## Take Care of Soils: Toward a Pluralistic Integral Soil Ethics

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## ABSTRACT ORIGINAL

Although land ethics and ethics focused on agriculture have been formalized, an explicit general soil ethics is lacking. The human approach to nature has been one of ethical relativism. Human-centric ethics that justify in one way or another the primacy of human desires, needs, values, and benefits have caused soil degradation and some serious destruction of the soil environment and planet Earth. This chapter provides an overview of normative ethical strands applied to soils/nature/environment that include (1) natural ethics (Natural Law ethics) grounded either in (a) entelechy, vital natural principle or (b) religious moralities (ethics of Divine Commands); (2) virtue ethics associated with valuation of soils/nature/Earth; (3) deontological ethics that is duty, obligation, or rule ethics subdivided into (a) act deontological ethics, (b) rule deontological ethics, and (c) Kantian ethics; (4) consequentialist ethics focused on the consequences (such as soil carbon sequestration; well-being and flourishing of people) with (a) ethical egoism, (b) act utilitarianism, and (c) rule utilitarianism; (5) intuitionist theory that combines duty and consequential ethics; and (6) relational ethics with (a) stewardship ethics and (b) ethics of care. A novel integrative soil ethics-Pluralistic Integral Soil Ethics (PISE)-is presented. PISE synthesizes multiple ethical pillars into a coherent soil ethics that informs the use, management, preservation, conservation, security, health, quality, and sacredness of soils. This integrative soil ethics features three pillars. The first pillar is focused on soil and environmental valuation and people's moral standards toward soil. This pillar explores the meaning of virtue, which is the quality of being morally good ("minimizing harm") in regard to soil and environment. The second pillar is focused on soil and environmental literacy (i.e., observable data, facts, knowledge, maps, and models of soils) and assessment of the consequences of soil use and management through understanding of cause-effect relations. The third pillar is focused on soil and environmental competency and awareness. This pillar represents ethics of care that stresses the empathic subjective and intersubjective intimate relations with soil/nature. Soil care is associated with people's closeness to personalize soils and making them one's own through sensing, feeling, and experiences of soil and nature. PISE is an integrative ethics that reframes "soil care" as a noun into an active process, that is, "to take care of soils," which is deliberately intentional to minimize soil degradation and honor soils in terms of their beauty and naturalness. © The Author(s), under exclusive license to Springer Nature Switzerland AG 2023.