “quadraturist” was someone who tried to build a square equalling a given circle (disc) in area, using nothing but a pair of compasses and a ruler. This mathematical problem is insoluble as a principle, which is proven by geometry. However, I. Scaliger had published a book where he claims to have proved the “true quadrature” – which solved the problem, “The best mathematicians of the epoch – Viète, Clavius... have tried their hardest to prove to him that... his reasoning was incorrect – all in vain” ([458], page 130). The point here is that Scaliger’s erroneous “proof” made the easy corollary, that the perimeter of an equilateral polygon with 196 angles being greater than that of the circle *circumscribing* it, which is, naturally, quite absurd. Nevertheless, “Scaliger and his supporters, who had a habit of defending their opinions vehemently, didn’t want to acknowledge anything... replying... with maledictions and scornful epithets, and finally calling all the geometricians complete ignoramuses in what concerned geometry” ([458], page 130).

One might imagine how these people reacted towards attempts of analyzing their version of chronology critically.

Few are aware that Scaliger and Petavius had brought chronology to “perfection” and “absolutely precise datings” quoting the year, day, month, and sometimes even the time of day for all the principal events in history of humankind. For whatever reason, modern monographies and textbooks usually only quote the years of events according to Scaliger-Petavius, coyly omitting the month, day, and hour. It is verily a step backwards that deprives the chronology calculated in the XVII-XVIII century of its former splendour and fundamentality.

By the XIX century, the accumulated volume of chronological material grew to the extent of inducing respect a priori by its sheer scale, so the chronologists of the XIX century saw their objective in making minor corrections and not much else.

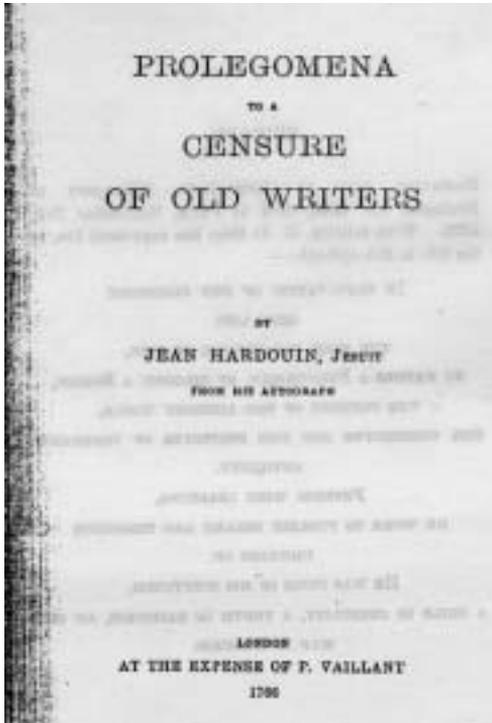


Fig. 1.9. The title page from one of the books by J. Hardouin, 1776.

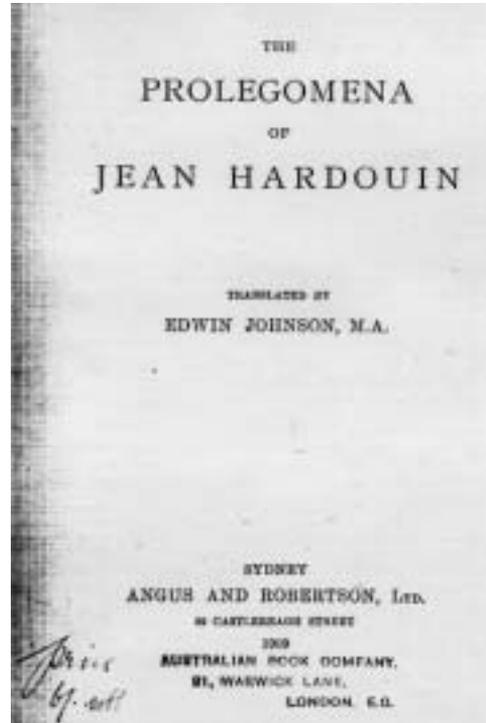


Fig. 1.10. The title page from J. Hardouin's book in Edwin Johnson's English translation, 1909.



Fig. 1.11. The title page from one of R. Baldauf's books, 1902.

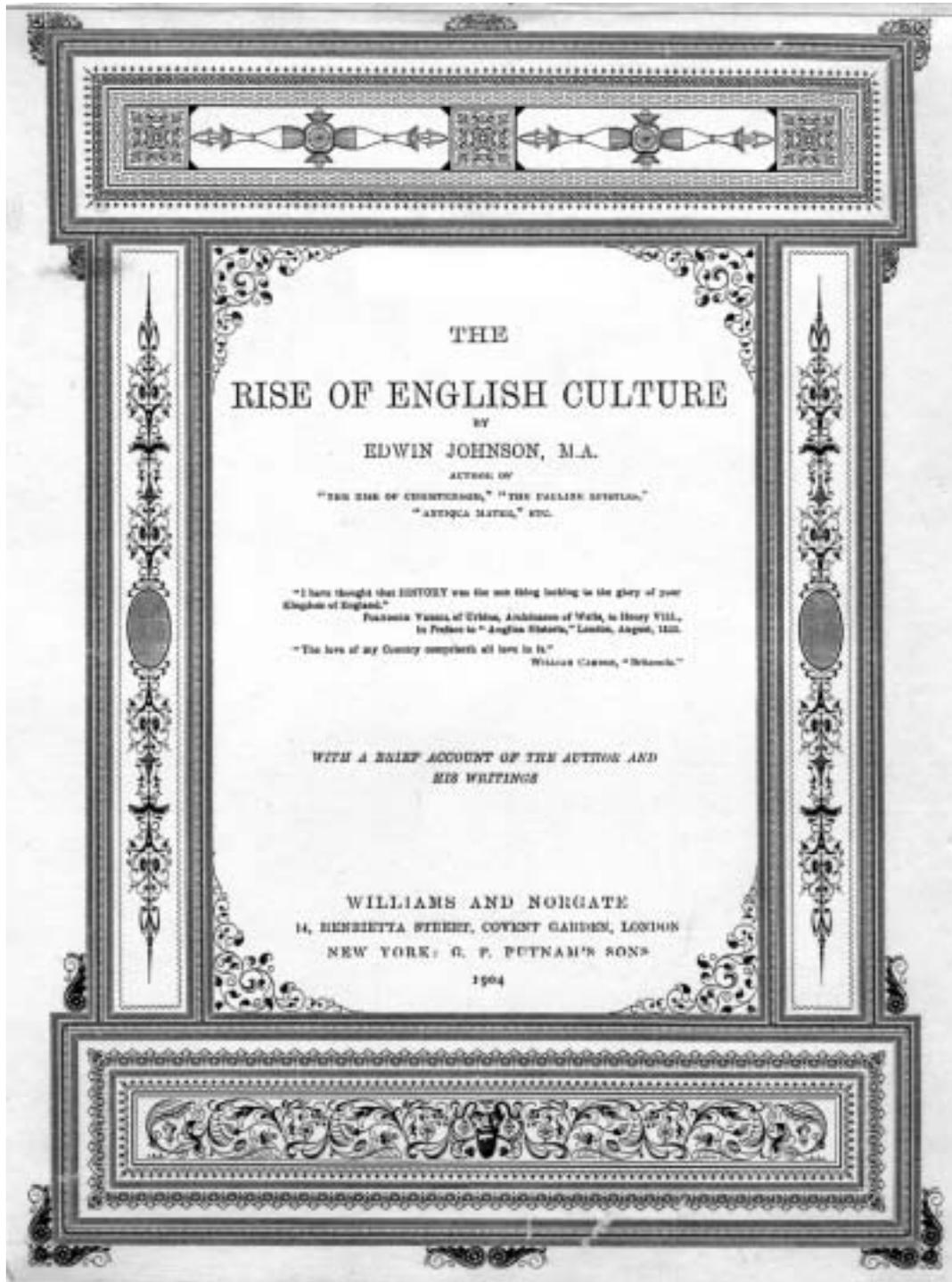


Fig. 1.12. The title page from one of E. Johnson's books, 1904.



Fig. 1.13. A portrait of Sir Isaac Newton. Taken from [336], Volume 6, inset between pages 646-647.

The issue of veracity is hardly raised at all in the XX century, and the ancient chronology solidifies terminally in the very shape and form given to it by the writings of Eusebius, Hieronymus, Theophilus, Augustine, Hippolytus, St. Clement of Alexandria, Usher, Scaliger, and Petavius. To someone in our day and age, the very thought that historians have followed an erroneous chronology for about three centuries seems preposterous since it contradicts the existing tradition.

However, as chronology developed, specialists encountered considerable difficulties in trying to correlate the varied chronological data offered by ancient sources with the consensual Scaliger's version. It was discovered, for instance, that Hieronymus misdates *his own time* by a hundred years ([72], page 83).

The so-called "Sassanide tradition" separated Alexander the Great from the Sassanides by an interval of 226 years, which was extended to 557 by contemporary historians ([72], page 83). In this case, the gap exceeds 300 years.

"The Jews also allocate a mere 52 years for the Persian period of their history, despite the fact that Cyrus II is separated from Alexander the Great by 206 years (according to the Scaligerian chronology – A. E.)" ([72], page 83).

The basic Egyptian chronology has also reached us through the filter of Christian chronologists: "The list of kings compiled by Manethon only survived as quotations made by the Christian authors" ([72], page 77). Some readers might be unaware that "The Oriental Church avoided using the birth of Christ as a chronological point of reference since in Constantinople the debates about the date of his birth have continued well into the XIV century" ([72], page 69).

3. THE VERACITY OF THE SCALIGER-PETAVIUS CHRONOLOGY WAS QUESTIONED AS EARLY AS THE XVI CENTURY

3.1. Who criticized Scaliger's chronology and where

3.1.1. *De Arcilla, Robert Baldauf, Jean Hardouin, Edwin Johnson, Wilhelm Kammeyer*

The doubts regarding the correctness of the consensual version aren't a recent phenomenon. They have quite a tradition behind them. N. A. Morozov wrote in particular that "the Salamanca University professor de Arcilla had published his works *Programma Historiae Universalis* and *Divinae Florae Historicae* where he had proved that the entire history of the Classical Age was mediaeval in its origin. This is exactly the same point of view that was shared by the Jesuit historian and archaeologist Jean Hardouin (1646-1724), who considered the Classical literature to have been written in monasteries during the preceding XVI century... The German Privatdozent Robert Baldauf wrote his *History and its Criticisms* in 1902-1903, proving that not only ancient history, but even that of the early Middle Ages, is a forgery of the Renaissance epoch and the subsequent centuries with the use of nothing but philological arguments" ([544], volume 7, pages VII-VIII, Introduction).

You can see the title page of one of Jean Hardouin's books on fig. 1.9, and that of its translation by Edwin