

Geoethics, bridging geoSTEM and social sciences

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Research into ‘*responsible geosciences*’ led to amalgamating insights into societal and geoscientific features of the World and Earth. The outcomes are geo-philosophical frameworks, of which geoethics is an example (Bohle et al., 2020). Human agency is a central tenet of geoethics (Peppoloni et al., 2019). Therefore, geoethical practice needs social sciences, and the composite design of geoethics enables that liaison.

The geoSTEM disciplines (Geosciences, *Erdwissenschaften*, *Sciences de la Terre*), which tackle processes and phenomena of Planet Earth, range from Geology and Geography over Oceanography and Meteorology to Climate sciences and Earth System Sciences. They are relevant to Planet Earth's stewardship in times of anthropogenic global change (Bohle, 2021).

As an emergent moral philosophy, geoethics was defined as “*research and reflection on the values which underpin appropriate behaviours and practices, wherever human activities interact with the Earth system*” (Peppoloni and Di Capua, 2015; p. 4), which stresses that ethically sound operational practices depend on environmental, social and cultural settings. Hence, geoethical practices are about the pluralism of socially sound choices.

Because of its composite design, geoethics are multiple based on the same epistemic foundation in geoSTEM expertise. Various epistemic-moral geo-philosophical frameworks can be assembled by selecting specific societal features. For example, Kohlberg’s, Jonas’, and Bunge’s political philosophies about the level of cooperation of agents (Kohlberg, 1981), the responsibility of agents of change (Jonas, 1984), and the balance of individual agent’s wellbeing and duty (Bunge, 1989), respectively, capture a realist-materialist understanding of the societal fabric, which can be applied to governing adaptation to impacts of climate change (Bohle and Marone, 2022).

Bohle, M. (2021). ‘Citizen, Geoscientist and Associated Terra-former’, in *Global Threats in the Anthropocene: From COVID-19 to the Future*, eds. L. Mercantanti and S. Montes (Il Sileno Edizioni), 169–186.

Bohle, M., and Marone, E. (2022). Phronesis at the Human-Earth Nexus: Managed Retreat. *Front. Polit. Sci.* 4, 1–13.
doi:10.3389/fpos.2022.819930.

Bohle, M., Peppoloni, S., and Marone, E. (2020). Viewing Earth and World

- through the geoethical lens. *Hum. Futur.*, 28–29.
- Bunge, M. A. (1989). *Treaties on Basic Philosophy -Ethics: The Good and The Right*. Dordrecht: D. Reidel Publishing Company.
- Jonas, H. (1984). *The Imperative of Responsibility: In Search of Ethics for the Technological Age*. Chicago: University of Chicago Press.
- Kohlberg, L. (1981). *The Philosophy of Moral Development: Moral Stages and the Idea of Justice*. San Francisco: Harber & Row.
- Peppoloni, S., Bilham, N., and Di Capua, G. (2019). 'Contemporary Geoethics Within the Geosciences', in *Exploring Geoethics* (Cham: Springer International Publishing), 25–70. doi:10.1007/978-3-030-12010-8_2.
- Peppoloni, S., and Di Capua, G. (2015). 'The Meaning of Geoethics', in *Geoethics*, ed. Wyss M. and Peppoloni S. (Elsevier), 3–14. doi:10.1016/B978-0-12-799935-7.00001-0.
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