SAMUEL E. NAVARRO

# GÖDEL AND THE INCOMPLETE PROOF

## Conversations on Truth, Mystery, and the Answers Beyond Reason

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## PREFACE

# THE INCOMPLETE PROOF

*Certainty is the comfort of those unwilling to think.*

—SAMUEL E. NAVARRO

I've been wanting to write this book for years.

Not because I have the answers but because I've never been able to stop asking the questions.

These are the kind of questions that most people outgrow—or bury. The kind that show up late at night when the noise dies down. The ones that tug at the edges of logic and make you feel like a child again.

What is truth? Why does beauty pierce us? Is meaning something we invent—or something we uncover? Can reason ever explain love?

I've always found myself drawn to the thresholds—the places where knowledge ends and wonder begins. Where the map runs

out. Where a model or a number no longer explains what's in front of you. Where the mind must kneel just to keep going.

It began not with Gödel but with a sense—a quiet but growing sense—that the world didn't work the way we were told. That behind the systems we build, the numbers we trust, and the truths we defend, there is silence. Not the silence of ignorance but the silence of something deeper: mystery. That we require more than what is provable yet knowable.

I studied engineering at the University of Texas at Austin, then went to Stanford University for graduate school. I did not finish my PhD, as I preferred to go into practice. I spent years designing structures meant to withstand earthquakes—elegant models bound by physical law, exact equations, and certainty—old-fashioned computational logic. Eventually, I moved to the East Coast, earning an MBA at the Wharton School and entering the machinery of New York City Wall Street. On to investment analysis, then investment banking. Then, on to hedge fund investment management and, eventually, a deep desire to step aside and think.

After five months of voracious reading and self-examination, a tempting offer to reengage Wall Street with a deeper and nonconformist approach followed. Not satisfied—and now better able to discern and withstand the pressures of groupthink—I decided to go on my own. Independence and controlling my own professional destiny ranked much higher than just money. I started a mergers and acquisitions boutique to pursue the dual goals of financial gains with a high degree of freedom to do what I wanted.

Over the years, I have seen and experienced the imprecision of markets and the madness of crowds. I saw how knowledge is traded like currency and how quickly consensus is confused with truth. I saw the shallowness of the masses' race to nowhere.

Through it all, I kept asking the oldest question of a rational mind: Why do we believe what we believe? Can we prove what we believe? This is old-fashioned epistemology. In my spare time, I delved into the history of philosophy, theology, doctrine, and practical logic.

I realized most people don't have the time or don't care to ask the big questions in life. Their beliefs, or lack of them, are inherited from their education, their environment, their careers, their social media, their fragmented news feeds, or their sad compromises made to avoid debate or not being liked or worse, risking their professional careers—as if there are no life consequences to avoiding the big questions of life. I couldn't shake the feeling that different domains of knowledge speak different languages—and sometimes, if we're honest, they contradict each other. Finance doesn't speak the way epistemology does. And physics doesn't speak the way the soul does. Sometimes, the heart and the mind disagree.

That's when Gödel found me.

His incompleteness theorems shook the foundations we thought were rock solid. Imagine you've built a clever little machine that can do basic arithmetic and prove any true statement about numbers—addition, multiplication, you name it. You'd expect it could answer every question you throw at it. But Gödel found a surprise hiding in the workings: In any system that's powerful enough to talk about arithmetic, there will always be true statements that the system can never prove.

Think of a formal system as a rules-based game: You begin with only a handful of axioms—your unshakable starting truths, like two plus two equals four—and a set of rules of inference, which are the cheat codes that let you build new truths from old ones.

Picture a game in which the axioms are the cards in your hand, and inference rules are the moves you can make to turn basic plays

into dazzling combos. If the game is consistent, you'll never win and lose simultaneously—no statement and its exact opposite can sneak in. If it's complete, every possible move you can describe is either a clear win or a clear loss—there's no "maybe" or "undecided" on the scoreboard. Gödel's brilliant twist shows us that in any game rich enough to talk about arithmetic, there will always be a play so clever that the rules themselves can't prove whether it's a win or a loss.

Think of it like a phone book that claims to list every phone number in town. If the book is consistent, it won't list two different numbers for the same person. If it's complete, it will list every single valid number. Gödel's insight tells us this perfect phone book can't exist; you can't have both perfect consistency and perfect completeness. There will always be a number that really belongs in the book but isn't there—no matter how well you organize it, you'll miss something.

What does this mean? It means that no matter how elegant or airtight our logical systems are, they'll never capture every truth. There will always be a horizon just out of reach. Logic can guide us far but can't map the entire landscape.

Leibniz had dreamed of developing a "calculus of reason" where disputes could be settled by calculation. Gottfried Wilhelm Leibniz (1646–1716) was a German mathematician, philosopher, and statesman—born in Leipzig, later working across Europe and at the court of Hanover—who co-invented calculus with Newton and championed binary arithmetic. He dreamed of a "calculus of reason," a universal logical language plus simple, mechanical rules that would let people settle arguments the way we add numbers. In plain terms, if we could agree on a few basic starting truths and clear rules for combining them, questions in science, law, or even theology might be decided by calculation rather than quarrel.

Then came Gödel. He showed how to encode arithmetic in

symbols, and in doing so, he discovered the surprising limits of any such system. If, in any dispute, people agree, first, on a fixed set of starting truths (*axioms*) and exact rules for turning those truths into new ones (*inference rules*), then any domain of knowledge can be attempted to be formalized.

If you could force any dispute or domain of knowledge into a Gödel-style formal system, incompleteness would follow. The challenge is to turn them into rigid symbols that minimize or eliminate ambiguity without losing meaning.

Conclusively, incompleteness is universal. If we build a fully formal, unambiguous system that includes arithmetic, then Gödel guarantees there will be true but unprovable statements. If you leave your system vague—so you can preserve meaning—then you never had the airtight, symbol-only definitions Gödel needs to do his proof. Once you have enough precision to do a real calculation (axioms, no logical contradiction, and potential self-reference), you automatically invite Gödel's incompleteness.

Therefore, I would argue that every domain of knowledge can be attempted to be formalized. The arguments against that proposition include the following: Words carry connotations shaped by history and culture (different worldviews); context and metaphor are vital (such as disagreeing what grace means in one tradition versus another); and personal experience can shift a statement's resonance (bias). Yet, worldviews are necessarily full of axioms, which can be turned into symbolic logic, thereby allowing for precision in the proposition yet leaving open the possibility of disagreement without eliminating Gödel's high likelihood of incompleteness.

I wrote this book to explore that idea—not by lecturing but by imagining the ripple effects of Gödel's discovery far beyond number theory. What if Gödel, beyond the grave, could join conversations

with some of history's greatest thinkers—not just mathematicians but scientists, philosophers, theologians, musicians, poets, and mystics? What if he could ask the questions he never finished: Can uncertainty principles go beyond math and forge doubts, like unprovable axioms that can impact and shape our moral frameworks? Can the limits of proof touch matters of faith, beauty, or purpose?

In this imaginative book, Gödel meets with many famous people in these fictional dialogues and travels through realms of meaning and arithmetic. They discuss not only equations and paradoxes but also suffering, grace, and the search for truth in many domains of knowledge. Each chapter is a step deeper into a grand labyrinth, not to escape complexity but to reveal how every field of knowledge shares the same horizon where certainty meets mystery.

I aim not to provide answers but to awaken questions—the kind of questions you don't shake off easily. I believe we don't meditate enough. And by meditating, I don't mean emptying the mind. I mean filling it—with wonder, paradox, and the joy of not knowing yet choosing. Because life is not a formula to be solved—it's a field of choices to be made.

And to choose well is not merely to follow instinct or yield to desire. It is to think with the heart and feel with the mind. To hold wisdom and freedom in the same breath. We are not animals bound by appetite nor machines governed by code. We are moral beings, made to navigate mystery—not with certainty but with conscience.

This book is an invitation to think critically, resist conformity, and rediscover the ancient art of asking. If you've ever felt that reason alone is not enough—that behind logic, there is music; behind order, there is awe—then this book is for you.

Because some truths cannot be proven, but they can be known.

And they are worth everything.