NEW LITERARIA-
An International Journal of Interdisciplinary Studies in Humanities
Volume 4, No. 2, July-August, 2023
ISSN: 2582-7375
www.newliteraria.com

The Unintended Repercussions of Technological Breakthrough in Satyajit Ray's *The Diary of a Space Traveller* and its Implication on the Status Quo of Artificial Intelligence: A Case Study Through the Lens of Heisenberg's Uncertainty Principle

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Abstract

The paper explains the application of Heisenberg's uncertainty principle to Professor Shonku's *The Diary of a Space Traveller* to analyze the implications of the principle on the behaviour of the characters and the plot and deploy that theoretical framework to address the current situation of burgeoning AI models and provide suggestions on how to mitigate its unintended consequences. Heisenberg's uncertainty principle states that it is impossible to simultaneously determine the position and momentum of a particle with complete precision. *The Diary of a Space Traveller* tells the story of Professor Shonku, a brilliant scientist who builds a spacecraft capable of travelling through space to discover unknown planets, encountering manifold and diverse alien species, and a highly sophisticated artificial intelligence-induced robot who irregularly exhibits unprecedented behaviour. The application of Heisenberg's uncertainty principle to *The Diary of a Space Traveller* can be seen in the following ways; Professor Shonku's scientific incapability to predict the unintended ramifications of his scientific inventions, his interaction with the alien species he encounters with expectations opposite to reality, the inability of other characters to make sense of unprecedented events, and the necessity of controlling the possibility of the unintended repercussions under voluntary human control. The results of this study will add to the larger conversation on responsible innovation and ways to mitigate the possibility of the adverse effects of unintended consequences of technological breakthroughs, especially in the realm of AI models.

Keywords: Artificial Intelligence, AI, Heisenberg's Uncertainty Principle, Unintended Repercussions, Voluntary Human Control, Responsible Innovation.