

Editorial by Giorgio Careri

Artists and Scientists: Open and Hidden Connections

In this text I inquire into the existence of an essential connection between art and science. I believe that this connection can be found not between these two fields, different and self-consistent as they are, but among scholars motivated by a common desire: to detect a world beyond appearances, a world to be achieved by solitary effort. This opinion can be supported by testimonials from major authors in both fields and by the experience of our life. It seems unlikely that this opinion can be shared by those who have not had the scholar's experience, or even by authors driven by different motivations [1].

It is a current commonplace to say that reproducible events require scientific treatment, while impressions and emotions suggest artistic imaginations. This viewpoint ignores desires and considers scientific work to be objective knowledge and artistic work, subjective intuition. Instead, it is possible to detect this desire in the active life of certain major artists and scientists. Let us start by comparing the work processes of physicists and painters and proceed to a generalization.

If we look at a modern painter's studio and a physicist's laboratory, we can easily detect several analogies between the activities within each. Both authors perceive a limited whole of signs, such as colors or data, and find correlations between the ratios of these signs, like a reader who tries to understand an obscure text by reading it several times and making expected conjectures. However, in a studio or a laboratory, both authors are able to change their signs by trying and trying again, searching for detectable correlations [2]. Aside from this activity, there is an emotional impact of the signs on the author that drives him or her toward a goal by focusing the attention on the meaningful correlation. Then what is being looked for is recognized to have been already "there" [3], not as an increase in knowledge but as a feeling of its presence.

This "there" seems to be a desired world. This experience is seldom a sudden fulguration and is often a progressive ripening. Of course this experience can easily be generalized to every search for unseen worlds in visible signs, such as in natural sciences and visual arts.

I believe that in this creative encounter in the working process, between a deep but vague desire of the author and a complexity of the potentially ordered material, is to be found the essential connection between artists and scientists, and other scholars as well. The life of every scholar is the story of these difficult encounters. Every devoted author is in a state of attention toward that which he does not know in advance, but hopes to identify as an inward-bound unity, exhibiting even uniqueness [4]. Thus, this desire is the origin of growing knowledge, grounded on fragments but free from the temporality of experience, a ripe knowledge reached in the process of working. Of course this process must not be confused with that of expressing a piece of work in the appropriate language, where science and art clearly diverge.

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References and Notes

1. The opinion outlined in this paragraph is grounded on the address by Einstein on occasion of Max Plank's 60th birthday in 1918, reprinted in A. Einstein, *Essays on Science* (New York: Philosophical Library, 1934) p. 2: "Man tries to some extent to substitute his cosmos for the world of experience, and thus to overcome it ... and make this cosmos the emotional pivot of his emotional life."
2. See G. Careri, "Physicists and Painters: The Similar Search for Meaning," *Leonardo* 22, No. 1, 113-115 (1989); G. Careri, "Discovering by Perceiving in Art and in Science," *Leonardo* 27, No. 3, 181-182 (1994).
3. J.L. Borges, *Conferances (Siete Noches)* (Paris: Gallimard, 1980) p. 96.
4. S. Beckett, *Proust* (London: Calder Boyars, 1985) p. 22: "Enchantments of reality have the air of a paradox. But when the object is perceived particular and as unique and not merely the member of a family, when it appears independently of any general notion and detached from a sanity of a cause, isolated and inexplicable, then and then only may it be a source of enchantment."