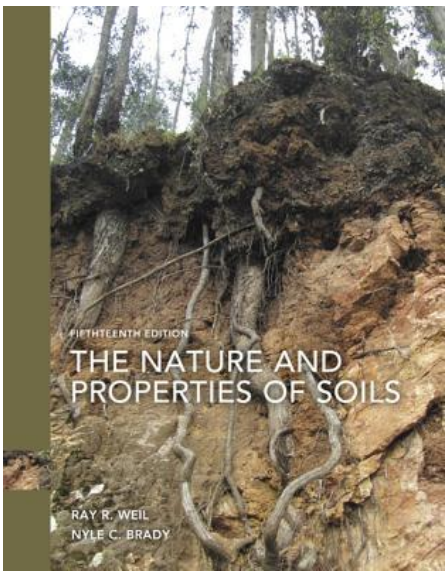

The Nature and Properties of Soils

Nyle C. Brady , Ray R. Weil

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"Developed for Introduction to Soils or Soil Science courses, The Nature and Properties of Soils, " Fifteenth Edition, " can be used in courses such as Soil Fertility, Land Resources, Earth Science and Soil Geography. " Help readers learn about soils and their connections to the ecosystem " The Nature and Properties of Soils " is designed to engage readers with the latest in the world of soils. This hallmark text introduces the exciting world of soils through clear writing, strong pedagogy, and an ecological approach that effectively explains the fundamentals of soil science. Worked calculations, vignettes, and current real-world applications prepare readers to understand concepts, solve problems, and think critically. Written for both majors and non-majors, this text highlights the many interactions between the soil and other components of forest, range, agricultural, wetland and constructed ecosystems.
Now in full-color, the Fifteenth Edition includes hundreds of compelling photos, figures, and diagrams to bring the exciting world of soils to life. Extensively revised, new and updated content appears in every chapter. Examples include: coverage of the pedosphere concept; new insights into humus and soil carbon accumulation; subaqueous soils, soil effects on human health; principles and practice of organic farming; urban and human engineered soils; new understandings of the nitrogen cycle; water-saving irrigation techniques; hydraulic redistribution, soil food-web ecology; disease suppressive soils; soil microbial genomics; soil interactions with global climate change; digital soil maps; and many others.

The Nature and Properties of Soils Details

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From Reader Review The Nature and Properties of Soils for online ebook

Robyn says

Textbook for our Soils class in the Agriculture/Environmental Science Department at Lubbock Christian University. I liked the photographic illustrations in the middle of the book, since they were helpful to understanding soil types. I don't really remember what I learned during class lectures, so the book may be better for that reference. I don't even remember us using the book in class, except for reference to the soil type pictures. This was back in 2001-ish.

Maola616 says

jord,vand og plant

John says

On one hand, this book seems to be very well organized and knowledgeable, exploring the nature and properties of soils in great detail. As a reference or with a particular question, it is a great place to begin, giving one a quantitative feel about what is really happening in the soil and how our interventions change it.

On the other hand, I think it relied on its status as a textbook in a particular area as not to build motivation. It always took the subject as intrinsically interesting even when the materials were not yet contextualized. Often, the presentation of the physical sciences has a kind of presumption that it is not important to say why something is important or interesting prior to presenting the facts. Though earlier chapters did frame its facts well, towards the middle it was much harder to see the point of things prior to their investigation. As such, I didn't end up reading the whole thing.

Overall, this isn't the place to begin thinking about soils. That would belong to a broader surveys on a practical subject, whether agriculture or civil engineering, for which soils are only a critical part; or else something looking at the soils yet more broadly, including cultural, social, and even mythological elements more thoroughly.

Alex Lee says

We may not think about it, because we treat the ground we walk on as a surface to get around from place to place. But the soil is the collection of earth's crust. Mixed with chemicals and chunks of matter collected from geological, meteorological, cultural, technological, social; the soil is a matrix reflexive of more than just "recent" geological and climate events but it also comes to mirror the action of humankind. The depth of our knowledge of the soil correlates with the noticed differences in phenotypical expressions of plants, animals and society. We build on the soil, so we need it stable, we grow on soil, so we need it fertile, we live

on soils so we need it to be productive, expansive, beautiful and natural. Natural here, acts as a term to stabilize this collection, as we recognize soil as what it isn't by what we need it to be. Thus, our knowledge grows deeper and deeper as we track (un)desired changes in the areas of (un)welcome surprises. Plants don't grow as good, or they have a discoloration. Floods happen. Buildings and roads collapse or crumble. Soil is one of the areas which has an influence, as soil is foundational to all aspects of human existence, as all life comes from it, all stability is attributed to it, without it we wouldn't have a place to be. We are made of it. It makes us, and returns to us our waste as useful, life and abundance (at least before there was too much, and too great a variety).

Thus, this textbook's depth reflects the depth to which humankind has become knowledgeable about the soil because we have traced our needs back to the soil, to this depth, that this 1000 page book is just the beginning. Yet even with its multitudinous diagrams, rampant calculations, redox equations, and geological terminology to nominalize difference in types, origins, natures of soil; you can still find hearty admonishments, and mentions of what humans use the soil for, what humans want from it, how humans mistreat it because it costs too much, or we were once ignorant. Our dependency on this prime earth is foretold in these pages by the amount of time, devotion and study it has taken to amass this depth of knowledge. And there are still things we don't yet know about the soil but hope to find out! Our reliance is truly unending.

Along the way, you'll find that much of this information is classified into chunks. But the parts of these chunks interact with one another, in dimensions the book still tries to highlight but obviously holds to be less important than the consistency of what has been chunked. Likewise, the soil itself has bands of interference as influences from one area, say climate, or another, say, by a farmhouse, all intermix. This is the nature of soil, that soil is a collection of anonymous particles that share similar constraints. For example, while the book mentions resistance in soil, this resistance is mostly due to contextual factors, such as what other influences of climate, geology, industry in its "surrounding" shall also claim influence. The creation of these contexts are the mutually shifting ground of shifting soil, as there is no soil; soil is what stays the same regardless of changes, and that formulates a substantive basis for naming them by what stays mostly the same.

Perhaps in some order of decades we may want to consider additional soil types, but this may not happen as our knowledge of the soil and our knowledge of our reliance on it, has introduced some movements whereby we wish for maintaining the soil, or even improving its functions in the aspects we deem to be desirable for the soil. This too is a sliding scale. As our knowledge increases, so we do find more ways in which our actions and treatment has influenced the soil heretofore unseen. The collection of our actions is a retroactive synthesis, ex post facto, of the true nature of our actions, not just in how we know but also how we are ignorant.

This differentiating edge of what soil can show us in our own knowledge highlights two aspects, both of which are parallax. On the one hand, we create our knowledge as an imprint (extension) of what we are... not just expressive of our desires but also expressive of aspects of our person as are unaware of being. On the other hand, this highlights the need for a post-rational approach to conceptualizing our frame. Following the work of Humberto Maturana, we can understand that "life is knowledge" and thus knowledge is the conceptual correlation with the extent of our ability to comprehend and appreciate what we are. The parallax isn't simply that human consciousness is the limit that defines our fields of knowledge, but that the limit of our knowledge is the extent of our human differentiation from the manifolds of soil, flesh and matter. It follows then, that our discursive practices are the materialization of our knowledge. The two go hand in hand as more than epiphenomenal, as the correlation isn't causal but it is a literal surjective distinction that expresses itself from the zones of ideational substance and material abstraction.

Following this, we can draw parallax lines in a projective geometry between economics as a rational material quantifiability, the internal classifications of which are on the level of value-form as espoused by the

ideology of merchant capital and the post-structural conception of the void as the abstraction to which we ground all concepts immanently within a transcendence characterized by the value-form of the void, as the zero-phoneme signifier is the only position from which we can measure all determinate fields of knowledge against. We sacrifice knowledge of the union of a parabola's curvature at the apex if we understand the apex as necessarily coinciding with the zero degree angle of measurement of a cartesian y-axis.

We can also understand the correlation of depth between our bodily elements and the elements adopted from a soil polluted with those reactive elements. This is akin to an expression of a generic within a transcendental field. Only within that field can we note the presence of a generic as a nominalisation when a functional value operates through blind procedure to highlight the operate distinction as reflective of a knowledge about the other domain. In other words, because we like our monoculture more, the stress of the soil is reflected in the diminished quality of vegetation, although we may notice first the diminished quality within ourselves.

Thus, the poverty of our soils knowledge is the poverty of our own organisms, as we attempt to master the earth; for it is not the individual human that struggles against the earth but the earth that struggles with the entire mass of humanity as we collectively shape our planet. Thus, the form of our knowledge as a discrete mathematics, the collective metaphor of set theory spacializes and flips the metaphysics of presence from a substantive position of a classical era in which knowledge was knowledge of material, but rather the formal interrelatinos become the means by which knowledge is generated. Thus our place of observation becomes part of the network of knowledge. In a post-rationalist conception, we understand where we are by where we want to see, intersubjectively, as stated by Vittorio Guidano is also explicated by John Galbraith in economics as a self referential series of groupings which create identity and sublimate actions for group subsistence. Although this post-rational approach developed by Guidano goes beyond economic justification for uber-production as outlined by Galbraith, we can see although with Badiou's set theory that the formalization of knowledge is reflective of classifications and their attendant distinctions. These distinctions formalized as separate chunks that reify dimensions of the context for consideration is reflective not only of how humans understand themselves in larger organizations (family, clan, tribe or seniority, department, branch, corporation or citizen, city, county, state, nation) but also in impersonal relations such as within soil, or in symphony or other unified "fields" of experience. Of course we would study that which we found to be useful to us! And of course our study would be reflective of who we are and what we do.

In this way we can understand the our desire to learn about soils is our desire to relate to the other of us, that is, the matrix from which we come and to which we return, the soil.

Kristi says

Fantastic resource on soils, replete with color photos and helpful analytical data. I need to procure a copy for my permanent book collection... I anticipate it will be very beneficial down the road in any career involving soil science.

Jetlee says

i want read this book
