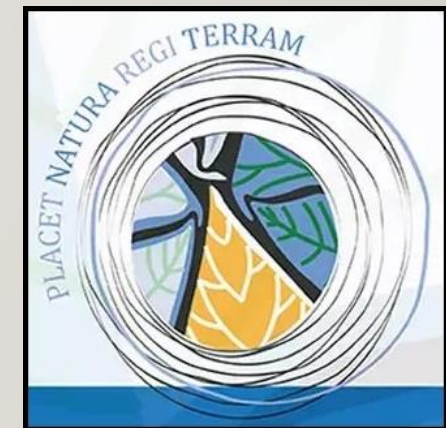


GEO-PHILOSOPHICAL ATTRIBUTES OF ANTHROPOCENE CONCEPTS

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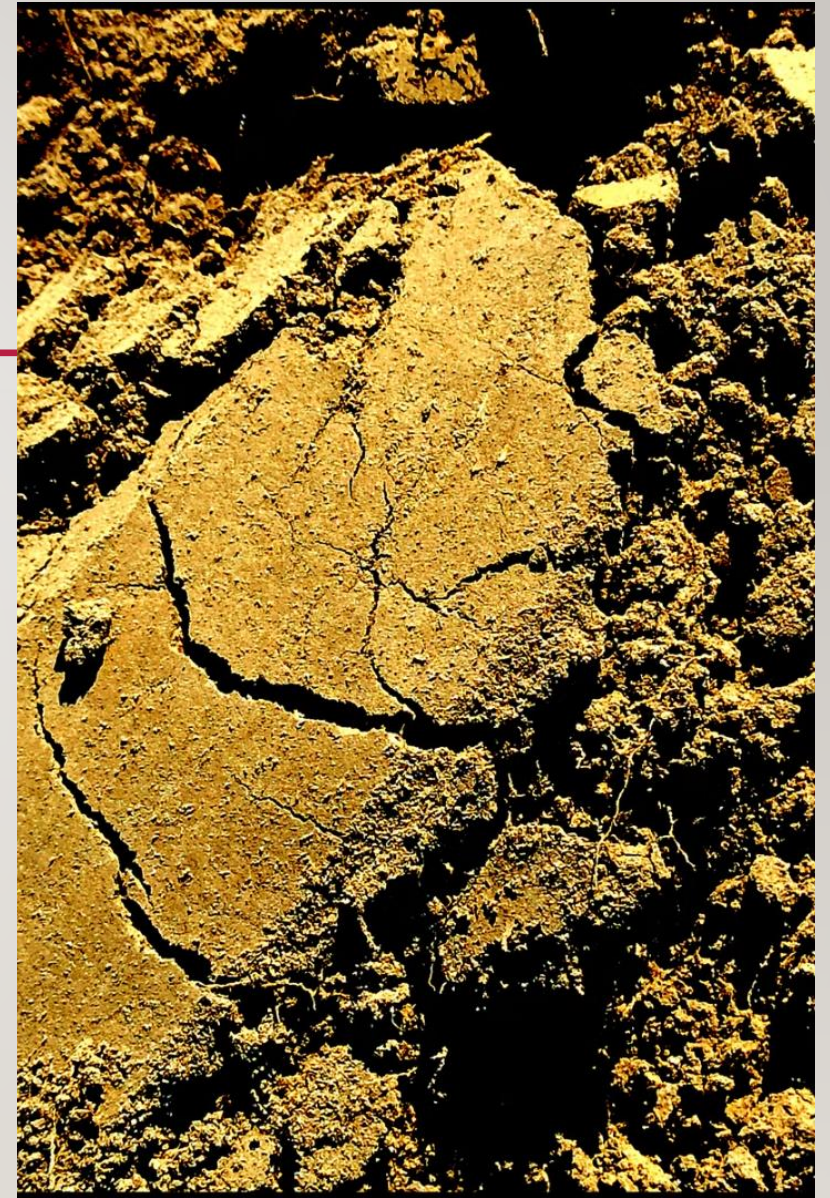
some refs:



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- Bohle M (2023) Crafting Attributes of a Geological Now. *Earth Sci Syst Soc* 3:1–13. <https://doi.org/10.3389/esss.2023.10089>
 - Zalasiewicz J, Thomas JA, Waters CN, et al (2024) What should the Anthropocene mean? *Nature* 632:980–984
 - Edgeworth M, Bauer AM, Ellis EC, et al (2024) The Anthropocene Is More Than a Time Interval. *Earth's Future* 12:1–5.
 - Wallenhorst N (2023) *A Critical Theory for the Anthropocene*. Springer International Publishing, Cham
 - Thomas JA, Williams M, Zalasiewicz J (2020) *The Anthropocene a multidisciplinary approach*. Polity Press, Cambridge (UK)
 - Renn J (2020) *The Evolution of Knowledge - Rethinking Science for the Anthropocene*. Princeton University Press, Oxford, UK

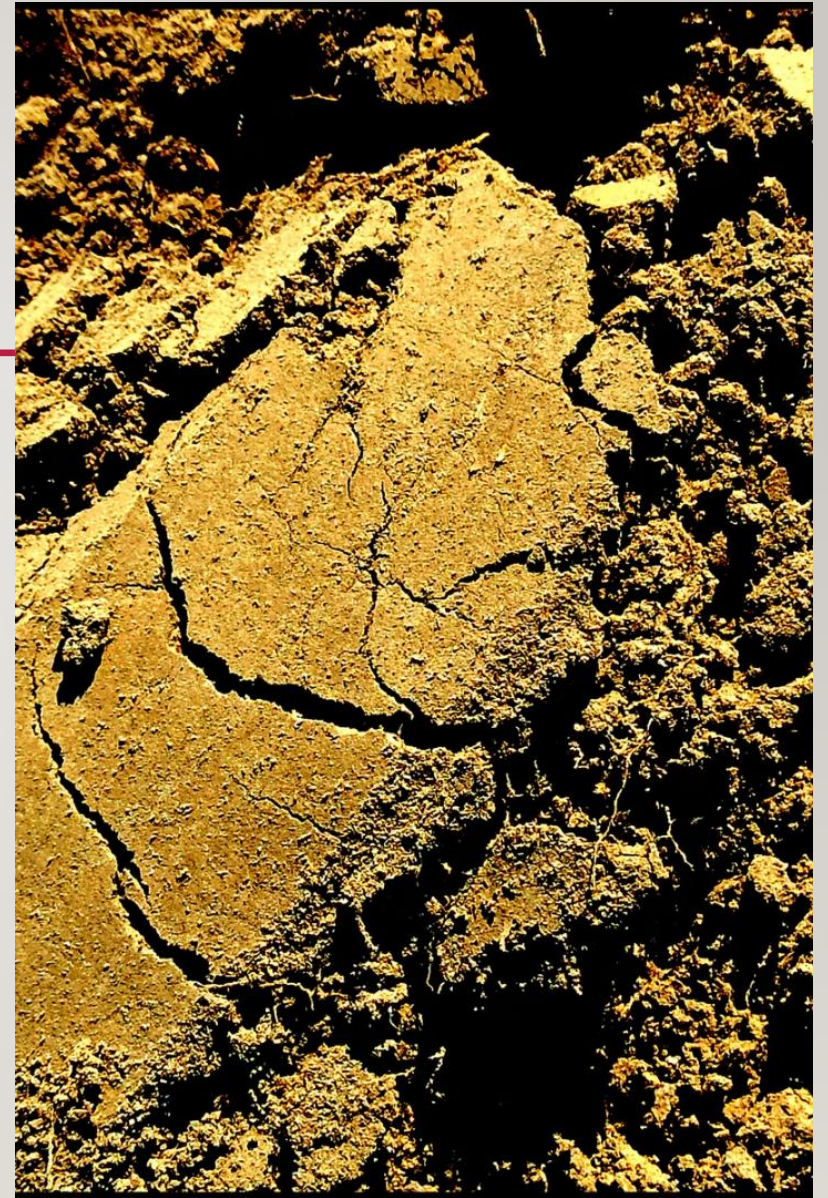
INTRODUCTION

- Earth/Geo-scientists employ discipline-specific methodologies to analyse both
 - the Planet
 - and, *to a certain degree,*
 - the World.
- Earth/Geo-scientists study the *Earth-Human Nexus* (*to a certain degree*).



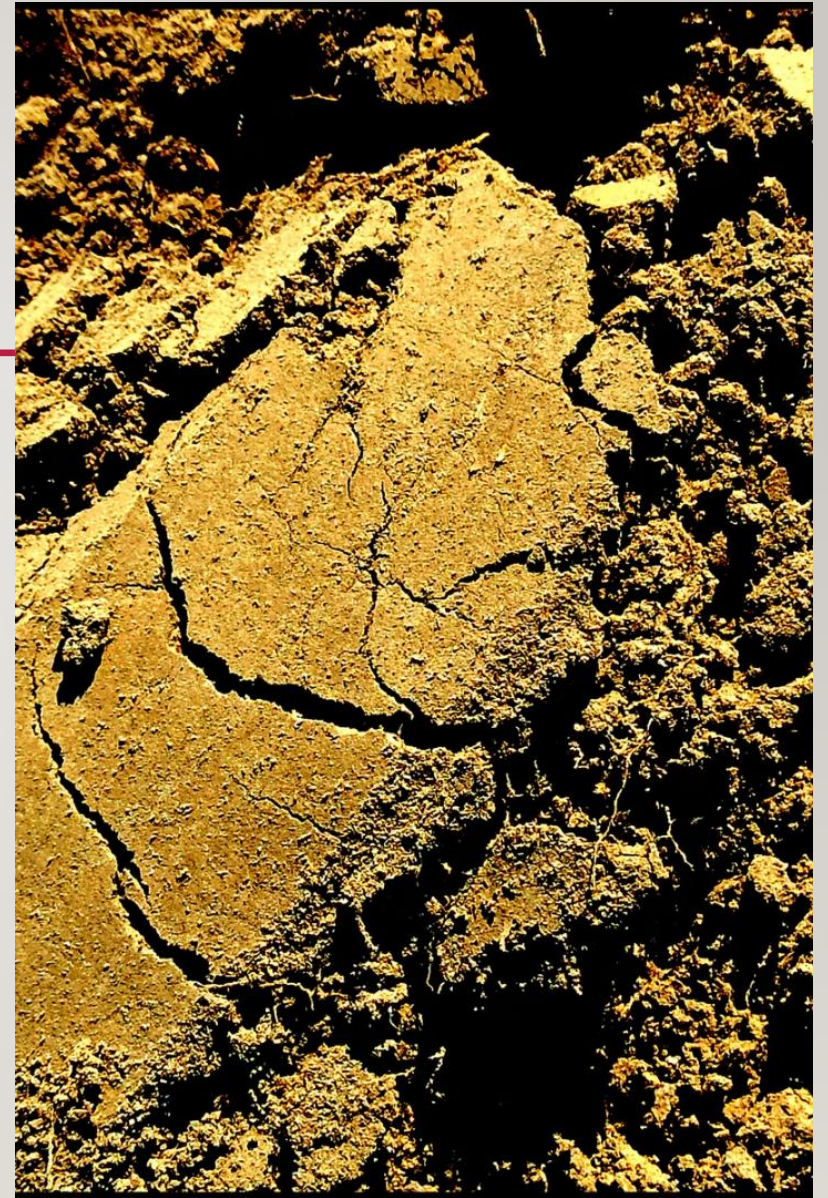
INTRODUCTION

- Earth/Geoscience interfaces (bi-directionally) with
 - STEM sciences
 - economy, social/political power, and hegemonic culture.
- Earth/Geoscience operate under '*post-normal*' conditions.



INTRODUCTION

- Earth/Geoscience englobe diverse disciplines;
 - some are *'narrative-driven'*,
 - others are *'mathematically coded'*,
 - all are *'data/observation driven'*,
 - all struggle with *'reproducibility'* &
 - all are *'performative'*.





GEO-CULTURAL CONNOTATIONS

- Example 1:
 - 'plate tectonics',...
 - 'deep time',...
- Example 2:
 - Rudwick MJS (1998) *Lyell and the Principles of Geology*. In: Blundell DJ, Scott AC (eds) *Lyell: the Past is the Key to the Presence*. Geological Society of London, London, pp. 3–15.



GEO-CULTURAL CONNOTATIONS


- Example 3:
 - 'tipping points'
 - 'planetary boundaries'
- Example 4:
 - Ellis EC (2024). *The Anthropocene condition: evolving through social–ecological transformations*. *Philos Trans R Soc B Biol Sci* 379.



GEO-CULTURAL CONNOTATIONS

Example 4 (cont., quote from abstract)

...transformative capabilities to shape environments are coupled with sociocultural adaptations enabling societies to more effectively shape and live in transformed environments, the social–ecological scales and intensities of these transformations can accelerate through a positive feedback loop of ‘runaway sociocultural niche construction’. Efforts to achieve a better future for both people and planet will depend on guiding this runaway evolutionary process towards better outcomes by redirecting Earth's most disruptive force of nature: the power of human aspirations....





GEO-CULTURAL CONNOTATIONS

Is the 'Anthropocene' an epoch or an event?

- *This question/debate tells best:*
 - Earth/Geoscientists operate in a 'post-normal' environment.
 - Earth/Geoscience are 'performative'.

'performative': scientific practice is a socially active, dynamic and embedded process. Communication, engagement, and the performative aspects of scientific work are important in shaping and understanding knowledge...; see J. Renn (2020)

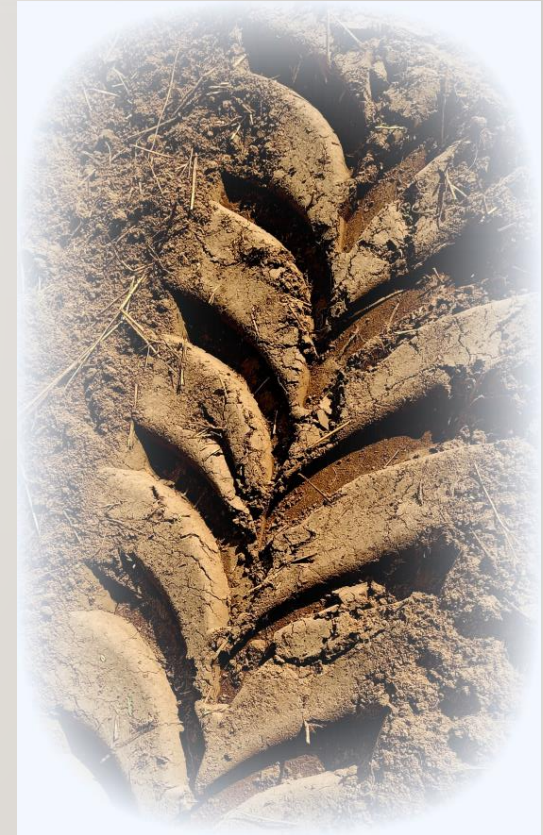
IUGS (MARCH 2024): THE ANTHROPOCENE



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- The ICS/IUGS recently enforced the vision to understand the Anthropocene as a geological event, which is not recorded in the Geological Time Scale (GTS).
 - * https://www.iugs.org/_files/ugd/flfc07_40d1a7ed58de458c9f8f24de5e739663.pdf
 - The ICS/IUGS does not challenge:
 - the scientific concept “Anthropocene”, as initially proposed by Earth System Science;
 - the GSSP, as recently proposed by the Anthropocene Working Group;
 - Instead, the ICS/IUGS claims stability for established practices of geological stratigraphy and sees no use of an “Anthropocene” and its GSSP.

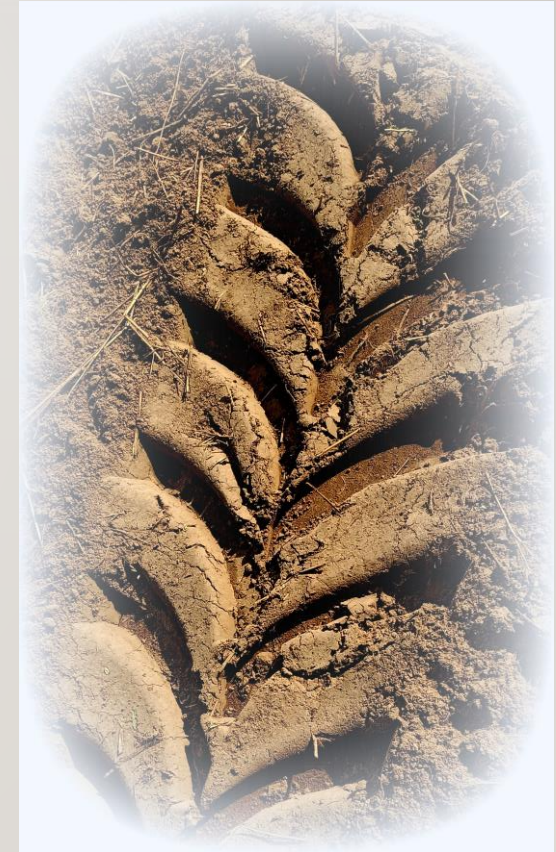
DISTINGUISHED CONCEPTS

- Two concepts of a ‘geological Now’ are proposed:
 - ‘Anthropocene’ event (outside GTS)
 - ‘Anthropocene’ epoch (part of GTS)
- The question to distinguish them:
 - *Occur(s/ed) a **qualitative** change in the dynamics of the Earth-System ?*
 - ‘Anthropocene’ event: No
 - ‘Anthropocene’ epoch: Yes



DISTINGUISHED CONCEPTS

- Both concepts of a geological Now ('Anthropocene') describe **quantitative** changes of the *Earth-Human Nexus*
 - i.e., of key attributes of the Earth System's physics, chemistry, biology, and socio-cultural characteristics.
- 'cumulative' change (= event)
- 'disruptive' change (= epoch)



DISTINGUISHED CONCEPTS

- The event concept recognises
 - quantitative changes (contemporarily at a critical level) of the Earth System are piling up;
 - people from palaeolithic to contemporary times, (all engaged in sociocultural niche construction) were/are causing them.




DISTINGUISHED CONCEPTS

- The epoch concept recognises
 - recent **quantitative** changes in the *Earth-Human Nexus* (the Great Acceleration) causes a **qualitative** change of the Earth System;
 - i.e., its dynamics shift out of the Holocene configuration.
 - a specific 'Anthropos', is causing this change;
 - i.e., contemporary people with affluent lifestyles.





CONCLUSION

- Choices of a ‘*geological Now*’ display different concepts of *planetary shift* and *human agency*.
 - Concepts of ‘*isochronous planetary stage shift*’ (*epoch*) or ‘*cumulative diachronous regional alterations*’ (*event*) reflect geologist’s worldviews about human agency and prowess.
 - The IUGS’s specific choice (Anthropocene event) is rooted in geo-philosophical considerations. It is ‘*performative*’ and is more than merely a [geo]scientific reasoning.
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THANK YOU VERY MUCH FOR YOUR ATTENTION !



*I like to thank my colleagues, like Silvia P. ,
Eduardo M. Much what is shown here does
originate from their and other colleagues' work.*

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