



City of Mardin, the city made of soil, Turkey. Source: Wikimedia Commons/Nevit Dilmen.

Students and Early Career Members

Soilistic Art: Part 1 – Painting, Ceramics, Pottery, and Architecture

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Editor's note: This is Part 1 of a two-part series brought to you by the ASA, CSSA, and SSSA Early Career Members Committee and the Graduate Student Committee. Part 1 will focus on painting, ceramics, pottery, and architecture as part of Soilistic Art. Part 2 will explore the role of soil in Native American art, cinema, music, and contemporary art.

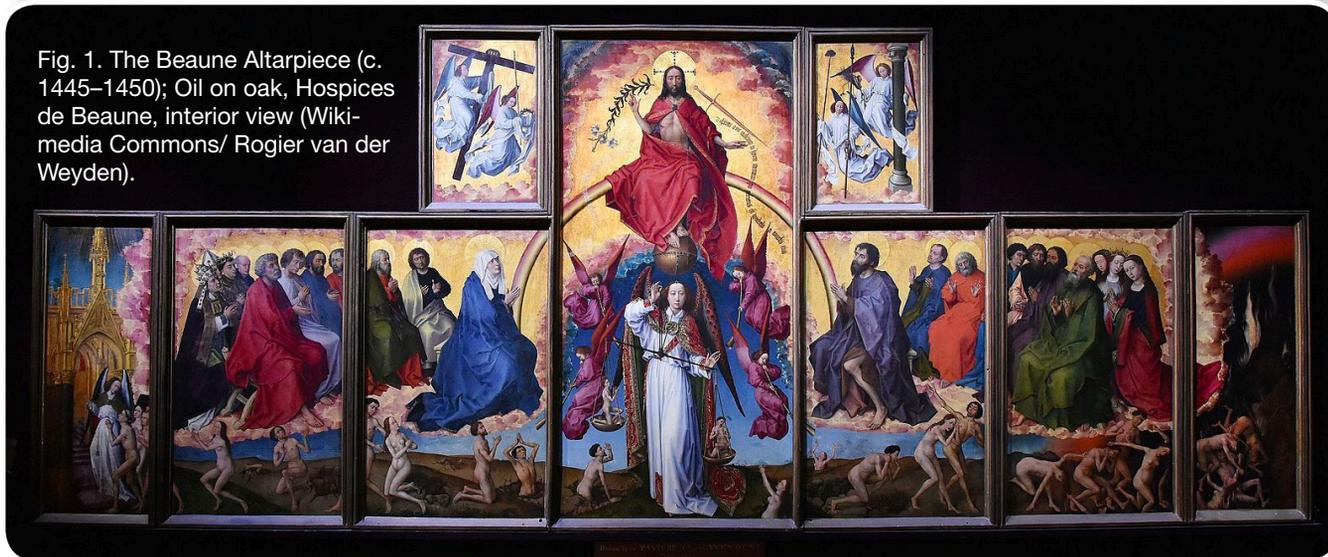
Early career members and graduate students: Are you enthusiastic about soils? Did you know this loved earth material can be used for artistic endeavors as soil-based art, or Soilistic Art? In this article, we would like to introduce some background and findings about the artistic aspect of soil (the role of soils in our life beyond science and agriculture). We highlight the historical roles that

soil has played in art, the importance of soils in recent art developments, and ideas about developing Soilistic Art as a hobby and ideology.

Soil Influences Are Broad

Soil has long been recognized by science for its functions in natural ecosystems such as maintaining biodiversity, regulating climate change, and mitigating pollution. Depending on where and who is looking, soil carries a wealth of various information. Soil scientist Dr. Alfred Hartemink stated recently that “The soil profile speaks to us...tells us stories” (Hartemink, unpublished, 2014). Its unique set of properties arise in a specific soil system surrounded by dif-

Fig. 1. The Beaune Altarpiece (c. 1445–1450); Oil on oak, Hospices de Beaune, interior view (Wikimedia Commons/ Rogier van der Weyden).



ferent environments. Vasilii Dokuchaev in his thesis, “The Russian Chernozem” (1883) (Dokuchaev, 1967), was the first to describe soils as an organized natural body with its own unique genesis and processes. While an engineer, physicist, chemist, or geologist most likely would describe soil as a matrix, neglecting other less tangible properties, soil scientists are obsessed with studying the physical structure, biological forces, chemical reactions, and their interaction within the soil. Soil is never “lifeless and static” in our heart, and artists also seem to know this well.

When subjected to climate change and biological activities, each element (minerals, organic materials, and pores filled with water and air) reacts with another in dynamic processes, creating distinct properties of a soil. Parallel in art, different clay types, for example, have specific properties that are utilized by humans to create exquisite vivid paintings, ceramics, and potteries. Therefore, soils have an artistic dimension that influences humans beyond growing food and serving as a building material. Starting with pre-historic paintings and ceramics, continuing with early Renaissance poetries and sculptures, and more recent developments in music, cinema, architecture, and contemporary art, the role of soil in human societal development is irrefutable (Landa and Feller, 2010; Toland and Wessolek, 2010, 2014), with deep spiritual and ethical connections. Therefore, we aim in this article to focus on the role of soil in art and help reveal the link between the soil and culture.

Soilistic Art

Art is a way of expressing one’s self as a human being. Artists have been able to reveal interconnectivity of soil, life, and culture over multiple civilizations (Feller et al., 2010). Soil has been used historically as a medium such as pigments for murals, ceramics, pottery, mosaics, ebru paintings, and schematic motifs of soil profiles (Feller et al.,

2010) in modern art. Soil has been part of art going back 40,000 years ago as observed in the following art forms: world’s “oldest figurative painting” discovered in a Borneo cave of wild cattle (40,000 years old) (Sample, 2018), pottery from China dated 20,000 BC (<https://en.wikipedia.org/wiki/Pottery>), Gravettian figurines (29,000 to 25,000 BC) (<https://en.wikipedia.org/wiki/Pottery>), mosaic found in a Mesopotamian temple that is as old as the third millennium BC (Richman-Abdou, 2018), and ebru or paper marbling from 1500s (https://en.wikipedia.org/wiki/Paper_marbling). Therefore, soil can act both as a medium and subject of art.

Development of soil color pigments extensively contributed to art. Humans have historically used soil pigments for painting. A creative way of making paints included combining soil particles, animal fat, charcoal, and chalk. This method has been used as far back as 40,000 years ago, which resulted in early colors reflecting red, yellow, brown, black, and grey (Gottesman, 2016). A historical source of yellow color came from the urine of cows that were fed mangos. Later on, yellow ochre from soil pigments were discovered and used to create a greater range of colors (Gottesman, 2016) and much more fascinating works of art. In ancient Greece, ochre was used to paint walls and murals while during the Renaissance, ochre was applied to the fresco technique to paint murals for religious and decorative purposes (Landau, 2019). Red ochre was used in Neolithic times for funeral services and by Egyptians as lip gloss and makeup. Egyptians also used yellow ochre to paint their tombs and pyramids (Butler, 2013). Figure 1 is a historical example of the use of different color combinations where red and yellow ochres were used extensively to contribute such a vivid painting.

Pottery is another example of soil use in art where wet clay is molded into desired shape and then dried and fired in ovens to create hard-wearing and long-lasting objects

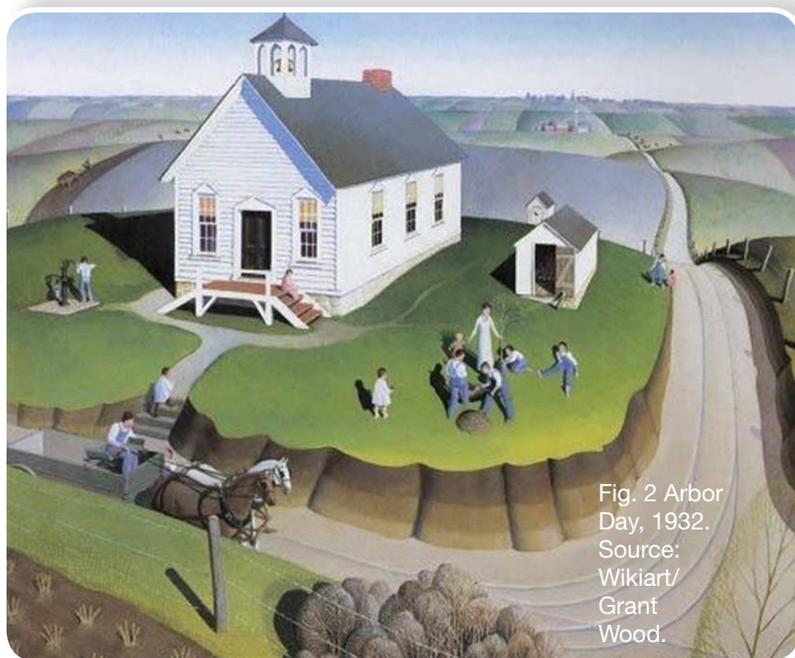


Fig. 2 Arbor Day, 1932. Source: Wikiart/Grant Wood.

(<https://en.wikipedia.org/wiki/Pottery>). Different clays were used to make different pottery types, with water retention properties of clay serving as a critical factor in the process. For instance, clay and potassium phosphate at high temperature resulted in strong clays; a mix of granite, clay, and potassium contributed to high quality ceramics; and pure kaolin and feldspar contributed to high quality porcelain.

Soil has also contributed to architecture, by serving as the main building material in ancient times. Improved building materials, such as fired bricks, led to strong and long-lasting buildings. The city of Mardin (est. 3 AD) in Turkey is an example of the use of the landscape and natural materials to create a gorgeous historical city.

American regionalist art also saw soil being depicted in art forms and reflecting connectedness with the land and the American cultural experience. One of the first examples comes from American landscape painter Grant DeVolson Wood (1891–1942) (Arthur et al., 2000) who was born in Iowa and lived in Nebraska. His famous *Arbor Day* (Fig. 2)

work depicts soil profiles with crisp lines separating the soil horizons. Another well-known American painter was George Washington Carver (Bamberger-Scott, 2019) who was an American botanist, scientist, professor, and inventor who used his own soil pigments to make colors and paintings. More recently, the *Three Sisters in Soil* painting was created by Cornell University scientists and students using paints formulated from soils in celebration of World Soil Day (Kelly, 2017; FAO, 2017).

Dr. Wessolek, a soil physicist and painter, encourages society to reflect on the cultural meaning and value of soil in today's changing environment as well as the use of soil as the foundation for a new art style: "Soil Art" (Wessolek, 2002). We encourage readers to explore this ideology of "Soilistic Art" and use soil as a medium and subject to explore their creative side. It might be as easy as digging a pit in the backyard and transferring soil to a canvas!

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