



The discovery of special entities allowing to authenticate the extension of nature in knowledge—thereby deserving the name of ‘natural science’—also allow the same extension to be demonstrable: that is, used not only to convince but to *involve* a community of peers. This is a *research hypothesis*.

But it is also a proposition that may serve to coin the romantic *episteme*. In the romantic era, professional relationships were also intellectual friendships. Though historically salient (cf, the Physiographic society) this feature—linking up trans-disciplinary communities—can be readily overlooked.

If scientific records include both experiment and narrative it was based on an idea that mediation could be scaled to what was found in research (cf, Alexander von Humboldt’s *Kosmos*) and extend nature as the scale of the human life-form. That is, to establish nature as the measure of all things.



From a scientific point of view, the romantic era emerges as an environmental adventure. From the tremendous work of Alexander von Humboldt grew a trail of fieldwork based research, in a sense of the field that became obsessed with two, seemingly paradoxical, knowledge orientations.

On the sciences based on field observations, that branched out from natural history in the romantic era, were obsessed by: **a)** measurements; and **b)** the dependency between non-same elements in nature. This is but one aspect of what is above coined an environmental adventure. It is out of context.

The trajectory of the romantic scientists was the historical background where measurements were extensions of the monarchy—literally, *le pied du roi*, was the king's foot—quantifying the royal claims to the land, as it was broken down to taxes that often were collected in kind, before the cash era.

It was the child of the feudal system in which the lands were first claimed by the lord, to be distributed or managed through an act of magnanimity. When the monarchies were receding—from the French Revolution (1789) throughout the 19th century—measurements were claimed for a different purpose.

The purposes of knowledge. Humanity could open its senses for a new world to be discovered, free of royal oppression. At the difference with the previous systems, the metric system was a planetary measurement: referred to the length of the equator, the distance to the sun and to the moon.

In that sense, it was a measurement system scaled by nature. Though the metric system stiffened in the hands of global trade and industry, establishing nature as the new scale was the intrinsic objective of the romantic scientists. Ideas that came back later with complexity and fractal geometry.

That is, the idea that nature itself was dimensional—constituting the scale of measurement—rather than simply being subject to measurements. Here the connections to the artistic understanding of nature would seem obvious, and the point is made by D.C. Christensen in the book *Krydsfelt* (2000).

Though the science of complexity and fractal geometry marked a renewal of the intimacy between empirical science and mathematics, the principle of self-similarity is basically the same as nature constituting its own scale of measurement, featuring the link between *discovery* and *demonstration*.

Basically, that the connection between record and replay is implicitly based on the notion of self-similarity: that is, not the idea of preservation through storage, but one of continuation. Here media are not extensions of the human body, but are extensions of the natural phenomena. A big difference.

It is similar to the turn from the body of the king—as the scale of measure—to nature as that scale: but turned to the aspects that relate to mediation. For instance, in our time, the use of computers. In complexity science computers are used for extending nature. But can this use be authenticated?