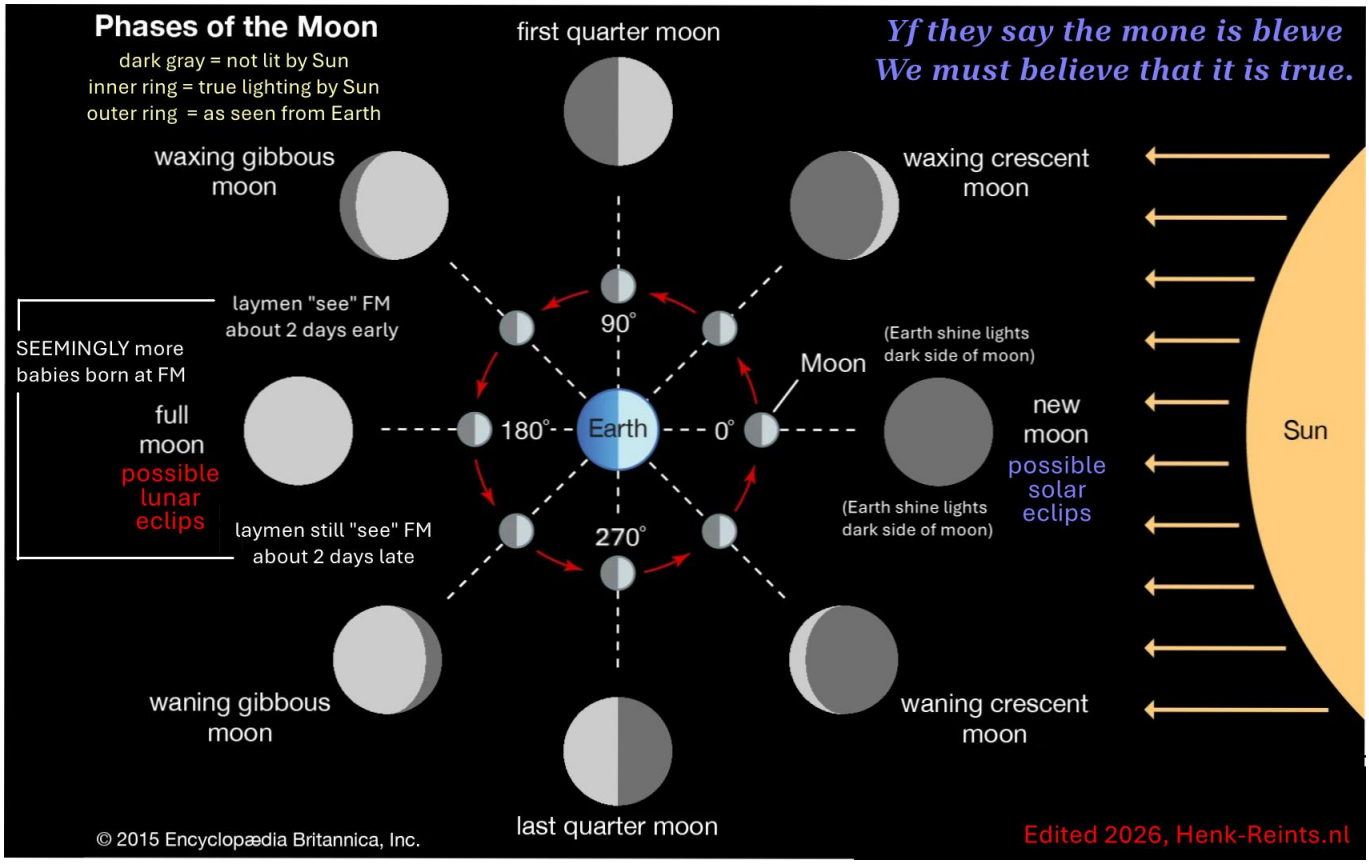
Definitions:

- *Ecliptica* ≔ the sun's *apparent path* through the stars due to Earth orbiting the sun; the latter takes place in the *Ecliptic Plane* in which *Longitude* is the *angle* w.r.t. the *Vernal Equinox*;
- GEL ≔ ***G**eocentric **E**cliptic **L**ongitude*, i.e. as seen/measured from Earth;
- $SGEL$ ≔ **S**olar GEL;
- $LGEL$ ≔ **L**unar GEL;
- $\%$ ≔ a *mathematical operator* rendering the ***positive** remainder* of an *integer division*, i.e. $\boldsymbol{x\%y} \coloneqq \boldsymbol{x - \lfloor x/y \rfloor \cdot y}$, $x, y \in \mathbb{R}$;
- ΔGEL ≔ $(LGEL - SGEL)\%360°$.

The eight principal phases of the moon (an ***exact point in time*** has ***zero duration***!):

- **New Moon**: the ***single exact point in time*** when $\boldsymbol{\Delta GEL = 0°}$;
- *Waxing Crescent*: $0° < \Delta GEL < 90°$;
- **First Quarter**: the ***single exact point in time*** when $\boldsymbol{\Delta GEL = 90°}$;
- *Waxing Gibbous*: $90° < \Delta GEL < 180°$;
- **Full Moon**: the ***single exact point in time*** when $\boldsymbol{\Delta GEL = 180°}$;
- *Waning Gibbous*: $180° < \Delta GEL < 270°$;
- **Last Quarter** (Third Quarter): the ***single exact point in time*** when $\boldsymbol{\Delta GEL = 270°}$;
- *Waning Crescent*: $270 < \Delta GEL < 360°$;
- next New Moon: $\Delta GEL = 0°$



Crescent comes from French *croissant*, literally meaning *growing/waxing* (hence *waning crescent* is a bit contradictoy). But already long ago it has also acquired the meaning of the moon before FQ and after LQ, i.e. when it is less-than-half lit.

In the 19th century, an originally *Austrian*[1] roll had a similar shape, making the French call it *croissant*.

Not only native English speakers are struggling to correctly understand & pronounce French, the Dutch too can easily mangle it:

Proef onze eerlijke heerlijke eerlijk heerlijk verse kwazandjes!

[1] That's not down under...

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