

## Perception as the solution of an inverse problem

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Visual perception is achieved via the deconstruction of a given percept followed by its reconstruction. I will refer to the *unconscious reconstruction* of the percept as its mental representation. About a third of a second after an unconscious reconstruction, *the brain informs itself of what the brain already knows*. Namely, the unconscious informs consciousness of the given percept. At this moment, the first 'big bang' takes place: *awareness*. I will refer to the *conscious construction* of the percept as its mental image. The generalization of this process gives rise to the hypothesis that: *every conscious experience is preceded by an unconscious process*. It is argued that in addition to the appreciation of the fact that *unconscious and conscious processes form a continuum*, the following notions are *indispensable for the comprehension of our thoughts, feeling and actions, and more generally for the search for the hidden reality*:

The notions of *continuity*, of *associations*, of *interconnectedness*, of *analogical thinking*, of *abstraction*, of *generalization*, as well as the dialectic pairs of *reduction versus unification*, *simplicity versus complexity*, and *local versus global processes*. Paintings of Wassily Kandinsky are used to illustrate the last two pairs.



### WAYS OF COMPREHENDING

The Continuum of Unconscious and Conscious Processes:

- Analogical Thinking
- Generalisation
- Abstraction
- Unification versus Reduction
- Local versus Global Processes
- Simplicity versus Complexity.