
FORUM

The End of the Beginning. China and the Abandonment of the Occidental Mode of Counting Years from the Creation of the World

Harald Kleinschmidt

ABSTRACTS

Zwischen der Spätantike und dem Ende des 18. Jahrhunderts gab es im christlich-abendländischen Kulturraum die als universelle Methode der Zeitrechnung gedachte Jahreszählung von der Erschaffung der Welt (AOC-Chronologie). Die Praxis der Anwendung der AOC-Chronologie stützte sich auf die alttestamentlichen Berichte über die Schöpfung, die Sintflut und den Bau des Babylonischen Turms und manifestierte den Glauben an die Stabilität der göttlich geordneten Welt, an die Menschheit als eine einzige Abstammungsgruppe und an die Erwartung, dass das Ende der Welt durch den göttlichen Willen bestimmt sein würde. Sie maß die Dauer der Welt in ein paar tausend Jahren. Ab dem späten 16. Jahrhundert wurde die Geschichte Chinas jedoch vor allem unter europäischen Missionaren bekannter, die die lange Dauer der chinesischen Kultur und Herrschaftsinstitutionen erkannten. Dieses Wissen warf die Frage auf, wie die chinesische Geschichte in die AOC-Chronologie eingepasst werden konnte. Debatten über die Beantwortung dieser Frage begannen um die Mitte des 17. Jahrhunderts und trugen schließlich in Verbindung mit der zunehmenden Forderung, die Dynamik einer sich verändernden Welt anzuerkennen, zur Aufgabe der AOC-Chronologie bei.

Between late Antiquity and the end of the eighteenth century, the Christian-Occidental cultural area featured the counting of years from the creation of the world (AOC chronology) intended

as a universal method of time reckoning. The practice of applying the AOC chronology drew on the Old Testament reports on the Creation, the Flood and the building of the Babylonian Tower and manifested the beliefs in the stability of the divinely ordered world, in humankind as a single descent group and in the expectation that the end of the world would be determined by divine will. It measured the duration of the world in a few thousand years. However, from the late sixteenth century, the history of China became better known mainly among European missionaries, who recognized the long duration of Chinese culture and institutions of rule. Such knowledge raised the question of how Chinese history could be fitted in with the AOC chronology. Debates about answers to this question began around the middle of the seventeenth century and eventually, in conjunction with the increasing demand for acknowledging the dynamics of a changing world, contributed to the abandonment of the AOC chronology.

1. Introduction: Chronology and Paleontology

Counting years *Ab orbe condito* (AOC) was based on the belief in the stability and finiteness of the world as a well-ordered and stable entity whose basic fates were removed from human influence. From late Antiquity to the end of the eighteenth century, the Jahwist report on the Creation, jointly with the subsequent reports on the Flood and the building of the Babylonian Tower, served as the platform for considering world time as a sequence of six world ages, equating every world age roughly with a millennium, in exegesis of Psalm 90, 4 (Vulgate: 89, 4), and understanding that the beginning of the world was, and that its end would be, due solely to divine will. Trust in the sequence of world ages spanning the entire period between the beginning and the end of the world, required the AOC chronology as a single uniform continuous mode of counting years. Thus, once Christianity had emerged as the religion of emperors in Rome, the traditional chronology of the city (*Ab urbe condita*, AUC) gradually lost significance, as it was not supportive of the Christian dogma setting the recognition of the arrival of the Saviour as the beginning of a new age. Early in the third century, Sextus Julius Africanus assigned 5500 years to the period between the Creation and the birth of Christ, the number becoming reduced to about 4000 in the later Middle Ages.¹ From the eighth century, the

1 Julius Africanus chronographiae. The Extant Fragments, ed. M. Wallraff, Berlin/New York 2007, pp. 274–276; D. Engelhus, *Nova Chronica* [1426], in: G. W. Leibniz (ed.), *Scriptores rerum Brunsvicensium*, vol. 2, Hanover 1710, pp. 977–1143, at pp. 979–996. For comments on the AOC chronology, see G. Bodmann, *Jahreszahlen und Weltalter. Zur Grundlegung von Zeit- und Raumvorstellungen in der mittelalterlichen Chronistik*, Frankfurt am Main/New York 1992, esp. pp. 54–81; A.-D. von den Brincken, *Hodie tot anni sunt – Große Zeiträume im Geschichtsdenken der frühen und hohen Scholastik*, in: *Miscellanea mediaevalia* 16 (1983) 1, pp. 192–211; C. Carozzi, *Weltuntergang und Seelenheil. Apokalyptische Visionen im Mittelalter*, Frankfurt am Main 1996, pp. 76–78; H. Gelzer, *Sextus Julius Africanus und die byzantinische Chronographie*, Leipzig 1898, pp. 24–26, 34–36, 46–51. F. C. Haber, *The Age of the World. Moses to Darwin*, Baltimore 1959, pp. 11–27; R. Konrad, *De ortu et tempore Antichristi. Antichristvorstellungen und Geschichtsbild des Abtes Adso von Montier-en-Der*, Kallmünz 1964, pp. 68–70; R. Martin, *Living within Sight of the End*, in: C. Humphrey/W. M. Ormrod (eds.), *Time in the Medieval World*, Woodbridge 2001, pp. 23–34; R. Landes, *Lest the Millennium be Fulfilled. Apocalyptic Expectations and the Pattern of Western Chronography. 100–800 CE*, in: W. Verbeke/Daniel Verhelst/Andries Welkenhuysen (eds.), *The Use and*

AOC chronology concurred with the AD chronology, frequently employed in mixed or parallel dates, but went out of use towards the end of the eighteenth century.²

Some scholars have maintained that the AOC chronology fell victim to the findings of empirical science research already during the seventeenth century,³ as these findings appeared to render vain the belief in the limited duration of the world within a few thousand years only. However, this belief waned only from the middle of the eighteenth century, when the expectation came to the fore that the world would continue into an indefinite future, manifest in work by George Louis le Clerc de Buffon (1707–1788).⁴ This expectation was drawn on the reinterpretation of fossils, which, from the middle of the eighteenth century, no longer counted as jokes of nature,⁵ but as evidence for extinct species, whenever they could not be connected with living ones.⁶ Indeed, the reinterpretation of fossils had the power to undermine both the belief in the validity of the Biblical record and the trust in the stability of the world. It was also conducive to replacing the notion of the finiteness of the world by a dynamic that would not be confined to a pre-determined span of time.

Research on the AOC chronology has thus mainly been focused on internal discourses in the sciences with implications for theology, notably the modalities of Bible exegesis, but has not been concerned with other disciplines. Hence, it has gone unnoticed that the AOC chronology continued in use, for more than a generation beyond Buffon's early statements, as a mode of counting years universally. Specifically specialised chronologists continued to use the chronology even though they rejected the equally conventional

Abuse of Eschatology in the Middle Ages, Louvain 1988, pp. 149–156; M. Völkel, *Vergangenheit*, in: S. Jordan (ed.), *Lexikon Geschichtswissenschaft*, Stuttgart 2002, pp. 300–303, at p. 301.

- 2 For early examples, see Henry of Herford, *Liber de rebus memorabilioribus. Sive Chronicon [to 1355]*, ed. A. Potthast, Göttingen 1859, pp. 1–291; Martin of Troppau, *Chronicon pontificum et imperatorum*, ed. L. Weiland, in: *Monumenta Germaniae historica, Scriptores*, vol. 22, Hanover 1879, pp. 377–475; Engelhus, *Chronica* (note 1), *passim*; H. Schedel, *Das Buch der Cronicken und Gedechnus wirdigern Geschichten von Anbegynn der Werlt bus auf dise vnserre Zeit*, Nuremberg 1493. Some later examples: R. Hooke, *The Posthumous Works*, ed. R. Waller, London 1705, pp. 299, 333; G. Vico, *Principij di una scienza nuova*, 3. Aufl., Naples 1744, table facing p. 37; J. C. Gatterer, *Vom historischen Plan und der darauf sich gründenden Zusammenfügung der Erzählungen*, in: Gatterer (ed.), *Allgemeine historische Bibliothek*, vol. 1, Halle 1767, pp. 15–89; Gatterer, *Einleitung in die synchronistische Universalhistorie zur Erläuterung seiner synchronistischen Tabellen*, Göttingen 1771, pp. 47–629; A. W. Franzen, *Allgemeine Geschichte der Welt und Natur, der Völker, der Staaten, der Kirche, der Wissenschaften und Künste*, vol. 1, Berlin 1769, p. 548; F. C. Fulda, *Karte der Weltgeschichte*, Mühlhausen 1782, fol. [D 1], Nr LVII: „A[nnus] M[undj] 5649“ glossed with the AD year 1700, the latest date referred to in the volume.
- 3 Haber, *Age* (note 1), pp. 38–59; W. Lepenies, *Das Ende der Naturgeschichte. Wandel kultureller Selbstverständlichkeiten in den Wissenschaften des 18. und 19. Jahrhunderts*, Munich 1976, pp. 11–13, 18, 29–40.
- 4 G. L. Le Clerc, Comte de Buffon, *Les époques de la nature* (Buffon., *Œuvres complètes*, vols. 9, 10), Paris 1778.
- 5 For example: T. Burnet, *Sacred Theory of the Earth*, London 1681, p. 273.
- 6 A. Grafton, *The Chronology of the Flood*, in: M. Mulsow/J. Assmann (eds.), *Sintflut und Gedächtnis*, Munich 2006, pp. 65–82; R. Groh/D. Groh, *Zum Wandel der Denkmuster im geologischen Diskurs des 18. Jahrhunderts*, in: *Zeitschrift für historische Forschung*, 24 (1997), pp. 575–604; Haber, *Age* (note 1), pp. 102–136, 159–186; C. P. E. Nothaft, *Noah's Calendar. The Chronology of the Flood Narrative and the History of Astronomy in Sixteenth- and Seventeenth-Century Scholarship*, in: *Journal of the Warburg and Courtauld Institutes*, 74 (2011), pp. 191–211; P. Rossi, *The Dark Abyss of Time. The History of the Earth and the History of Nations from Hooke to Vico*, Chicago/London 1984, pp. 33–40; M. J. S. Rudwick, *The Meaning of Fossils*, second edn, Chicago/London 1985, pp. 1–48; D. J. Wilcox, *The Measurement of Times Past. Pre-Newtonian Chronologies and the Rhetoric of Relative Time*, Chicago/London 1987, pp. 187–219.

world-empire chronology as a useless parameter for accommodating diverse chronologies all across the world.⁷ Likewise, the chronology did not suffer from the emerging separation of “prehistory”, defined as the epoch of oral cultures, from “history” as the period of the transmission of records in writing, even though the separation marked an epochal gap that could not easily become integrated into the AOC chronology.⁸ It remained unaffected as the challenge did not raise questions about the beginning and the end of the world. Moreover, the simultaneously emerging paradigm of the historiography of humankind bridged the epochal gap between prehistory and history by integrating all human history into a linear sequence of events seen as progressing in an uninterrupted process towards the final goal of moral perfection.⁹ This paradigm supported the construction of a single continuous time line linking the remote past with the present. But the staunch continuity of the AOC chronology does not imply that it was uncontested. Instead, it received its first cracks already during the late Middle Ages, when the intermingling of universal and local historiography, such as in Mathew Paris (c. 1200–1259)’s *Chronica majora*, boosted secular accounts of the past and separated narratives about the past from eschatological speculations about the future. In historiography proper, thus, the distant future became indefinite, while, at the same time, practical action became more focused upon the immediate future, as can be judged from the growing frequency of the use of credit and bills of exchange, the intensification of military planning in the context of the mechanisation of weaponries and the expansion of the practice of concluding treaties among states.¹⁰ Therefore, it is inappropriate to limit the process of rendering the future indefinite to a few decades during the later eighteenth century.¹¹ Instead, the process was taking place across a considerable span of time, initialised during the late Middle Ages and ending only with the full conceptual admission of the triad of the time dimensions of past, present¹² and future early in the nineteenth century.

7 Gatterer, Plan (note 2), pp. 28f.

8 H. Zedlmaier, *Der Anfang der Geschichte. Studien zur Ursprungsdebatte im 18. Jahrhundert*, Hamburg 2003, pp. 177–243.

9 I. Iselin, *Ueber die Geschichte der Menschheit*, vol. 1, Frankfurt/Leipzig 1764, pp. 81–243; A. Ferguson, *An Essay on the History of the Civil Society*, Edinburgh 1966, pp. 112–164.

10 For sources on the use of credit and bills of exchange, see P. di Giovanni Olivi, *De usu paupere. The Questions and the Tractatus*, ed. D. Burr, Florence 1992; F. B. Pegalotti, *La pratica della mercatura*, ed. Allan Evans, Cambridge, MA 1936. For a reference on military planning, see H. Kleinschmidt, *Logistik im städtischen Militärwesen des späten Mittelalters. Dargestellt an Beispielen aus süddeutschen Städten im Vergleich mit dem Ordensland Preußen*, in: *Mediaevalia historica Bohemica* 4 (1995), pp. 232–263. For a reference on treaty-making, see R. Lesaffer, *The Three Peace Treaties of 1492–1493*, in: H. Duchhardt/M. Peters (eds.), *Kalkül, Transfer, Symbol. Europäische Friedensverträge der Vormoderne*, Mainz 2006, pp. 41–52 [<http://ieg-mainz-de/vieg-online-beiheft/01-2006.html>]. For further aspects of the late medieval perception of the future, see K. Oshema/B. Schneidmüller (eds.), *Zukunft im Mittelalter. Zeitkonzepte und Planungsstrategien* (Protokoll über die Arbeitstagung; Konstanzer Arbeitskreis für mittelalterliche Geschichte, 420), Constance 2018 [full-length version scheduled to be published in 2021].

11 L. Hölscher, *Die Entdeckung der Zukunft*, Göttingen 2016, pp. 55–90; Hölscher, *Zukunft*, in: Jordan (ed.), *Lexikon* (note 1), pp. 342–345, at pp. 342f. For Matthew Paris, see his *Chronica majora*, ed. H. R. Luard, 7 vols., London 1872–1883.

12 For the process of providing the present with its own duration, see in the context of the reformulation of the concept of statistics into a numerical discipline at the beginning of the nineteenth century: W. Butte, *Die Statistik als Wissenschaft*, Landshut 1808, p. 137; D. F. Donnant, *Théorie élémentaire de la statistique*, Paris 1805, pp.

During this entire period the AOC chronology not only stood firm but also sustained the major transformation of the European world picture provoked by the beginning of the trans-Atlantic voyages. The integration of America into European world cartography early in the sixteenth century opened questions about the human settlement of America and, consequently, cast doubts on the Biblical postulate of the single origin of humankind (monogenesis): If the routes could not be ascertained that humankind might have taken on its way from Babylon to America, the Biblical record might become subject to critical questions. Some universal historiographers tried to solve the problem of the routes of the human settlement of America by claiming that the settlement had only recently occurred, that, in other words, the “New World” did not have an ancient history.¹³ Mainly around the middle of the seventeenth century, some scholars maintained that the ancestors of Native Americans had crossed some Asian-American land bridge in post-Babylonian times.¹⁴ Others took the view that there had been two acts of Creation and postulated the existence of “pre-Adamic” humans, thereby opting for the polygenetic hypothesis.¹⁵ At the same time, universal historiographers dealing with ruling dynasties, mainly the Habsburgs, became accustomed to remove from their genealogies figures recorded in the Old Testament and Greek as well as Roman times,¹⁶ thereby uncoupling the beginnings of ruling genealogies from the Biblical Creation report and records of Antiquity. The AOC chronology remained unaffected by these fundamental transformations and debates. Instead of external factors seen as promoting the abandonment of the AOC chronology, the following survey shall focus on internal factors leading to difficulties in its handling. Specifically, China shall be visited as a part of the world the culture of which was then known in Europe, while Chinese chronology, ascribing a high age to Chinese culture, came to militate against the claim for the unconditioned universal applicability of the AOC chronology. The conclusion will be that the AOC chronology was abandoned at the turn of the nineteenth century, not in the main due to the process of rendering the

158f., 223; F. J. Mone, *Theorie der Statistik*, Heidelberg 1824, p. 5; A. C. H. Niemann, *Abris der Statistik und der Staatenkunde*, Altona 1807, p. 33; A. L. J. Quetelet, *Lettres à S[on] A[lt]esse R[oyale] le Duc Régna[n]t de Saxe-Coburg et Gotha sur la théorie de probabilité, appliquée aux sciences morales et politiques*, Brussels 1846; J. E. Woerl, *Erläuterung zur Theorie der Statistik in näherer Rücksicht für Staatszwecke*, Freiburg 1841, p. 25.

13 G. Horn, *Introductio ad historiam universalem*, Leipzig 1699, pp. 202–210.

14 Among many, see H. Grotius, *De origine gentium Americanarum*, Paris 1642; J. de Laet, *Notae ad dissertationem Hugonis Grotii, De origine gentium Americanorum*, Amsterdam, 1643; G. Horn, *De originibus Americanis libri IV*, The Hague 1652; J. H. Horb [praes.]/G. Wagner [resp.], *De origine Americanorum*, Ph. D. thesis, University of Leipzig 1669. For studies, see L. E. Huddleston, *Origins of the American Indians*. *European Concepts 1492–1729*, Austin, TX/London 1967; C. C. Uhlenbeck, *Hugo de Groot en de oorsprong von de bevolking van America*, in: *Mededelingen der Koninklijke Akademie van Wetenschappen. Afdeling Letterkunde, Series B* 72, Nr. 2 (1931), pp. 53–69; S. Williams, ‘From Whence Came Those Aboriginal Inhabitants of America?’ A.D. 1500–1800, in: D. L. Browman/S. Williams (eds.), *New Perspectives on the Origins of Americanist Archaeology*, Tuscaloosa, AL 2002, pp. 30–59; J. Winsor, *The Progress of Opinion Respecting the Origin and Antiquity of Man in America*, in: Winsor (ed.), *Narrative and Critical History of America*, vol. 1, Boston/New York 1889, pp. 369–412, at pp. 369–370; H. F. Wright, *The Controversy of Hugo Grotius with Johan de Laet on the Origin of the American Aborigines*, in: *Bibliotheca Visseriana*, 7 (1928), pp. 211–228.

15 Among the earliest: I. de La Peyrère, *Systema Theologicum ex Praeadamitarum hypothesi*, Paris 1655. For a study, see Rossi, *Abyss* (note 6), pp. 132–136.

16 M. Herrgott, *Genealogia diplomatica Augustae Gentis Habsburgicae*, vol. 1, Vienna 1737, esp. pp. 263f.

future indefinite, but, more importantly, in conjunction with the waning trust in the stability of the world.

2. Europeans Debating the Age of the World and Looking at China

The belief in the unity of humankind as a descent group required tracing the pluralism of the empirically existing varieties of human groups back to one single origin; it was supported by and, at the same time, backed the AOC chronology. However, from the sixteenth century, the use of the AOC chronology faced the cardinal problem of coping with and integrating the specific chronologies that then came to be known from America and East Asia. For one, Catholic savant Guaman Poma de Ayala (1550–1615), claiming for himself descent from an Inca ruler, struggled to construct a chronology combining indigenous traditions of time reckoning with the Biblical foundations of the AOC chronology. To that end he postulated Native American descent from one of Noah's sons, divided historical time into five world ages comprising altogether 6612 years for the Native American and 6613 years for the Christian world and consociated Inca figures with Biblical occurrences and figures for all five of his world ages. In the first world age, Ayala paralleled Uari Uiracocha Runa with Adam and Eve, in the second Uari Runa with the Flood (*Noe Diluvio*), in the third Purun Runa with Abraham, in the fourth Auca Runa with David and in the fifth Inca Runa with Christ.¹⁷ Thus he tied Native American history up with the Old Testament migration narrative and used these ties to advance his bid for the recognition of the equality of Native Americans with European settlers in cultural, legal and political terms. Yet the manuscript he left behind at his death,¹⁸ represented a singular attempt at the fusion of indigenous traditions, for which Ayala used the word *historia*,¹⁹ with Christian traditions. The fusion came at the high price at once of reducing the number of world ages to the number of five and expanding the time frame that had been authorised by the exegesis of the Book of Genesis. Ayala did so by placing his own present into the sixty-seventh century after the Creation and leaving the future open-ended. Hence, the Christian world ignored Ayala's work until the early twentieth century, and his manifesto of resistance against the oppression of Native American cultural identity has remained without impact.²⁰

17 F. Guaman Poma de Ayala, *El Primer nueva corónica y bien gobierno* [1615] [Autograph. Copenhagen: Kongelige Bibliotek, GKS 2232.49]; first printed, Paris 1936, p. 49; also ed. Franklin Pease, vol. 1, Caracas 1980, pp. 6f.: "Carta del padre del autor", pp. 38–57, 293.

18 First described by R. Pietschmann, *Nueva Crónica y buen gobierno* des Don Felipe Guaman Poma de Ayala. Eine peruanische Bilderhandschrift, in: *Nachrichten der Gesellschaft der Wissenschaften zu Göttingen. Philol.-Hist. Kl.*, 6 (1908), pp. 637–659.

19 R. Adorno, *Guaman Poma. Writing and Resistance in Colonial Peru*, second edn, Austin, TX 2000, p. 40.

20 See Adorno, Poma (note 19), *passim*; Adorno, *New Studies of the Autograph Manuscript of Felipe Guaman Poma de Ayala's 'Nueva corónica y buen gobierno'*, Copenhagen 2003; Adorno, *The Polemics of Possession in Spanish American Narrative*, New Haven 2007; C. Julien, *Inca Historical Forms*, in: J. Rabasa/M. Sató/E. Tortarolo/D. Woolf (eds.), *The Oxford History of Historical Writing*, vol. 3, Oxford 2012, pp. 619–639, at pp. 629–633; J. M. Ossio, *Myth and History. The Seventeenth-Century Chronicle of Guaman Poma de Ayala*, in: R. K. Jain (ed.), *Text and Context. The Social Anthropology of Tradition*, Philadelphia 1977, pp. 51–93, esp. pp. 54–82.

Quite a different matter was the reception in Europe of Chinese chronology starting late in the sixteenth century. It has long been accepted that, between the late sixteenth and the early eighteenth centuries, the main transmitters of knowledge about things Chinese were clergymen, who could rely on their own autoptic experiences and of whom some were well versed in the Chinese language. Among the first was Augustinian monk Juan González de Mendoza (1545–1618), who provided a survey of Chinese chronology. He relied on the report by Martín de Rada (1533–1578), another Augustinian monk, who had served on the first Spanish mission to China in 1575. González de Mendoza's work was quickly translated into various languages.²¹ It formed part of the text sort of statistics, the study of states in the world, and surveyed various aspects of nature and culture in China ranked as a "Kingdom".²² Reflections on the fertility of the land induced González de Mendoza to consider the origin of the inhabitants, purportedly on the basis of their own records.²³ These records appeared to reveal that the earliest inhabitants had simultaneously been the founders of the "Kingdom" and that Noah had been their grandfather. Reportedly, they had chosen eastern Asia for its fertility and pleasant climate after having thoroughly investigated "all of Armenia". Chinese records also appeared to claim that the world was more than 90.000 years old,²⁴ but González de Mendoza took this number to be drawn on an erroneous belief. He recorded some 'Vitei' as "the first King", endowed with a gigantic body and credited, among many other things, with having invented shipbuilding.²⁵ He believed that 'Vitei' had twenty-five sons of four women, that 116 "kings" had been his successors altogether reigning for 2257 years.²⁶ González de Mendoza did not use an "exotic" imperial title and thus refrained from elevating China to a higher rank than other states of the world. In doing so he followed contemporary statistical practice. He dated the settlement of the land after the global

21 J. González de Mendoza, *Historia de las cosas más notables, ritos y costumbres del gran regno de la China*, Madrid 1586; German version s.t.: *Eine neuwe, kurtze doch warhafftige Beschreibung deß gar großmächtigen, weitbegriffenen, bißhero unbekandten Königreichs China*, Frankfurt 1589, Book III, pp. 59–end. The description opened with a survey 'Von den Vorzügen Chinas vnd ihren Namen'.

22 *Ibid.*, German version, Book I, Chap. III, pp. 6–10. On the early history of statistics, see H. E. Bödeker, 'On the Origin of the Statistical Case', *Modes of Perception, Forms of Knowledge and Ways of Writing in the Early Social Sciences*, in: P. Becker/W. Clark (eds.), *Little Tools of Knowledge. Historical Essays on Academic and Bureaucratic Practice*, Ann Arbor 2001, pp. 169–196; V. John, *Geschichte der Statistik*, Stuttgart 1884, pp. 3–154; K. H. Kaufhold/W. Sachse, *Die Göttinger 'Universitätsstatistik' und ihre Bedeutung für die Wirtschafts- und Sozialgeschichte*, in: H.-G. Herrlitz/H. Kern (eds.), *Anfänge Göttinger Sozialwissenschaft. Methoden, Inhalte und soziale Prozesse im 18. und 19. Jahrhundert*, Göttingen 1987, pp. 72–95, at p. 86; U. Muhlack, *Geschichtswissenschaft im Humanismus und in der Aufklärung. Die Vorgeschichte des Historismus*, Munich 1991, pp. 126f.; A. Seifert, *Conring und die Begründung der Staatenkunde*, in: M. Stolleis (ed.), *Hermann Conring (1606–1682)*, Berlin 1983, pp. 202–214; G. Valera, *Introduzione*, in: Valera (ed.), *Scienza dello stato e metodo storiografico nella Scuola storica di Göttinga*, Naples 1980, pp. IX–CXVIII; Valera, *Statistik, Staatengeschichte, Geschichte im 18. Jahrhundert*, in: H. E. Bödeker/G. G. Iggers/P. H. Reill (eds.), *Aufklärung und Geschichte. Studien zur deutschen Geschichtswissenschaft im 18. Jahrhundert*, Göttingen 1986, pp. 119–143, at pp. 121–124; M. Völkel, *German Historical Writing from the Reformation to the Enlightenment*, in: Rabasa, *Oxford History* (note 20), pp. 324–346, at p. 336; R. Zehrfeld, *Hermann Conrings Staatenkunde*, Leipzig 1926.

23 González de Mendoza, *Historia* (note 21).

24 *Ibid.*, German version, Book I, Chap. III, pp. 6f., Book I, Chap. V, pp. 40–42.

25 *Ibid.*, German version, Book I, III Chap. I, p. 59.

26 *Ibid.*, German version, Book III, Chap. I, p. 60.

Flood, thus postulating the single common origin of all humankind in accordance with the Biblical record. Trusting this record, he rejected Chinese statements about the age of the world. He did not explicitly identify ‘Vitei’ with Noah, even though the invention of shipbuilding, ascribed to ‘Vitei’, might have suggested such identification. The critical refutation of Chinese statements about the age of the world made it possible for González de Mendoza to fit China into the AOC chronology without much ado. Yet, he remained vague; neither did he specify which of Noah’s sons had been the ancestor to whom the Chinese should have traced their origin, nor did he provide a time frame for the settlement process. Thus he did not specify whether Noah’s alleged descendants had transmigrated before or after the building of the Babylonian Tower.

At the turn of the seventeenth century,²⁷ Jesuits began to write on China.²⁸ Matteo Ricci (1552–1610), in Macau from 1582, subsequently the first missionary admitted to Beijing, documented mainly occurrences related to his missionary work in his contemporarily published “relations” to the headquarters of the order, while he took scarce notice of Chinese historical records.²⁹ But already Nicolas Trigault (1577–1628), Ricci’s successor from 1611, ascribed the age of 4000 years to the Chinese “Kingdom”, when he added his report on China to the series of statistical handbooks issued by then Leiden publisher Elzevier.³⁰ Trigault thus extended the time frame for Chinese history to the most extreme point that was permissible within the AOC chronology but did not raise questions about the compatibility of Chinese and Biblical records. It was only fellow Jesuit Álvaro Semmedo (1585/6–1658, in China 1613–1636), who studied Chinese history intensively, more cautiously stated that it covered a period of some 3000 years,

27 Laicist translator and editor Francisco de Herrera Maldonado, for his *Epitome historial de Reyno de la China*, Madrid 1621, used González de Mendoza’s work.

28 For Jesuit impacts on the transfer of culture, see R. Dürr, *Akkomodation und Wissenstransfer. Neuerscheinungen zur Geschichte der Jesuiten in der Frühen Neuzeit*, in: *Zeitschrift für Historische Forschung*, 44 (2017), pp. 487–509; I. Higashibaba 東馬場郁生, *Christianity in Early Modern Japan. Kirishitan Belief and Practice*, Leiden 2001, pp. 1–28; F. R. Reichert, *Bateren und Samurai. Der Austausch von Wissen durch die Japanmission der Jesuiten*, in: *Zeitschrift für Historische Forschung*, 45 (2018), pp. 431–463; A. C. Ross, *A Vision Betrayed. The Jesuits in Japan and China. 1542–1742*, Edinburgh 1994; M. A. J. Üçerler, SJ, *The Jesuits in East Asia in the Early Modern Ages. A New ‘Areopagus’ and the ‘Re-Invention’ of Christianity*, in: T. Banchoff/J. Casanova (eds.), *The Jesuits and Globalization. Historical Legacies and Contemporary Challenges*, Washington, DC 2016, pp. 27–48; R. Wendt, *Mission in vielen Zungen. Der Beitrag der Jesuiten zu Erfassung und Klassifizierung der Sprachen der Welt*, in: J. Meier (ed.), ... *usque ad ultimum terrae. Die Jesuiten und die transkontinentale Ausbreitung des Christentums. 1540–1773*, Göttingen 2000, pp. 53–67; T. Winnerling, *Vernunft und Imperium. Die Societas Jesu in Indien und Japan. 1542–1574*, Göttingen 2014.

29 M. Ricci, SJ, *Annua della Cina del 1606 e 1607*, Milan 1610; Ricci, *Opere storiche*, 2 vols., ed. P. Tacchi Venturi, Macerata 1911–1913. For studies, see L. Brancaccio, *China accommodata. Chinakonstruktionen in jesuitischen Schriften der Frühen Neuzeit*, Berlin 2007, pp. 77–128; G. F. Strasser, *The Impact on the European Humanities of Early Reports from Catholic Missionaries from China, Tibet and Japan between 1600 and 1700*, in: R. Bod/J. Maat/T. Weststeijn (eds.), *The Making of the Humanities*, vol. 2, Amsterdam 2012, pp. 185–208, at pp. 188–192.

30 N. Trigault, SJ [Trigautius; Trigaultius], *Regni Chinensis descriptio ex variis authoribus*, Leiden 1639, pp. 2, 131. In his brief contribution to a volume of collected reports on Japan, written before his departure for Beijing, he admitted that he knew little about China: Trigault, *Vom Königreich China*, in: A. Albertinus, *Historische Relation, was sich in etlichen Jaren hero im Königreich Iapon so wol im geist- als auch weltlichem Wesen namhaftes begeben und zugetragen*, Munich 1609, pp. 315–317. For a study of the series, see G. Frick, *Die Elzevir’schen Republiken*, Halle 1892.

termed the state an “Imperium” and thereby elevated China above other states to the same rank as the Holy Roman Empire. Passing over ‘Vitei’, he identified „Fo-Hi“ (Fúxī 伏羲) as the first “Emperor”.³¹ None of these three authors, however, saw problems of integrating the Chinese into the AOC chronology but simply took for granted that the universal applicability of the latter chronology was unconditioned.³²

Martino Martini (1614–1661, in China from 1642) was the first European scholar to investigate Chinese historical records thoroughly under the question of what they had to say about the beginning of the world and the Chinese “Empire”. In what became the first major piece of European historiography of China, appearing in 1658, Martini raised questions about the unconditioned applicability of the AOC chronology in Chinese historical contexts. These contexts appeared to provide some evidence supporting the viability of the use of the AOC chronology. Thus, Martini believed to be able to glean from Chinese records several hints at the occurrence of the Flood. However, he also found evidence on numerous ancient rulers seemingly preceding Fo-Hi as the founder of the “Empire”. He rejected these pieces of information as “false and ridiculous” (*falsa et ridicula*), arguing that records on the period before Fo-Hi were not contemporary or had been transmitted corruptly and thus could not be trusted.³³ Nevertheless, he accepted as certain the view that eastern Asia had been inhabited since antediluvian times, even though he blamed the corrupt transmission of records for the lack of reliable knowledge about the routes human migrants might have taken to eastern Asia after the Flood.³⁴ Reliable records, he insisted, were extant only for the periods since Fo-Hi, whose access to rule he dated to the year ‘2952 BC’, using AD style.³⁵ He also credited Fo-Hi with having invented Chinese characters which he described as pictograms similar to ancient Egyptian hieroglyphs.³⁶

Martini’s critical approach to sources was built on the distinction between two “layers of time”, on the one hand, the time period covered by the source, and on the other, the time at which the source came into existence. Martini concluded that doubts in the reliability of sources were reasonable once the gap between the two “layers of time” would have to be regarded as considerable. He then used this approach to defend the AOC chronology against the doubts raised by recorded, apparently ancient Chinese assessments of the age of the world. Prima facie Martini noted, as González de Mendoza had done before him, that historical time and human settlement according to Chinese records extended further back into the past than the Book of Genesis would permit. However, whereas González de Mendoza had accepted the Biblical record as the given incontestable standard for measuring the age of the world, Martini struggled to establish criteria for determining the source value of the Chinese texts available to him. In other words, Martini held the

31 Á. Semmedo, SJ, *The History of That Great and Renowned Monarchy of China*, London 1655, p. 106.

32 Trigault, *Descriptio* (note 30), p. 9.

33 M. Martini, SJ, *Sinicae historiae decas prima*, Munich 1658, pp. 3, 5–10.

34 *Ibid.*, p. 10.

35 *Ibid.*, p. 11.

36 *Ibid.*, p. 12.

view that the AOC chronology was no longer in a position to demand unconditioned applicability under all circumstances. By consequence, had the Chinese records passed the test of reliability, the AOC chronology would have to be given up. Martini thus believed that he could continue applying the AOC chronology because he had proved that Chinese records were irrelevant for determining the age of the world. But this rationalist approach also established the principal need to subject records of any provenance to the same type of source criticism, including the Biblical record. Therefore, Martini arrived at general skepticism vis-à-vis retrospective narratives about the remote past, including those contained in the Bible. In his somewhat Pyrrhonist approach he even admitted the possibility of antediluvial human settlement in eastern Asia, even though he continued to adhere to the dogma of the common descent of all humankind from Noah. This position immediately placed him dangerously close to the simultaneously argued “pre-Adamitic” theory, which some historians vehemently contested,³⁷ and, in the long run, formed the toolkit for the eventual deconstruction of the AOC chronology, once the Chinese records reached a position of higher credibility than the Biblical record. Yet, in his own time, Martini would not abandon the AOC chronology, but tried his best to defend it. Still, when he had to date the beginning of Fo-Hi’s reign, seemingly founding the Chinese “Empire” as a continuing state institution, he used the AD chronology and, in doing so, set a standard Western grid of Chinese regnal years.³⁸

Philippe Couplet (1623–1693, in China 1656–1681), who played a major role in translating the *Analects* of Confucius into a European language, followed Martini’s standard, dated the beginning of Fo-Hi’s reign to ‘2952 BC’, rejected the information contained in Chinese records about the remote past and maintained that nothing could be known

37 G. Horn, *Dissertatio de vera aetate mundi, qua sententia illorum qui statuunt natale mundi tempus annis minimum 1440 vulgarem aeram anticipare*, Leiden 1659, p. 70. For a study on Pyrrhonist skepticism, see M. Völkel, „Pyrrhonismus historicus“ und „fides historica“. Die Entwicklung der deutschen historischen Methodologie unter dem Gesichtspunkt der historischen Skepsis, Frankfurt 1987.

38 Martini also received prominence as a cartographer; see M. Martini, *Novus Atlas Sinensis*, Amsterdam 1655, appendix, separate pagination: *Historia von dem Tartarischen Krieg. Einfal in das Sinesische Kayserthum vnd der Tartarn Sitten*; Martini, *Novus Atlas absolutissimus. Das ist Generale Welt-Beschreibung, mit allerley schönen und neuen Land-Charten gezieret*, Amsterdam 1655, Part 11, appendix, separate pagination: J. Golius, *Beyfügung vom Reich Catayo. Die umfangreiche Forschung zu Martini ist bisher auf diese Theorien nicht eingegangen*. For studies, see B. Bolognani, *L'Europa scopre il volto della Cina. Prima biografia di padre Martino Martini missionario, sinologo, geografo*, Trento, 1978; C. von Collani, *Chinese Emperors in Martino Martinis 'Sinicae Historiae Decas Prima'*, in: A. Hsia (ed.), *Mission und Theater*, Ratisbon 2005, pp. 113–175; F. Demarchi/R. Scartezzini (eds.), *Martino Martini. A Humanist and Scientist in XVIIth Century China*, Trento 1996; Demarchi, *Martino Martini und die Chinamission der Jesuiten im 17. Jahrhundert*, in: R. Malek/A. Zingerle (eds.), *Martino Martini S.J. und die Chinamission im 17. Jahrhundert*, Nettetal 2000, pp. 25–48; T. N. Foss, *A Western Interpretation of China. Jesuit Cartography*, in: C. E. Ronan (ed.), *East Meets West. The Jesuits in China. 1582–1773*, Chicago 1988, pp. 209–251, at pp. 216–219; G. Melis (ed.), *Martino Martini geografo, cartografo, storico, teologo*, Trento 1983; G. O. Longo, *Il gesuita che disegno la Cina. La vita, le opere di Martino Martini*, Milan 2010; L. M. Paternicò, *When the Europeans Began to Study Chinese. Martino Martini's Grammatica Linguae Sinensis*, Louvain 2013; Paternicò, *The Manuscript of the Sinicae Historiae Decas Prima in the Vatican Library*, in: Paternicò/C. von Collani/R. Scartezzini (eds.), *Martino Martini. Man of Dialogue*, Trento 2016, pp. 285–298; Paternicò, *Jacob Golius and Martino Martini. The Enlightening Encounter and the Additamentum*, in: A. T. M. Chen (ed.), *Catholicism's Encounter with China. 17th to 20th Century*, Louvain 2018, pp. 185–206; N. Standaert, *Chinese and European Stories about Emperor Ku and His Concubines*, Leiden/Boston 2016, pp. 94–149.

about the Flood from ancient books and monuments.³⁹ Joachim Bouvet (1656–1730, in China from 1688) was the last Jesuit missionary⁴⁰ to issue reports on China based on his own experience. Following Couplet's path, Bouvet directed his interest not on Chinese history but focused on contemporary politics under the early Qīng 清 ruler Kāng-Xī 康熙 (in office 1661–1722), to whom he devoted two monographs.⁴¹ He exercised his main influence through his wide-ranging correspondence,⁴² including exchanges of letters with Leibniz, who had requested information about Fo-Hi. Leibniz assumed that “all languages in Europe and Asia, from the Brittanic Ocean to the River Indus (as far as known), appeared to have arisen from one single source”;⁴³ he then argued that this finding, were it tenable, raised questions about the age of the world, as the spreading of languages through migrations of their speakers would have required extensive time spans; therefore critical examination of records of ancient Chinese history seemed to be of general interest.⁴⁴ In his responses, Bouvet ranked Fo-Hi as China's first legislator, which was another term for the founder of the Chinese “Empire”,⁴⁵ and as the inventor of Chinese characters;⁴⁶ he measured the length of Chinese history again in terms of more than 4000 years with the qualification, however, “si on en croit la Chronologie Chinoise”.⁴⁷

39 P. Couplet, SJ, *Tabula chronologica monarchiae Sinicae juxta cyclos annorum 60. Ab anno ante Christum 2952 ad annum post Christum 1683*, Paris 1686, pp. III, V, VI; Couplet/Prospero Intorcetta/Christian Herdrich/François Rougement, *Confucius Sinarum philosophus sive scientia Sinensia latine exposita*, Paris 1687. For studies, see J. Heyndricks (ed.), *Philippe Couplet S.J. The Man Who Brought China to Europe*, Louvain/Nettetal 1990; T. Meynard, SJ, *The Jesuit Reading of Confucius. The First Complete Translation of the Lunyu (1687) Published in the West*, Leiden 2015, pp. 93–589.

40 J. H. M. de Prémare, SJ (1666–1736, in China from 1698), wrote an undated analysis of the Chinese language which was first printed in Qāngzhōu in 1847. For a study, see D. E. Mungello *The Silencing of Jesuit Figurist Joseph de Prémare in Eighteenth-Century China*, Lanham, MD 2019.

41 J. Bouvet, SJ, *Histoire de l'Empereur de la Chine*, The Hague 1699; Bouvet, *Portait historique de l'Empereur de la Chine*, Paris 1697.

42 See the early edition in: *Recueil de diverses pièces sur la philosophie, les mathématiques, l'histoire etc. Avec II lettres où il est traité de la philosophie et de la mission Chinoise, envoyées à Mr de Leibniz par le P. Bouvet, Jesuite à Pekin*, ed. C. Kortholt, Hamburg 1734.

43 G. W. Leibniz, Letter to Father Claudio Filippo Grimaldi dated 31 May/10 June 1691, in: Leibniz, *Novissima Sinica, historiam nostri temporis illustratura* [second edn, s. l. 1699], reprint, ed. W.-C. Li/H. Poser, Stuttgart 2000; German version s. t. *Novissima Sinica* (1697). *Das Neueste von China*, Nachdruck, ed. G. Paul/A. Grünert, Munich 2010, pp. 89f.

44 G. W. Leibniz, Letter to Claudio Filippo Grimaldi, probably dated 21 March 1692, in: *Sinica* (note 43), pp. 94–98, at pp. 95f.

45 *Recueil* (note 42), pp. 78–83; Lettre de Bouvet à Leibniz, 8 November 1702, at p. 80; Bouvet, Lettre au Père Le Gobien, SJ, et à Gottfried Wilhelm Leibniz, 8 November 1700, in: L. Dutens, ed., *Leibnitii opera omnia*, vol. 4, Geneva 1768, pp. 146–151, at p. 147.

46 *Recueil* (note 42), p. 85.

47 J. Bouvet, SJ, Letter to Gottfried Wilhelm Leibniz, Beijing, 4 November 1701, in: Leibniz korrespondiert mit China. *Der Briefwechsel mit den Jesuitenmissionaren (1689–1714)*, ed. R. Widmaier, Frankfurt 1990, pp. 147–163, at p. 155. On the correspondence between Bouvet and Leibniz, see C. von Collani, P. Joachim Bouvet S. J. Sein Leben und sein Werk, Nettetal 1985; Collani (ed.), *Eine wissenschaftliche Akademie für China. Briefe des Chinamissionars Joachim Bouvet S. J. an Gottfried Wilhelm Leibniz*, Stuttgart 1989; D. A. Harvey, *The French Enlightenment and Its Others. The Mandarin, the Savage and the Invention of Human Sciences*, New York 2012, pp. 41–68; F. R. Merkel, G. W. von Leibniz und die China-Mission, Leipzig 1920; D. E. Mungello, Leibniz' Interpretation of Neo-Confucianism, in: *Philosophy East and West*, 21 (1971), pp. 3–22; Mungello, *Leibniz and Confucianism. The Search for Accord*, Honolulu 1977, esp. pp. 46f.; Mungello, *Curious Land. Jesuit Accommodation and the Origins of Sinology*, Honolulu 1989, pp. 300–328; Mungello, *The Great Encounter of China and the West*, Lanham, MD 2005; V. Pinot, *La Chine et la formation de l'esprit philosophique en France (1640–1740)*, Paris 1932; R. Widmaier

Some of these Jesuits were empiricists in so far as they drew on original texts for their statements about Chinese chronology and studied them while working as missionaries in China. They credited the written sources known to them with a “right of veto” (*avant la lettre*), acknowledgment of which induced them to call into question the source value of the Biblical record in case the Chinese chronological records had a higher credibility for them than the Bible. These seventeenth- and early eighteenth-century Jesuits did not speculate about the future duration of the world. Instead, they made efforts to establish the age of Chinese institutions of rule, to be gleaned from ancient historiography. Specifically, Martini would not on principle ascribe to the Bible an unconditioned higher credibility than to ancient Chinese records, but gave priority to Biblical evidence for the sole reason that he believed to be obliged to rank as untrustworthy evidence from ancient Chinese records. Or, as Bouvet put it, the source value of the Old Testament collapsed once Chinese records gained authority. Jesuits did subscribe to figurism,⁴⁸ when, for example, they likened Confucius to Cicero; but they hesitated to identify Fo-Hi with Noah and insisted that several centuries had passed between the Flood and the beginning of Fo-Hi’s reign.⁴⁹ While they fitted Chinese history into the grand narrative of universal history based on the Old Testament, they refused to be precise about when and how the actual ties had been established. In short, the AOC chronology, for the time being, passed the text of empirical criticism but cracks became recognisable.

Next to missionaries who used their own autoptic experiences in China, several further European scholars collected and worked on Chinese texts during the second half of the seventeenth and the first half of the eighteenth centuries without travelling to China. The most eminent among them was Jesuit Athanasius Kircher (1602–1680), author of a ‘bestselling’⁵⁰ monograph about things Chinese. Missionary Michał Boym had provided him with material,⁵¹ on the basis of which Kircher learned to read Chinese characters and, following Martini, compared them with Egyptian hieroglyphs. Perceived similarities between both systems of writing brought him to suppose that all Chinese characters had originally been pictograms and had been derived from the Egyptian model.⁵² He argued that descendants of Ham, Noah’s son, had carried the Egyptian script first to Persia and from there via Bactria and Mongolia to China. Noah’s descendants had ruled the world for about three centuries before Fo-Hi started his reign and invented the Chinese script. Subsequent

er, *Die Rolle der chinesischen Schrift in Leibniz’ Zeichentheorie*, Wiesbaden, 1983, esp. pp. 85–86; J. W. Witek, *Chinese Chronology. A Source of Sino-European Widening Horizons in the Eighteenth Century*, in: *Actes du IIIe colloque international de Sinologie*, Paris 1983, pp. 223–253.

48 For studies, see C. von Collani, *Die Figuristen in der Chinamission*, Frankfurt 1981, esp. pp. 16, 22, 24–25; Collani, *Von Jesuiten, Kaisern und Kanonen. Europa und China*, Darmstadt 2012, pp. 100–103; K. Lundbæk, *Joseph de Prémare, S. J. Chinese Philology and Figurism*, Aarhus 1991; A. H. Rowbotham, *The Jesuit Figurists and Eighteenth-Century Religious Thought*, in: *Journal of the History of Ideas*, 17 (1956), pp. 471–485; P. A. Rule, *K’ung-tzu or Confucius? The Jesuit Interpretation of Confucianism*, Sydney etc. 1986.

49 Martini, *Decas* (note 33), p. 3.

50 Thus: Brancaccio, *China* (note 29), pp. 228–230.

51 A. Kircher, *SJ, China monumentis qua sacris qua profanis, nec non variis naturae et artis spectaculis aliarumque rerum memorabilium argumentis illustrata*, Amsterdam 1667, p. 225.

52 *Ibid.*, p. 228.

generations had expanded the pictograms with points and lines, thus creating a system of 10.000 characters.⁵³ Thus, Kircher developed his own theory of the origin of Chinese culture within the chronological framework of the Old Testament albeit without concern for the cartographic tradition of assigning Asia to the descendants of Sem.⁵⁴ He upheld the conventional assessment that several centuries separated the Flood from the beginning of Fo-Hi's reign, whom he identified as a Noachid. Even though Kircher did not explicitly discuss Martini's views, the supposition is difficult to avoid that he tried to overcome Martini's scepticism by positioning Chinese culture as a secundogeniture of Egyptian culture.⁵⁵ Nevertheless, already in the year following its appearance in print, Martini's work triggered a dynamic which sparked a debate about the age of the world between two scholars then active in the Netherlands. They were prolific writer and editor Isaac Voss (1618–1689) and Leiden historian Georg Horn (1620–1670). Voss analysed age dates recorded for Old Testament figures, compared these dates with Martini's observations on Chinese chronology and arrived at the conclusion that the world must have been 1440 years older than commonly assumed. Consequently, Voss insisted that the AD year 1658 had to be equated, not with the conventional AOC year 5608, but with 7048; rather than leaving some 400 years for the future, Voss went far beyond the total of roughly 6000 years for the entire span between Creation and Judgment Day and made no statement about the time span to remain until the end of the world.⁵⁶ He further claimed that the Flood spreading across China dated to the same period than the Noachid Flood and that Chinese history comprised the duration of only 1505 years up to AD 1658.⁵⁷ In his

53 Ibid., pp. 226, 232.

54 For example: G. Horn, *Arca Noae. Historia imperiorum et regnorum a condito orbe ad nostra tempora*, Leiden 1666, p. 35.

55 For Kircher's interpretation of China, see H. Beinlich, *Kircher und Ägypten. Informationen aus zweiter Hand*. Tito Livio Burattini, in: Beinlich/H.-J. Vollrath/K. Wittstadt (eds.), *Spurensuche. Wege zu Athanasius Kircher*, Dettelbach 2002, pp. 57–72; Beinlich, *Athanasius Kircher und die Kenntnis vom Alten Ägypten*, in: Beinlich/C. Daxelmüller (eds.), *Magie des Wissens. Athanasius Kircher. Universalgelehrter, Sammler, Visionär*, Dettelbach 2002, pp. 85–98; A. Böttger, *Jesuitenmissionar Heinrich Roth und Johannes Grueber. Ihr Einfluss auf die China illustrata von Athanasius Kircher*, München 2016; Brancaccio, *China* (note 29), pp. 201–236; S.-C. Chang, *Natur und Landschaft. Der Einfluss von Athanasius Kirchers „China illustrata“ auf die europäische Kunst*, Berlin 2003; J. E. Fletcher, *A Study of the Life and Works of Athanasius Kircher, „Germanus incredibilis“*, Leiden 2011, pp. 68–87, 216–255; Fletcher, *A Brief Survey of the Unpublished Correspondence of Athanasius Kircher*, S. J., in: *Manuskripta*, 13 (1969), pp. 150–160; Fletcher, *Athanasius Kircher and His Correspondence*, in: Fletcher (ed.), *Athanasius Kircher und seine Beziehungen zum gelehrten Europa seiner Zeit*, Wiesbaden 1988, pp. 139–195; J. Godwin, *Athanasius Kircher. Ein Mann der Renaissance und die Suche nach verlorenem Wissen*, Berlin 1994; Godwin, *Athanasius Kircher's Theatre of the World. The Life and Work of the Last Man to Search for Universal Knowledge*, Rochester, VT 2009, pp. 237–256; A. Grafton, *Kircher's Chronology*, in: P. Findlen (ed.), *Athanasius Kircher. The Last Man Who Knew Everything*, New York 2004, pp. 171–190; F. Hsia, *Athanasius Kircher's China Illustrata. An Apologia Pro Vita Sua*, in: Findlen (as above), pp. 383–404; T. Leinkauf, *Mundus combinatus. Studien zur Struktur der barocken Universalwissenschaft am Beispiel Athanasius Kirchers SJ*, second edn, Berlin 2009, pp. 235–267; M. Monila, *True Lies. Athanasius Kircher's China illustrata and the Life Story of a Mexican Mystic*, in: Findlen (as above), pp. 365–382; G. Mori, *I geroglifici e la croce. Athanasius Kircher tra Egitto e Roma*, Pisa 2016, pp. 69–98; T. M. O'Neill, *Ideography and Chinese Language Theory*, Berlin/Boston, 2016, pp. 144–155; W. Ritz, *Athanasius Kircher und seine Vaterstadt Geisa*, Rhön, second edn, Geisa 2013, pp. 61–75.

56 I. Vossius, *Dissertatio de vera aetate mundi in qua ostenditur natale mundi tempus annis 1440 vulgarum anticipare*, The Hague, 1659, pp. XIV–XIX, XLIV–XLVIII, LV.

57 Ibid., pp. LV, XLVII.

immediately published critique of Voss's argument, Horn restated Martini's criticism of Chinese records and concluded that extant Chinese sources provided no reliable information about the period before Fo-Hi, and that, by consequence, assessments of the age of world could not be based on Chinese evidence. Hence, the established view on the age of the world should remain accepted.⁵⁸ In so far as Chinese records proved reliable regarding the remote past, the recorded occurrences should be regarded as antediluvian, whence Fo-Hi ought to be identified with Adam.⁵⁹

Yet Horn did not succeed in hedging the dynamics Martini had provoked within the debate about the age of the world. Already in 1671, Berlin parson Andreas Müller from Greiffenhagen in Pomerania (1630–1694) argued that Fo-Hi was identical with Noah and had begun his reign in '2952 BC'; but he also identified Adam with "Puonanus", allegedly the first human being according to Chinese records, and referred to a text published by architect John Webb (1611–1672) in 1669, who had held fully credible the time span of 8865 years since Creation according to Chinese chronology and had even taken the Chinese language to be the original language of humankind (instead of Hebrew).⁶⁰ Müller argued that while he was on principle willing to follow the AOC chronology, he was obliged to admit that the Chinese chronology rested on solid foundations.⁶¹ By consequence, a higher age of the world might be possible and the whole span of human history might extend far beyond the conventional limit of 6000 years. Such relativism brought Müller into severe distress. Elias Grebnitz (1627–1689), Calvinist theologian at the University of Frankfurt an der Oder, accused Müller of having entered into a pact with the devil. Müller's knowledge of Chinese characters was proof of evidence for Grebnitz because, in his view, these characters were pictures and had been invented by the devil in order to destroy the Christian faith.⁶² Müller defended himself against these accusations, which betray knowledge of Kircher's work, by pointing out that Chinese characters, unlike 'Mexican' hieroglyphs, were not pictures but signs. He also claimed that "printing and writing" had been established by divine will.⁶³ Frederick

58 Horn, *Dissertatio* (note 37), pp. 52–55, 70.

59 Horn, *Arca* (note 54), pp. 4f., 13f. On Voss, Horn and the debate between them, see F. F. Blok, Isaac Vossius and His Circle. His Life until His Farewell to Queen Christina of Sweden, Groningen 2000, pp. 199–214; E. J. von Kley, Europe's 'Discovery' of China and the Writing of World History, in: *American Historical Review*, 76 (1971), pp. 358–385, at pp. 364–366; Rossi, *Abyss* (note 6), pp. 145–151; I. v. Schmitz-Auerbach, Georg Horn. Ein deutscher Geschichtsschreiber, Karlsruhe 1880.

60 J. Webb, *An Historical Essay Endeavoring a Probability that the Language of the Empire of China is the Primitive Language*, London 1669.

61 A. Müller [-Greiffenhagen], *De regionibus orientalibus*, in: Müller, *Disquisitio geographica et historica de Chataia*, Berlin 1671, pp. 1–167, at pp. 3, 39.

62 E. Grebnitz, *Verthaedigung gegen den anzueglichen Tractat, worinnen M. Andreas Müller Praepositus Berlinensi seine ungelahrte Anstechung des Unterrichts von der Reformirten und Lutherischen Kirchen unter der Decke eines Unterrichts von der Chinäsichen Schrifft und Druck verbergen wollen*, Frankfurt an der Oder 1681.

63 A. Müller [-Greiffenhagen], *Besser Unterricht von der Sineser Schrifft und Druck. Als etwa in Herrn Doctor Eliase Grebnitzen Unterricht von der Reformirten und Lutherischen Kirchen enthalten ist*, Berlin 1680, pp. 14f.; Müller, *Andreae Muller Greiffenhagii Unschuld gegen die hefftige Beschuldigungen, die in Herrn D. Elia Grebnitzen, Professoris und der Theologischen Facultät Senioris, auff der Churfürstlich Brandenburgischen Universitet zu Franckfurt an der Oder so genandten Verthädigung enthalten seyn*, Stettin 1683, pp. 35–46. For studies, see E. S.

William, Elector of Brandenburg, remained unimpressed by Grebnitz's reasoning and saved Müller from persecution.

Among the remaining collectors and compilers of things Chinese around 1700,⁶⁴ Charles le Comte Louis le Gobien (1653–1708) had the strongest impact with his multi-volume collection of news of the world launched in 1703. He started his editorial work with reports about China and drew on Martini's work for issues of chronology, now, however, assigning some 40.000 years to Chinese history. Although he acknowledged that "none of their savants", including Confucius, had ever called into question that number of years nor that had anyone ever raised doubts about the uninterrupted sequence of rulers,⁶⁵ he did class Chinese records as unreliable, claiming that "there was little certainty about their secular history, and that they are manifestly wrong because they counted more than 40.000 years from the beginning of the Empire". Gobien thus continued to rank the Biblical record superior to evidence provided from Chinese texts, credited the AOC chronology with superior source value and let Noah's grandchildren "spread all across Asia".⁶⁶ According to Gobien, Fo-Hi was the founder of the monarchy.⁶⁷

Kraft, Frühe chinesische Studien in Berlin, in: *Medizinhistorisches Journal*, 11 (1976), pp. 92–128; D. F. Lach, *The Chinese Studies of Andreas Müller*, in: *Journal of the American Oriental Society*, 60 (1940), pp. 564–575; S. L. Marchand, *German Orientalism in the Age of Empire. Religion, Race and Scholarship*, Washington, DC/Cambridge 2009, p. 368; Mungello, *Land* (note 47), pp. 198–200.

- 64 For one, Christian Mentzel, physician to the Elector of Brandenburg and biologist, in his Sinological work, took over Kircher's postulate of the Egyptian origin of Chinese characters, but did not identify Fo-Hi with Noah. See C. Mentzel, *Sylloge Minutiarum Lexici Latino-Sinico Characteristici*, Nuremberg 1685, fol. a 2r–fol. a 3v: "De characteribus Chinenensium in genere", at § 2, fol. a 2r; Mentzel, *Kurtze Chinesische Chronologia oder Zeit-Register/ Aller Chinesischen Kayser: Von ihrem also vermeinten Anfang der Welt bis hieher zu unsern Zeiten/ des [...] 1696sten Jahres; In einer richtigen Ordnung von Jahren zu Jahren/ [...] auch mit zweien Chinesischen erklärten Tafeln der vornehmsten Geschichten von ihrem Anbeginn der Welt/ Gezogen aus der Chineser Kinder-Lehre Siao Ul Hio oder Lungenandt*, Berlin 1696, p. 15. Similarly the compilatory works by: G. Spitzel, *De re literaria Sinensium commentarius*, Leiden 1660, pp. 52f. on Fo-Hi as the inventor of Chinese characters; A. Pfeiffer [praes.]/H. Zimmermann [resp.], *Dissertatio secunda de lingvarum Orientalium non originalium constitutione et usu*, in: Pfeiffer, *Introductio in Orientem. Sive Synopsis quaestionum nobiliorum de origine, natura, usu et adminiculis ling[uarum] Orientalium et plerarumque*, Wittenberg 1671, pp. 18–42, at p. 40 about similarities between Egyptian and Chinese scripts; S. Chappuzeau, *Idée du monde*, vol. 2, Celle 1690, p. 265; G. B. Bilfinger, *Specimen doctrinae veterum Sinarum moralis et politicae, tanquam exemplum philosophiae gentium ad rempublicam applicatae; excerptum libellis sinicae genti classicis, Confucii sive dicta, sive facta complexis. Accedit de Litteratura Sinensi dissertatio extemporalis*, Frankfurt 1724, pp. 315f. on Fo-Hi as inventor of Chinese characters. For studies on Mentzel, see W. Artelt, *Christian Mentzel. Leibarzt des Grossen Kurfürsten, Botaniker und Sinologe*. Ph. D. thesis, University of Berlin 1939; E. S. Kraft, *Christian Mentzel, Philippe Couplet, Andreas Cleyer und die chinesische Medizin*, in: *Fernöstliche Kultur*, Marburg 1975, pp. 158–196; R. Winau, *Christian Mentzel und die Academia Naturae Curiosorum*. M. D. thesis, typescript, University of Mainz 1970; Winau, *Sylloge Minutiarum Lexici Latino-Sinico characteristici*. Christian Mentzels kleines lateinisch-chinesisches Lexikon, in: *Beiträge zur Geschichte der Naturwissenschaften und der Medizin. Festschrift für Georg Uschman*, Halle 1975, pp. 463–472; Winau, *Christian Mentzel, die Leopoldina und der ferne Osten*, in: *Medizinhistorisches Journal*, 11 (1976), pp. 72–91.

- 65 C. le Comte Louis le Gobien, *SJ, Das heutige Sina*, vol. 1, Frankfurt 1699, containing, at pp. 174–215: *Send-Schreiben an Monseigneur, den Markgrafen von Torsi, Staats-Secrétaire zu den ausländischen Sachen, von den absonderlichen Kennzeichen der Sinesischen Nation, ihrem Altertum, Adel, ihren Moden, guten und bösen Eigenschaften*, at pp. 175f.

- 66 *Ibid.*, pp. 177f.

- 67 *Ibid.*, p. 178.

The survey of European reports on China has, so far, shed light on cracks in the AOC chronology. Beginning with Martini's work and continuing with its reception until the early eighteenth century, the AOC chronology could only support assessments of the age of the world, if rival chronologies were shown to be unreliable, and by consequence, lost its claim for unconditioned worldwide applicability. However, critics and defenders of AOC chronology were in balance to the 1720s. Only thereafter did critics begin to dominate. In 1730, Gottlieb Siegfried Bayer (1694–1738), comparative linguist working at the Academy of Sciences in St Petersburg, published a discussion about the early phases of universal history based on linguistic evidence. Believing in descent from Noah, he argued, was reasonable only under the condition that until the building of the Babylonian Tower, all humans should have spoken Hebrew as the alleged original language of humankind. However, he had found sufficient evidence to the extent that discrepancies of “dialect” had existed already in pre-Babylonian times.⁶⁸ Bayer pointed to Webb's view that Chinese was the original language of humankind. This language being unrelated to other idioms, he suggested the preliminary conclusion that Webb's view militated against the postulate of the descent of all humankind from Noah. But he then argued against this conclusion on the grounds that there were numerous distinct languages the genesis of which could be explained without difficulty as the consequence of migrations and the need to coin suitable words for newly appearing things. Hence the postulate of a single common original language for all humankind was unnecessary. Should there have been a common Noachid language, its lexicon must have become submerged in the course of the time and replaced by new words.⁶⁹ Bayer thus rendered the belief in a common original language and, associated with this belief, the common origin of humankind as irrelevant when scientific explanations for the empirical fact of linguistic diversity were being sought for. He thus postulated a dynamic that was continuously changing the world, thereby forcing humans to adapt. He did not argue against the trustworthiness of the Biblical record but excluded it from the range of topics lending themselves to scientific research. Put differently: the AOC chronology had lost relevance for Bayer.⁷⁰ A few years later, Jesuit compiler and historiographer Jean-Baptiste du Halde (1674–1743) turned away completely from the foundations of the AOC chronology. For his four-volume history of China, he mainly drew on Jesuit reports and Gobien's collection, which he continued to edit himself. In an *Avertissement* prefixed to the narrative, Du Halde discussed the source value of Chinese records. He noted that the belief in the settlement of Asia by Noah's descendants was commonly held “among those who faced the

68 T. S. Bayer, *Praefatio historica de progressu litteraturae Sinicae in Europa, grammatica sinica, grammatica linguae chincheo, missionariorum e Tranquebare epistolam Andree Mülleri propositionem clavis sinicae et epistolam ad Io. Hevelium comprehendit*, in: Bayer, *Museum sinicum in quo sinicae linguae et litteraturae ratio explicatur*, St Petersburg 1730, pp. 1–145, at pp. 100f.

69 *Ibid.*, pp. 101f., 103.

70 For a study, see F. Babinger, Gottlieb Siegfried Bayer. Ein Beitrag zur Geschichte der morgenländischen Studien im 18. Jahrhundert. Ph. D. thesis, University of Munich 1915.

task of investigating the origin of the Chinese Empire”.⁷¹ Yet, he was uncertain when actually Fo-Hi had started his reign, as evidence from Chinese historiography appeared to be equivocal. European scholars, he noted, had striven to shorten the time span covered by Chinese history but had been unable to produce a cogent criterion for determining the exact chronology of the early period. Therefore, all attempts to reduce the length of Chinese history were arbitrary.⁷² Du Halde’s narrative of Chinese history was based on the AD chronology only.⁷³

In sum, Chinese records imposed no difficulties upon the AOC chronology up to the middle of the seventeenth century. Until then the chronology remained regarded as applicable throughout the world without any condition, while Chinese records were held not to be able to contradict the Biblical record. During this time, scientist Matthew Hale (1609–1676) would portray the world as stable and admit mutations in the human body solely as insignificant “accidental variations in the process of time” and this only during the postdiluvial period,⁷⁴ and Isaac Newton (1643–1727) could still dream of establishing a new and secular single linear chronology for the whole world, based on astronomical features.⁷⁵ Hence, the AOC chronology remained embedded in the broad current of thought imagining the world as a stable entity according to divine will. But around the middle of the seventeenth century, doubts in the unconditioned applicability of the chronology began to mount, trust in the human capability of determining the date of the origin of the world began to wane and the future began to appear to be open-ended. This suggests that the belief in the divinely-willed stability of the world encountered objections approximately one hundred years before it was fuelled by the sciences, especially paleontology. Affirmative and skeptical voices remained in balance to the 1720s. But when Buffon, in 1749, estimated the age of the world in terms of three million years, he did not dare to submit this estimate to the public. This was the time when the AOC chronology had already been given up in the European literature about China. Moreover, in 1755 Immanuel Kant (1724–1804) felt no scruples in committing himself publicly to the view that since the beginning of the world, “perhaps a sequence of millions of years and centuries has passed” and that “further millions and entire mountain ranges of millions of centuries will pass” before the world would reach its end. The Creation,

71 J.-B. du Halde, SJ, *Description géographique, historique, chronologique, politique et physique de l’empire de la Chine et de la Tartarie chinoise*, 4 vols., The Hague 1736, vol. 1, pp. 259–265: Avertissement, at p. 259.

72 *Ibid.*, pp. 260f.

73 For studies, see G. Espagne, *Doppelter Tropismus. Eine deutsch-französische Wahrnehmung Chinas am Beispiel der deutschen Übersetzung (1747–1749) von Jean Baptist du Halde’s ‘Description (...) de la Chine et de la Tartarie chinoise’*, in: W. Adam/Y.-G. Mix/J. Mondot (eds.), *Gallotropismus und Zivilisationsmodelle im deutschsprachigen Raum (1660–1789)*, vol. 2, Heidelberg 2016, pp. 213–242; H. Hartmann, *Zur Frage des Quellenwertes der ‘Description de la Chine’ und ihrer deutschen Ausgabe*, in: *Baessler-Archiv*, N. F., vol. 4 (1955), pp. 81–90; I. Landry-Deron, *La preuve par la Chine. La ‘Description’ de Jean-Baptiste du Halde, Jésuite*, Paris 2002; J. Pereira, *Montesquieu et la Chine*. Thèse, University of Nice 2009.

74 M. Hale, *The Primitive Origination of Mankind*, London 1677, p. 201.

75 I. Newton, *The Chronology of the Ancient Kingdoms Amended*, London 1728. For a study, see H. Jordheim, *Making Universal Time. Tools of Synchronization*, in: H. S. Bjørnstad/H. Jordheim/A. Régent-Susine (eds.), *Universal History and the Making of the Global*, New York/London 2019, pp. 133–151.

Kant expected, “has begun at some time, but it will never end”.⁷⁶ Chronologists and philosophers, then, were much less cautious than scientists about raising doubts concerning the validity of the Biblical record when it came to determining the age of the world. They remorselessly shifted its beginning back to the mists of the remote past and classed the future as indefinite. The identification of Fo-Hi with Noah⁷⁷ or the establishment of the contemporaneity of Fo-Hi with the building of the Babylonian Tower⁷⁸ continued as mere traditional intellectualisms into the second half of the eighteenth century.

3. Mechanicism, the Expectation of the Divinely-Willed Stability of the World and the Concept of System

Almost one and a half century passed between the emergence of doubts in the viability of the AOC chronology and its eventual abandonment. When tackling the question why the AOC chronology maintained its status as a means of time reckoning despite these doubts to the end of the eighteenth century, the starting point should be the perception of a great tradition enshrining the expectation of the stability of the world. This perception was shared by many reporters on China from the sixteenth century and confirmed, even strengthened the concurring expectation for Europe. For one, González de Mendoza already emphasised that firearms and printing by moveable types had been used in China for a longer time than in Europe.⁷⁹ Under Kāng-Xī, China, especially in Bouvet’s judgment,⁸⁰ acquired the image of a well-governed state under the rule of law, next to Japan,⁸¹ thus becoming the empirical model for Enlightenment projections of the ideal state.⁸² In his criticism of sources, Martini noted that Chinese official historiography had long rested on a firm source base,⁸³ whereby he seems to have had in mind Ming-period record-keeping practice.⁸⁴ However, the attraction of the model of the ideal state alone hardly explains the full range of the resistance capability of the AOC chronology. The

76 I. Kant, *Allgemeine Naturgeschichte und Theorie des Himmels. Oder Versuch von der Verfassung und dem mechanischen Ursprunge des ganzen Weltgebäudes nach Newtonischen Grundsätzen abgehandelt*, Königsberg u. Leipzig 1755, in: Kant, *Werke in zwölf Bänden*, ed. W. Weischedel, vol. 1, Frankfurt 1968, pp. 219–400, at pp. 334, 335.

77 C. F. Toustain, *Neues Lehrgebäude der Diplomatik, welches von einigen Benedictinern von der Congregation des heil[igen]. Mauri ausgefertigt worden*, vol. 2, ed. J. C. Adelung, Erfurt 1761, pp. 9f.

78 F. M. Arouet de Voltaire, *Essai sur les mœurs et l’esprit des nations* [Basle 1754], in: Voltaire, *Œuvres*, ed. A. J. Q. Beuchot, vol. 15, Paris 1829, p. 259.

79 González de Mendoza, *Historia* (note 21), Book III, Chap. 15, pp. 134–136, Book III, Chap. 16, pp. 137–139.

80 Bouvet, *Histoire* (note 41), pp. 120–125; Bouvet, *Portait* (note 41), pp. 7f.

81 E. Kaempfer, *Heutiges Japan* [c. 1700], ed. W. Michel/B. J. Terwiel, vol. 1 (Kaempfer, *Werke*, vol. 1), Munich 2001.

82 For a study, see H. Kleinschmidt, *Die Rezeption des Japanberichts Engelbert Kaempfers im Wandel vom 18. zum 19. Jahrhundert*, in: *Das Achtzehnte Jahrhundert*, 37 (2013), pp. 26–41; D. F. Lach, *The Sinophilism of Christian Wolff*, in: *Journal of the History of Ideas*, 14 (1953), pp. 561–574.

83 Martini, *Decas* (note 33), pp. 5–10.

84 For studies, see W. Franke, *The Veritable Records of the Ming Dynasty*, in: W. G. Beasley/E. G. Pulleyblank (eds.), *Historians of China and Japan*, Oxford 1961, pp. 64–75; V. Wagner, *Archive am chinesischen Kaiserhof. Geheime Archive im Dienste dynastischer Erinnerungspolitik*, in: *Archivalische Zeitschrift*, 86 (2004), pp. 9–90, at pp. 30–36.

search for further factors thus must focus on another element of the perception of the world as a stable entity, namely the mechanistic concept of the system.

Emerging from humble origins in Antiquity, the word *systema* had a splendid career from around 1600, coming in use for a wide variety of practices of ordering things as well as the results of such activity.⁸⁵ “System” could mean the type of logical derivation promoted by Petrus Ramus⁸⁶ and Giacomo Zabarella,⁸⁷ the continuous maintenance of well-ordered administration,⁸⁸ the consistent implementation of a foreign-policy strategy,⁸⁹ the ordering of living species as well as inanimate elements of the world,⁹⁰ every state as well as the ensemble of states in some part of the world,⁹¹ the well-arranged presentation of a lecture syllabus for an academic public,⁹² a plan for the arrangement of books on shelves⁹³ and, last but not least, the consistent deposit of excerpt sheets in some manner allowing quick retrieval.⁹⁴ At the latest in the early seventeenth century, European theorists imagined the system according to the model of the machine: an assemblage of correlated parts within a solid frame and a hierarchical structure, considered to be

- 85 Etienne Bonnet de Condillac, *Traité des systèmes* [1749], in: Condillac, *Œuvres complètes*, vol. 2, Geneva 1970, p. 1 (edn of 1970).
- 86 P. Ramus, *Dialecticae libri duo*, Paris 1572. For a study, see N. W. Gilbert, *Renaissance Concepts of Method*, New York 1960.
- 87 G. Zabarella, *De methodis libri quinque*, Venice 1578.
- 88 C. G. Hoffmann, Entwurf einer Einleitung zu dem [sci1] Erkäntniß des gegenwärtigen Zustands von Europa, Leipzig 1720, p. 7; G. A. von Münchhausen, *Memoria* [18 December 1756], Ms. Hanover: Niedersächsisches Hauptstaatsarchiv, Cal. Br. 24, Nr 4510; fol. 67r–68r; Frederick II, King of Prussia, *Betrachtungen über die Regierungsformen und den Pflichten der Könige* [1777], in: Frederick, *Drei politische Schriften*, Leipzig 1912, pp. 21f.
- 89 W. A. von Kaunitz-Rietberg, *Meynungen des Graffen Kaunitz über das auswärtige System* [24 March 1749], Ms. Vienna: Österreichisches Staatsarchiv, Haus-, Hof- und Staatsarchiv, Staatskanzlei, Vorträge, Karton 62, fol. 115r–238v, ed. R. Pommerin/L. Schilling, in: J. Kunisch (ed.), *Expansion und Gleichgewicht*, Berlin 1986, pp. 168–238, at p. 208 (fol. 177v–179r).
- 90 C. von Linné, *Systema naturae*, first edn, Leiden 1735; C. Bonnet, *Contemplation de la nature*, vol. 1, Amsterdam 1764, p. 18.
- 91 B. Keckermann, *Systema disciplinae politicae*, in: Keckermann, *Systema systematum*, Hanau 1613, pp. 890–1075; Frederick II, King in Prussia, *Considérations sur l'état présent du corps politique de l'Europe* [1737/38], in: Frederick, *Œuvres*, vol. 8, Berlin 1848, pp. 3–27, at p. 24; J. H. G. Justi, *Der Grundriss einer guten Regierung*, Frankfurt 1759, pp. 320f, 329; E. de Vattel, *Le droit des gens. Ou Principes de la loi naturelle appliquées à la conduite et aux affaires des Nations et des Souverains*, London [recte Neuchâtel] 1758, Book VII, Chap. III, § 47, vol. 2, pp. 39f.; G. Real de Curban, *Staatskunst*, vol. 6, Bamberg 1790, pp. 582f.; Thomas Abbt, *Vom Tode für das Vaterland* [1761], in: Abbt, *Vermischte Schriften*, vol. 2, Berlin 1770, p. 76; J. F. v. Pfeiffer, *Grundsätze der Universal-Kameral-Wissenschaft*, vol. 1, Frankfurt 1783, p. 25; A. L. v. Schlözer, *Allgemeines StatsRecht und StatsVerfassungslehre*, Göttingen 1793, p. 5. On the mechanistic concept of the state, see L. Marino, *Praeceptores Germaniae*. Göttingen 1770–1820, Göttingen 1995, pp. 374f.; B. Stollberg-Rilinger, *Der Staat als Maschine*, Berlin 1986, pp. 101–201.
- 92 A. L. v. Schlözer, *Systema politices*, Göttingen 1771. For a study, see H. E. Bödeker, „... wer ächte freie Politik hören will, muss nach Göttingen gehen.“ Die Lehre von der Politik in Göttingen um 1800, in: Bödeker/P. Büttgen/M. Espagne (eds.), *Die Wissenschaft vom Menschen in Göttingen um 1800*, Göttingen 2008, pp. 325–369, at pp. 332–333, 350–361.
- 93 J. M. Chladenius, *Einleitung zur richtigen Auslegung vernünftiger Reden und Schriften*, Leipzig 1742, pp. 318f. for a study, see H. Kleinschmidt, *Vom System zur Ordnung. Bemerkungen zu Bewertungen von Sachkatalogen vornehmlich des 18. und 19. Jahrhunderts*, in: *Libri*, 37 (1987), pp. 126–159.
- 94 B. Keckermann, *De locis communibus ... epistola ad Gualterum ab Holden*, in: Keckermann, *Opera omnia*, vol. 1, Geneva 1614, pp. 494–500, at p. 495.

complete⁹⁵ and not subject to changes affecting the frame and the structure.⁹⁶ In other words, despite occasional criticism,⁹⁷ the machine, specifically the clock as its prototype, formed the model for the world at large (*systema mundi*),⁹⁸ for living bodies, which René Descartes (1596–1650) and Thomas Hobbes (1588–1679) termed *Automata* and equated with machines,⁹⁹ the Holy Roman Empire which Jean-Jacques Rousseau portrayed as an indestructible machine,¹⁰⁰ armies¹⁰¹ as well as entire philosophical ordering schemes, of the study of which the academic discipline of “systematology” was in charge.¹⁰² For a long time, research in the history of philosophy,¹⁰³ literature,¹⁰⁴ science,¹⁰⁵ medicine¹⁰⁶ and law¹⁰⁷ has examined the change of system models around 1800 as part

- 95 I. Kant, *Metaphysische Anfangsgründe der Naturwissenschaft* [Riga 1786], in: Kant, *Werke in zwölf Bänden*, ed. W. Weischedel, vol. 9, Frankfurt 1968, p. 19. For a study, see G. Lehmann, *System und Geschichte in Kants Philosophie*, in: Lehmann, *Beiträge zur Geschichte und Interpretation der Philosophie Kants*, Berlin 1969, pp. 152–170.
- 96 J. H. Lambert, *Logische und Philosophische Abhandlungen*, vol. 2, Berlin 1787, p. 386.
- 97 Jakob von Cognazo, *Freyemüthiger Beytrag zur Geschichte des österreichischen Militärdienstes*, Frankfurt, Leipzig 1780, p. 131.
- 98 J. G. Walch, *Philosophisches Lexikon*, second edn, Leipzig 1733, s. v. System. For studies, see K. Maurice/O. Mayr, *Die Welt als Uhr*, Munich 1980; O. Mayr, *Uhrwerk und Waage. Autorität, Freiheit und technische Systeme in der frühen Neuzeit*, Munich 1986.
- 99 R. Descartes, *Passions de l'âme* [1649], in: Descartes, *Œuvres et lettres*. Paris 1952, pp. 775f.; T. Hobbes, *Leviathan* [London 1651], ed. R. Tuck. Cambridge 1991, p. 9. Similarly: J. G. Noverre, *Briefe über die Tanzkunst und über die Ballette*, Hamburg/Bremen 1769, p. 200, regarded passions as the strings keeping the machine of the body in motion [first published, Lyon, 1760].
- 100 J.-J. Rousseau, *Extrait du Projet de paix perpétuelle de M. l'Abbé de Saint-Pierre*, in: *The Political Writings of Jean Jacques Rousseau*, ed. C. E. Vaughan, vol. 1, Cambridge 1915, pp. 364–396, at pp. 366f.
- 101 Ueber Aufklärung des Militärs, in: *Militärische Monatsschrift* (1785), pp. 590–601, at p. 595 [comparing the profession of the soldier with a machine]; F. C. J. Fischer, *Geschichte Friedrichs des Zweyten Königs von Preussen*, vol. 1, Halle, 1787, p. 27 [comparison of the Prussian army with a clock]; F. Eckard, *Versuch über die Kunst junge Soldaten zu bilden*, Prague 1782, pp. 19f. [comparison of an army with a machine]; H. H. E. Lloyd, *Abhandlungen über die allgemeinen Grundsätze der Kriegskunst* [Paris 1766], Frankfurt/Leipzig 1783, p. XXI [comparison of armies with machines]; C. G. Wolff: *Versuch über die sittlichen Eigenschaften und Pflichten des Soldatenstandes*, Leipzig 1776, p. 324 [comparison of a soldier with a machine].
- 102 E. Bonnet de Condillac, *Traité des systèmes* [Paris 1749], in: Bonnet de Condillac, *Œuvres complètes*, vol. 2, Geneva 1973, p. 1; P. H. Thiry d'Holbach, *Système de la nature*, London [recte Amsterdam] 1770; J. H. Lambert, *Fragment einer Systematologie* [before 1767], in: Lambert, *Texte zur Systematologie und zur Theorie der wissenschaftlichen Erkenntnis*, ed. G. Siegwart, Hamburg 1988, pp. 125–144.
- 103 H. Blumenberg, *Paradigmen zu einer Metaphorologie*, in: *Archiv für Begriffsgeschichte*, 6 (1960), pp. 7–142; F. Kambartel, 'System' und 'Begründung' als wissenschaftliche und philosophische Ordnungsbegriffe bei und vor Kant, in: J. Blühdorn/J. Ritter (eds.), *Philosophie und Rechtswissenschaft*, Frankfurt 1969, pp. 100–112; A. Meyer, *Mechanische und organische Metaphorik politischer Philosophie*, in: *Archiv für Begriffsgeschichte*, 13 (1969), pp. 147–163; M. Riedel, *System, Struktur*, in: O. Brunner/W. Conze/R. Koselleck (eds.), *Geschichtliche Grundbegriffe*, vol. 6, Stuttgart 1990, pp. 285–322; O. Ritschl, *System und systematische Methode in der Geschichte des wissenschaftlichen Sprachgebrauchs und der philosophischen Methodologie*, Bonn 1906, esp. p. 58; A. von der Stein, *Der Systembegriff in seiner geschichtlichen Entwicklung*, in: A. Diemer (ed.), *System und Klassifikation in Wissenschaft und Dokumentation*, Meisenheim 1968, pp. 3–9; Christian Strub, *System und Systemkritik in der Neuzeit*, in: J. Ritter/K. Gründer (eds.), *Historisches Wörterbuch der Philosophie*, new edn, vol. 10, Basle 1998, col. 825–856.
- 104 M. H. Abrams, *Coleridge's Mechanical Fancy and Organic Imagination*, in: Abrams, *The Mirror and the Lamp*, New York 1976, pp. 167–177.
- 105 K. M. Figlio, *The Metaphor of Organization*, in: *History of Science*, 14 (1976), pp. 17–53.
- 106 G. Mann, *Medizinisch-biologische Ideen und Modelle in der Gesellschaftslehre des 19. Jahrhunderts*, in: *Medizinhistorisches Journal*, 4 (1969), pp. 1–23.
- 107 E.-W. Böckenförde, *Der Staat als Organismus*, in: Böckenförde, *Recht, Staat, Freiheit*, Frankfurt 1991, pp. 263–272;

and parcel of the wider change of perception from seventeenth- and eighteenth-century mechanicism to biologism dominating the nineteenth and early twentieth centuries. The history of system models should, by consequence, be understood as integrated into the history of perception. Biologism as the dominant type of the nineteenth-century perception of the world became explicit in the use of the word “organ”, together with word formations such as “organism”, “organisation” and their derivations, “state organ”, “*Volkskörper*” as well as “*Socialer Körper*”,¹⁰⁸ in political jargon as well as the basic vocabulary of many academic disciplines, including the social sciences.¹⁰⁹

Furthermore, the view held sway to the 1770s that “revolutions” were either regular planetary movements or variations, seemingly without impact on the stability of the world, or age-old, status-quo preserving patterns of mainly state-related action. As late as in 1708, the imperial commission visiting the Free City of Hamburg was given the assignment to restore the “age-old form of government” (*uralte Regimentsform*), after demands for fundamental change had become vocal in several riots, and to do so by means of ending “existing abuses and contraventions”.¹¹⁰ Less than three decades later, a *Historical Discours of Old and New State Revolutions in the Most Prominent Kingdoms and Principalities of the Inhabited and Known Globe*, 1735) was published to provide a survey of the “waxing and waning” of nations.¹¹¹ Johann Christoph Gatterer (1727–1799),¹¹² foremost among universal historians who deemed the world-empire chronology obsolete, nevertheless insisted that revolutions were regular occurrences and should be awarded proper attention even in abridgments of world history.¹¹³ Military theorist Ferdinand

H. Coing, *Bemerkungen zur Verwendung des Organismusbegriffs in der Rechtswissenschaft des 19. Jahrhunderts in Deutschland*, in: G. Mann (ed.), *Biologismus im 19. Jahrhundert*, Stuttgart 1973, pp. 147–157; T. Ellwein, *Die Fiktion der Staatsperson*, in: Ellwein/Joachim Jens Hesse (eds.), *Staatswissenschaften. Vergessene Disziplin oder neue Herausforderung?*, Baden-Baden 1990, pp. 99–110; Erich Kaufmann, *Über den Begriff des Organismus in der Staatslehre des 19. Jahrhunderts*, in: Kaufmann, *Rechtsidee und Recht*, Göttingen, 1960, pp. 46–66; H. J. McCloskey, *The State as an Organism, as a Person, and as an End in Itself*, in: *Philosophical Review*, 72 (1963), pp. 306–326; J. E. Schlanger, *Les métaphores de l'organisme*, Paris 1971; H. E. Troje, *Wissenschaftlichkeit und System in der Jurisprudenz des 16. Jahrhunderts*, in: Blühdorn, *Philosophie* (note 103), pp. 63–88; James Weinstein, *The Corporate Ideal in the Liberal State. 1900–1918*, Boston 1968.

108 Thus, for example: A. Schäffle, *Bau und Leben des socialen Körpers*, vol. 4, Tübingen 1881.

109 For studies, see F. Barnard, *Metaphors, Laments and the Organic Comments*, in: *Canadian Journal of Economics and Political Science*, 32 (1966), pp. 281–301; K. W. Deutsch, *Mechanism, Organism and Society. Some Models in Natural and Social Science*, in: *Philosophy of Science*, 18 (1951), pp. 230–252; M. Landau, *On the Use of Metaphor in Political Analysis*, in: *Social Research*, 28 (1961), pp. 331–343.

110 N. Kopernikus, *De revolutionibus [orbium coelestium] libri sex* [Nuremberg 1543], ed. H. M. Nobis/B. Sticker (Kopernikus, Gesamtausgabe, vol. 2), Hildesheim 1984; A. Furetière, *Dictionnaire universel*, vol. 2, The Hague 1727, s. v. *Révolution*; Art. *Révolution*, in: J. Le Rond d'Alembert/D. Diderot (eds.), *Encyclopédie. Ou Dictionnaire raisonné des sciences, des arts et des métiers*, vol. 14, Paris 1765, s. v.; H. Hübbe, *Die kaiserlichen Commissionen in Hamburg*, Hamburg 1855, pp. 124f. For this meaning of the word revolution, see R. Koselleck/C. Meier/J. Fisch/N. Bulst, *Revolution*, in: Brunner, *Grundbegriffe* (note 103), vol. 5, pp. 653–788, at pp. 714–717.

111 *Historischer Discurs von alten und neuern Staats-Revolutionen in den vornehmsten Reichen und Herrschaften des bewohnten und bekannten Erd-Krayses*, Frankfurt 1735, p. 2.

112 Gatterer, *Plan* (note 2), pp. 28f., 62–73; Gatterer, *Einleitung in die synchronistische Universalhistorie zur Erläuterung seiner synchronistischen Tabellen*, Göttingen 1771, Part I, pp. 1–8, at p. 1; Gatterer, *Vorrede von der Evidenz in der Geschichtskunde*, in: F. E. Boysen (ed.), *Die allgemeine Welthistorie*, vol. 1, Halle 1767, pp. 1–38, at p. 14.

113 On Gatterer's historiographical world picture, see M. Gierl, *Johann Christoph Gatterers Ideal einer allgemeinen Weltstatistik. Die praktische Aufklärung fortlaufender Geschichte und ihre Wissensarchitektur*, in: G. Berg/B.

Friedrich von Nicolai (1730–1814) believed that teaching the history of states was crucial to the education of soldiers and, with an eye on the world as a whole, demanded that the soldier must “above all know the basics of the main political revolutions; for they contain the key to their wars and the chain of occurrences; to that end, the subject of the history of states is essential”.¹¹⁴

Jurist Johann Stephan Pütter (1725–1807) classed the investiture controversy in the history of the Occidental Roman Empire as a period of “great revolutions in state and church” and yet insisted that the main purpose of the imperial constitution, watching over all these “revolutions” was the provision of security and welfare, i.e. stability, for the ruled.¹¹⁵ Likewise, a description of Hindu religion, published in 1773, could be accompanied by a survey of the “newest revolutions” within the continuing “present constitution of Indostan”.¹¹⁶ Johann Gottfried Herder (1744–1803) held revolutions necessary for the continuity of the humankind and compared them with running water: “The machinery of revolutions does not disturb me any longer; in humankind it is as essential as waves to the river, so that it does not become a marsh.”¹¹⁷ Kassel librarian Friedrich Wilhelm Strieder (1739–1815), in 1779, even passed off some change in the administration of his institution as the “revolution of the library at Cassel”.¹¹⁸ And still in 1787 diplomat and foreign-policy advisor to the Prussian government Ewald Friedrich von Hertzberg (1725–1795) equated “external revolutions” with the destruction of world empires in remote periods, “internal revolutions” with constitutional transformations and “religious revolutions” with the rise of Christendom and Islam.¹¹⁹ Only from the 1780s did the habit of associating fundamental changes of states and the state system with “revolutions” spread.¹²⁰

Török/M. Twellmann (eds.), *Berechnen, Beschreiben. Praktiken statistischen (Nicht-)Wissens. 1750–1850*, Berlin 2015, pp. 21–41; Gierl, *Mit der Hilfe von Wissenschaften. Johann Christoph Gatterers Objektivierung der Geschichte mithilfe von Hilfswissenschaften*, in: M. Kintzinger/S. Steckel/J. Crispin (eds.), *Akademische Wissenschaften. Praktiken des Lehrens und Forschens vom Mittelalter bis zur Moderne*, Basle 2015, pp. 277–300; L. M. Gisi, *Einbildungskraft und Mythologie. Die Verschränkung von Anthropologie und Geschichte im 18. Jahrhundert*, Berlin 2007, pp. 114–149, 318–391.

114 F. F. von Nicolai, *Betrachtungen über die vorzüglichsten Gegenstände einer zur Bildung angehender Officiers anzuordnenden Kriegsschule* [Ms. Stuttgart: Württembergische Landesbibliothek, Cod. Milit. 2^o 33 (1770), fol. 235v], ed. Daniel Hohrath, in: *Militärgeschichtliche Mitteilungen*, 41 (1992), pp. 115–141, at p. 123.

115 J. S. Pütter, *Historische Entwicklung der heutigen Staatsverfassung des Teutschen Reiches*, vol. 1, second edn, Göttingen 1787, pp. 141–194, 234f.

116 J.-R. Sinner, *Versuch über die Lehren der Seelenwanderung und des Fegfeuers der Braminen von Indostan. Nebst einem kurzen Entwurfe der neuesten Revolutionen und der gegenwärtigen Verfassung dieses Reichs*, Leipzig 1773, pp. 152–239.

117 J. G. Herder, *Ideen zur Philosophie der Geschichte der Menschheit* [1784–1791], ed. B. Suphan, in: Herder, *Sämtliche Werke*, vol. 13, Berlin 1887, p. 353. On Herder's concept of the revolution, see W. Förster, *Johann Gottfried Herder. Weltgeschichte und Humanität*, in: Bödeker, *Aufklärung* (note 22), pp. 363–387, at p. 372.

118 F. W. Strieder, *Die 'Revolution der Casselischen Bibliothek' in dem Jahr 1779. Nach einem Tagebuch des damaligen Bibliotheks-Registrators*, ed. K. Bernhardt, Kassel 1850.

119 E. F. v. Hertzberg, *Mémoire sur les révolutions des états, externes, internes et religieuses* [1786/87], in: *Mémoires de l'Académie Royale*, Berlin 1791, pp. 665–673. Likewise: S. Ascher, *Ideen zur natürlichen Geschichte der politischen Revolutionen*, s. I. 1802, p. 74.

120 J. F. Freiherr von und zu Mansbach, *Gedanken eines norwegischen Officiers über die Patriotischen Gedanken*

It has long been well known that the linear concept of “revolution” came to the fore during the decade or so preceding the Paris unrest of 1789 within the context of reflections about uprisings in Corse (1755), Geneva,¹²¹ the Netherlands¹²² and the British colonies in North America.¹²³ Already in 1778, a commentator on the then so called “Revolution in English America” emphasised the abruptness of the occurrences as well as their immediate and seemingly irrevocable effects upon the world at large. According to this commentator, one single day had provoked a “revolution”,¹²⁴ which did not allow a return to the past with its desire for reconciliation and peace,¹²⁵ i.e., the status quo ante.¹²⁶ Historian Claude François Xavier Millot (1726–1785)¹²⁷ set out in the 1780s to describe revolutions relating to the “most prominent state changes in Asia during the most recent centuries”. That is to say that the word “revolution” was already in use for a

eines Dänen über stehende Heere, politisches Gleichgewicht und Staatsrevolution, Kopenhagen 1794; W. F. v. Schmettow: Erläuternder Commentar zu den Patriotischen Gedanken, Altona 1793.

121 Précis historique de la révolution de Genève, Geneva 1782.

122 F. Bernard, Précis historique de la révolution qui vient de s'opérer en Hollande, Paris 1788. For a study, see S. R. E. Klein, Patriots Republikanisme. Politieke cultuur in Nederland (1766–1787), Amsterdam 1995.

123 For surveys, see E. W. Becker, Zeit der Revolution! – Revolution der Zeit? Zeiterfahrungen in Deutschland in der Ära der Revolutionen. 1789–1848/49, Göttingen 1999, pp. 38–48, 197–221; K.-H. Bender, Revolutionen. Die Entstehung des politischen Revolutionsbegriffs in Frankreich zwischen Mittelalter und Aufklärung, München 1977, pp. 149–183; Bender, Der politische Revolutionsbegriff in Frankreich zwischen Mittelalter und Glorreicher Revolution, in: H. Reinalter (ed.), Revolution und Gesellschaft. Zur Entwicklung des neuzeitlichen Revolutionsbegriffs, Innsbruck 1980, pp. 35–52; J.-M. Goulemot, Le mot ‘révolution’ et la formation du concept de révolution politique, in: Annales historiques de la Révolution Française, 39 (1967), pp. 417–444, esp. p. 423. K. Griewank, Der neuzeitliche Revolutionsbegriff, Weimar 1955, pp. 187–209; A. Hatto, ‘Revolution’: An Enquiry into the Usefulness of an Historical Term, in: Mind, 58 (1949), pp. 495–517, at pp. 501f.; C. Hill, The Word “Revolution”, in: Hill, A Nation of Change and Novelty, London 1990, pp. 82–101; R. Koselleck, Historische Kriterien des neuzeitlichen Revolutionsbegriffs, in: Koselleck, Vergangene Zukunft. Zur Semantik geschichtlicher Zeiten, Frankfurt 1979, pp. 67–86; U. Niggemann, ‘Revolution’. Zur Karriere eines Begriffs in Großbritannien. 1688–1714, in: Historische Zeitschrift, 304 (2017), pp. 631–654; Niggemann, Revolutionserinnerung in der Frühen Neuzeit, Berlin/Boston 2017, pp. 221–240; I. Rachum, ‘Revolution’. The Entrance of a New Word into Western Political Discourse, Lanham, MD 1999, esp. p. 12; R. Reichardt, Die Revolution – ein ‘magischer Spiegel’ historisch-politischer Begriffsbildung in französisch-deutschen Übersetzungen, in: H.-J. Lüsebrink/Reichardt (eds.), Kulturtransfer im Epochenumbbruch Frankreich–Deutschland. 1770–1815, vol. 2, Leipzig 1997, pp. 883–999, esp. pp. 891, 896–898, 977; Reichardt, Revolution, in: Enzyklopädie der Neuzeit, vol. 11, Stuttgart/Weimar 2010, pp. 152–175; H. Reinalter, Der Revolutionsbegriff in der französischen Aufklärung, in: Reinalter (ed.), Revolution und Gesellschaft. Zur Entwicklung des neuzeitlichen Revolutionsbegriffs, Innsbruck 1980, pp. 53–66; E. Rosenstock-Huussy, Revolution als politischer Begriff in der Neuzeit, in: Festgabe der Rechts- und Staatswissenschaftlichen Fakultät in Breslau für Paul Heilborn zum 70. Geburtstag, Breslau 1931, pp. 83–124, at pp. 84–96; F. W. Seidler, Die Geschichte des Wortes Revolution. Ph. D. thesis, typescript, University of Munich 1955; H. G. Wassmann, Revolutionstheorien, Munich 1978, pp. 24–26.

124 P. U. Dubuisson, Abrégé de la Révolution de l'Amérique angloise, Paris 1778, p. 1. Likewise: T. Pownall, Pensées sur la révolution de l'Amérique-Unie, Amsterdam 1781, pp. III f.; J.-B. Mailhe [Maille], Discours, qui a remporté le prix à l'Académie des jeux floraux en 1784, sur la grandeur et l'importance de la Révolution, qui vient de s'opérer dans l'Amérique Septentrionale, Toulouse 1784, pp. 19, 20, 23.

125 G.-T. F. Raynal, Révolution de l'Amérique, London 1781, p. 75.

126 Thus, among others, the effort, remaining uncontested up to the end of the eighteenth century, of restoring, at the time of the conclusion of a war-ending peace, the patterns of relations between states that had been in effect prior to the beginning of the same war. For evidence, including a statement reflecting upcoming criticism of that practice, see G. F. v. Martens, Einleitung in das positive Völkerrecht, auf Verträge und Herkommen gegründet, Göttingen 1796, p. 12.

127 C. F. X. Millot, Universalhistorie alter, mittlerer und neuer Zeiten, German version, ed. W. E. Christiani, vol. 9, Leipzig 1787, pp. 297–313.

linear process in the French language, before it became applied to the Paris uprising.¹²⁸ Yet even though the uprising did not kick off this shift in the meaning of the word “revolution”, it greatly eased the dissemination of the new meaning in various other European languages. In 1790, Christoph Martin Wieland, in his *Göttergespräche*, let Zeus defend the Paris uprising vis-à-vis a sceptical Juno, arguing that many good things had been brought about by the “revolution” as a severe break with the past, and that she just should have “sufficient patience to look at such a multi-layered matter from more than one angle” and would not, “when looking at all the injustice, pranks and acts of force always having been inseparable from a great revolution, allow [he]rself to be tempted to overlook the immense problems, the roots of which now been cut by it, and the innumerable good”.¹²⁹ This new meaning of the word changed the concept of “revolution” so dramatically that, already in 1792, August Ferdinand Lueder (1760–1819), critic of the discipline of statistics as the study of the state, could remark satirically: “Beverages and food, customs, habits and the way of life have always been all powerful. The revolutions of the greatest strikers at the world were nothing against the effects of tea and coffee.”¹³⁰ In Lueder’s view, exotic stimulants seemed to have provoked more fundamental changes than all overthrows of governments. Thus, already for the 1790s, Lueder’s joke confirmed the trend to expand the concept of “revolution” to comprise not just militant resistance from below against state power, but any fundamental change excluding return to the status quo ante.

To conclude, the AOC-chronology was manifestation of the belief in the stability and finiteness of the world seemingly ordered by divine will. It articulated the claim for unconditioned worldwide applicability. It rested on the perception of humankind as a given unity and on the trust in the possibility of tracing the empirical pluralism and diversity of all groups and cultures back to one single common origin. In the course of the sixteenth century, the problem came up how to integrate Native American groups and their cultures into the AOC chronology and the Biblical record supporting it. This problem appeared to be solvable, as it only touched on the mode of explaining the settlement of America, then often construed as migration from Asia. Debates about the most probable migration routes took place but did not shake the foundations of the AOC chronology, for dating the beginning of the world was not an issue in these debates. By contrast, the growing intensity of European interest in China during the seventeenth century raised fundamental questions which Catholic missionaries as empirically minded scholars asked fearlessly. These questions were troubling because the chronology gleaned from Chinese records was not easily to be rendered compatible with the AOC chronology and

128 J. H. Campe, *Briefe aus Paris während der Revolution geschrieben [1789–1790]*, ed. H. König, Berlin 1961, p. 256; on the concept of revolution [first printed s. t.: *Briefe aus Paris zur Zeit der Revolution*, Brunswick 1790, pp. 214–241: sixth letter, dated 23 August 1789, at p. 220].

129 C. M. Wieland, *Göttergespräche [1789–1793]. Gespräche im Elysium* (Wieland, *Sämtliche Werke*, vol. 25), Leipzig 1796, pp. 196–225: XII. Jupiter – Juno – Minerva, at pp. 212f.

130 A. F. Lueder, *Einleitung in die Staatskunde nebst einer Statistik der vornehmsten europäischen Reiche*, Leipzig 1792, p. 35.

forced the scholars involved to decide which of the two chronological systems deserved more credibility. While the AOC chronology had formed a bulwark of Christian faith to the middle of the seventeenth century, against which deviant chronologies appeared to be powerless, Jesuits reporting on China faced the task of having to employ methods of source criticism to the end of confirming the appropriateness of the use of the AOC chronology as a universal means of time reckoning. They believed to be able to master the task *ex negativo* by discrediting Chinese records as unreliable sources on the remote past. But implied in the use of this method was the recognition that the AOC chronology could no longer maintain its status as a chronological instrument applicable solely on account of its own strength but only as long as its major challenger could be rejected as feeble. In seeking to rescue the AOC chronology, Jesuits reporting on China unwillingly shook the very foundation of the chronology. For the time being, the chronology stood firm against these and other shocks, such as polygenism, as it was tied together with more complex perceptions of the world as a stable and finite entity. Only when, from the 1730s, questions about the beginning and end of the world began to turn irrelevant for the handling of chronological issues and when the expectation of the stability of the world gave way to the demand for the recognition of the dynamics of change, the AOC chronology flattened to an empty convention before being abandoned towards the end of the eighteenth century. The sciences, specifically palaeontology, had no significant impact on this process but have continued to be haunted by questions about beginnings.