BAYESIAN REVISION REVISITED

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Introduction

Two distinct areas of application for Bayesian Revision (BR) can be dichotomized. In the first, a true state of the world (SOW) exists and remains to be identified. An example would be drug properties. A new drug is subjected to various tests, trials etc. and over time its true properties and efficacy are correctly identified. Sometimes, mistakes are made – think Thalidomide. In the second, the true SOW only becomes known at a specific time and date as in election results. This SOW cannot be known in advance although it could be foretold, and a particular prediction could be correct or incorrect. For example, the many predictions of a Harris presidency were incorrect. The primary vote was remarkably close but the electoral college result decisive for Trump.

Bayesian Revision

The first SOW situation above would seem an area for classical Bayesian Revision. Early tests suggest how subsequent tests should be designed with a succession of test results approaching the true SOW which is a fixed point. The second area of application (SOW II) has an objective which is a moving target. The true SOW can only be known at the appointed time – predictable but not certain. A day later and the result could be different. And anomalies such as fraud can play a decisive role in this second area.

The volatility of the SOW in situation II leading up to the final determination can itself be an area of BR as some commentators have pointed out. But the calculations are necessarily complex and typically beyond the comprehension and capability of the common decision-maker (DM). The "more likely" approach using the DM's intuitions is at least a feasible procedure for anyone, but with no guarantee of accuracy of course.

Conclusions

The "more likely" approach is easier than BR and also, human intuition and extrapolation may be more powerful than classical statistical extrapolation. Or, has the emergence and rise of social media made the outcomes in some situations essentially random which means they cannot be predicted by any methodology?