Remittances Review
June, 2023
Volume: 8, No: 4, pp. 3625-3642
ISSN: 2059-6588 (Print) | ISSN 2059-6596 (Online)
remittancesreview.com

Received: 11 November 2022 Accepted: 15 March, 2023
DOI: https://doi.org/10.33182/rr.v8i4.250

Sentiments and Discourses: How Ireland Perceives Artificial Intelligence

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Abstract

Artificial Intelligence (AI) has grown to be a focal point of technological evolution, implicating various sectors including healthcare, education, and manufacturing. Amidst its promise lies a complex web of emotional, ethical, and societal intricacies, making public sentiment a critical factor in shaping AI policy and strategies. This research explores the duality of hope and fear within the public discourse on AI, specifically in the Republic of Ireland—a European hub for tech innovation. To bridge the existing gap in understanding the emotional aspects of public sentiment toward AI in Ireland, the study utilizes a mixed-methods approach. It employs surveys administered to a random sample of 90 residents from Dublin, Cork, and Limerick, focusing on their optimism and fears toward AI. These cities were chosen for their socio-cultural and economic relevance to the national discourse on AI. The survey data are analysed using descriptive statistics and chi-squared tests to identify correlations with demographic variables such as age, gender, education, and employment type. The study aims to identify prevalent themes of hope and fear toward AI in public discourse, scrutinize how localized narratives influence public perception, and examine how demographic variables affect these narratives. Furthermore, it seeks to investigate the potential impacts of these narratives on future AI policies and development strategies in Ireland. Preliminary results indicate a moderate level of optimism (Mean=3.4) and fear (Mean=2.93) about AI among the public. Age, education, and employment appear to be weakly correlated with optimism and fear, while gender shows no significant influence. These findings aim to serve as a blueprint for policymakers and industry stakeholders for aligning AI development strategies with public sentiment. However, the study is not without limitations, including its small sample size and the lack of qualitative insights and social media analysis, necessitating further research for a more comprehensive understanding. By disentangling the intricate emotional layers of public discourse, the research aspires not only to enrich academic dialogue but also to provide pragmatic insights that can guide ethical and effective AI implementation.

Keywords: *Artificial intelligence, Irish Public, Public Sentiments, Public Discourse, social discourses, Hope and Fear of AI, Technophobia*

Introduction

Artificial Intelligence (AI) has emerged as a seminal technology with the capacity to revolutionise

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diverse sectors, ranging from healthcare and education to transport and manufacturing. Whilst the transformative potential of AI is indisputable, it is concomitantly enmeshed in a web of societal, ethical, and emotional intricacies. The dialectic of hope and fear within public discourse surrounding AI is not a peripheral academic inquiry; rather, it exerts substantive influence upon both the technological trajectory and the societal integration of AI. The present research foregrounds these dialectics within the specific context of the Republic of Ireland, thereby offering a nuanced dissection of public sentiment as a pivotal determinant of policy formulation and technological strategies.

The Republic of Ireland presents a salient backdrop for this investigation. It has rapidly ascended as a European nexus for technological innovation, underpinned by favourable governmental policies and the burgeoning presence of global technology firms. In such a fertile context, AI transcends the realm of theoretical discourse to become a tangible element of public concern. Nevertheless, there exists a conspicuous lacuna within scholarly literature pertaining to the emotional dimensions of public sentiment towards AI in Ireland, particularly in terms of the bipolar narratives of hope and fear.

To address this research gap, the study adopts a mixed-methods approach, amalgamating quantitative and qualitative methodologies to construct a comprehensive tableau of public sentiment. In addition to textual analysis of dialogues from mainstream social media platforms such as Facebook and Twitter, this research is enriched by empirically-driven survey data. These surveys have been administered across a diverse sample of 30 participants, spanning various age demographics, educational backgrounds, and professional sectors, in the cities of Dublin, Cork, and Limerick.

The analytical framework for examining public sentiment is intentionally bifurcated into narratives of hope and fear. 'Hope' serves as an encapsulation of public enthusiasm towards the potential benefits of AI, encompassing a spectrum of considerations from advancements in healthcare to solutions for environmental sustainability. Conversely, 'fear' epitomises a spectrum of public apprehensions, including but not limited to concerns about employment instability, infringements upon privacy, and existential risks such as unchecked AI systems. This dual framework provides a balanced and nuanced schema for understanding the heterogeneity and complexity of public sentiments, thereby contributing to a more informed landscape for policy and technological decision-making.

This study aims not merely to contribute to academic discourse, but also to furnish pragmatic insights with substantial applicability. By delineating the emotional contours of public discourse, the findings of this research seek to function as a navigational tool for both policy-makers and industry stakeholders. The objective is to advance AI technologies in a manner that is not only technologically robust but also ethically congruent and emotionally resonant with public sentiment.

As we proceed with this presentation, we shall engage more deeply with the extant literature,

elucidate our research methodologies, present our salient findings, and elucidate their broader implications. We extend an invitation to accompany us on this academic journey as we traverse the intricate landscapes of hope and fear within public discourse on AI, as articulated within the specific socio-cultural context of the Republic of Ireland.

Research Questions:

1. What are the prevalent themes of hope and fear towards AI in the public discourse in Dublin, Cork, and Limerick, and how do they contribute to the dominant narratives within the Republic of Ireland?
2. How do these localized narratives from Dublin, Cork, and Limerick inform the broader public's perception and acceptance of AI across Ireland?
3. How do demographic variables such as age, gender, education, and employment influence these narratives?
4. What are the potential impacts of these narratives on AI development strategies and public policy within the Republic of Ireland?

Research Objectives:

1. **To Identify Dominant and Local Narratives**: Expand the catalogue of dominant narratives to include survey data from Dublin, Cork, and Limerick. This will add depth to the existing data gleaned from social media platforms and previous surveys.
2. **To Provide a Nuanced Understanding of Public Sentiment**: Employ a mixed-methods approach that combines both qualitative and quantitative data from the surveys in Dublin, Cork, and Limerick to offer a comprehensive and localized picture of public perception of AI.
3. **To Understand Emotional and Demographic Drivers**: Dive into the underlying factors contributing to public sentiment by looking at how demographic variables like age, gender, education, and employment types influence the levels of hope and fear towards AI.
4. **To Examine Policy Impact**: Based on the localized narratives and demographic correlations, explore how public perception could be shaping or could shape future AI development strategies and policies in the Republic of Ireland.
5. **To Provide Strategic Recommendations**: Formulate actionable recommendations for policymakers, AI developers, and educators, aiming to align AI strategies with public sentiment for more ethical and effective implementation.

Literature Review

Artificial intelligence (AI) is a technology that simulates human intelligence in machines, enabling them to perform tasks that typically require human intelligence. It encompasses various subfields, including machine learning, natural language processing, computer vision, and robotics (Irfan, Fahad and Alqahtani, 2023; Lu et al., 2017). AI has different kinds, such as narrow AI general AI and AI Super Intelligence (Irfan and Murray, 2023a) . Narrow AI refers to AI systems that are designed to perform specific tasks, while general AI refers to AI systems that possess the ability to understand, learn, and apply knowledge across a wide range of tasks, similar to human intelligence (Irfan, Murray & Ali, 2023b; Legg & Hutter, 2007).

The importance of AI lies in its ability to automate tasks, improve efficiency, and enhance decision-making processes. AI technologies have the potential to revolutionize various industries, including healthcare, agriculture, education, and retail. In healthcare, AI can assist in diagnosing diseases, analyzing medical images, and developing personalized treatment plans (Irfan and Murray, 2023c; Manne & Kantheti, 2021). In agriculture, AI can optimize resource usage, improve crop yield, and enable precision farming practices (Rozhkova et al., 2022). In education, AI can personalize learning experiences, provide intelligent tutoring, and support educational innovation (Irfan and Murray, 2023d; Qin et al., 2023). In retail, AI can enhance customer experiences, optimize supply chain management, and enable personalized marketing strategies (Irfan, Murray and Ali 2023f; R. & Devi, 2022).

The Impact of AI

The impact of AI in Europe has been significant. European countries have been investing in AI research and development, aiming to become global leaders in AI technologies. The European Commission has launched initiatives such as the European AI Strategy and the European AI Alliance to promote the development and adoption of AI in Europe (Irfan and Murray 2023G; Lu et al., 2017). AI has the potential to drive economic growth, improve public services, and address societal challenges in Europe. For example, AI can contribute to the development of smart cities, improve transportation systems, and enhance energy efficiency (Veselovsky et al., 2021). However, the widespread adoption of AI also raises concerns about ethics, privacy, and job displacement, which need to be addressed through appropriate regulations and policies (Begishev et al., 2019).

Artificial intelligence is a technology that simulates human intelligence in machines. It has different kinds, including narrow AI and general AI. AI is important due to its ability to automate tasks, improve efficiency, and enhance decision-making processes. Its impact in Europe is significant, with investments in research and development and initiatives to promote its adoption. However, the adoption of AI also raises ethical and societal concerns that need to be addressed.

The impact of AI on the public is multifaceted and has implications in various domains. One of

the key impacts of AI on the public is in the realm of employment. The automation of tasks previously performed by humans can lead to job displacement and changes in the labor market (Acemoglu & Restrepo, 2018). AI technologies, such as robotics and machine learning, have the potential to automate routine and repetitive tasks, which can result in a shift in the types of jobs available and the skills required for employment (Acemoglu & Restrepo, 2018). This can have implications for income inequality and the distribution of wealth, as the benefits of AI may not be evenly distributed (Acemoglu & Restrepo, 2018).

In addition to employment, AI also has an impact on public services and governance. The use of AI in the public sector can improve the efficiency and effectiveness of government operations, leading to better service delivery and decision-making (Maalla, 2021). AI technologies can be utilized in areas such as healthcare, transportation, public safety, and urban planning to enhance the quality of services and optimize resource allocation (Kurhayadi, 2022). For example, AI can be used to analyze large datasets in healthcare to improve diagnosis and treatment outcomes (Kurhayadi, 2022). In the field of public administration, AI can automate administrative tasks, streamline processes, and improve citizen engagement (Kurhayadi, 2022).

Furthermore, AI has implications for public perception and attitudes. Public perceptions of AI are shaped by various factors, including media portrayals, personal experiences, and cultural influences (Brauner et al., 2023). The public may have concerns and fears about the impact of AI on privacy, job security, and ethical considerations (Brauner et al., 2023). Understanding public perceptions of AI is crucial for policymakers and stakeholders to address potential biases and ensure the responsible development and deployment of AI technologies (Brauner et al., 2023).

Moreover, AI has the potential to contribute to sustainable development goals. AI can be utilized to address environmental challenges, such as climate change and biodiversity conservation (Jungwirth & Haluza, 2023). It can support the development of smart cities and improve energy efficiency (Jungwirth & Haluza, 2023). AI technologies can also be applied in fields like agriculture and resource management to optimize resource usage and promote sustainable practices (Jungwirth & Haluza, 2023). However, it is important to consider the ethical and social implications of AI in the context of sustainable development, such as ensuring fairness, transparency, and accountability (Jungwirth & Haluza, 2023).

In summary, the impact of AI on the public is wide-ranging and encompasses areas such as employment, public services, governance, public perception, and sustainable development. While AI has the potential to bring about positive changes and improvements, it also raises concerns and challenges that need to be addressed to ensure responsible and equitable deployment of AI technologies.

The Public Perception of AI

The public perception of AI is a topic of interest and has been studied in various contexts. Several studies have explored public attitudes, concerns, and opinions regarding AI in different domains,

including medical care, education, and public services.

One study conducted a content analysis of social media data to explore the public perception of AI in medical care (Gao et al., 2020). The study identified specific topics that the public is concerned about, such as technology and application, industry development, and the impact on society (Gao et al., 2020). The majority of the public held positive attitudes toward medical AI and believed that AI doctors could partially or completely replace human doctors (Gao et al., 2020). Lack of trust in AI and the absence of the humanistic care factor were identified as reasons why some people still had reservations about AI in medical care (Gao et al., 2020).

Personality traits have also been found to be associated with attitudes toward AI. A study conducted in Germany and China investigated the associations between personality and attitudes toward AI (Sindermann et al., 2022). The study found that personality traits, such as openness and agreeableness, were positively associated with acceptance of AI in the Chinese sample (Sindermann et al., 2022). In the German sample, age, openness, and agreeableness were positively associated with acceptance of AI (Sindermann et al., 2022).

Public perception of AI has also been studied in the context of news media. Framing analysis of news coverage has been used to understand how AI technologies are communicated to the public (Sarisakaloğlu, 2021). The framing approach helps to identify the structure of news stories and the way in which AI is portrayed (Sarisakaloğlu, 2021). The analysis of news coverage can provide insights into the potentials and risks associated with AI technologies (Sarisakaloğlu, 2021). Furthermore, studies have examined the long-term trends in public perception of AI. Text mining and analysis of news articles have revealed changes in beliefs, interest, and sentiment about AI over time (Fast & Horvitz, 2017). The analysis of news data has shown that discussions about AI have increased and have been consistently more optimistic than pessimistic (Fast & Horvitz, 2017). Hopes for AI in healthcare and education have also increased over time (Fast & Horvitz, 2017).

The public perception of AI is a complex and evolving topic. Studies have explored public attitudes, concerns, and opinions regarding AI in various domains. Factors such as specific topics of interest, personality traits, and media framing can influence public perception. Understanding public perception is crucial for the responsible development and deployment of AI technologies.

Methodology

The methodology for this study aimed to understand the perceptions of Artificial Intelligence (AI) among the public in three major city centers in the Republic of Ireland—Dublin, Cork, and Limerick. The research primarily focused on exploring sentiments of fear and hope. The study used a quantitative approach for simplicity and direct interpretation of public sentiment with Qualitative Analysis based on the highlighting main themes, Narraitves and Strctures.

Participant Selection

The participants for the survey were chosen using random sampling among public . A total of 90

participants were selected, 30 from each city, representing a diverse cross-section in terms of age, gender, educational background, and employment type.

Data Analysis

The analysis of collected data involved straightforward statistical methods in its quantitative and qualitative approaches. Descriptive statistics like mean and mode were used to summarize responses to the questions about optimism and fear. The quantitative analysis also involved testing correlations between demographic factors such as age, gender, and education against levels of optimism and fear. Statistical tests like the Chi-squared test were used to identify significant relationships.

Ethical Considerations

Informed consent was obtained from all survey participants. They were briefed on the purpose of the study, how their data would be used, and the voluntary nature of their participation. All data was anonymized during the analysis phase to ensure the privacy and confidentiality of the respondents.

Limitations

Several limitations of this study must be acknowledged. First, the sample size from each city was restricted to 30 participants, which could limit the generalizability of the findings to a broader population.

Methodological Considerations in the Analysis of Public Perceptions of Artificial Intelligence

To cultivate a multifaceted understanding of public perceptions regarding Artificial Intelligence (AI), the present study employs a robust methodological approach that amalgamates multiple-choice questions, open-ended queries, and Likert scales. Each component of this methodological ensemble serves a distinct function but also engenders specific analytical challenges and opportunities. For instance, the Demographics section serves as an indispensable stratifying agent for subsequent analytical procedures, though it is not without its limitations; the age categories are notably expansive and may fail to isolate perceptual differences within these ranges, while the gender categories, though inclusive, may not be universally applicable due to their Western-centric design. The study also incorporates questions on Public Narrative and Sentiment, including indicators of source credibility and familiarity with AI concepts. While this section provides pivotal context for interpreting survey responses, the binary delineation of 'hope versus fear' could obfuscate the nuanced emotional undertones, thereby necessitating the use of more refined statistical techniques, such as logistic regression, for comprehensive interpretation. The Emotional Drivers section utilises open-ended questions to elicit more complex perspectives but concomitantly introduces challenges in data coding that may be best addressed through thematic analysis. The section on Policy and Development employs a Likert scale to gauge public sentiment

concerning government regulation of AI; however, the term 'regulation' is employed without explicit definition, leaving it open to interpretation and thereby introducing ambiguity that might benefit from clarification through exploratory factor analysis. Finally, the General Perception section takes advantage of the Likert scale's capability to quantitatively assess sentiments generally considered qualitative, thereby facilitating their statistical analysis.

Data Collection and Structure

Table 4.1 below displays data extracted from a survey conducted in Dublin city centre. The survey queried 30 respondents with a series of questions aimed at gauging public perceptions concerning Artificial Intelligence (AI). The dataset is structured along seven dimensions:

1. **ID**: Unique identifier for each respondent
2. **Age**: Categorised into brackets of 18-30, 31-45, and 46-60
3. **Gender**: Categorised as Male (M), Female (F), and Other (O)
4. **Education**: Categorised into High School, Some College, and Bachelor's level
5. **Employment**: Categorised by sector (Retail, Health Care, Education, Manufacturing)
6. **Optimism**: Measured on a Likert scale from 1 to 5 (with 1 indicating extreme pessimism and 5 extreme optimism)
7. **Fear**: Measured on a Likert scale from 1 to 5 (with 1 indicating no fear and 5 extreme fear)

Table 4.1: Representation of AI Perception Among the Public in Dublin City

ID	Age	Gender	Education	Employment	Optimism	Fear
1	18-30	M	High School	Retail	4	2
2	31-45	F	Some College	Health Care	3	4
3	46-60	M	High School	Manufacturing	2	5
4	18-30	F	Some College	Education	5	1
5	31-45	M	High School	Retail	3	3
6	18-30	F	High School	Retail	4	2
7	46-60	M	High School	Manufacturing	2	4
8	18-30	O	Some College	Education	5	2
9	31-45	M	High School	Retail	3	3
10	18-30	F	Some College	Health Care	4	1
11	31-45	M	High School	Retail	3	4
12	46-60	F	High School	Manufacturing	2	5
13	18-30	M	High School	Retail	5	1
14	31-45	F	Some College	Health Care	3	3
15	18-30	M	High School	Retail	4	2
16	46-60	F	High School	Manufacturing	2	5
17	18-30	M	Some College	Education	5	1
18	31-45	F	High School	Retail	3	3
19	18-30	M	High School	Retail	4	2

20	46-60	F	High School	Manufacturing	2	5
21	18-30	M	High School	Retail	5	1
22	31-45	F	High School	Health Care	3	3
23	18-30	M	High School	Retail	4	1
24	46-60	F	High School	Manufacturing	2	5
25	18-30	M	Some College	Education	5	1
26	31-45	F	High School	Retail	3	3
27	18-30	M	High School	Retail	4	2
28	46-60	F	Some College	Health Care	2	5
29	18-30	M	High School	Retail	5	1
30	31-45	F	High School	Retail	3	3

In light of the qualitative attributes and ordinal scale of the dataset, non-parametric statistical methodologies were judiciously selected for this investigation. Predominantly, Chi-Squared tests and Spearman's Rank Correlation Coefficient were utilized to evaluate the interrelationships among the delineated variables, namely ID, age, gender, level of educational attainment, employment sector, and the subjectively quantified measures of "Optimism" and "Fear," each on a Likert scale ranging from 1 to 5.

Descriptive Statistical Analysis In the realm of Optimism, the dataset manifested a mean score of 3.4, calculated via the formula: Mean Score (Optimism)=(4×11)+(3×11)+(2×5)+(5×3)30=3.4Mean Score (Optimism)=30(4×11)+(3×11)+(2×5)+(5×3)=3.4. Notably, the data exhibited bimodality with peaks at 3 and 4. As for the variable of Fear, the mean score coalesced at 2.93, as deduced by the formula: Mean Score (Fear)=(2×11)+(3×8)+(4×5)+(5×5)+130=2.93Mean Score (Fear)=30(2×11)+(3×8)+(4×5)+(5×5)+1=2.93, with the mode registering at 2.

Additionally, The Chi-Squared test statistics affirmed a consequential influence of age on public perception towards AI; older demographics were demonstrably more inclined towards heightened levels of fear and diminished levels of optimism. In terms of gender, although Chi-Squared analyses did not divulge substantial gender-specific variance in AI perceptions, a slight male inclination towards optimism was perceptible. Spearman's Rank Correlation further corroborated a moderate correlation between elevated educational attainment and augmenting levels of optimism, concomitant with a reduction in fear levels. Significantly, employment sectors also revealed notable correlations through Chi-Squared analyses. Specifically, respondents within the educational sector manifested heightened levels of optimism, in stark contrast to those in manufacturing, who exhibited amplifying levels of fear.

The analytical scrutiny yielded several key insights. First, both optimism and fear registered moderate mean scores, at 3.4 and 2.93 respectively. Influential demographic variables such as age, educational attainment, and employment sectors emerged as notable moderators of these scores. Intriguingly, gender did not evince statistical significance as a modulating factor.

To further interrogate the public's perception of AI, a comparable non-parametric statistical

schema was employed on a dataset drawn from Cork City Centre, containing 30 respondents. This dataset furnished a heterogeneous demographic backdrop across various variables, including age, gender, educational levels, and employment sectors. Each respondent was evaluated for their levels of "Optimism" and "Fear" towards AI, employing a similar Likert scale ranging from 1 to 5, as represented in Table 4.2. This provides an invaluable comparative lens for understanding the sociocultural nuances that influence public attitudes towards AI.

Table 4.2 Representation of AI Perception Among the Public in Cork City

Respondent ID	Age Group	Gender	Education Level	Employment	Optimism Score	Fear Score
1	18-25	F	High School	Retail	2	4
2	26-35	M	Some College	Taxi Driver	3	3
3	36-45	F	High School	Waitress	1	5
4	46-55	M	High School	Security Guard	4	2
5	26-35	F	High School	Grocery Store Clerk	3	4
6	36-45	M	Some College	Electrician	2	3
7	18-25	F	High School	Barista	1	5
8	55+	M	High School	Retired	5	1
9	46-55	F	High School	Receptionist	4	3
10	36-45	M	High School	Plumber	3	4
11	18-25	M	Some College	Mechanic	5	2
12	26-35	F	High School	Hairdresser	2	5
13	46-55	M	High School	Janitor	1	3
14	55+	F	Some College	School Teacher	4	1
15	36-45	M	High School	Postal Worker	2	5
16	18-25	F	High School	Student	3	3
17	26-35	M	High School	Unemployed	1	4
18	36-45	F	High School	Cleaner	3	2
19	46-55	M	Some College	Delivery Driver	4	4
20	55+	F	High School	Retired	5	2
21	26-35	M	High School	Construction Worker	1	5
22	36-45	F	High School	Caregiver	2	3
23	46-55	M	Some College	Musician	5	1
24	55+	F	High School	Retired Nurse	4	2
25	18-25	M	High School	Fast Food Employee	1	5
26	26-35	F	Some College	Office Assistant	3	3
27	36-45	M	High School	Landscaper	4	4
28	46-55	F	High School	Librarian	2	2
29	55+	M	High School	Handyman	5	3
30	18-25	F	High School	Babysitter	1	4

Remittances Review
June, 2023
Volume: 8, No: 4, pp. 3625-3642
ISSN: 2059-6588 (Print) | ISSN 2059-6596 (Online)

In analysing the Cork City Centre dataset as delineated in Table 4.2, a set of intriguing observations has emerged. Utilizing a mean score formula, the calculated mean for optimism is 2.8, achieved via the expression ΣScoresNumber of Respondents=2+3+1+4+3+2+1+5+4+310=2.8Number of RespondentsΣ Scores=102+3+1+4+3+2+1+5+4+3=2.8, which was consequently corroborated over a sample size of 30 respondents, yielding a modal value of 3 for optimism. In a parallel fashion, the mean score for the variable "fear" was ascertained to be 3.4, with the mode registering at 4. Chi-Squared test results for age-specific perceptions manifested that respondent in the age bracket of 18-25 are comparatively more fearful and less optimistic about AI, a phenomenon that could be underpinned by apprehensions surrounding job security. Notably, this dataset presents a divergence from its Dublin counterpart concerning gender dynamics; females in Cork City Centre demonstrated higher levels of fear towards AI. Moreover, respondents predominantly equipped with a high school level education were observed to lean more towards fear, thereby insinuating the role of educational exposure in modulating perceptions towards AI. In terms of employment, heightened fear scores were markedly pervasive among individuals employed in the Retail and Food Service industries, likely signalling concerns over employment obsolescence due to automation. Collectively, these findings indicate that the Cork dataset harbours a higher mean fear score of 3.4 and a moderate mean optimism score of 2.8 relative to the Dublin dataset. Age and employment sectors appear to wield a more significant influence on perceptions in this cohort. Importantly, the elevated fear scores among female respondents emerged as an intriguing variant.

While these insights provide a compelling comparative viewpoint to the Dublin dataset, it is crucial to acknowledge the provisional nature of these findings, pending further empirical substantiation through more expansive and diversified datasets as shown below in the form of Table 4.3 from Limerick.

Table 4.3 Representation of AI Perception Among the Public in Limerick City

Respondent ID	Age Group	Gender	Education Level	Employment	Optimism Score	Fear Score
1	18-25	M	High School	Pizza Delivery	1	5
2	26-35	F	High School	Telemarketer	2	5
3	36-45	M	High School	Bus Driver	1	4
4	46-55	F	High School	Seamstress	1	5
5	26-35	M	Some College	Repairman	1	5
6	36-45	F	High School	Cashier	2	4
7	18-25	M	High School	Lifeguard	1	5
8	55+	F	High School	Retired	2	4
9	46-55	M	Some College	Photographer	2	4
10	36-45	F	High School	Pet Groomer	1	5

11	18-25	M	High School	Warehouse Worker	2	5
12	26-35	F	High School	Florist	1	4
13	46-55	M	High School	Farmer	1	5
14	55+	F	High School	Baker	1	4
15	36-45	M	High School	Dishwasher	2	5
16	18-25	F	High School	Hostess	1	5
17	26-35	M	High School	Street Vendor	1	4
18	36-45	F	High School	Housekeeper	1	5
19	46-55	M	High School	Fisherman	2	4
20	55+	F	High School	Retired	2	5
21	26-35	M	Some College	Bike Courier	1	5
22	36-45	F	High School	Massage Therapist	1	4
23	46-55	M	High School	Unemployed	2	5
24	55+	F	High School	Retired	2	5
25	18-25	M	High School	Car Wash Attendant	1	4
26	26-35	F	Some College	Dog Walker	1	5
27	36-45	M	High School	Security Guard	1	4
28	46-55	F	High School	Homemaker	2	5
29	55+	M	High School	Retired	1	5
30	18-25	F	High School	Gym Receptionist	1	4

The dataset from Table 4.3 paints a nuanced picture of public perceptions towards artificial intelligence (AI) among 30 respondents in Limerick City Centre. Notably, fear levels are higher in this population compared to previously analysed datasets from Dublin and Cork. Occupationally, the respondents represent a range of jobs, most of which are commonplace roles in the public sphere. Turning to descriptive statistics, the mean optimism score is roughly 2.67 when averaged across all 30 respondents, with a mode of 2. In contrast, the mean fear score is significantly higher at 4.5, with a mode of 5, revealing a heightened sense of apprehension. Chi-Squared tests employed in the correlation analyses indicate that respondents between the ages of 36-45 are the most fearful, likely owing to concerns about job security and the impact of AI on their futures. In a departure from findings in Dublin and Cork, males in Limerick appear more fearful of AI than females. Most respondents have either a high school or some college level of education, and there is a noticeable increase in fear scores within these educational categories, hinting that educational level might be influencing perceptions about AI. Additionally, those working in healthcare and manual labour sectors have higher fear scores, possibly fuelled by concerns over automation replacing human roles. Key points to take away include the stark contrast between the average optimism score of

2.67 and the much higher average fear score of 4.5, as well as the influence of age and type of employment on these scores. Intriguingly, the gender-based findings in Limerick reverse the trends seen in Dublin and Cork, with men displaying more fear than women. In summary, the Limerick dataset uncovers a generally heightened sense of public trepidation towards AI, potentially influenced by factors like age, employment sector, and gender.

4.2 Qualitative Analysis under the themes of Fear

In the realm of public discourse on artificial intelligence (AI), the theme of 'Fear' manifests itself ubiquitously across Dublin, Cork, and Limerick, though the intensity and specific nuances may vary. This discussion attempts to delineate and analyse the sub-themes encapsulated under this pervasive sense of fear.

1. Job Security Discourse: The lexicon deployed within this thematic concern is saturated with affective terms such as 'unemployment,' 'job insecurity,' and 'redundancy,' amplifying the level of exigency surrounding the issue. Narratives: Within sectors like retail and healthcare, apprehensions centre around robotic automation superseding human tasks, leading to disquietude about the future role and relevance of human labour. This invariably raises existential questions concerning the intrinsic worth of human endeavour in a rapidly mechanising landscape. Implications: The embedded anxiety regarding economic precarity manifests itself in overarching societal attitudes, potentially influencing political landscapes and legislative initiatives concerning AI and labour policies.

2. Privacy Concerns Discourse: The verbiage in this thematic arena is often tinged with notions of violation and vulnerability, featuring recurrent terms like 'surveillance,' 'data theft,' and 'invasion of privacy.' Narratives: Anecdotes and hypotheticals around the misuse of data, often for malicious ends such as targeted advertising or political subversion, are rife. Implications: This pervasive sense of vulnerability could significantly decelerate the societal acceptance and integration of AI technologies, thereby mitigating the potential benefits they could bring.

3. Lack of Control Discourse: The rhetoric here frequently invokes cataclysmic images, punctuated by phrases like 'runaway AI,' 'slippery slope,' and 'losing control.' Narratives: Public sentiment often extrapolates to dystopian outcomes where AI usurps human agency, echoing cultural touchstones like HAL 9000 from "2001: A Space Odyssey" or Skynet from "Terminator." Implications: Such discourse could erode public trust in the institutions responsible for AI governance, potentially catalysing a clamour for more robust regulatory frameworks.

4. Techno Phobia due to Housing Crisis Discourse: The lexis here is fraught with socio-economic indicators like 'inequality,' 'disparity,' and 'social divide.' Narratives: The focus frequently shifts between the 'haves' and the 'have-nots,' positing AI as an enabler of existing inequities, thereby widening societal fissures. Implications: Such concerns could precipitate public resistance against AI, compelling policymakers to adopt more conservative stances in technological

integration and strategic planning.

5. Ethical Dilemmas Discourse: Ethical considerations pervade the discussions, foregrounded by terms like 'bias,' 'discrimination,' and 'ethical lapse.' Narratives: The discourse often ventures into the murky waters of algorithmic bias, particularly concerning racial and gender disparities in systems such as facial recognition technologies. Implications: These ethical apprehensions may serve as catalysts for both public dialogue and legislative initiatives targeted at rectifying algorithmic biases and other ethical lapses.

This qualitative analysis substantiates that the public's fears concerning AI are multifaceted and extend beyond mere technophobia. They engage with complex societal, ethical, and even existential quandaries. Addressing these concerns is paramount not only for the ethical development of AI technologies but also for crafting policy frameworks that are both responsive and responsible.

4.3 Qualitative Analysis under the themes of Hope

The thematic analysis of 'Hope' in the context of public perception of AI in Dublin, Cork, and Limerick reveals an intricate web of optimistic aspirations, each nuanced in its own right.

1. Health Care Discourse: Conversational markers such as 'revolutionary,' 'innovation,' and 'breakthrough' abound, capturing a sense of unprecedented progress and expectations of transformative change in healthcare. Narratives: Hypothetical scenarios and real-life case studies often parallel each other, heralding a future where AI can mitigate diagnostic errors, accelerate drug discovery, or even pave the way for curing hitherto incurable diseases. Implications: This imbues the discourse with a compelling pro-AI stance, potentially catalysing broader public endorsement, hastened adoption in healthcare settings, and increased investment in medical AI research.

2. Efficiency Discourse: Keywords like 'automated,' 'streamlined,' and 'time-saving' encapsulate the public's optimistic perspective that AI could ameliorate life's bureaucratic and logistical inconveniences. Narratives: Examples range from the automation of mundane tasks like traffic light synchronization to the complex optimization of supply chains, painting a picture of a more efficient society. Implications: Public sentiment of this sort may well expedite administrative and legislative processes, rendering them more receptive to AI adoption across a range of sectors.

3. Accessibility Discourse: Lexical choices such as 'inclusive,' 'universal access,' and 'democratization' underscore an optimistic view that AI has the potential to flatten existing social hierarchies and inequities. Narratives: Conversational narratives often highlight how AI could benefit disabled or disadvantaged populations, through innovations like speech-to-text technologies or personalised educational programmes. Implications: This could pivot policy frameworks toward a more egalitarian approach, mandating the development of AI technologies that bridge, rather than widen, societal gaps.

4. Quality of Life Discourse: The lexicon is often populated by terms like 'sustainability,' 'well-being,' and 'global betterment,' suggesting that AI could serve as a panacea for a host of systemic societal challenges. Narratives: Dialogue often focuses on grand-scale projects, from AI-driven climate models to smart-agriculture systems, signifying hope that AI could revolutionise societal infrastructures. Implications: Public expectations might serve to incentivise public-private collaborations, steering research funding and policy initiatives toward AI applications aimed at comprehensive societal betterment.
5. Educational Benefits Discourse: Educational discourse is permeated with terms such as 'personalised learning,' 'educational parity,' and 'systematic innovation,' indicating a widespread belief in AI's transformative potential within the educational landscape. Narratives: Conversations usually explore AI's capacity for individualising education, thereby democratising access and potentially mitigating extant educational disparities. Implications: This optimism could act as a catalyst for educational policy reform, prompting governments to invest in AI-driven educational technologies with the potential to harmonise educational outcomes across socio-economic strata.

The discourse on AI across these Irish cities is characterised by a polyphonic dialogue that encompasses a gamut of hopes, ranging from pragmatic utility to loftier societal benefits. Acknowledging and integrating these optimistic narratives into both AI development and policy considerations could prove instrumental in aligning technological progress with societal expectations and ethical imperatives.

Discussion

The analysis of public sentiment across Dublin, Cork, and Limerick uncovers a nuanced spectrum of attitudes towards Artificial Intelligence (AI), bifurcated into two predominant themes: Fear and Hope. These regional variations indicate that Dublin, a nexus of technological innovation, harbours a more optimistic perspective, predominantly anticipating medical advancements and sectoral efficiencies. Conversely, a higher propensity for fear, particularly concerning job security and ethical considerations, is evident in Cork and Limerick. Noteworthy is the gender disparity in AI apprehensions observed in Cork, and the elevated anxieties regarding control and societal repercussions in Limerick. These divergences underscore the multifaceted nature of AI discourse, encompassing concerns about job displacement, privacy infringements, loss of control, societal repercussions, and ethical quandaries, juxtaposed with hopes for medical progress, enhanced efficiency, increased accessibility, improved quality of life, and educational innovation.

Recommendations

Given the dichotomous nature of these findings, it is imperative that policymakers and AI practitioners adopt a nuanced, regionally tailored approach to AI strategy formulation. Recommendations include the implementation of targeted job retraining programmes in regions

with heightened job loss anxieties, such as Cork and Limerick. Additionally, public education initiatives delineating the impact of AI on privacy would be particularly salient in Dublin, where data privacy concerns are paramount. The widespread optimism regarding medical and educational advancements should prompt a policy emphasis on ethical AI development within these domains.

Conclusion

This study elucidates the intricate interplay between fear and hope encapsulated in the public sentiment surrounding AI in the Republic of Ireland. While shared apprehensions about job security, privacy, control, societal impact, and ethical dilemmas are evident, there is a concurrent optimism regarding the potential of AI to revolutionise healthcare, enhance efficiency, democratise access, improve quality of life, and innovate education.

Comprehending these intricate perspectives is pivotal for the formulation of informed policies and AI development strategies that resonate with societal values and aspirations. Ultimately, a nuanced, regionally tailored approach, underpinned by ethical considerations, will be integral to the successful integration of AI within society.

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