
Sangam

lingering Vedantic legacy linking "the empirical" with the transcendental. The Śūnya though sounds negative is absolutely positive and its knowledge the foundation of all systems of knowledge.

The relation between "Religion", "Philosophy" and "Science" had not been so in all ages and cultures.

What is foundationalism? makes sense only under the supposition that the concerned knowledge is bottom-up - inductive in character. Many now - particularly the mathematician now talk of top-down - deductive - reductionistic way. This cannot be established by test processes - and cannot be elevated to the level of ~~truth~~ definitive truth. The issues which are dealt with under the rubric of foundationalism itself cannot be self-evident or intuitive. This ~~is~~ unquestionable intuitionism has been questioned. Bottom-up inductive strategies are open to criticism.

The Choices - { God certified certainity.
intuitive self-evidentialism.
Conventionalism - deductive, inductive, probabilistic

{Lokāchār, Deśāchār} are our global acceptance.
Correspondence, Coherence.

Problem of foundationism addressed by scientists like Einstein, Heisenberg, Dirac, Pauli -
Verificationalism, falsificationalism - testability, refutability -
basic statements not foundational - decline of logical positivism

Is Metaphysics (first philosophy) foundation of physics?
rejected because not verifiable or falsifiable.
Heisenberg's Uncertainty principle.
Probabilistic laws in QM.
Mathematical Foundation of QM.
Failure to unify QM field interpretation and Uncertainty interpretation.

"Foundation of Scientific knowledge is yet to be found in a ~~&~~ very ~~Cunning~~ Convincing manner"

Popper's metaphor. (page 14)

Foundationalism in Mathematics —
problem of Consistency
infinite Sets are they Coherent Concept. — Bertrand Russell's
deriving mathematics from logic — Leibniz.
"Numbers an invention from pure laws of thought" Dedekind. (1831 - 1916)

intuitionism — Dedekind and Frege.
Logicism —
Russel — All mathematics symbolic Logic.
Mathematical Laws must also be true physically
and derivable from logical principles

Russel and Whitehead System of logic Criticised by Poincare,
Herman Weyl and Carl Hempel

"The Splendid Certainty both which I had always hoped to find in mathematics was lost in a bewildering haze..."

Four years after that Heisenberg did in physics it seems Godel did in mathematics
"Certainity in mathematics did not and could not exist"

Intuitionism – Descartes definition.
Pascal's faith.

Kant: "Mathematics is a supreme example of how human knowledge can arise and progress independently of experience"

Brouwer: Intuition itself ensures soundness of and ~~otess~~ acceptibility of mathematics
| rejected the Law of Excluded Middle.

Formalist approach to Math: Hilbert. Set theory.
Cantor – the basis of mathematics – metaphysical.

"Mathematics need not be taken as shrine of absolute certainty"
Imre Lakatos.

* It is indeed very difficult to draw unambiguous conclusions on the subject of foundations of Sciences because of the huge range of activities that have become part of this fast growing area of knowledge and the diversity of opinions that are held on many of the issues. Nevertheless, I have made an effort that it may be stated as follows:

* It is indeed very difficult to draw unambiguous definitive they conclusions regarding the foundations of Sciences since it has developed into multifarious branches at different times and in different contexts. There are strong interconnections between them some obvious and some subtle and hidden. Also Science is different from other branches of knowledge it in that the foundations can change or even collapse and new foundations laid. The following conclusions are indicative of the complexity of the field. Some of the conclusions may be said to be firm and some tentative