FAQ — Expanded Public Edition

This document presents the fully expanded public FAQ for *One Small Change to Gravity – One Giant Leap for Science*. It follows the same structure as the short FAQ (Sections 1–9), but with richer, non-technical explanations. Each section can be read independently, and question numbering restarts within each section.

SECTION 1 — About This Project

1. What is One Small Change to Gravity – One Giant Leap for Science?

It is a book-length exploration of how gravity might be understood more intuitively without changing any of its proven mathematics. The project asks whether a small shift in how we picture space itself could help reconcile Newton's force-based description with Einstein's geometric one, making gravity feel less abstract and more physically grounded.

2. What problem with gravity is this project addressing?

Although gravity is described with extraordinary precision by existing theories, many people still struggle to explain what gravity *is* in physical terms. This project addresses the long-standing gap between mathematical success and intuitive understanding.

3. Is this proposing a new theory of gravity?

No. It does not attempt to replace Newtonian gravity or General Relativity. Instead, it explores whether an additional interpretive layer can help explain why these theories work so well.

4. Why describe this as a "small change"?

Because no equations, observations, or experimental results are altered. The change lies purely in perspective: how we imagine space behaving in the presence of matter.

SECTION 2 — The Core Idea (Plain Language)

5. What is SpacePressure (or SpaceCompression)?

SpacePressure is the idea that space may respond to matter not only by curving geometrically, but also by becoming compressed. This compression creates gradients within space that naturally guide the motion of matter and light.

6. How does SpacePressure explain gravity in simple terms?

Rather than thinking of gravity as objects pulling on one another across empty space, gravity can be pictured as objects moving in response to differences in the 'pressure' of space itself, much like motion occurs in response to pressure differences in everyday physical systems.

7. Does this replace Isaac Newton or Albert Einstein?

No. Newton's laws still describe how objects move, and Einstein's theory still describes how space is shaped. SpacePressure suggests they may be describing the same underlying phenomenon from different perspectives.

8. Why has gravity been so hard to explain intuitively?

Because most explanations rely heavily on advanced mathematics or abstract geometry. While accurate, these approaches often leave people without a clear physical picture of what is happening.

SECTION 3 — Relation to General Relativity

9. How does this relate to Einstein's General Relativity?

General Relativity describes gravity as the curvature of spacetime caused by mass and energy. SpacePressure does not challenge this description. Instead, it asks what physical behaviour of space might underlie that curvature, suggesting compression as an intuitive way to understand why spacetime bends and guides motion.

10. What does "curved space" mean in this context?

Curved space means that distances, paths, and the passage of time behave differently near massive objects. SpacePressure offers a way to picture this behaviour as arising from how space itself responds physically to mass, rather than treating curvature as a purely abstract concept.

11. Does this change how gravity works in practice?

No. Planets still orbit, objects still fall, and light still bends exactly as predicted. The difference lies only in how we understand the cause of these effects.

SECTION 4 — What This Is Not

12. Is SpacePressure the same as the old "aether" idea?

No. SpacePressure does not propose a hidden substance filling space. It works entirely within modern physics and focuses on how space itself behaves, not on adding a new medium.

13. Is this anti-Einstein or anti-modern physics?

No. The project builds on the success of modern physics and treats Einstein's work as foundational. Its aim is to complement, not contradict, established theory.

14. Is this science fiction or speculation?

No. While exploratory, the idea is grounded in known gravitational behaviour and avoids claims that go beyond existing observations.

SECTION 5 — Visualisation & Diagrams

15. Why are gravity diagrams often confusing or misleading?

Many familiar diagrams are simplified teaching tools. While helpful, they can unintentionally suggest that space behaves like a stretched rubber sheet, which is not meant to be taken literally.

16. What is missing from traditional gravity illustrations?

They rarely show how space might behave physically. SpacePressure highlights compression and pressure-like gradients that are usually left out of visual explanations.

17. Why do better visuals matter?

Visual understanding helps bridge the gap between equations and intuition, especially for readers without advanced mathematical training.

SECTION 6 — The Author

18. Who is Brian C. Solomon?

Brian C. Solomon is an independent Australian author with a background in business and technology and a long-standing interest in how complex scientific ideas are explained and communicated.

19. Is the author a professional physicist?

No. This work is developed outside academia, which allows questions to be approached from a fresh and unconstrained perspective.

20. Why pursue this work independently?

Because some ideas emerge from curiosity rather than institutions. The project is offered as an invitation to discussion, not a claim of authority.

SECTION 7 — ChatGPT & Transparency

21. What role did ChatGPT play in this project?

ChatGPT was used as a writing and thinking assistant, helping to refine explanations, test clarity, and structure ideas. It did not originate the concepts themselves.

22. Why openly acknowledge AI involvement?

Transparency matters. Explaining how tools were used allows readers to judge the work with full context and confidence.

23. Can readers use AI to explore these ideas themselves?

Yes. Readers are encouraged to ask questions and explore explanations using AI alongside the book and website materials.

SECTION 8 — Status, Review & Next Steps

24. Has this idea been peer reviewed?

Not yet. At this stage, it is presented as a conceptual exploration intended to invite discussion rather than claim formal validation.

25. Is SpacePressure proven?

No. It is offered as a way of thinking about gravity, not as an established or experimentally confirmed theory.

26. What happens next?

The focus is on clear communication, informed feedback, and exploring whether the perspective has value for further scientific discussion.

SECTION 9 — Practical & Media Questions

27. Who should read the book?

Anyone curious about gravity, how scientific ideas evolve, or how complex concepts can sometimes be clarified by a change in perspective.

28. Is a review or press PDF available?

Yes. Journalists and reviewers can request press materials through the website.

29. Where should new readers start?

The Media Summary and short FAQ provide a clear entry point before exploring the book in more depth.