Holocene calendar

The **Holocene calendar**, also known as the **Holocene Era** or **Human Era** (**HE**), is a year numbering system that adds exactly 10,000 years to the currently dominant (AD/BC or CE/BCE) numbering scheme, placing its first year near the beginning of the Holocene geological epoch and the Neolithic Revolution, when humans shifted from a hunter-gatherer lifestyle to agriculture and fixed settlements. The current year by the Gregorian calendar, AD 2023, is 12023 HE in the Holocene calendar. The HE scheme was first proposed by Cesare Emiliani in 1993 (11993 HE),[1] though similar proposals to start a new calendar at the same date have been put forward decades earlier.[2][3]

Contents

Overview

Cesare Emiliani's proposal for a calendar reform sought to solve a number of alleged problems with the current *Anno Domini* era, which number the years of the commonly accepted world calendar. These issues include:

- The *Anno Domini* era is based on the erroneous and / or contentious estimates of the birth year of Jesus of Nazareth. The era places Jesus's birth year in AD 1, but modern scholars have determined that it's more likely that he was born in or before 4 BC.[4] Emiliani argued that replacing the contested date with the approximate beginning of the Holocene makes more sense.
- The birth date of Jesus is a less universally relevant epoch event than the approximate beginning of the Holocene.
- The years BC/BCE are counted down when moving from past to future, making calculation of time spans difficult.
- The *Anno Domini* era has no year "zero", with 1 BC followed immediately by AD 1, complicating the calculation of timespans further. This is equally true of the Common Era, its non-religious equivalent.

Instead, HE uses the "beginning of human era" as its epoch, arbitrarily defined as 10,000 BC and denoted year 1 HE, so that AD 1 matches 10,001 HE.[1] This is a rough approximation of the start of the current geologic epoch, the Holocene (the name means *entirely recent*). The motivation for this is that human

civilization (e.g. the first settlements, agriculture, etc.) is believed to have arisen within this time. Emiliani later proposed that the start of the Holocene should be fixed at the same date as the beginning of his proposed era.[5]

Benefits

Human Era proponents claim that it makes for easier geological, archaeological, dendrochronological, anthropological and historical dating, as well as that it bases its epoch on an event more universally relevant than the birth of Jesus. All key dates in human history can then be listed using a simple increasing date scale with smaller dates always occurring before larger dates. Another gain is that the Holocene Era starts before the other calendar eras, so it could be useful for the comparison and conversion of dates from different calendars.

Accuracy

When Emiliani discussed the calendar in a follow-up article in 1994, he mentioned that there was no agreement on the date of the start of the Holocene epoch, with estimates at the time ranging between 12,700 and 10,970 years BP.[5] Since then, scientists have improved their understanding of the Holocene on the evidence of ice cores and can now more accurately date its beginning. A consensus view was formally adopted by the IUGS in 2013, placing its start at 11,700 years before 2000 (9701 BC), about 300 years more recent than the epoch of the Holocene calendar.[6]

Equivalent proposals

In 1924 Gabriel Deville proposed the use of *Calendrier nouveau de chronologie ancienne* (CNCA), which would start 10,000 years before AD 1, which is identical to Emiliani's much later proposal.[2]

In 1963 E.R. Hope proposed the use of *Anterior Epoch* (AE), which also begins at the same point.[3]

Conversion

Conversion from Julian or Gregorian calendar years to the Human Era can be achieved by adding 10,000 to the AD/CE year. The present year, 2023, can be transformed into a Holocene year by adding the digit "1" before it, making it 12,023 HE. Years BC/BCE are converted by subtracting the BC/BCE year number from 10,001.

Calendar epochs and milestones in the Holocene calendar

Gregorian year	ISO 8601	Holocene year	Event
10000 BC	−9999[a]	1 HE	Beginning of the Holocene Era
9701 BC	−9700	300 HE	End of the Pleistocene and beginning of the Holocene epoch[6]
4714 BC	−4713	5287 HE	Epoch of the Julian day system: Julian day 0 starts at Greenwich noon on January 1, 4713 BC of the proleptic Julian calendar, which is November 24, 4714 BC in the proleptic Gregorian calendar[7]:10
3761 BC	−3760	6240 HE	Beginning of the Anno Mundi calendar era in the Hebrew calendar[7]:11
3102 BC	−3101	6899 HE	Beginning of the Kali Yuga in Hindu cosmology[8]
2250 BC	−2249	7751 HE	Beginning of the Meghalayan age, the current and latest of the three stages in the Holocene era.[9][10]
45 BC	−0044	9956 HE	Introduction of the Julian calendar
1 BC	+0000	10000 HE	Year zero at ISO 8601
AD 1	+0001	10001 HE	Beginning of the Common Era and Anno Domini, from the estimate by Dionysius of the Incarnation of Jesus
622, 1 AH	+0622	10622 HE	Migration of Muhammad from Mecca to Medina (Hijrah), starting the Islamic calendar[11][12]
1582	+1582	11582 HE	Introduction of the Gregorian calendar[7]:47
1912	+1912	11912 HE	Epoch of the Juche[13] and Minguo calendars[14]
1950	+1950	11950 HE	Epoch of the Before Present dating scheme[15]:190
1960	+1960	11960 HE	UTC Epoch
1970	+1970	11970 HE	Unix Epoch[16]
1993	+1993	11993 HE	Publication of the Holocene calendar
2023	+2023	12023 HE	Current year
10000	+10000	20000 HE	

a. Emiliani[1] states his proposal would set "the beginning of the human era at 10,000 BC" but does not mention the Julian or Gregorian calendar.

See also

- After the Development of Agriculture – calendar system that adds 8000 years to the Common Era.
- Anno Lucis – calendar system that adds 4000 years to the Common Era.
- Before Present, the notation most widely used today in scientific literature for dates in prehistory.
- Calendar reform

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