

## DOCTORAL THESIS

### The fine-tuned universe and the existence of God

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## **Abstract**

Recent research in science indicates that we are living in a fine-tuned universe. Only a very small parameter space of universal fundamental constants in Physics is congenial for the existence of life. Moreover, recent studies in Biological evolution also reveal that fine-tuning did exist in the evolution. It seems that we are so lucky to exist as all universal fundamental constants and life-permitting factors really fall into such a very small life-allowing region. This problem is known as the fine-tuning problem. Does this phenomenon need an explanation? Can the fine-tuning problem point to the existence of God? Modern Science invokes the idea of multiverse to address the fine-tuning problem. Some scientists suggest that each universe in a set of infinitely many universes contains a typical set of fundamental constants. We should not be surprised why our universe is fine-tuned because we would not exist if the constants are not the life-allowed values. Some suggest that the existence of God can explain this fine-tuning problem. The naturalistic multiverse theory and the existence of God are the two most robust proposals to address the fine-tuning problem. Moreover, some argue that the fine-tuning problem is not real because we are just subject to observational selection effect. In this thesis, I will provide a comprehensive discussion on the fine-tuning phenomena in our universe. In particular, I will use the confirmation principle and the inference to the best explanation simultaneously to evaluate different hypotheses in a more systematic way and give some of the new and updated scientific and philosophical arguments to respond to the recent criticisms of the fine-tuning arguments. I conclude that the theistic hypothesis is the best among all to address the fine-tuning problem.

## Content

<b>Chapter 1</b>	<b>Introduction</b>	<b>1</b>
<b>Chapter 2</b>	<b>The confirmation theory and the inference to the best explanation</b>	<b>7</b>
<b>Chapter 3</b>	<b>Fine-tuning of the physical constants</b>	<b>20</b>
<b>Chapter 4</b>	<b>Fine-tuning of the initial conditions and life formation</b>	<b>42</b>
<b>Chapter 5</b>	<b>Global fine-tuning – guidance of evolution</b>	<b>56</b>
<b>Chapter 6</b>	<b>Philosophical arguments about the fine-tuning phenomena</b>	<b>67</b>
<b>Chapter 7</b>	<b>Compatibility of the hypothesis and the criticisms of the fine-tuning argument</b>	<b>110</b>
<b>Chapter 8</b>	<b>Conclusion</b>	<b>123</b>