

A Study About the Ethical Use of Artificial Intelligence Through Cognitive Dissonance

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Abstract

Ethical contradictions and cognitive dissonance exist in all walks of life, especially in our ever-changing world, where newer constructs and influences pop up sporadically. Nonetheless, these ethical faults do exist in all of us, completely overcoming them is not a likely option, if this were possible governance of human behavior in its self may become redundant, but one's understanding of their own individual shortcomings cultivates an awareness of one's internal statutes, necessary and apt for the time we live in. Motivation theories and developmental theories of psychology well establish the astute and truthful ability we possess to mark down our sense of achievement, status, goals with both internal schemas and the external environment. But these theories have little to say about the finer details of our lives, the details that go on to hinder and trouble us the most consistently, sustaining themselves across life. This research set about to only seek answers to only one such troubling hindrance that gains stock, literally.

Introduction

This experimental research seeks to understand the ethical basis of one's use of artificial intelligence in their daily life, work, and study. The age ranges targets emerging adults or adolescents, specifically those attending college but given the platform on which the questionnaire was developed and largely desperation on the part of the researcher led to a more accommodating pool of participants, a pool of participants the test was designed to accommodate.

The test uses the psychological concept of cognitive dissonance, which is the clash between contradictory attitudes and behaviors, held and acted on by an individual respectively. The test uses multiple choice questions to evaluate the respondents attitudes and beliefs regarding artificial intelligence and their actual use of it, to verify any existence of cognitive dissonance between their attitudes and beliefs and their usage. The boom in the use of large language models by my fellow peers and friends pointed me in the direction of this research, many of whom, who admittedly use these freely offered large language models to slack off on assignments, cheat on tests all the while contributing to the enhancement and development of those large language models.

Problem statement

To better understand a respondents ethical or non-ethical use of large language models via the application of the cognitive dissonance to improve understanding of concepts relating to one's field of study and add to existing body of research.

Objectives of study

Learn about the research process. Establish a coherent link between the two variables being studied. Un-

Understand the ethical of the respondents in their usage of large language artificial intelligence models. Uphold research methodology process throughout the process.

Literature review

This research topic belonging to the realm of social sciences and the topic itself carrying weight of a term such as “artificial intelligence” made it quite difficult to find corresponding research papers, with the inclusion of the concepts like artificial intelligence and ethics, the majority of research papers assess the ethical understanding, requirements, and responsibilities of the creators of artificial intelligence not the end users. The research pertaining to the above topic, the one pertaining to the creators is an important one, maybe even more important than this one but its findings can seldom be correlated. This was identified as the existing research gap.

A Study on Ethical Awareness Changes and Education in Artificial Intelligence Society (Jungin Kwon, 2023) hits closer to home than the others, it aims to understand the importance of ethical understanding of artificial intelligence utilization through and in education, it concludes in these ever-changing times a proper ethical understanding established through education can significantly improve and is vital to humanities coexistence with such technology.

A paper written by another Chinese author, An Overview of Artificial Intelligence Ethics (Changwu Huang) concluded the establishment of any ethical constraints on artificial intelligence systems would be outcome of a joint effort on part of governing bodies, engineers, scientists, philosophers and users. The author takes current ethical standings and likely future trends to draw the above conclusion, making note of the current shortcomings in ethical standards.

Hypothesis

After perusing through research papers with similar research intent and the research gap being identified a concise hypothesis was deduced. The research hypothesis was finalized before moving forward with the further research processes, the hypothesis chosen was as such, “the presence of cognitive dissonance is a predictor of ethical shortcomings”. The presence of cognitive dissonance, contrary opinions, choices, beliefs, can predict ethical misjudgments.

Methodology

Random sampling methods were employed via the Google Forms platform. The questionnaire was targeted towards individuals attending college or university in the city of Pune. A questionnaire was constructed using close ended questions. A total of the 32 items were devised.

Pearson Chi-Square test was used to interpret the accumulated data across the three pairs of items chooses with regard to their effectiveness at digging out any contradictory beliefs held by the respondent.

Data collection analysis

After collecting the necessary data to draw conclusions with regard to the research hypothesis in question, the collected data was first exported onto a spreadsheet and then fed into S.P.S.S. to be correctly represented and interpreted. The final item in the questionnaire is with all regards a pure self-report item, as it is the first and last of all the items to bring overtly bring the respondent's attention, their awareness to their inner beliefs and opinions with regard to the topic at hand. Making it quite a powerful item in a test, that aims to stipulated on the beliefs held by one and the extent to which they deem them ethical. Yet

the validity of self-report items is to be contested here, as it is elsewhere, everywhere, as they are their responses are only as trustworthy as the respondent. Thus, keeping that in mind there other pairs of items in the test were identified as being crucial markers of judging ones ethical understanding with the matter of artificial intelligence use. The three item pairs were chosen on the basis of the items composition and how it worked with the item in the pair to weed out any contrary beliefs held by the respondent. The pairs chosen are the following, item numbers 16 and 17, 17 and 18, the final pair being made up by item numbers 22 and 23. The first pair consist of the following two items, “Will the further development of A.I. be beneficial to humanity?” and “Do you think the power and fresh drinking water diverted to and consumed by the A.I. models is worthwhile?” respectively. The second pair consisted of the above 17th item and the 18th one, which was as follows, “Are the backers of A.I. in your opinion of sound conscience?”. The final pair was made up of the following to items, “In your opinion, does the user retain the ownership of whatever content they generate?” and “If any of the content you generate draws from existing material or data of others (people, organizations, other models), where does its ownership lie?”

Chi-Square Tests (1st Pair)

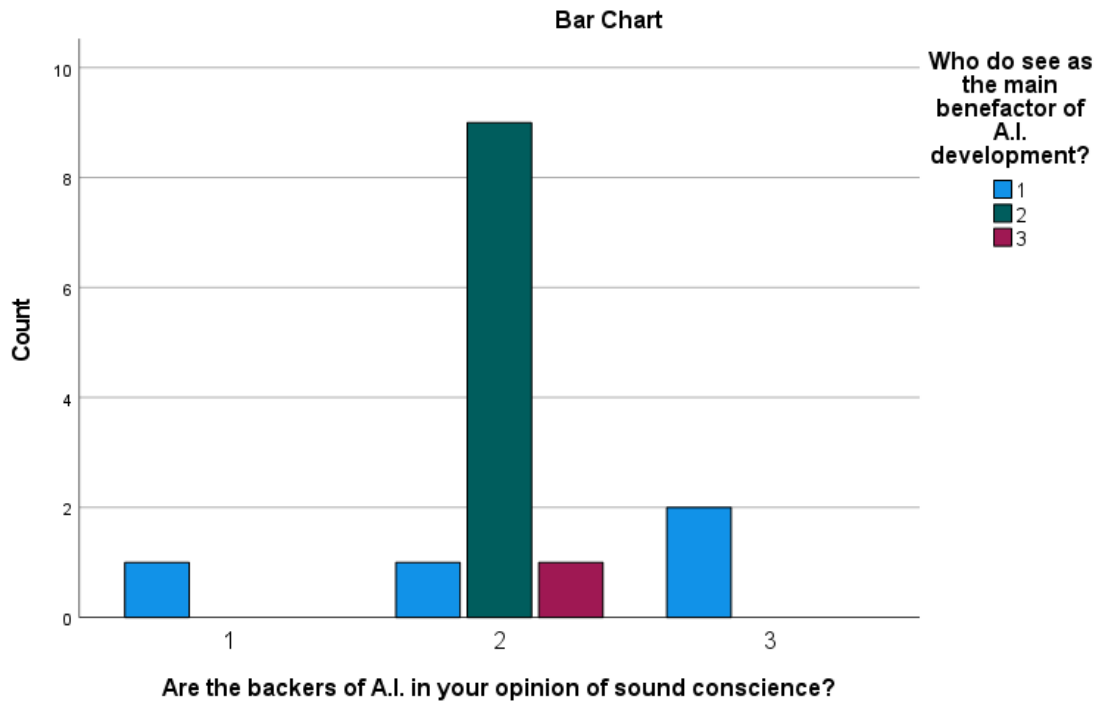
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.636 ^a	2	.727
Likelihood Ratio	1.052	2	.591
N of Valid Cases	14		

The above Pearson Chi-Square test for the first pair yielded the output shown below. With the attained p-value being above 0.5, it would be correct to interpret there being no significant correlation between the responses of the two items. There are no ethical contradictions to see here.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.545 ^a	4	.049
Likelihood Ratio	10.050	4	.040
N of Valid Cases	14		

The above Pearson Chi-Square achieved a p-value lower than 0.5, meaning there is significant enough correlation to between the responses of the two items. The responses here showed the ethical shortfalls as seen on the following page.



The response chooses my a majority of the participants for the 17th item was option 2, which represented the response “No” with regard to the question “Are the backers of A.I. in your opinion of sound conscience?” this correlated when correlated with the second response option for item number 18, which was picked by the majority of respondents, this option was “Those who develop it” for the question “Who do you see as the main benefactor of A.I. development”. The p-value of the Pearson Chi-Square test correctly reflects the dissonance between the respondents beliefs. If the respondent holds the opinion that the backers of A.I. are not of sound conscience along with believing the main benefactors of the A.I. system are those who develop it, they have fallen into an ethical quandary of supporting the development with their own individual use while believing they alone nor the populous benefits from said development and those who do benefit, here, the makers for those systems are not of sound conscience. This plus given that every respondent accepted to having extensively used A.I. systems across their lives makes it an ethical dilemma.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.294 ^a	2	.863
Likelihood Ratio	.503	2	.778
N of Valid Cases	14		

The above Pearson Chi-Squared test completed on the item pair 22 and 23 was inconclusive with regard to revealing any ethical quandaries resulted from the existence of any cognitive dissonance, given the p-value achieved by it was higher than 0.5.

Research Findings

Only one of the three conducted test proved the chosen research hypothesis. The small respondent pool contributes to this greatly. A larger group of respondents would more accurately represent the student populace in Pune, India and increase the likelihood of making sound generalizations that contribute to existing body of research and society.

Ethical contradictions and cognitive dissonance exist in all walks of life, especially in our ever-changing world, where newer constructs and influences pop up sporadically. Nonetheless, these ethical faults do exist in all of us, completely overcoming them is not a likely option, if this were possible governance of human behavior in its self may become redundant, but one's understanding of their own individual shortcomings cultivates an awareness of one's internal statutes, necessary and apt for the time we live in. Motivation theories and developmental theories of psychology well establish the astute and truthful ability we possess to mark down our sense of achievement, status, goals with both internal schemas and the external environment. But these theories have little to say about the finer details of our lives, the details that go on to hinder and trouble us the most consistently, sustaining themselves across life. This research set about to only seek answers to only one such troubling hindrance that gains stock, literally.

Conclusion

The one out of three strike rate of the tests conducted only suggest a weak and ultimately null hypothesis. The ethical dilemmas exist in abundance, but the low draw of respondents greatly holds the test and hypothesis back which in turn channels the lack of robust evidence, more data and revisions to the collection of items is necessary.

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