

Geoethics, emerging from splendid segregation ?



Take home message: Geoethics are plural, they benefit from an ample environment of philosophical thinking, humanities & social sciences.



I like to thank many colleagues, including Silvia and Eduardo. Much that I show here does originate from their works.

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Framings, &...

Structure of my Talk

- ✓ Take Home Message
- 2. Framings & Schemata
- 3. Socio-Historical Contexts of geoSTEM
- 4. Recalling Design-Facets of Geoethics
- 5. Contests
- 6. Conclusions



**Philosophy is the
science to engineer
your thinking.**

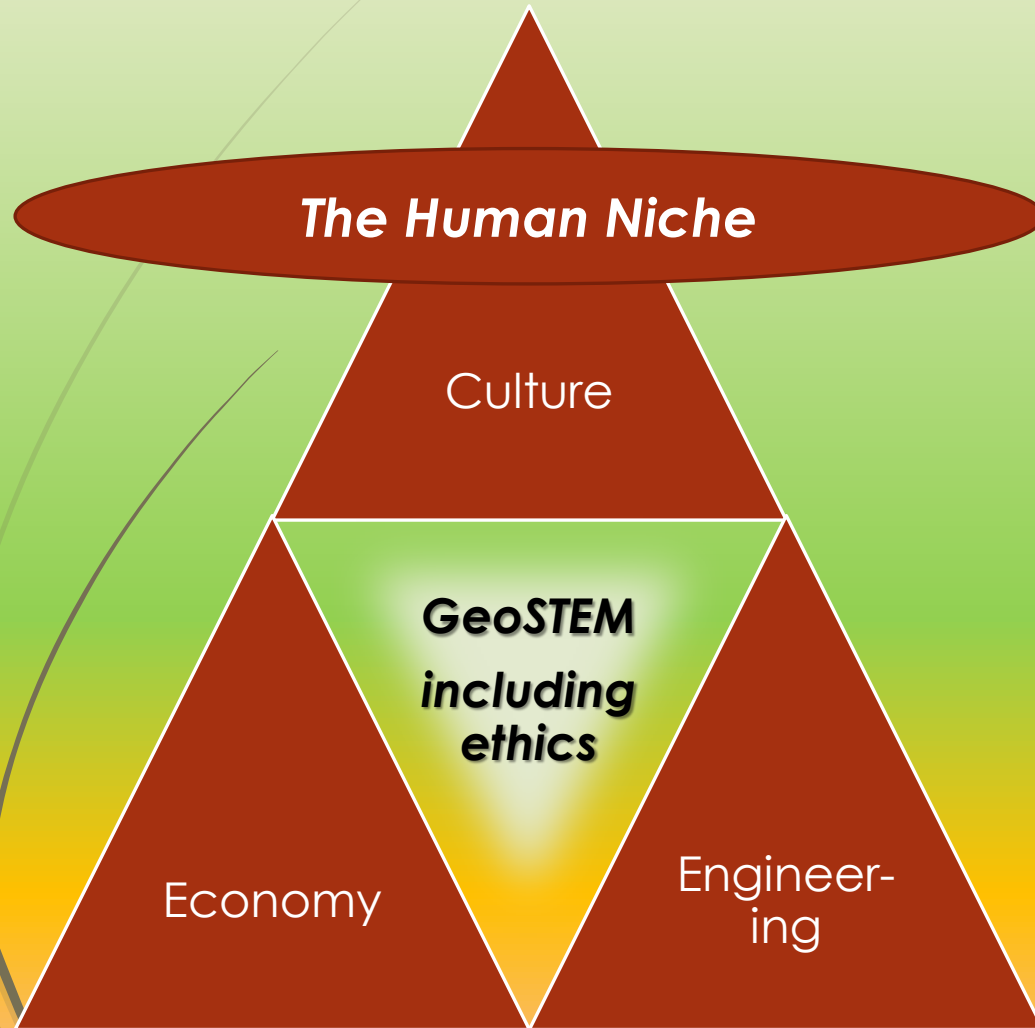
**About geoSTEM practices: ...no
anthropogenic change would
happen **without** geoscientists
who are:**

**finding coal, oil, and minerals,
or forecasting weather for
shipping commodities around
the globe, estimating natural
hazards for infrastructures, or
stability of foundations of
buildings, etc...**



Earth Sciences (= “geoSTEM”) are... “a range of applied and fundamental research fields, as well as related engineering disciplines and commercial undertakings. Together, they address the functioning of the Earth, the nexus of Earth and Human Systems, as well as the extraction and use of (abiotic) natural resources”

...& Schemata




- ❑ The *Human Niche* is the planetary network of landscapes and seas profoundly shaped by engineering, production and consumption.
- ❑ Bundled by *global supply chains* people modulate the human niche.
- ❑ Geoscientists, the *experts in geoSTEM*, assist in operating the human niche.
- ❑ Geoethics explores *societal contexts* of the human niche through geoSTEM angles.



The latter is both a strength and a weakness because it is robust but limited.

Socio-Historical Contexts of geoSTEM (1/2)

❑ The post-medieval European cultures


- I. *engaged* early with scientific studies of planet Earth; 
- II. *merged* science, research, engineering, economy and applied ethics into a massive societal venture;
- III. *shaped* hegemonic practices at planetary scale;
- IV. *mobilized* gigantic physical, mental, and economic resources;

and led to the Anthropocene,
eventually.



- **Some references:** Reinhard, Die Unterwerfung Der Welt - Globalgeschichte Der Europäischen Expansion 1415-2015.; Mokyr, A Culture of Growth - The Origins of the Modern Economy.; Malanima, Europäische Wirtschaftsgeschichte 10-19. Jahrhundert.; Hall, History of the Earth Sciences during the Scientific and Industrial Revolutions with Special Emphasis on the Physical Geosciences.; Denevan, "The 'Pristine Myth' Revisited."; Fressoz, L'Apocalypse Joyeuse - Une Histoire Du Risque Technologique. "; Hamilton, Bonneuil, & Gemenne, "The Anthropocene and the Global Environmental Crisis: Rethinking Modernity in a New Epoch".; Dryzek and Pickering, "The Politics of the Anthropocene"

Socio-Historical Contexts of geoSTEM (2/2)

- ❑ Within the European cultural models, science evolved from an undertaking of a minuscule elite to a massive societal endeavour.
- ❑ Subsequently, the ethics of science gained relevance – as deontology and societal feature.
- ❑ Explicit ethics in geoSTEM (geoethics) is a relatively recent field. 

...specific ethics of the geosciences. What for ?

- Ethically sound geoSTEM implies to analyse jointly: (i) natural processes, (ii) socio-political drivers, and (iii) cultural features of the human niche.
- **Some references:** McNie, Parris, and Sarewitz, “Improving the Public Value of Science: A Typology to Inform Discussion, Design and Implementation of Research”; Leys, “The Scientist’s Code of Ethics”; Douglas, “Science, Policy and the Value-Free Ideal.

Recalling Design-Facets of Geoethics

- ❑ (1): Geoethics are of composite design (are a conglomerate)
 - {‘earth sciences’ + ‘political/moral philosophies’ } = geoethics
 - **Therefore**, the notion ‘geoethics’ is a plural.
- ❑ (2): Geoethics are a product of European cultural models.
 - European philosophies shape geoethics.
 - **Therefore**, geoethics are missing out other philosophies of humankind.
- ❑ (3): Geoethics are founded in [geo]scientific knowledge & comparative justice [*]
 - [*] “...[have] a strong awareness of the technical, environmental, economic, cultural and political limits existing in different socio-ecological contexts”. <http://www.Geoethics.Org/Definition>
 - **Therefore**, reliable geoethics need insights from the people sciences.



...geoethics are cultural conglomerates of European origin...

Contests (1/2)

...an irritated peer reviewer wrote (2019):



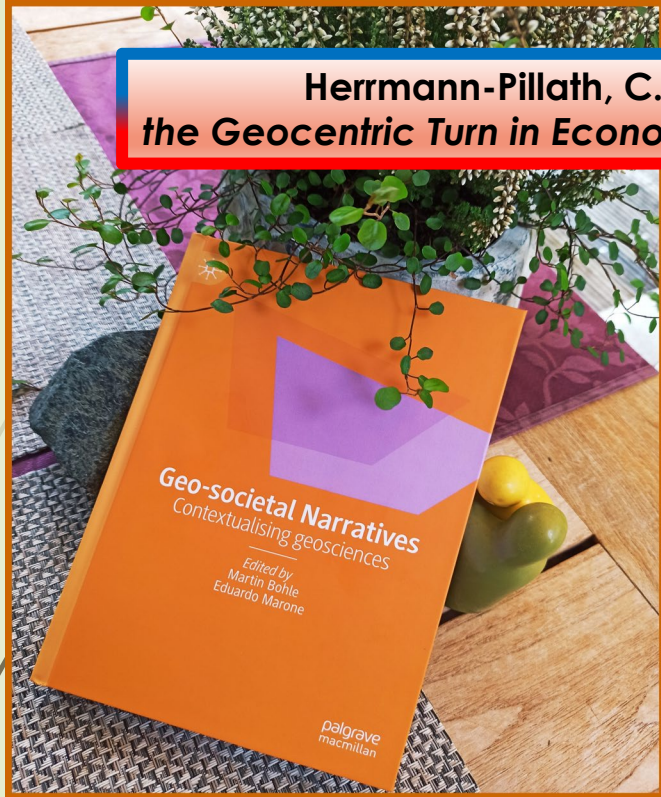
“...the whole thing [geoethics] consists of an idealist-based approach... According to such approach, the world is idealised as a sum of individual atoms deprived of any social character and of any capability of social and collective actions but, rather,... there is obviously not even a single word about the structural determinations upon individuals in the particular form of social organisation where they live...”

❖ **Source:** Anonymous review published in Quaternary (2019);

https://www.mdpi.com/2571-550X/2/2/19/review_report (1st round review, 2nd report)

**Research question: What are philosophical, cultural, economic,...
embeddings of geoethics**

Contests (2/2)



Herrmann-Pillath, C. (2021). 'A Copernican Moment: Engaging Economic Ethics in Orchestrating the Geocentric Turn in Economics', in: *Geo-societal Narratives* (Cham: Springer International Publishing), 105–126.

... Armatya Sen, an Indian Economist, Philosopher and Holder of the Nobel Prize, advocates '*comparative justice*' [1] scrutinising Rawls theory of 'justice as fairness'. A. Sen works support that "*choices taken in a specific social and cultural setting, that respect the ethical norms of this setting, may appear unethical elsewhere*" [2, p.30]... That is what 'comparative justice' is about...

[1] Sen A (2009) *The idea of Justice*. Belknap Press, Cambridge, MS

[2] Peppoloni S, Bilham N, Di Capua G (2019) *Contemporary Geoethics Within the Geosciences*. In: *Exploring Geoethics*. Springer International Publishing, Cham.

Literature research: '*comparative justice*' versus '*geoethics*'



Example:

Google Scholar: between 2012 and 2022 about 800 references about '*comparative justice*' but none relates it to '*geoethics*'

Conclusions

- ✓ GeoSTEM disciplines are paramount for stewardship of the human niche.
- ✓ Geoethics offer specific ways of thinking within geoSTEM.
- ❖ Therefore, geoethics
 - ❖ (1) are about societal use of geoscience expertise;
 - ❖ (2) apply to societal dealings;
 - ❖ (3) require scrutiny from non-geoSTEM perspectives;



Why such scrutiny is scare?

...emerging from splendid segregation...

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A recent publication (open access): „**Phronesis at the Human-Earth Nexus: Managed Retreat**“
<https://www.frontiersin.org/articles/10.3389/fpos.2022.819930/full>