

# Foundations of physics and phenomenological reduction.

Образец подзаголовка

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# Two kinds of criticism

- 1) C!

- **.1) CRITICISM OF THE RIVAL THEORY, CRITICISM WHICH RESULTED FROM COMPETITIONS OF THE THEORIES**

- **2) CRITICIM TO IMPROVE THE THEORY, to make its**

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# Stereotypes

- The second type of criticism is connected with the struggle against stereotypes (idols) which beset our mind.

# Husserl E. Phenomenological reduction

- This criticism is close to what Edmund Husserl calls the **phenomenological reduction**. The phenomenological reduction means bracketing (or clothing in inverted commas) of current beliefs or notions. This means that we suspend these beliefs and notions to analyze and clarify them.

# P.A.M. Dirac "Principles"

- In his 1930 classic he distinguished the symbolic method which is concerned with fundamental quantities of the theory (invariants and

# Hilbert space

- A Hilbert space is an abstract vector space possessing the structure of an inner product that allows length and angle to be measured. Hilbert spaces are complete: there are enough limits in the space to allow the techniques of calculus to be used. In the mathematically rigorous formulation of quantum mechanics, the possible states (more precisely, the pure states) of a quantum mechanical system are represented by unit vectors (called state vectors) residing in a complex separable Hilbert space, known as the state space.

# Quantum logic

- Lattice is a partially ordered set in which every two elements have an unique supremum (also called a least upper bound or join) and an unique infimum (also called a greatest lower bound or meet).
- Distributive lattice:
- $a \vee (b \wedge c) = (a \vee b) \wedge (a \vee c)$

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