Effects of political orientation on perceptions of the digital revolution's impact on job functions

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ABSTRACT,

In this study the influence of political orientation on perceptions of the digital revolution and Robophobia in the workplace among Europeans was investigated. The primary aim of the research was to investigate how political beliefs shape individuals' views on digitalization in the workplace, with specific attention on attitudes towards job displacement and job certainty. By analyzing existing literature and empirical data from the Special Eurobarometer 460 survey, the study seeks to identify the relationship between political orientation and views on the impact that the digital revolution is having on employment.

The central research question is: "How does political orientation influence European workers' perceptions of the digital revolution's impact on their job functions?" This question explores whether political stance significantly affects attitudes towards technological advancements in the workplace.

The research utilizes Eurobarometer survey data to investigate differences in attitudes across the political spectrum. Statistical methods such as Chi-square tests and pairwise comparisons are used to analyze the data from the survey.

Existing literature highlights the complexity of political psychology and comparable societal issues, sometimes political leaning is a good variable for explaining different opinions on for example climate change but often it is difficult to find correlations. Literature does suggest that political orientation may influence one's perception on job security and the impact of automation.

Statistical analysis reveals differences in perceptions of AI and robotics between individuals with various positions on the political spectrum. While differences exist, they are nuanced, indicating that political ideology only subtly shapes how an individual experiences these issues.

The contribution of this study into how political orientation influences perceptions on the digital revolution is nuanced. On one hand, there is a noticeable effect of political orientation on these perceptions but simultaneously this effect is only minute.

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Keywords

Robophobia, AI, Automation, Europe,

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1. INTRODUCTION

The digital revolution we are currently experiencing has shown rapid advancements in Artificial Intelligence (AI), Machine Learning, Cloud Computing, and robotics. And is going to fundamentally change the landscape of many (if not all) industries worldwide. These innovative technologies will not only change how businesses operate but will also change the nature of many jobs. While most people are excited about the possibilities that the digital revolution brings there are also many uncertainties, for example with regards to job security or job skills. It is still unclear how the digital revolution will impact existing jobs; some jobs may become more digitally oriented while others may become obsolete entirely.

The uncertainty of this transformation caused by the digital revolution is a source of anxiety for employees in different sectors. As highlighted by (Krzywdzinski, Gerber, & Evers, 2018), the rate at which technology changes is often quicker than the rate at which employees can adapt to the innovative technologies. Implementation of these new digital technologies therefore naturally leads to increased concerns on career stability. Some, especially elder, employees may experience the feeling of being left behind in this increasingly more digital world (Knowles & Hanson, 2018). This highlights the importance for a deep understanding of how the digital revolution is reshaping jobs as we know them today and how this reshaping affects the employees that conduct these jobs. If this is fully understood, potential measures can be taken to lessen the negative impact employees experience.

For this study specifically the aim is to look at the complexities of this issue, which is also called Robophobia, with specific regards to differing perspectives between people with different political beliefs. The political spectrum is extremely interesting as many individuals strongly belief they are either left wing, right wing or belong to the center. This field has been extensively studied in relation to pressing issues such as climate change. However, little is known about the effect of these political beliefs on matters such as the digital revolution. It would be interesting and valuable to find out whether the same effect of political orientation shaping ones' view is noticeable here as is with many other societal issues.

By examining the differences between people with differing political beliefs and variances between people from the same political orientation when it comes to fears regarding ever increasing integration of digital technologies into their daily lives the aim is to have a look at the often-overlooked human dimension of technological change and try to investigate whether there exists a correlation between attitudes towards the digital revolution and political orientation.

2. KNOWLEDGE GAP

There have been numerous different studies on Robophobia or technological unemployment. These often look mostly at the causes and potential solutions while the human aspect is mostly overlooked. Especially with regards to political orientation there has been minimal if any relevant research on the topic of technological unemployment and the subjective outlook of people on this matter. Additional research is required to gain a full understanding of how this threat is perceived by people with different political backgrounds. Therefore, the goal of this study is to identify whether political orientation contributes to differences in opinions on the digital revolution and its impact on our daily lives.

3. RESEARCH OBJECTIVE

The research objective is to investigate the influence of political orientation on subjective opinions regarding the digital revolution and Robophobia. Understanding the interaction between political beliefs and attitudes towards digitization and automation can provide valuable insights for organizations and society at large. This knowledge can aid in addressing concerns related to technological advancements and their impact on employment.

This study will explore the influence of political orientation on subjective perceptions of the digital revolution and Robophobia, utilizing a comprehensive review of existing literature and quantitative data analysis. The research will try to quantify if there are any differences in stance on the digital revolution between people from different political backgrounds. These scores will be examined in relation to political leanings to determine any correlations. Anticipated outcomes include actionable insights for political parties and other organizations dealing with the divide between the left and right wing of political orientation. By focusing on literature and data, the research aims to pinpoint underlying factors of anxiety, aiding in the development of precise strategies to cater to people across the political spectrum.

4. RESEARCH QUESTION

The research question for this paper is as follows: "How does political orientation influence European workers' perceptions of the digital revolution's impact on their job functions?." With this the aim is to investigate whether political orientation has a significant effect on perceptions of the digital revolution and its effects.

5. METHODOLOY

The goal of this research is to obtain information on how political orientation influences attitudes towards the digital revolution, specifically how individuals with different political beliefs feel about the introduction of advanced digital technologies such as AI and advanced robotics in their workplace. To achieve this, it is necessary to have access to data on political orientation of individuals and data on how these same individuals feel about the increased implementation of digital technologies in the workplace. In turn, this data needs to be analyzed to determine whether a significant relationship exists between political orientation and attitude towards impact of the digital revolution.

The study was conducted using a mostly theoretical approach with a thorough look at existing literature on political science and Robophobia. Alongside this theoretical approach empirical research was also done using data that originates from the Eurobarometer surveys which have been conducted throughout the years covering a variety of recurring questions on society and live. With this data we can compare the stances on digital revolution in the workplace between political orientation, different years, and across all the participating EU countries. The data will be analyzed to find meaningful correlations between the variables and put meaning to these findings together with existing literature.

The hypothesis that "political orientation will predict attitudes towards the digital revolution" can be assessed through statistical analysis of the data and using regression analysis to determine the strength and significance of the relationship. The expected relationship being that more conservative individuals will have a greater aversion and concerns towards advanced digitalization in their workplace. It will be interesting to investigate whether this is true and if the difference between conservative and liberal individuals is meaningful.

6. LITERATURE REVIEW

The theoretical framework of this thesis is built on the intersection of political psychology and the impact that the digital revolution is having on job functions. With political psychology the influence of political orientation on perceptions of individuals regarding this topic can be examined. Political psychology suggests that political beliefs are not just passive stances individuals take but rather actively shape how people respond to societal changes, including the technological advancements of the digital revolution. This framework will look at the cognitive dissonance experienced by European workers when challenged in their political ideologies and job functions by the digital revolution (Kneuer & Milner, 2019).

6.1 Political Orientation

It is widely known that political attitudes have a significant effect on how individuals engage with climate change and other societal matters (Gregersen, Doran, Böhm, Tvinnereim, & Poortinga, 2020), individuals who position themselves on the right side of the political spectrum show less worry for climate change and its effects than their peers who position themselves on the left side of the spectrum. However little to no research exists on this interaction between left and right political beliefs with Robophobia. These differing attitudes may also shape how individuals perceive the benefits and challenges brought about by the digital revolution in their workplace. The hypothesis here is that political orientation affects workers' perceptions and regulates the relation between the perceived benefits and challenges of the digital revolution. This hypothesized effect stresses the complexities of the relationship between the perceived benefits and challenges of digital transformation within the workplace and political orientation. Individuals with a liberal political orientation may have different levels of acceptance and perceived usefulness of digital technologies in the workplace compared to individuals with a conservative view (Fahmi, Tjakraatmadja, & Ginting, 2023). Likewise, the perceived fear for job displacement between these groups may also be different. For analysis, political orientation and attitudes towards digital technologies can be modelled by hypothesizing that political orientation will predict attitudes towards the digital revolution.

6.2 Artificial Intelligence

Artificial Intelligence (AI) has been a strong topic of debate in recent years. Its rapid development has enabled marvelous things such as medical screening by AI, where the AI is sometimes better at detecting specific diseases from MRI imaging than most doctors are. But at the same time numerous experts in the field such as Elon Musk have gone on record stating their concerns regarding AI. In 2017 Musk stated that AI poises a "fundamental risk to the existence of human civilization" and has the potential to be "more dangerous than nukes" (The Guardian, 2017). On the other hand, Mark Zuckerberg for example disagrees with Musk and is of the opinion that AI fearmongering is irresponsible (Vox, 2017). Both Musk and Zuckerberg have heavily invested in AI technologies with their companies. These opinions from two extremely influential people from the AI space demonstrate that opinions on AI are diverse.

A study from 2021 examined the effects of political orientation on the evaluation of Artificial Intelligence. The study found that people who are more conservative have greater odds of underestimating the value of AI and have an aversion towards it because it threatens human uniqueness (Han, Park, & Lee, 2021). The research did not go much deeper into views on specific aspects of AI aversion, but it serves as a groundwork for the idea that political orientation has an effect on perceptions regarding digitalization in the workplace.

6.3 Robophobia

This paper focusses on the effects of political orientation on Robophobia. Robophobia in this sense means fear towards the implementation of automation, artificial intelligence, and other technologies in the work field that have the potential to make employees obsolete.

Robophobia is a term that is increasingly more often used to describe negative attitudes and fear towards robotization and AI. The fear is often caused by the fear of job security and the fear of AI taking over (Foster, 2024). Robophobia is defined as being an anxiety disorder that causes an irrational fear of robots and AI, it is rooted by the fear of having no control over robots and a sense of a future that will be controlled by machines and AI (Zhadan, 2022).

With specific regards to the context of the workplace, Robophobia can manifest itself as a fear of technology developing at such a pace that workers cannot keep up. Additionally, within this context this fear is also caused by the idea that robots and AI can take over jobs in the future. These beliefs raise concerns such as job displacement and skill obsolescence, which naturally result in undesired outcomes such as income inequality and social unrest (Pocriciuc, 2023).

The recent boom in automation and developments in AI over recent years have increased the occurrence of Robophobia. Robots and AI are becoming increasingly more intertwined with our daily lives while simultaneously becoming more advanced. Therefore, the fear of these technologies has become more pronounced over recent years (Foster, 2024).

In a world where automation is becoming increasingly more prevalent, Robophobia can be seen as a response to the perceived threat that this automation has on job security. Innovations in technology often have both positive and negative impacts on the labor market. These innovations on one hand increase productivity, can increase quality, decrease costs, and create opportunities in emerging industries. On the flipside, innovations in automation and AI can lead to job displacement and skills becoming obsolete.

When looking at the past these fears of job displacement and skill obsolescence have always been present. During the agricultural revolution workers suddenly had to find other occupations as agriculture become significantly more efficient. After that, during the first industrial revolution people moved from being artisans to producing products in mass with the help of big machines powered by steam. And during the second industrial revolution production shifted again with the introduction of automation (Hobijn & Kaplan, 2024). As highlighted by history the fear of job displacement and skills becoming obsolete is nothing new. The new Digital revolution that brings us more sophisticated automation and AI will, as history suggests, inevitably lead to these outcomes. However, people have always been able to adapt and will adapt to this new reality.

Robophobia is a complex phenomenon that is influenced by multiple factors such as rapid development of technology and job security concerns. Understanding this fear is crucial for successfully integrating AI and advanced automation into the workplace and society. Further research is needed to find strategies that mitigate Robophobia and help workers to see the positive aspects of the digital revolution.

6.4 Job Security

Job security or insecurity is best defined as a "sense of powerlessness to maintain desired continuity in a threatened job situation" (Greenhalgh & Rosenblatt, 1984). The effects of implementing robotics, automation, and AI on job security has been widely researched. According to a study done by

(Bhargava, Bester, & Bolton, 2020), implementing these aspects has negative effects on job security, satisfaction, and employability. The article also discusses that although robotics, automation, and AI is extremely advanced nowadays, the need for human soft skills remains as these cannot be replaced by a machine. However, with the rapid development of these technologies these human soft skills may eventually become obsolete as well.

This negative view on implementing digital technologies in the workplace is not new, a study from the 90s found that low skilled workers are most concerned about their job stability as a result of implementation of automation in the workplace (Chao & Kozlowski, 1986).

A study conducted in 2016 estimates that 47% of jobs in the United States is at high risk for automatability, they expected that these jobs could be automated in the next 2 decades (Frey & Osborne, 2017). Of course, the actual number of jobs that are poised to be automated will turn out lower, nevertheless the estimation of 47% is alarming. According to their model the jobs that are most at risk are ones in the following sectors: transportation and logistics, office and administrative support, and production. At the end of the paper the authors state "Our model predicts a truncation in the current trend towards labor market polarization, with computerization being principally confined to low-skill and low-wage occupations. Our findings thus imply that as technology races ahead, low-skill workers will reallocate to tasks that are non-susceptible to computerization – i.e., tasks requiring creative and social intelligence. For workers to win the race, however, they will have to acquire creative and social skills." (Frey & Osborne, 2017). This implies that the occupations that are most at risk are also the ones that are often associated as being low-skill and low-income. Workers that perform said low-skill occupations will have difficulty in finding new occupations because of their minimal education. Therefore, for the sake of social stability, it is important to minimize the systemic risk that workplace digitalization has on job security and job displacement.

6.5 Theoretical Framework
The existing literature suggests a complex relationship between political orientation and Robophobia. Literature has shown that perceived job security is affected by digitalization within the workplace. Prior research also highlights that employees may feel threatened by implementation of advanced automation, robotics, and AI. Moreover, a substantial number of low skill jobs is poised to be replaced by AI. The effects of this can be seen in the increasing prevalence of Robophobia as increasingly more people are becoming concerned about their job security and the long-term effects of digitalization. With regards to the effect of political orientation little research has been done, however prior research has demonstrated that conservative individuals are more likely to have aversion towards AI. Hypothesized, based on the existing literature, is that conservative individuals will also feel more threatened in their job functions by the digitalization.

6.6 Conclusion
Existing literature shows that there may be a significant effect of political orientation on the perceived threat to job functions by advanced digitalization of the workplace. However, it fails to specifically address this question. This research aims to fill the gap of whether individuals from various political backgrounds feel threatened in different ways regarding their job functions by AI, automation, and robotics.

7. ACADEMIC AND PRACTICAL RELEVANCE
7.1 Academic Relevance
There is widespread academic relevance in terms of investigating the effects of political orientation on European workers' perceptions of the digital revolution and its implications on their daily lives. The research contributes to the wider discussion on the societal implications of the digital revolution. Political orientation can have a big impact on how individuals accept and adapt to changes in technology. Prior studies have shown that the digital revolution can be likened as a transformative force such as the industrial revolution. In other words, it will have profound effects on how we navigate our daily lives in the future but may also have implications for politics, society as a whole and the economy (Kneuer & Milner, 2019). Understanding the interaction between political beliefs and perceptions on digitalization can help policymakers and businesses to better navigate the complexities of the digital transformation and the challenges it will bring such as privacy issues and the future of employment (Hedling & Bremberg, 2021).

Additionally, this research question is interesting to the field of labor economics, in which digital divide and skill gaps are pressing issues. Insights this report would offer on how political orientation affects the views of workers could help form strategies to create a smarter labor market (Vasilescu, Serban, Dimian, Aceleanu, & Picatoste, 2020).

Lastly, when looking at the psychological side, results of this study may reveal cognitive and motivational processes that have influence on how workers perceive the digital revolution. This can be valuable for creating effective communication and educational methods for reaching people with different political views as this political difference may influence individuals' intrinsic motivation.

7.2 Practical Relevance
The interaction of political orientation with the digital revolution's impact on job functions and individuals' perceptions of these effects is an issue that knows multiple dimensions with significant practical implications. Political orientation can shape an individual's view on the world and by extension this also shapes their perception on technological changes within the workplace. For instance, a study by the European Parliament highlights differences in impact that digital working had on workers, employers, and society. The study suggests that policy measures at EU and national levels are influenced by political climate and these policies affect workers' perceptions on the digital revolution (Manuela, Samek, & Lodovici, 2021).

Moreover, the digital transformation has been shown to challenge the traditional power structures of national states as the widespread use of social media can influence public opinion and political outcomes in ways that traditional political institutions may struggle to manage. Widespread adoption of advanced digital technologies such as AI will only make this a bigger issue. Digital technologies can bring improvements in productivity and convenience for workers. However, these technologies may lead to job displacement due to automation, which can cause workers to be skeptical about the benefits of these technologies (Stötzel, 2020). The practical relevance of this research question lies in the potential it has to inform policy makers. With the outcomes of this research question, policy makers can ensure that diverse political orientations are considered when trying to address the challenges and opportunities that the digital revolution presents. Understanding this dynamic between political orientations and stance on advancement of digital technologies is crucial for creating a digital work environment that is inclusive, respects and

incorporates perspectives of all workers regardless of their political background. This research may result in more targeted and effective policies which not only consider technological aspects, but also the socio-political aspects of the workers that influence their acceptance and adaption towards the changes of the digital revolution.

8. DATA ANALYSIS

The empirical part of this research is based on data that is provided by the European commission's Special Eurobarometer survey 460 'Attitudes towards the impact of digitalization and automation on daily life' (European Commission, 2017). As part of the greater Eurobarometer 87.1 study. The dataset is comprised of responses from 27.901 individuals from all 28 countries belonging to the European Union, it was carried out between the 18th and 27th of March 2017. As the individuals from varying backgrounds were interviewed in their native languages and in a face-to-face setting, the dataset is an accurate representation of the opinions of European individuals on the matters discussed in the survey.

In the survey individuals were asked from a scale of 1-10 where they view themselves on the political spectrum with 1 being extreme left and 10 being extreme right. The results of this question were categorized as 1-4 being left, 5-6 being center, and 7-10 being right wing. With this categorization we can determine whether individuals with these differing political beliefs have different stances on digitalization in the workplace.

As part of the survey several questions were asked regarding digitalization in the workplace. The questions which are interesting for answering the research question are Q10, Q11, Q12.1, Q12.2, Q12.3, Q12.4, Q12.6, Q13.22. Below they will be analyzed using RStudio which is a programming environment for data analysis programming language R.

8.1 Eurobarometer Question 10

Question 10 from the survey is as follows: "Generally speaking, do you have a very positive, fairly positive, fairly negative or very negative view of robots and artificial intelligence?". Analysis of this statement is interesting for answering the research question as it tells us how the groups from the different political orientations perceive robots and AI. Although the statement does not mention robots and AI in relation to the workplace the answers do give a clear picture of the stance on robots and AI in general.

Table 1

Q10	Left	Center	Right
Total Don't know	515 (7%)	840 (8%)	338 (6%)
Total 'positive'	4841 (65%)	6169 (62%)	3262 (63%)
Total 'negative'	2100 (28%)	2976 (30%)	1593 (31%)

Following analysis with the Chi-Square Test of Independence the resulting p-value is 3.776e-7 which indicates that there is a significant difference between the groups. Following pairwise comparison we get the following results:

Table 2: Q10 Don't know vs Positive

P values	Left	Center
Centre	1e-4	-
Right	0.74798	0.00013

Table 3: Q10 Don't know vs Negative

P values	Left	Center
Centre	0.05443	-
Right	0.06707	0.00022

Table 4: Q10 Positive vs Negative

P values	Left	Center
Centre	0.0063	-
Right	0.0069	0.07609

From further analysis through pairwise comparison the results show that there are some specific differences. There are significant differences present between 'don't know' and 'positive' or 'negative.' More interestingly, there seems to be a significant difference between 'positive' and 'negative' between left, with both center and right political orientations. Looking at table 1, the differences may not be that pronounced but statistically they are relevant.

8.2 Eurobarometer Question 11

For question 11 the interviewees were asked the following: "Do you think your current job could be done by a robot or by artificial intelligence in the future?". This question is important as it directly aims to measure the stance on job security with relation to implementation of AI or robotics in the workplace. Overall, there are fewer responses to this question as the previous one, this can be explained by the fact that the question was only asked to working individuals.

Table 5

Q11	Left	Center	Right
Don't know	72 (2%)	177 (4%)	72 (3%)
Yes	1603 (43%)	2157 (43%)	1248 (46%)
No not at all	2039 (55%)	2664 (53%)	1384 (51%)

Following analysis with the Chi-Square Test of Independence the resulting p-value is 1.235e-5 which indicates that there is a significant difference between the groups. Following pairwise comparison we get the following results.

Table 6: Q11 Don't know vs Yes

P values	Left	Center
Centre	8.6e-5	-
Right	0.167	0.034

Table 7: Q11 Don't know vs No not at all

P values	Left	Center
Center	2.9e-5	-
Right	0.055	0.101

Table 8: Q11 Yes vs No not at all

P values	Left	Center
Center	0.519	-
Right	0.025	0.057

Results indicate that there are some differences between the groups, mostly for the 'don't know' answers. However, between left and right there seems to be an interesting difference between 'yes' and 'no not at all' answers. Looking at the data of table 5 however we can see that the difference is not that pronounced and therefore in the practical sense not that significant.

8.3 Eurobarometer Question 12.1

With question 12.1 individuals are asked whether they feel like the number of jobs will reduce because of robotics and AI. This was asked with the following question: "Due to the use of robots and artificial intelligence, more jobs will disappear than new jobs will be created." The answers to this question give a direct view on the effects of AI and robotics on job security.

Table 9

Q12.1	Left	Centre	Right
Don't know	368 (5%)	469 (5%)	229 (5%)
Agree	5496 (74%)	7428 (74%)	3901 (75%)
Disagree	1591 (21%)	2088 (21%)	1063 (20%)

Following analysis with the Chi-Square Test of Independence the resulting p-value is 0.4419 which indicates no significant differences between the groups. If we look at the table above, we can confirm that this is the case, therefore no further analysis is necessary.

8.4 Eurobarometer Question 12.2

For this question, the purpose was to find out whether individuals perceive benefits from robots and AI, the question was asked as follows: "Robots and artificial intelligence are a good thing for society, because they help people do their jobs or carry out daily tasks at home." The answers to this question give a valuable view on whether robots and AI are seen as positive.

Table 10

Q12.2	Left	Centre	Right
Don't know	281 (4%)	523 (5%)	207 (4%)
Agree	5272 (70%)	6828 (68%)	3682 (71%)
Disagree	1902 (26%)	2634 (27%)	1303 (25%)

Following analysis with the Chi-Square Test of Independence the resulting p-value is 2.645e-6 which indicates a significant difference between the groups. We can further investigate the differences using pairwise comparison. Using pairwise comparison of proportions the following results are derived.

Table 11: Q12.2 Don't know vs Agree

P values	Left	Centre
Centre	6.3e-6	-
Right	0.60337	0.00057

Table 12: Q12.2 Don't know vs Disagree

P values	Left	Centre
Centre	0.00072	-
Right	0.49114	0.02693

Table 13: Q12.2 Agree vs Disagree

P values	Left	Centre
Centre	0.119	-
Right	0.660	0.092

The pairwise comparison shows significant differences between left and right with the center, but only for the comparisons with 'don't know.' There does not seem to be a significant difference between left and right. This indicates that there seems to be no evidence for a difference between left- and right-wing individuals.

8.5 Eurobarometer Question 12.3

Q12.3, "Robots and artificial intelligence are technologies that require careful management," aims to gauge the stance on regulation of robots and AI. Answers to this question will tell us if robots and AI are perceived as being dangerous if not controlled.

Table 14

Q12.3	Left	Centre	Right
Don't know	203 (3%)	398 (4%)	186 (4%)
Agree	6795 (91%)	8900 (89%)	4663 (90%)
Disagree	457 (6%)	687 (7%)	344 (6%)

Following analysis with the Chi-Square Test of Independence the resulting p-value is 4.157e-5 which indicates a significant difference between the groups. We can further investigate the differences using pairwise comparison. Using pairwise comparison of proportions the following results are derived.

Table 15: Q12.3 Don't know vs Agree

P values	Left	Centre
Centre	1.4e-5	-
Right	0.012	0.224

Table 16: Q12.3 Don't know vs Disagree

P values	Left	Centre
Centre	0.04	-
Right	0.26	0.57

Table 17: Q12.3 Agree vs Disagree

P values	Left	Centre
Centre	0.089	-
Right	0.449	0.53

The results indicate that there is a statistically significant difference between mostly the left and center group when it comes to opinions on whether robots and AI require careful management. Table 14 shows us that the actual differences are not that big, nevertheless it is still statistically significant.

8.6 Eurobarometer Question 12.4

This goal of this question was to assess the perceived necessity of robots and AI by asking "Robots are necessary as they can do jobs that are too hard or too dangerous for people". It does not answer the question of whether individuals perceive these technologies as a threat to their job. However, it does show

whether the individuals think using robotics and AI is necessary, even if perceived as being negative.

Table 18

Q12.4	Left	Centre	Right
Don't know	167 (2%)	231 (2%)	133 (3%)
Agree	6437 (86%)	8529 (86%)	4425 (85%)
Disagree	851 (12%)	1224 (12%)	635 (12%)

Following analysis with the Chi-Square Test of Independence the resulting p-value is 0.2954, this value indicates that there is no significant difference for this question between the political orientations. Therefore, no further analysis is needed.

8.7 Eurobarometer Question 12.6

Q12.6 is "Robots and artificial intelligence steal peoples' jobs," the question is perfect for answering individuals concerns regarding implementation of robotics and AI in the workplace. It will help us answer the research question by providing a view on job security and job displacement concerns.

Table 19

Q12.6	Left	Centre	Right
Don't know	242 (3%)	353 (4%)	141 (3%)
Agree	5297 (71%)	7162 (72%)	3709 (71%)
Disagree	1917 (26%)	2469 (24%)	1342 (26%)

Following analysis with the Chi-Square Test of Independence the resulting p-value is 0.04498 which indicates a slightly significant difference between the groups. We can further investigate the differences using pairwise comparison. Using pairwise comparison of proportions the following results are derived.

Table 20: Q12.6 Don't know vs Agree

P values	Left	Centre
Centre	0.397	-
Right	0.198	0.036

Table 21: Q12.6 Don't know vs Disagree

P values	Left	Centre
Centre	0.224	-
Right	0.224	0.012

Table 22: Q12.6 Agree vs Disagree

P values	Left	Centre
Centre	0.53	-
Right	1.00	0.53

Following the results we can conclude that between center and right there are statistically significant differences in opinions on robots and artificial intelligence stealing peoples' jobs. If we look at the table however we see that the differences between the groups percentage wise is not that big, nevertheless there still seems to be a statistically significant difference.

8.8 Eurobarometer Question 13.22

Question 13.2 asked individuals how they felt about "Having a robot assist you at work." They answered this question from a scale of 1-10 with 1 being uncomfortable and 10 being comfortable. In 13.22 the scores are categorized in uncomfortable (1-4), moderately comfortable (5-6), and comfortable (7-10)

Table 23

Q13.22	Left	Centre	Right
Uncomfortable	2703 (36%)	3644 (36%)	1697 (33%)
Moderately comfortable	1572 (21%)	2427 (24%)	1139 (22%)
Comfortable	2844 (38%)	3308 (33%)	2144 (41%)

Following analysis with the Chi-Square Test of Independence the resulting p-value is 2.2e-16 which indicates a significant difference between the groups. We can further investigate the differences using pairwise comparison. Using pairwise comparison of proportions the following results are derived.

Table 24: Q13.22 Uncomfortable vs moderately comfortable

P values	Left	Centre
Centre	0.0032	-
Right	0.0085	0.8863

Table 25: Q13.22 Uncomfortable vs comfortable

P values	Left	Centre
Centre	4.5e-5	-
Right	3.1e-5	9.0e-16

Table 26: Q13.22 Moderately comfortable vs comfortable

P values	Left	Centre
Centre	1.5e-11	-
Right	0.43	3.6e-12

The pairwise analysis reveals significant differences between most answer combinations and the political orientations. This indicates that for this question There are significant differences between the political left, center, and right. If we take a look at the table with the distribution of answers on the survey, we can also see notable differences between the groups which confirms the test results.

9. CONCLUSSIONS AND RECOMMENDATIONS

The empirical data analysis section of this research that was based on data from the European Commission's Special Eurobarometer survey 460, reveals some statistically significant differences between the different political orientations of left, center, and right. The revealed differences from the survey conducted by the EU Commission in attitudes towards digitalization, automation, robots, and AI seem significant. The dataset comprised of 28.000 individual responses with varying backgrounds provides a comprehensive view of the opinions of individuals throughout Europe.

Utilizing statistical methods such as Chi-square tests and pairwise comparison the survey results were analyzed. The analysis revealed notable variations in perceptions towards robots and AI in general and in the workplace. However, while the observed differences were statistically significant, the actual magnitude of said differences was small. These results suggest needed caution in drawing conclusions from the data that support the initial hypothesis of political orientation shaping how an

individual perceives automation, robots, and AI in the workplace. As the findings are quite nuanced, they indicate that while political orientation does influence perceptions, the effect of political orientation is very subtle and may not align with the initial expectations.

The relationship between political ideology and attitudes towards society is extremely complex, these insights contribute valuable nuance to the existing understanding of said relationship. The result may not be what was initially expected but nevertheless it is still valuable. This stresses the need for further research to delve deeper into what underlying factors drive the differences that were observed.

In summary, while the data analysis provides meaningful statistical results in the differences in Robophobia it uncovered across the political spectrum. The results are not satisfactory to draw meaningful conclusions with regards to the hypothesized effect, as the modest nature of these results is not satisfactory for making clear conclusions.

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