

Gödel's Devastating Machinery

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Abstract: In the last journal it was shown how the EPR paradox could be mirrored in the relativity theory. This created the following dichotomy: Either (1) The result of an acceleration performed at one part **A** by an object has a not local effect on the physical reality of a distant object at part **B**, in the sense that the relativity theory can predict outcomes of this not local effect acting on **B**, or (2) The relativity theory is not complete in the sense that some element of the physical reality corresponding to **B** cannot be accounted for by the relativity theory (that is, some extra variable is needed to account for it). <http://www.sciencepub.org/american/0302/06-0252-KeesBeukering-Einstein.doc>. A solution of the mirrored EPR paradox will be given in this article. [The Journal of American Science. 2007;3(3):47-48]. (ISSN: 1545-1003).

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The mirrored EPR paradox can be solved with the aid of [Gödel's incompleteness theorem](#). Kurt Gödel proved his incompleteness theorem for a particular logical system, but already commented in the introduction to his proof that it could be used for almost any logical system. Gödel's incompleteness theorem shows that within a logical system, there exist certain clear-cut statements that can neither be proved nor disproved. The truth of such a statement reveals the incompleteness of the logical system and is often referred to as "the Gödel sentence" for this logical system.

The relativity theory can also be seen as a logical system which is "embedded" in the Universe. One can try to understand the Universe in terms of relative truths that are described by the relativity theory, but this will always lead to a non-complete understanding, non-complete meaning neither complete nor incomplete. In order to realise absolute truths of the Universe one needs to apply Gödel's incompleteness theorem to the relativity theory. This can be done by constructing a Gödel sentence that will reveal a truth which can only be realised from a universal point of view.

The Gödel sentence for the relativity theory is, "[The Principle of local action](#) acts unlocally". The relativity theory can neither prove nor disprove this statement, because the truth of this statement is undefinable within the relativity theory. The Universe must therefore appeal to higher principles than the rules and axioms of the relativity theory. It can now be realised that from a universal point of view there exists a truth called non-locality, meaning neither local nor unlocal. This non-locality is of course the same kind as the [nonlocality](#) revealed by quantum mechanics.

The mirrored EPR paradox observes the relativity theory from a universal point of view and reveals a non-local effect created by a homogeneous gravitational field. This non-local effect is only realised if one possesses a "birds-eye view" or in this case a "universal-eye view" while zapping between different coordinate systems and is underivable from the axioms and rules of the relativity theory. The dichotomy created by the mirrored EPR paradox is thus based on a point of view which is untouchable for the relativity theory and therefore leaves the dichotomy unanswered. Only from a universal point of view can the appearance of this non-local effect be acknowledged. One can now realise that this non-local effect is a consequence of a universal truth called non-locality, which can be revealed by applying the incompleteness theorem to the relativity theory. The relativity theory itself gives in this respect a non-complete understanding of the Universe, while non-locality being a universal truth.

The Gödel sentence given here is not the only one. There are more Gödel sentences for the relativity theory, each one revealing a universal truth and solving its particular paradox. Examples that have already been pointed out are, "simultaneous occurrences occur unsimultaneously" revealing non-simultaneity and "coordinate systems coordinate unsystematically" revealing non-systematisation also known as non-aether.

It will be left as a challenge for the "seekers of truth" to find more Gödel sentences in order to reveal more universal truths.

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