

*A word will suddenly reverberate in us and find too lingering an echo in cherished, old ideas; an image will light up and persuade us outright, abruptly, and all at once. In reality, a serious, weighty word, a key word, only carries everyday conviction, conviction that stems more from the linguistic past or from the naivety of primary images than from objective truth...All description nucleates in this way and collects about centres that are too bright. Unconscious thought gathers around these centres—these nuclei—and thus the mind is introverted and immobilised.* –Gaston Bachelard, *Formation of the Scientific Mind*

In this work Bachelard theorizes a pedagogical psychoanalysis that will attempt to reinstate the sense of the problem in science and remove any unconscious valorizations that occur through the development of scientific knowledge. The sense of the problem is at the forefront of Bachelard's project because he believes that all knowledge must be an answer to a question (24-25). Moreover, the conservative instinct takes a stunting grip on science insofar as it becomes self-satisfied with the solutions it has already established. These solutions are the same platitudes that teachers and textbooks command us to memorize. A psychoanalysis of the scientific mind is called upon when epistemological obstacles encrust knowledge that is not questioned.

In fact, this is Bachelard's main thesis: knowledge becomes overcoded with affective images that reduce the efficacy of thought by burdening it with so many coefficients of values. This instructs us on a difference between the historian of science and the epistemologist: the former considers the errors of a previous mode of thought to still constitute facts insofar as they entail *real* investments and beliefs. The latter, however, proceeds to link facts to a system of ideas that can show how these errors harbor a specific power of the problematic insofar as they represent *counter-thoughts*. Thus Bachelard believes that truly scientific knowledge always mobilizes its forces *against* previous knowledge.

We recognize this pseudo-knowledge in the guise of the pre-scientific mind. It has a tendency to valorize immediate satisfaction in the curiosity that its simple experiments evoke. In fact, Bachelard criticizes seventeenth-century empiricists for constantly erasing the theoretical connections that lead them to the productive experiments that they construct. The pre-scientific mind does this in order to highlight the astonishment that accompanies the advancement of science in general. This leads it to substitute and emphasize images to the detriment of ideas thereby removing the sense of the problem from science. Moreover, pre-scientific thought seeks variety and not variation—the former hinders concepts from being adequately employed in a systematic nature, while the latter enriches the comprehension of the concept through mathematical experimentation.

Deleuze definitely inherits a philosophical impulse from Bachelard. They both stress the importance of the sense of the problem and the fact that questions deserve the answers that follow due to the clarity and comprehensibility of the question itself (52). They also both fight tirelessly against the images, analogies and metaphors that only serve to obscure the thoughts with which they are associated. And it is insofar that unconscious thought gravitates around these images and lodges itself there that we need a psychoanalysis of reason that can exorcise this unconscious by reviving the ability to pose adequate problems. Bachelard calls the coefficients that superimpose values on thought *affective stereotypes*. Thus, the unconscious values that impede the function of thought are affective stereotypes because they constitute a pretension to

knowledge that has not reached the stage of self-criticism. It is up to this different breed of psychoanalysis to disrupt the 'values in themselves' that inevitably intermix themselves in the energy that is transformed into scientific endeavors (for we should remember that science is never fully removed from the culture through which investments of desire *flow*).

–Taylor Adkins

(c) Fractal Ontology, 2007