

The representation of soil in the Western Art: From genesis to pedogenesis

Christian Feller^A, Lydie Chapuis-Lardy^A and Fiorenzo Ugolini^B

^AInstitut de Recherche pour le Développement (IRD), UMR 210 Eco&Sols, SUPAGRO, Bâtiment 12, 2 Place Viala, 34060 Montpellier cedex 1, France.

^BUniversità Degli Studi, Dipartimento di Scienza del Suolo e Nutrizione della Pianta, Piazzale delle Cascine 16, Firenze, Italy.

Abstract

This communication is a chronological short history of Western art (mainly paintings) from Prehistory to the contemporary period through the word “Soil”. The conclusion is that the vision of Soil (in a scientific meaning), as an independent work of art, is recent.

Key Words

Soil, landscape, Western art, paintings.

The websites allowing one to see the artworks are designated as [x] in the text; the links are provided in the references list.

Soil (capitalized) or soil in Art?

It is widely accepted that humans always have considered the natural environment a subject of great interest to art. Early pictorial examples include cave paintings done by Cro-Magnon man during the Upper Palaeolithic, about 30,000-40,000 years ago. However the vision of Soil (in a scientific meaning), as an independent work of art, is recent and still extremely rare in the world of painting. For many years, artists have depicted actual or imaginary landscapes from which the trained eye of a pedologist, agronomist or geographer can recognise a schematic view of what is commonly called soil but not Soil (as a Soil profile). This communication will: (i) show representations of Soil or soil in Western Art from the Palaeolithic to the modern era, and (ii) show some recent artworks where the Soil is considered as the main subject, and has as its goal to present Soil in art from Genesis (the Bible) to Pedogenesis (the scientific approach of the Soil formation, from the Greek word *Pedon* meaning soil) [1, 2].

When soil is depicted by chance in the landscape: the soil as a surface

In the biblical Genesis story of the World creation, the whole of humanity is “soil” as Adam—meaning “soil” in Hebrew—was created from red dust and returned back to it.

To a large extent, representation of soils, as even a single line of soil surface, is neglected in upper-Palaeolithic cave paintings.

The few extremely schematic representations inherited from the Assyrian civilisation (11th to 7th BC) depict natural scenes in which the soil surface is represented by schematic rocks and hillocks, drawn as shaped curves (Parot 1961, p. 40). In Grecian art, very few traces of soil representation have been found, except for frescoes of Aegean art coming from Santorini dating from the 5th century BC (Carli 1980, p. 21). Wall paintings were widespread in the Roman civilisation as decorative art designed in a truly realistic style that would never be seen again until the Early Renaissance. At Pompeii, Nature was represented through flowers and birds, as well as other animals. However, relatively few representations of the landscape stood the test of time (Carli 1980, pp. 12 and 24). They were probably simply lost.

From the Byzantine period of the Early Middle Ages (6th century), many mosaics depicted rocky landscapes. However, between the 5th and 12th century, the representations of soil surface or landscapes are very often strongly schematised with undulating lines or hillocks, as in religious miniatures.

The Florentine painter Giotto (1266-1337) made a decisive break with the static Byzantine style, introducing realism. His paintings of rocky landscapes were among the first that included some perspective. Other Italian painters from the contemporary Giotto’s Sienese school developed a similar naturalistic style: Duccio di Buoninsegna (1260-1318), Simone Martini (1284-1344) and the Lorenzetti Brothers (1280/1285-1348).

During the Renaissance, the soil, as a surface, is generally represented in a highly realistic way, even for

symbolic and/or imaginary landscapes. Such realism sometimes allows one to discern the Soil profile with different colours given to the surface soil and to deep horizons, as, for example, in the works by Hans Memling (1430-1494) of “The Last Judgment”, *circa* 1470 [3] and Hieronymus Bosch with his “St John the Baptist” (*circa* 1500).

When soil is depicted by choice in the landscape: the Soil as a profile

Three reasons motivated the representation of a soil profile: to explain the resurrection of the dead, to display the roots, to show ploughing.

In the “Last Judgment” by Rogier Van der Weyden (1432) the resurrection of dead required the artist to show the Soil profile. The complete painting exhibits numerous such soil profiles.

In the paintings of the Renaissance, the representation of a ditch or a soil cut in a painting served very often as an excuse to picture roots. In the “St John the Baptist” by Hieronymus Bosch (1450-1516) the figure of St John leans towards a sharp vertical exposure of soil which includes a strange large root [4]. A large root also appears in “The Tempest” painted by Giorgione (1477/78-1510) [5] and in “The Fall of Icarus” by Peter Brueghel the Elder (1525-1569), just at right and behind the ploughman. These works were just some examples of paintings in which large forked roots were made evident. The representation of roots was not due to chance, but chosen for its symbolic value and refers the mandragora as suggested by Marjnissen and Ruyffelaere (1987). The perception of mandragora as the subject of superstitions is presented in the “Encyclopédie des Symboles” (1996) through the following comments:

Mandragora is a plant with a high symbolic value, inspiring both fear and fascination. Its forked root which crudely resembles the human form has been credited since ancient times with a divine origin. It is considered as a universal medicine. The mandrake grows only at night, releasing some toxins (hyoscyamin, atropin, scopolamin) with a narcotic effect. For this reason, the root was used by medieval witches to concoct potions, and it played a remarkable role in the occult practices. According to the legend, the root grew only beneath gallows trees as it was believed to be produced from the semen involuntarily ejaculated by a hanged man. It has to be gathered with high caution, and it was said that the mandrake gave forth an extremely piercing and fatal cry. It was uprooted, therefore, by a dog that died immediately after. During Antiquity, the mandrake was considered as one of the attributes of the sorceress Circe. The root was used by the Jews to overcome infertility. In general, mandrake was associated with black and supernatural forces that man would approach with many precautions.

From the 14th and during the 15th century, especially in the “Très Riches Heures” and the “Calendriers” (calendars), we see representations of agricultural tasks and toils. Here, the soil is depicted with a clear concern of realism and technical specificity, including the tilling of the soil. In addition to this example, Peter Brueghel the Elder (1525/30-1569) might be newly cited for “The Fall of Icarus”. Icarus is the tiny figure at the bottom on the right-hand corner, with only his legs visible, while in forefront of the canvas, attention is centered on the good Flemish ploughman tilling furrows. That was the triumph of daily working life over Utopia (“falling from the sky”).

The soil by Hieronymus Bosch and his disciples

The work of Hieronymus Bosch (*circa* 1450-1516) abounds in “earth” and “bare soil” representations as it can be seen in the “The Temptation of St Anthony”. The soil in Bosch’s work was not only represented as a surface, but often either as a Soil profile in a slope cut (see above), or in adobes that are associated with thatched roofs. Here he emphasized the decomposition and decay of the sides of huts, in the same way that plant debris is decomposing on the top of the soil. The whole of Bosch’s work is influenced by “decomposition” and soil depiction contributes to this process. The work of Bosch would deserve an independent study of his “soil”, or “Soil” vision.

As Hieronymus Bosch is said to have been an inspiration for the surrealist movement of the twentieth century, some Surrealists might be considered as his disciples throughout their vision of soil or earth’s uses:

- Salvador Dalí with “Soft Construction with Boiled Beans: Premonition of Civil War” (1936. Oil on canvas. Museum of Art, Philadelphia [6], “The Spectre of Sex-Appeal” (1934. Oil on canvas. Gala-Salvador Dali Foundation, Figueras, Spain [7], or the “Metamorphosis_of_Narcissus” [8];
- Yves Tanguy with the “Extinction of Useless Lights” (“Extinction des lumières inutiles”) by (1927. Oil on canvas);
- Jean Dubuffet with “The Magician” by (1954. Slag and roots, including slag base), both on view at The

Museum of Modern Art, New York [9].

The soil, yesterday and today

Paintings during the 16th, 17th and 18th centuries reached realistic excellence in representing the soil surface that could never be equaled. During this period and until the 20th century, artists have not considered the Soil as a chief subject, not even the Impressionists who have rendered it only as a landscape component.

During the 20th century, the soil surface was well represented in the Land Art movement.

Today, soil is depicted as an object *per se* especially by some naturalists, agronomists, pedologists and others who have developed a substantial artistic talent besides their scientist's profession. Many works of contemporary artists—paintings, sculptures, performances, or art installations—centered on the Soil can be seen at Wessolek's website [1].

Conclusion

Our look at soil or Soil in art confirmed that in Western culture, most artists did not view soil as the complex and subtly beautiful medium that holds the interest of agronomists or pedologists. It was usually only considered as a surface. The below-ground layers were generally not represented, while rocks and other natural objects fascinated artists. However, as underlined by Jenny (1968) in his paper's conclusion:

"Whoever said that soils lack beauty is behind the times. Soil in art has arrived. It is an enrichment of art that is here to stay".

Finally, it is predicted that we will increasingly see more artists and soil scientists interacting at the interface of their expertise and consciousness, to produce images and objects that will capture the attention of audiences. If a successful exhibition on "The Soil" could be hosted by the Grand Palais in Paris, or the Museum of Modern Art in New York, the soil science texts would surely become best-sellers the day after the opening reception!

Never stop dreaming...

Acknowledgments

The authors thank Edward Landa for his assistance in the English language review and editing of this manuscript.

References and websites

- Carli E (1980) Le paysage dans l'art. Traduit de l'italien par M. Orcel. Nathan, Paris, 319 p.
Encyclopédie des Symboles, 1996. Article « Mandragore », p. 392. traduit de l'allemand par F. Périgaut, G. Marie et A. Tondat. Edition française établie sous la direction de M. Cazenave. Librairie Générale Française, Pochothèque, Livre de Poche, 818 p.
Jenny H (1968) The image of soil in landscape art, old and new. In "Study Week on Organic Matter and Soil Fertility", Pontificiae Academiae Scientiarum Scripta Varia 32, pp. 947-979, North Holland Publ. Co and Wiley Interscience Division, Amsterdam, New York.
Marijnissen R H, Ruyfellaere P (1987) Jérôme Bosch. Tout l'oeuvre peint et dessiné. Fonds Mercator. Albin Michel, Paris, Anvers, 513 p.
Parrot A (1961) ASSUR. Univers des Formes, coll. Dirigée par A. Malraux et G. Salles. NRF Gallimard, Paris, 380 p.

[1] <http://www.kunstundboden.de/>

[2] <http://www.alfredhartemink.nl/various.htm>

[3] [http://en.wikipedia.org/wiki/The_Last_Judgment_\(Memling\)](http://en.wikipedia.org/wiki/The_Last_Judgment_(Memling))

[4] http://en.wikipedia.org/wiki/St._John_the_Baptist_in_the_Wilderness

[5] [http://en.wikipedia.org/wiki/The_Tempest_\(painting\)](http://en.wikipedia.org/wiki/The_Tempest_(painting))

[6] <http://www.philamuseum.org/collections/permanent/51315.html>

[7] <http://www.salvador-dali.org/eng/cat1104-2/finici.htm>

[8] http://upload.wikimedia.org/wikipedia/en/2/21/Metamorphosis_of_Narcissus.jpg

[9] <http://www.moma.org/collection>