Wiles has not proven the Fermat's Last Theorem

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Demonstrated in an alternative way, that the Theorems of Gödel are true, and hold not only for some special mathematical problems but in general (for any kind of statement in any kind of system/situation). As applications: Hilbert's Second Problem Solved. Agnosticism is solved. The burden of Disproof is given to atheists. Andrew Wiles's proof of Fermat's Last Theorem (which is a hypothesis) uses unproven hypothesis-es of set theory (not the axioms of set theory), thus, the proof is debunked.

Introduction

A good video of the introduction is in Ref.[1], I am adding the following to it.
In our Scientific experience, we often see, that some theorems or conjectures/hypothesis-es have more ways of proving than others. Hereby theorems with an unlimited number of non-equivalent proofs are not seen yet. For example, there are several ways to prove the Pythagorean Theorem, but only one way to prove Fermat's Last theorem.
Therefore, there must be a chance, that for some hypothesis there has and will have only zero proofs. Yes, the Riemann Hypothesis in 2020AD has zero proofs, and there is a chance, that during an unlimited time, it will still have zero proofs. That is believed in 2020AD as being trivially true because there is no automatic way of finding proof. But before Dr. Gödel's contribution it was believed that given infinite research time any true statement will be proven. But came Gödel and made a revolution in our understanding of mathematics. I am spreading this revolution to any methodology, to any paradigm, to any field.

My Proof of the First Incompleteness theorem

Suppose Dr. Gödel is wrong. In such a case there is a certainty to find [given unlimited research time and resources] the first way to prove a true hypothesis. After that somebody will look for the second way to prove the hypothesis like there are some people today, who look for "simpler proof" of the Fermat's Last Theorem: Ref.[2]. But because the number of ways to prove something is limited (footnote [3]), then the chances to find the second proof of the true hypothesis is less than certain. But because the second way of proving the true hypothesis could have been found first instead of the second (it means, the order of finding the proofs is not crucial for my proof), then it is wrong to assign to every first proof the perfect certainty. Therefore, Dr. Gödel must be right.

Topic of Axioms

An axiom is defined in its historic origin as an undecidable thing, but which is obvious and natural and, thus, comes even to skeptic's mind with no doubt, e.g., „I think, therefore I am" (Descartes).
There is at least one historic case [4], that a hypothesis, which was a long time being tested to be true (tested numerically), became one day wrong.
From this one can conclude, what even if the Riemann Hypothesis is undecidable (can neither be proven nor disproven), it can not be called a new axiom. However, the idea to add the Riemann Hypothesis as an axiom is considered in Ref.[5]. Thus, the number of axioms in any theory stays limited: the undecidable things are not added as axioms [in my vision of Science], but rather they remain hypothesis-es, which can serve us as assumptions.

Proof of the Second Incompleteness Theorem

The set of axioms produces statements. Some are decidable, some are undecidable. To prove in full range the consistency of mathematics is to prove the validity of all statements, including undecidable ones. Latter to do is impossible by definition. Thus, it is not possible to prove, that mathematics is consistent.
Another way to prove the Gödel's Second Theorem:
1. Axioms are defined as undecidable things.
2. Such things are true.
3. Thus, axioms are true, and, thus, the set of axioms are without self-contradiction, i.e. consistent.
Thus, a consistent set of axioms can not be proven.
The axioms are defined not as assumptions, but as undecidable but obvious things. Indeed, some axioms can be logically demonstrated [thus, gaining the status of theorems or facts].

Proof of the Euclid's fifth postulate

From the proper definition of parallel lines follows, that at least one parallel line can cross a point near some other line. Moreover, the definition shows, that such a line is one.
Proof of A+B=B+A axiom follows from the definition of the sum. Proof of A=B, B=A axiom follows from the definition of equality (=).
One can prove the **postulates of the Theory of Relativity**. The central postulate of the Theory of Relativity is the equivalence principle. It can be proven the following way: take one ball of 1 gram and drop it down. It reaches the ground at the same time as a falling group of two such balls (or more identical balls). Varying the size of the balls, their number, and distance between the balls, one

comes to the conclusion, that falling (along the line of different spacetime curvature) is independent of mass, size, shape, and density of the object. Thus, it logically proves the equivalence principle: „physics in the small falling laboratory is independent of the spacetime curvature.“ But others are looking for experimental debunking of Theory of Relativity: Ref.[6].

The solution to Hilbert's Second Problem

1. If an arbitrary statement is undecidable, then it is true. Indeed, if a statement is false then sooner or later a counter-example will be found (at least in numerical search).
2. The statement "mathematics is consistent" is either undecidable (thus, true) or false (due to the second theorem).
3. If the set of axioms is inconsistent, then any statement (which uses axioms) is false, because one or more of used axioms is false. Any false statement is decidable. Thus, the undecidable statements are possible only for a consistent set of axioms. I remember, that something in mathematics was proven to be undecidable: Ref.[7]. Any undecidable statement is true. Thus, mathematics is consistent.

Application to Agnosticism

1. There is only one person Dmitri Martila. It is a unique name. It is the definition of me.

2. God is the name of God. It is the perfect definition. One can google about who is God. But there is a problem: many imposters have stollen the name of God. They are idols. Please separate idols from God. Simply follow your heart: do you think, that the God is Atheistic Nothing, or is He something? Because He has name, then He is a person; thus, Atheism is wrong. Then what do you feel in your heart, is He loving person or not? Because He is better in Love than any other person, then He must be Omnipresent and Omniscient.

If one can neither prove nor disprove God, then God exists. The statement "God does not exist" is not complete. The full meaning of the statement is: "God, who exists according to the source/definition, does not exist", because atheism is defined as blaspheme. Therefore, it is enough to consider the statement "God exists" to prove Him. The atheists say, that they make no claims, therefore the „God does not exist“ has no meaning. The original statement is "God exists", without it there were be no opposite statement. Thus, it is enough to prove the original statement. And if a god is false, then he can be disproven by finding inconsistency or unsolvable paradox (in nature or him); like the

Fermi paradox is the conflict between the sterile cosmos and the atheistic depiction of the God.

Application to Gnostic Atheism

The fact to accept: if one can neither prove nor disprove God, then God exists. Hereby because Gnostic Atheists hope for absence God, then God could be disproven. Because God could be disproven, then it is wrong to assign Burden of Disproof exclusively to theists. In such a case the atheists must accept, that God satisfies Popper's Falsifiability criterion, thus the God is scientific.

Application to Fermat's Last Theorem

Colin McLarty: „This paper explores the set-theoretic assumptions used in the currently published proof of Fermat's Last Theorem, how these assumptions figure in the methods Wiles uses, and the currently known prospects for a proof using weaker assumptions… Fermat's Theorem talks about numbers, so it should be possible to prove it just talking about numbers." [2]. Such assumptions are not axioms, because they are not obvious things. Secondly, the Proof of Fermat's Theorem is outside the axioms of algebra, because it supposed to use axioms of the set theory. Therefore, within the algebra the Fermat's theorem is still neither proven, nor disproven. It is a strong candidate then for an undecidable statement of algebra [therefore the Hilbert's Second Problem, which is talking about algebra axioms, is becoming solved through my arguments above]. Conclusion: Fermat's Hypothesis was proven by another hypothesis-es („assumptions"), thus there is no proof of Fermat's statement even in the set theory.

Discussion

A fact from Scientific Research is the following: „It is very well known that there are complete consistent formal systems, for example the Tarski axioms for geometry (which are also decidable). There is even a cute algorithm that applies to the Tarski axiomatic system that decides (with certainty) whether a particular statement is true or false. Finally, it would seem that according to the original papers of Dr. Gödel, the Tarski axioms can not be a consistent set of axioms. However, the Tarski system is not strong enough to model natural numbers, therefore it is not subject to Gödel's Theorems."

The situation is different from my paper first hand by the absence (in Tarski case) of non-equivalent ways of proving true statements: the single way of proving has proved all true statements; and in contrast to Tarski I am defining axioms as undecidable true things. If there is a way to turn proof A into proof B, then the proofs A and B are equivalent. Moreover, all statements have one common proof. That is not the case I am considering.

References

[1] Gödel's Incompleteness Theorem – Numberphile, 2017. https://youtu.be/O4ndIDcDSGc
[2] Colin McLarty, What Does it Take to Prove Fermat's Last Theorem? Grothendieck and the Logic of Number Theory, Bulletin of Symbolic Logic 16 (3), 359-377 (2010) https://doi.org/10.2178/bsl/1286284558
[3] Surely, one can imagine infinite non-equivalent ways to prove the Pythagorean theorem during the infinite long development of science; but, there is a possibility, that there are or will be some theorems or hypothesis-es, which will never have infinite many proofs.
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[5] Chaitin G.J., Thoughts on the Riemann hypothesis, 2003, arXiv:math/0306042
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[7] Rado T., On Non-Computable Functions, Bell System Technical J. 41, 877-884 (1962), e.g. Busy beaver function; Kurtz, Stuart A.; Simon, Janos, The Undecidability of the Generalized Collatz Problem, Proc. 4th Intern. Conf. on Theory and Appl. of Models of Computation, TAMC 2007, Shanghai, May 2007; Wikipedia: Undecidable problem; there are several problems in ZFC known to be undecidable, the continuum hypothesis and the axiom of choice, for example. Hilbert's tenth problem is an example of very concrete principle limits of mathematics.