理髮師悖論(Barber paradox)

• 一個城市裡唯一的理髮師立下了以下的規定:只幫那些自己不理髮的人理髮。

• 問題:理髮師應該為自己理髮嗎?
• 如果理髮師不給自己理髮，他需要遵守規則，幫自己理髮。

• 如果理髮師是自己理髮的，他需要遵守規則，不給自己理髮。
羅素悖論

• Let $X=\{A \mid A \text{ not in } A\}$.
• Is $X$ in $X$?
• If $X$ is not in $X$, by definition, $X$ is in $X$.
• If $X$ is in $X$, by definition, $X$ is not in $X$.

• $P$ if and only if $\neg P$
The liar paradox

• I am lying.
政客悖論

• 這世界上絕對沒有什麼事情是絕對的.
上帝悖論

• 若上帝是萬能的，則上帝能制造出一顆祂舉不起的石頭。
“I should like to say two things, one intellectual and one moral. The intellectual thing I should want to say is this: When you are studying any matter, or considering any philosophy, ask yourself only what are the facts and what is the truth that the facts bear out. Never let yourself be diverted either by what you wish to believe, or by what you think would have beneficent social effects if it were believed. But look only, and solely, at what are the facts. That is the intellectual thing that I should wish to say.

The moral thing I should wish to say... I should say love is wise, hatred is foolish. In this world which is getting more closely and closely interconnected we have to learn to tolerate each other, we have to learn to put up with the fact that some people say things that we don’t like. We can only live together in that way and if we are to live together and not die together we must learn a kind of charity and a kind of tolerance which is absolutely vital to the continuation of human life on this planet.”
我要說兩件事，一件是知性上的，另一件是道德上的。知性上我要說的是：不論你學習任何東西，或考慮任何哲學，問你自己什麼是事實及什麼是由該事實所導引出的真相。

不要讓你所想要相信的，或你覺得相信後可能會有有利的社會效益所誤導。但只看，而且只看，什麼是事實。

這是知性上我所要說的。
道德上我想要說，愛是有智慧的，仇恨是愚蠢的。在這個關係越來越緊密相連的世界，我們必須學會包容彼此，我們必須學會面對一些人說些我們不喜歡的事情。我們只能這樣一起生活。

而且若我們是想要活在一起而不是死在一起，我們必須學習某種博愛及包容，這對於人類繼續在這星球上生存是至關重要的。