

$$P \iff \neg P$$

Ayman Timjicht

August 18, 2024

1 Introduction

The main reason for all my research was a discussion between me and Professor Salim Al Bazzi. I asked him for an explanation of Gödel's theorem, which proves that provable and true are limited for any axiomatic system. He then asked me to conduct research after my graduation, and I agreed. Before the year ended, he asked if I could write something and send it to him. That's exactly what I did. After the year ended, I went to AbacallCenter for my first internship. At the end of the internship in 13 sept 2021, I wrote an email to him latex corrected by AI to be adaptable: 'Nous pouvons considérer un système d'axiomes comme un ensemble de propositions supposées vraies.

Un système d'axiomes \iff {Proposition P supposée vraie}

S'il existe $P \iff \neg P$, alors le système d'axiomes est incomplet. Si nous prenons P comme un axiome, le système ne sera pas incohérent puisque P est indémontrable. Ainsi, le système est incomplet, mais il contiendra des propositions et des raisonnements supplémentaires. Si nous ajoutons au système d'axiomes les axiomes de Peano et les propositions où P est choisi par l'algorithme de Gödel, alors P est vrai en tant qu'axiome, et nous serons capables d'avoir un avis déterministe sur toute proposition P .

Soit P une proposition. Si P est démontrable, alors P est déterminé par le système d'axiomes composé par les axiomes de Peano et l'axiome retiré par l'algorithme de Gödel. Si P est indéterminé par le système d'axiomes, montrons que $\neg P$ est également indéterminé. Si $\neg P$ est vrai, alors P est faux, ce qui est absurde. Ainsi, P est indéterminé, de même que $\neg P$ est faux. Par conséquent, $\neg P$ est aussi indéterminé.

Si $P \neq \neg P$, alors la valeur de vérité est différente, ce qui est faux car P est indéterminé, de même que $\neg P$. Ainsi, $P \iff \neg P$. Si nous supposons P comme un axiome, alors le système d'axiomes n'est pas incomplet et détermine P .

Un ensemble qui se contient lui-même est une proposition fausse. Si nous postulons que les éléments des ensembles x appartiennent à E , nous pouvons différencier les éléments des ensembles. Soit $A(E)$ une fonction de E vers N . Pour chaque ensemble E , elle donne le nombre maximum d'ensembles imbriqués. Si E contient E , alors $A(E) = A(E) + 1$.

En arithmétique de Peano, cela conduit à $A(E) = S(A(E))$, ce qui touche à l'arithmétique de Peano.' but the meaning remains clear, and this is the explanation

2 A simpler explication

As a general mathematical rule, we know that a contradiction is false. Let x be an axiom system and P be a proposition. The statement $\forall x \forall P, P \iff \neg P$ is false.

If P is a proposition in the system or is implied by the system, we can find a decision for $\forall P$. Thus, coherence is the key to finding a decision for all propositions.

We can then add any proposition to the system of axioms, provided it is coherent, in order to have more decisions. We can adjust the system to be true if P and $\neg P$ are new propositions.

Finally, I gave an example: a group that contains itself is a contradiction. I introduced a function $A(E)$ from E (the group) to N . If E is stable, we should have a number, but since the group contains itself, we have $A(E) = A(E) + 1$, which leads to $A(E) = S(A(E))$ in Peano axioms.

3 Next year after the publication

A professor of network security, Mr. OUROUSS Abdelali, said in class, "you don't use a signature, and your email is lost." To emphasize his point, he added, "you use a function, you can say the degree of E is infinite, and it's gone." I found myself in a difficult situation, and then I came across a report on the Collatz conjecture regarding the disappearance of work related to it. I spent more than two months searching for a solution, which is unusual for me to spend such a long time on a mathematical problem.

To be sure of my findings, I contacted a professor who is an old friend of my family. This time it was a physics professor. He told me that my work was great, but it was not his specialty, so he redirected me to Mr. Lahcen Taoufiq in February 2022. In the next year I went to Mustapha Machkour for an algorithm optimized but I was in a really weird situation after internship of EST. After that, I published all those articles.

4 Conclusion

Not always does the bad win.

5 References

[Gödel Theorem](#)

[Peano axioms](#)

[ZFC](#)