

The Role of Infographics in Shaping Political Literacy in the UK and US since 2016

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Chapter 1: Introduction

This dissertation examines the research question: What role have infographics played in shaping political literacy in the UK and US since 2016? Engaging in democratic politics is daunting and complex (Gaultney, et al., 2022; Infield, 2024). Understanding how infographics can be used to engage the public, focus media attention, and foster accurate understanding of issues provides insight into the development of political literacy. The period since 2016 is characterised by growing polarisation associated with misleading or conflicting political narratives often spread on social media and different news outlets. This has contributed to increasingly hostile and unapproachable political environments (Uberoi & Johnston, 2022). For those navigating the political landscape it has become harder to recognise and filter false information (Birmingham & Miller, 2021). There is a tendency to gravitate towards the loudest voice to form individual opinion, regardless of truth or bias, eroding effective participation in democratic processes based on well-founded, impartial information. Political literacy can be usefully defined as having the required knowledge, understanding and comprehensible skills of political issues, systems and events, which an individual needs to fully participate in their society's government and democratic practices (Lailiyah, et al., 2018), (Carr, et al., 2018). Infographics appear to offer both an aid and a threat to political literacy, as they are uniquely effective tools for engaging and informing an audience, but with corresponding potential for misuse. The way infographics have been used in the UK and US since 2016 allows us to use infographics as a lens to view the condition of political literacy.

This approach provides insight into two sub questions: how can visualised data can be manipulated to reinforce certain political ideologies (Velemirovich, 2019) and narratives? And what role can infographics play in enhancing critical engagement with political media (Amit-Danhi & Shifman, 2018; Allen & Amit-Danhi, 2024), the development of well-informed political views and thereby improving political literacy? Infographics are graphical representations of specific information or data set, which offer an elegant, visual and memorable way to convey meaning. (Velemirovich, 2019) reports that people only retain about 70% of information when text alone is used, but

when a visual element accompanies that, retention rates increase to about 95%. This highlights the remarkable effectiveness of representing data and information visually. In the context of political literacy, the utilisation of infographics offers the ability to make complex political information, and data sets comprehensible and visually engaging (Amit-Danhi & Shifman, 2018). Consequently, infographics can be used to sway opinion, engage and mobilise people about political issues and events (Schreder, et al., 2016).

General factors including educational and social background, personal experiences and media engagement over time all contribute to political literacy. For this reason, political literacy is an abstract concept and cannot be directly measured (Cassel & Lo, 1997). However, as political literacy is central to the functioning of any democratic process, factors like public political participation, media attention and the accurate discourse around political events, issues, concepts and facts are reliable indicators pointing to the state of political literacy in the UK and US (Pagliarello, et al., 2023).

Chapter 2 examines how a person engages with an infographic, answering the sub question: What factors influence a person's cognitive process when engaging with an infographic? This chapter investigates aesthetics and the sensory impact infographics have on the viewer (Kirk, 2016), then considers how narrative influences perception, introducing the Martini Glass Structure (Figure 1) (Segel & Heer, 2010). The perceived objectivity of infographics is examined, in the context of limited critical analysis by viewers (Tal & Wansink, 2014). The common ways infographics can be visually manipulated are outlined. Three infographics provide visual aid to understand these manipulation techniques (McCready, 2020). Chapter 3 examines factors influencing development of political literacy in the US and UK. This provides the context for the ways infographics were deployed during key political events, the UK EU Referendum ('Brexit') and the US 2020 General Election. Chapters 4 and 5 analyse a sample of infographics to assess their use and their effectiveness in the US and UK. The analysis uses a framework developed through this research combining Kirk's principles of good design (Kirk, 2016), with the role of associated narrative (Martini Glass model) (Segel & Heer, 2010), and further considers each infographic's impact on the audience, in the

context of the author's intended outcome . The framework includes an evaluation of overall effect on political literacy, positive or negative, based on these criteria.

Conclusions and wider inferences are presented in Chapter 6, summarising the role infographics play in political literacy, and what further considerations are necessary to improving political literacy (Velemirovich, 2019). Based on these conclusions, recommendations are presented on how to recognise and critically engage with intentionally or accidentally misleading infographics and ultimately to ensure future infographics serve to improve political literacy (Pagliarello, et al., 2023).

Chapter 2: Infographics in Society

2.1 Engagement in Infographics

Using visual elements to represent data is the essence of infographics. This technique is essential to capture the attention of the viewer and aid retention of the data presented (Kirk, 2016). Translating raw data or information into visual elements allows the viewer to engage in a sensory experience (Brinch, 2020). Experiencing the data visually, the viewer cognitively simplifies the data for ease of comprehension and retention (Ware, 2019). It allows for patterns and comparisons in data sets to be recognised with ease. (Kirk, 2016) writes that good visualisation design has three principles: being “Trustworthy, accessible and elegant” (Kirk, 2016, p. 26). The “elegance” of an infographic flows from its design choices. The use of colour, scale, shape, and position are all design choices made to “represent data” by visually encoding it using these elements (Kirk, 2016, p. 158). The audience’s job is to decode these visual representations. Kirk claims elegant visual data representations should not be for aesthetics, instead the aesthetic beauty should result from the process of designing effective visual representations (Brinch, 2020; Kirk, 2016).

When people are given visually represented information or instruction, even for a matter of seconds, they are more likely to recall it - accurately - than through any other form of sensory communication (Dunlap & Lowenthal, 2016). This is even the case when a person has no prior knowledge of the themes or data being represented (Ware, 2019). Not only does this make engaging in with complex data sets and information less daunting, but it also enables the viewer to retain the data represented for longer and with more accuracy (Zull, 2002). Infographics developed to harness these effects are often used to enhance understanding of political events and issues, often as part of narratives to give context or introduce ideas alongside an infographic (Dailey, et al., 2022).

2.2 Narratives and Infographics

Understanding the effect narratives or storytelling have on an individual is vital in examining how a population’s political literacy is shaped through its pairing with

visualised data. Storytelling is part of human nature and key to understanding our world, creating connections with others and forming individual and cultural identities (Weber, 2020). Through storytelling or, in a political context, journalism, a narrative evokes emotional responses which is a powerful tool in a political environment (Dailey, et al., 2022).

Evoking an emotional response is only possible when the narrative is trusted by the audience (Popescu-Sarry, 2024). When the narrator does not evidence claims made within a narrative it can trigger distrust in narrator and narrative (Weber, 2020). Political narratives published by news media outlets, social media users, political parties, campaign groups and policy think-tanks are sources people commonly used to develop political literacy (M & Al Zuhri, 2023). Identifying the political narrators is key to understanding where and how individuals receive their political information and how this plays a part in shaping political literacy. Pairing a narrative with infographics to show relevant data as evidence of research is one the most effective ways of building trust in a narrative. This utilises showing as well as telling, one of the most effective principles in storytelling (Klauk & Köppe, 2014). Introducing visualised data and allowing the reader to independently engage with the information puts the narrator into the background and the viewer in charge. Democratic politics is based around trust of the political parties, elected representatives, officials and journalists, making the viewer's own ability to judge trustworthiness central to political literacy (Kolpinskaya & Bennett, 2024).

Weber introduces the concept of author-driven and reader-driven narratives which analyses the process of how an individual engages with a narrative paired with an infographic (Weber, 2020). An author-driven approach presents information in a strict sequence, often summarising main facts, using visualisations with heavy messaging and no interactivity with the narrative from the audience. Whereas a reader-driven approach has an emphasis on interactivity with little messaging and no set order in which the information should be engaged with (Segel & Heer, 2010).

The combination of both an author- and reader-driven narrative are visualised using a “Martini Glass Structure” (figure 1) a model coined by (Segel & Heer, 2010, p. 8). Figure 1 is a recreation of this structure. The structure begins with the introduction of the narrative found in the data. When the author has established the narrative, the visualisation allows for a reader-driven interpretation of the data. The widening of the mouth of the glass represents the possible interpretive paths available to the reader through interaction with the data. This structure is dynamic depending on the authoring (a more author-driven approach means a longer stem). The readership also impacts the mouth shape. Fewer reader-driven interactions with the data leads to a narrower mouth shape. The author-driven predefined narrative based around the data can lead to the reader exploring fewer paths and fewer interactions with the data leading to a narrower mouth of the glass. (Weber, 2020) adds to this structure by adding a second author-driven “toothpick” indicating the narrative control being passed back to author as the reader moves on from exploring the visualised data.

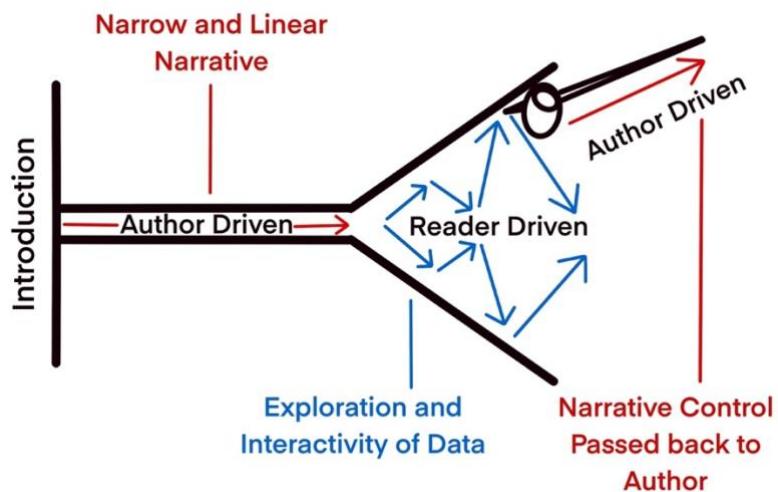


Figure 1 Recreation of the Martini Glass Figure. 1 Elements from (Weber, 2020) and (Segel & Heer, 2010, p. 8).

In politics, infographics are rarely presented without a narrative. The concept presented in Figure 1 is applied to analysis of case studies, particularly how the audience engages with the infographics and how this shapes political literacy and subsequently political events.

2.3 Objectivity and Infographics

The combination of data with a political narrative can be very effective in generating an emotional response from an audience. The presence of visualised data alone can enhance the credibility of narrative claims and their reception by the viewer/reader. The association of data with scientific methods and the implication that authoritative research was conducted instils a perception of credibility in the data (Lewandowsky, et al., 2012). (Tal & Wansink, 2014, p. 117) states:

“... Communications may be made more convincing without any alteration in content, simply by virtue of being presented with elements associated with science.”

This reinforces the idea that public persuasion can be increased merely by the assumption that data provided has been collected through academic or scientific research (Tal & Wansink, 2014). The basis of these assumptions made by a person stems from the high standing of science and academia in society. To describe this perceived objectivity at its most extreme McCosker & Wilken (2014, p. 155) use the terms “fantasy of knowing, or total knowledge”. When perceived objectivity of data is of a political nature, these effects become intensified by pairing with political narratives. The inclusion of an author-driven narrative preceding reader-driven infographics can privilege the proposed narrative and viewpoints of the author and result in misinformation when trying to educate the population on political events and issues (Helen Kennedy, 2020). Figure 2 shows an infographic assumed to be based on scientific data showing the spread of Covid-19 but is in fact flight path data from 2017 used as part of research attempting to predict the spread of Covid-19 (BBC, 2020).



Figure 2 An infographic misinterpreted by the Sun claiming the redlines show the spread of Covid-19 but in fact the data infographic shows flight paths from 2017 (BBC, 2020)

Having established how an individual engages with infographics, we can examine the wider societal and political impacts of infographics when used to propound misleading narratives. The illusion of “total knowledge” (McCosker & Wilken, 2014, p. 155) based on blind trust in data encourages a lack of critical engagement with an infographic-supported narrative. (Kennedy & Lucy Hill, 2017) states that infographics are not merely visualisations of raw data or facts but designed to reinforce certain ideologies while ignoring or downplaying others. Furthermore, they state that infographics “perpetuate existing power relations and create new ones” (Kennedy & Lucy Hill, 2017, pp. 1-2). Applying this to politics, infographics are tools that can induce uncritical trust in ideology-driven narratives and can also promote the interests of those in a position of power (Nærland & Engebretsen, 2023). Nærland & Engebretsen (2023, p. 640) cite an article by (Dick, 2014) which details the long history of abuse of narrative-driven infographics in journalism. The article investigates the use of infographics published in several well-established UK newspapers, especially the Daily Express, to promote the views of their proprietors. Infographics published in the newspapers between 1956 and 1959 did not represent data “accurately or objectively” (Dick, 2014, p. 152). This provided misleading evidence to support headlines which perpetuated owner Lord Beaverbrook’s own political ideologies and business interests.

2.4 Manipulation in Infographics

This section summarises manipulation of data in infographics, with examples to provide a visual aid. Understanding common techniques used to manipulate the perception of data to promote a particular narrative is the starting-point for a viewer to determine whether an infographic is presenting data accurately so they can form data-based opinions and viewpoints. Critical awareness of ways infographics is manipulated relates to effective media and political literacy and is relevant to the contexts where infographics influence political outcomes.

Using a scale which is proportionate to the data presented is key to creating an accurate visual representation of the data, but extension or compression of the Y-axis is widespread. Manipulation by compressing the Y-axis is clear violation of one of Kirk’s principles of good design, being trustworthy (Kirk, 2016). Figure 3 shows a graph

published by the National Review on Twitter in 2015 which hides trends in average global temperature since 1880 in this way.

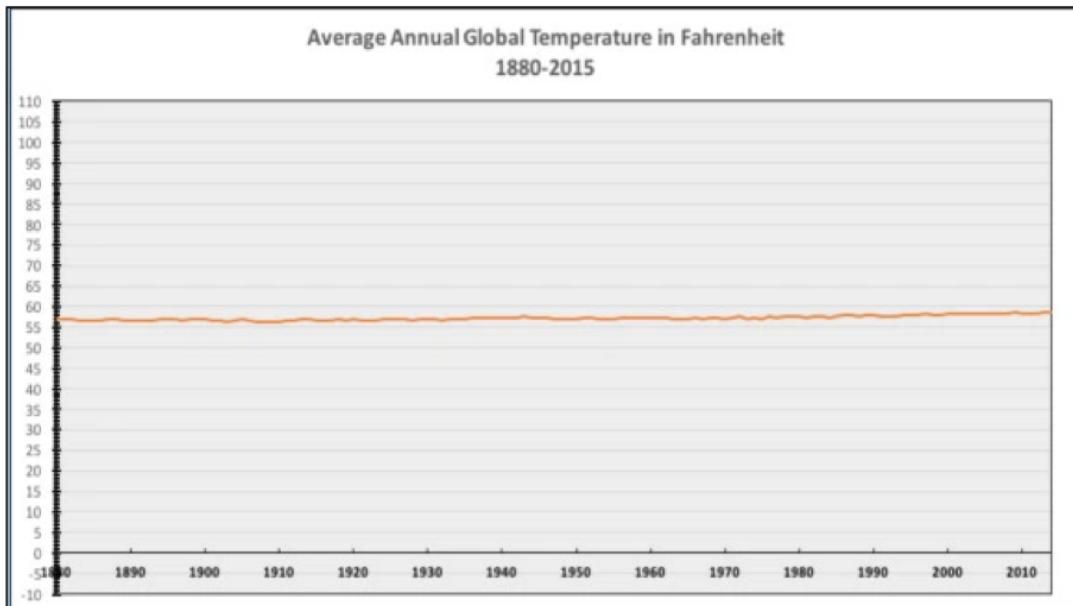


Figure 3 A graph published by the National Review showing climate change 1880 with manipulated Yaxis (@NRO, 2015)

Cherry-picking data and misrepresenting it is a pervasive abuse of infographic design principles. Figure 4 shows an Instagram post from 2018 by then-President Trump. The post claimed an 88% job approval with data from figure 5 combining the ‘somewhat agree’ and ‘strongly agree’ categories creating a misleading approval rating. The small subtitle “Among Republicans” can be easily overlooked allowing room for misinterpretation of the data as cross-party. The graphic also ignores other data sets from Democrats, Independents, and all registered voters (figure 5).



Figure 4 An Instagram post by Donald Trump claiming an 88% approval rating (@realdonaldtrump, 2018)

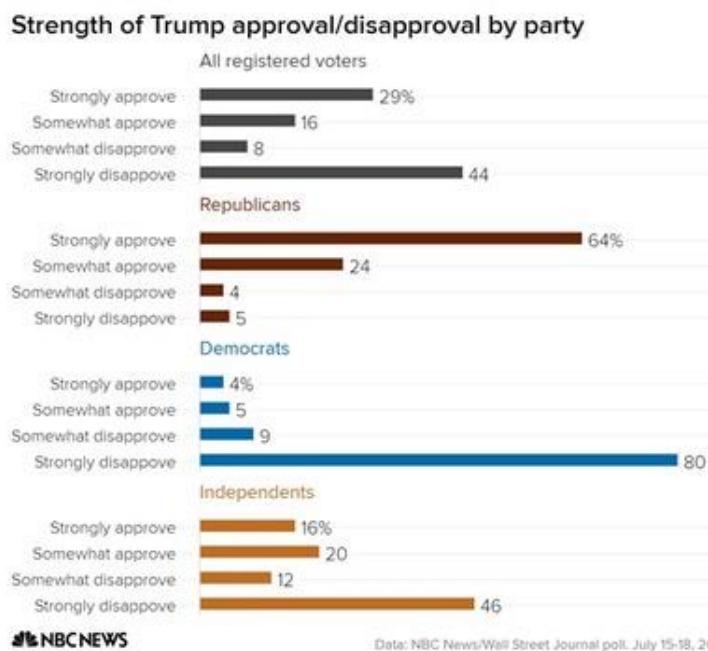
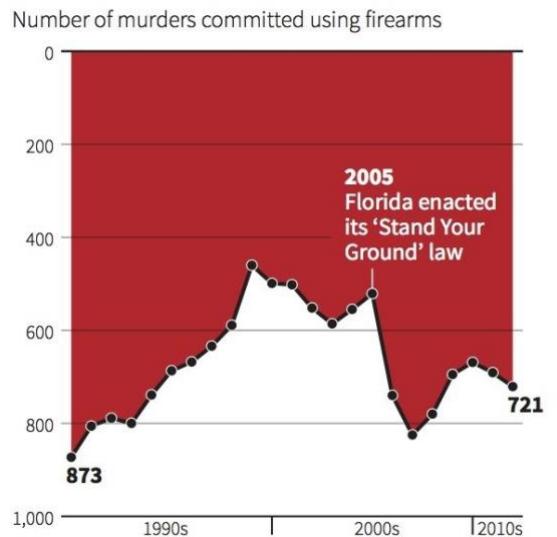


Figure 5 Donald Trump's approval rating data reported by NBC and partially used to inform the infographic in figure 5 (NBC, 2018)

Going against conventional standards is a common way to mislead the viewer by violating the principle of accessibility. Figure 6 an example of gun violence in Florida after the introduction of the Stand Your Ground Law, shows how the viewer intuitively misinterprets correct data because the Y-axis is inverted.

Gun deaths in Florida



Source: Florida Department of Law Enforcement

C. Chan 16/02/2014

REUTERS

Figure 6 An example of an unconventional infographic showing gun deaths in Florida since the implementation of the "Stand Your Ground" law (Lallanilla, 2014)

Chapter 3: The Shape of Political Literacy

Societal contexts for political literacy in the UK and US leading up to 2016 and since help inform the analysis and evaluation of the role infographics have played in developing political literacy (Allen & Amit-Danhi, 2024) (Pagliarello, et al., 2023). The US Presidential election and EU Referendum in the UK were intense and divisive political events unlike anything either country had experienced previously. This placed unprecedented demands on each electorate's political literacy at that specific time particularly during the campaign period. Social media's impact was crucial in each campaign in a transformed media landscape, with significant ongoing consequences for political literacy (Amit-Danhi & Shifman, 2018).

Common factors in shaping political literacy include civic education, personal societal experience and media exposure (Koren, 2023). In the UK and US these factors operate in a similar way due to their respective democratic heritage, historical links and economic, social and political connections. However, similarities and links should not

mask the clear cultural, societal and political differences evident in the way political literacy developed in each country (Happer & Philo, 2013). This in turn influences the different ways infographics are deployed by news media and political campaigns often leveraging the power of social media networks.

The factors influencing the development of political literacy in recent years have created room for influential political figures and organisations to take advantage for their benefit (Tam, 2016). The shift to digitalised means of communication opened new ways in which people can engage in political discourse (Cormack, 2023). This new and fertile political communication landscape is and has been susceptible to the influence of powerful political figures and organisations shaping political discourse around their own political ideologies (Bradshaw, et al., Programme on Democracy & Technology). The inexperience of people being able to critically engage with the vast and unregulated range of political opinions, ideologies, and facts have led to many gravitating towards the most influential voice regardless of credibility (Pagliarello, et al., 2023) (Lewandowsky, et al., 2012). This has created political polarisation with many being misinformed leading to their political literacy being undermined (Vasist, et al., 2023).

A defining example of the use of social media to sway political opinion happened in 2016 with the twitter-driven campaign of Donald Trump posting unfounded information about political issues and the opposition candidate (Sanderson, et al., 2021) (Zhang, et al., 2024). Although much of the content posted related to untrue narratives to prompt an emotional response from voters, many lacked the media literacy to critically evaluate the posts, quickly adopting the same political viewpoints themselves. During this campaign the ability to share and interact with content rapidly was crucial in the spread and believability of misinformation (Sanderson, et al., 2021). Use of infographics plays a key role in this. Shared alongside political narratives (Amit-Danhi & Shifman, 2018) they were instrumental in lending misleading narratives the perception of being accurate and credible while also (over-)simplifying complex political ideas. This resulted in an ideologically motivated voter base which ultimately won Trump the 2016 election (Wong, 2019) (Muyskens, 2016). To many traditional politicians this irresponsible, unconventional but effective method of voter mobilisation was

unprecedented. It caused a divide within the Republican party as well as the between the two parties. The loyal and ideological following of Trump was enabled initially by the lack of media literacy to recognise misinformation designed to sway political opinion (Carr, et al., 2018) and now has had a significantly damaging influence on people's willingness to engage critically with political information to accurately inform their political views to effectively participate in democracy.

A similar polarising event that year was the UK EU Referendum, similarly characterised by a highly-effective social media-driven Leave campaign, (Gallo & Langtry, 2020) using simple messages backed by an appeal to emotion, using unfounded claims to promote one side and undermine the opposing Remain campaign, which relied more on traditional media and official data sources (Henshall, 2017). The breadth and complexity of the issues involved during a short nine-week campaign meant the electorate was required to understand, assess and form views about a succession of opposing positions and narratives, with conflicting data-driven claims (Eríşen & Ersoy, 2024) (Henshall, 2017). Both campaigns frequently utilised infographics as a means of presentation which generated further polarising debate when data and claims were disputed or undermined by the other side. The two main political parties offered little guide to their supporters (King, 2019), as they were officially neutral and deeply split (Moore & Ramsay, 2017).

Chapter 4: Analysis

4.1 Analysis Strategy and Framework

This chapter analyses four political infographics from the UK and US using the framework outlined in Chapter 2. The analysis and assessment of each infographic's influence on political literacy is summarised in a table under each example. Table 1 shows the framework and assessment criteria developed for this dissertation.

Table 1 Analysis framework and assessment criteria summary

Criteria	Considerations	Rating Scale	Source
Elegance	Simplicity, comprehensibility	High – Medium - Low	Kirk
Trust	Accuracy of visual encoding	High – Medium - Low	Kirk
Accessibility	Ability to engage and access	High – Medium - Low	Kirk
Narrative Function	Viewer-driven engagement	High – Medium - Low	Segel & Heer
Effectiveness	Achievement of author's intended outcome	High – Medium - Low	(Author)
Enhancement of Political Literacy	Overall net contribution to political literacy of audience	Positive -Neutral - Negative	(Author)

To evaluate the visual effectiveness of each infographic Kirk's three principles of good design, "elegance, accessibility and trustworthiness", (Kirk, 2016, p. 26) are used. The role of visual elements is analysed, evaluating their necessity or simplicity when enhancing the comprehensibility and engagement of data or information representation. Kirk's principle of 'elegance' focuses on the appropriate, simple visual encoding of information (Kirk, 2016). Secondly, 'trustworthiness' of the visual encoding of the data or information is evaluated, ensuring that any attempt to mislead via the visual representation of data is highlighted. Third, 'accessibility' of the infographic is analysed by evaluating the infographic as whole and its ability for an audience to engage with the data or information represented.

The fourth criterion is narrative context, which is analysed using the Martini Glass structure as a guide to show how the infographic operates paired with a narrative (Segel

& Heer, 2010). Then the effectiveness of achieving author's intended goal is assessed with reference to the wider political context in which the infographic was published.

Lastly, an overall assessment is made of how this translated into influence on the political literacy of the audience who engaged with it. Consideration was given to whether the infographic oversimplified or misinformed or whether it added complexity to the issues. An assessment of how the infographic shaped the understanding of the political theme is based on the analysis.

4.2 2016 Vote Leave Immigration Infographic

Figure 7 was published during Brexit by the Vote Leave campaign. The visual elements do not only represent information or data but aim at connoting that immigration from the countries highlighted in red and orange will increase if the UK were to remain in the EU (Eríşen & Ersoy, 2024). The use of a large gradient-hued arrow pointing directly from the countries in red to the UK is the primary element conveying this message.



Figure 7 Infographic published by the Vote Leave campaign during the Brexit campaign (Eríşen & Ersoy, 2024)

As (Drainville, 2016) observes the large arrow sweeping across the map of Europe is reminiscent of Second World War graphics signifying military invasion (figure 8), which emotionally enhances the message that immigration from these countries should be feared.

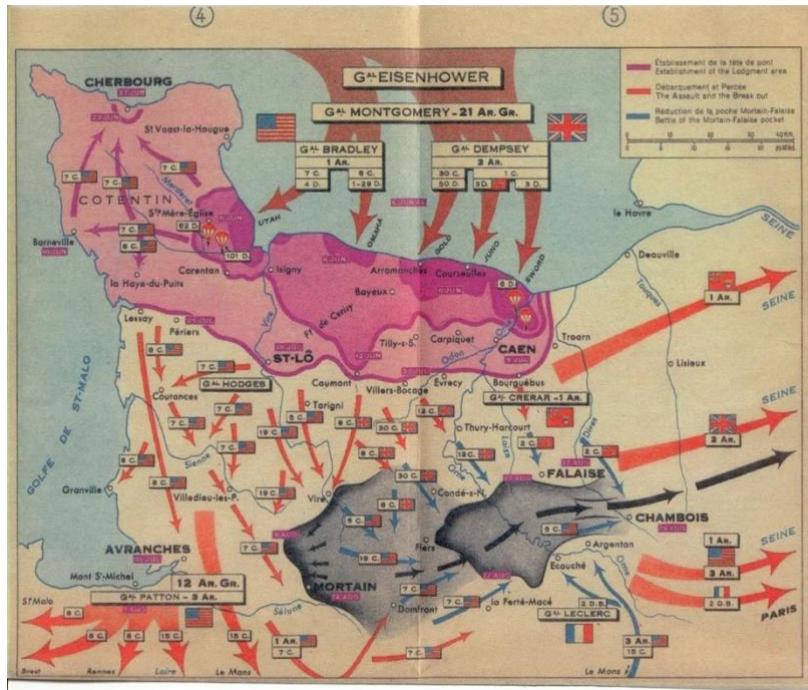


Figure 8 WW2 invasion map drawing a comparison with figure 7 about the use of arrows (Fisher, 2014)

This visual element appears to be supported by information to the side of map. The inclusion of population totals next to the countries listed next to the large arrow is a clear attempt to associate the populations of these countries (Turkey in particular) with the likely level of immigration from them to the UK. Although most of the countries in red are given some context through the panel showing they are 'set to join' the EU, Syria and Iraq are just labelled. By including these countries, it visually groups these countries (figure 9) with those 'set to join' the EU giving the false impression that continued EU membership would enable immigration to the UK from three large Muslim-majority countries. All five countries listed are in fact not 'set to join' the EU but have had applied to join and were yet to meet the EU's strict entry criteria in 2016. Turkey applied in 1987, and negotiations have since stalled (Drainville, 2016). We have seen that data and information in infographics are often assumed to be authoritative

fact. This graphic includes misinformation, with no source for the information or research, clearly violating Kirk's principle of trustworthiness.



Figure 9 A section of figure 7 showing the grouping of Syria and Iraq with "countries set to join the EU" (Erşen & Ersøy, 2024)

The infographic was printed on flyers and distributed to millions of households in the UK and was published on the Vote Leave website. It was part of a series of seven similar infographics using visualisations to generate discourse about immigration in relation to the EU referendum. Before publication of this infographic the Vote Leave campaign led by Boris Johnson frequently expressed widely-reported prejudices (King, 2019) in particular about Muslim immigration to the UK, often being criticised for his comments. UKIP/Brexit Party and leading Conservative party figures were heavily involved in the Vote Leave campaign with Nigel Farage commissioning this infographic (Drainville, 2016). This makes this infographic not only untrustworthy through its visual elements but ideologically aligned with xenophobic and anti-immigration narratives and also an example of misinformation (Drainville, 2016).

In relation to the Martini Glass structure the narrative of this infographic does not allow reader-led exploration of the topic. Instead, the narrator guides the viewer's engagement. The inclusion of carefully selected misinformation alongside the map's visual elements promotes an anti-immigration narrative to the viewer. For these reasons this infographic borders on propaganda with the sole purpose of pushing an

ideological narrative, i.e. it is an anti-immigration narrative disguised as a campaign infographic (Eríşen & Ersoy, 2024).

In terms of achieving the objectives of the Vote Leave campaign and its right-wing anti-immigration key figures, this graphic is effective in implying that if the UK stays in the EU, Middle Eastern countries will gain migration rights to the UK (Eríşen & Ersoy, 2024). The inclusion of two Muslim-majority countries with no path to EU membership is a clear attempt to play on fear of Muslim immigration from Syria and Iraq, countries associated with authoritarian regimes, regional conflict and terrorist extremism. This infographic succeeded in its overall aim of mobilising leave voters through perpetuating fear of immigration with a survey by British Social Attitudes finding that 73% of those worried about immigration voted leave contributing to the outcome of the referendum (Bulman, 2017).

This infographic contributed to misinforming the British public and inhibited the provision of necessary information needed to make an informed decision about immigration during the Brexit vote (Eríşen & Ersoy, 2024). The intention to mislead acted to erode political literacy, given its wide distribution. The likely effect was to hinder the electorate's ability to represent their own interests effectively in a uniquely complex and nuanced democratic event.

Table 2 Assessment and Analysis of the Vote Leave Campaign Infographic

Criteria	Considerations	Assessment Rating
Elegance	Simplicity, comprehensibility	Medium
Trust	Accuracy of visual encoding	Low
Accessibility	Ability of audience to engage and access	High
Narrative Function	Degree of audience-driven engagement	Low
Effectiveness	Achievement of author's intended outcome	High (Low as an infographic)
Effect on Political Literacy	Overall net contribution to political literacy of audience	Negative

4.2 2024 General Election Guidance Infographic

The infographic (figure 10) has a simple, consistent and clear layout using icons to represent important issues facing the UK population ahead of the 2024 election, based on reputable polling data from YouGov (Duggal & Chughtai, 2024).

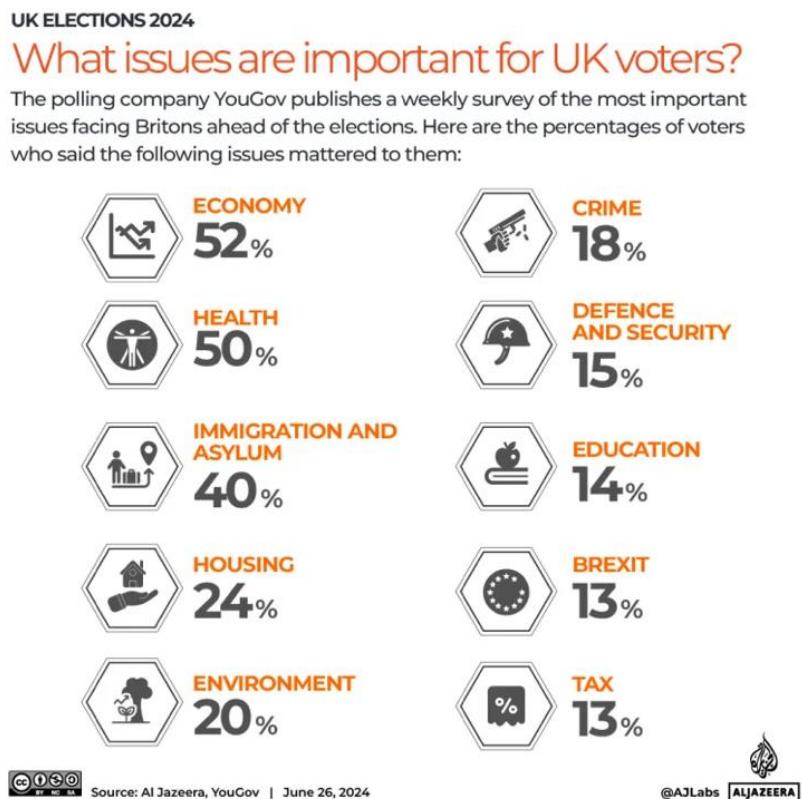


Figure 10 An infographic from a series published by Al Jazeera aimed at informing the public about important political issues (Duggal & Chughtai, 2024)

These icons (figure 11) allow the viewer to identify the issues quickly and improve overall aesthetics by giving it an easy-to-follow structure. The infographic has a short description summarising what the percentages mean and the source of data. The inclusion of the data source (twice) instils a sense of trust in the data and gives an indication of how to appropriately engage with the data. Ordering the data by importance makes it immediately clear to the viewer what the most and least important issue is to Britons. This layout makes the infographic easily accessible as well as visually engaging (Kirk, 2016).



Figure 11 A crop of figure 10 showing the icons used to represent complex political issues (Duggal & Chughtai, 2024)

The purpose of this infographic is to inform Britons about key issues relevant during the 2024 general election with the goal of improving general understanding. There is no obvious narrative paired with this infographic or in any of the other infographics presented alongside it. This allows the viewer to explore the graphic free of any narrative which might guide them to predefined conclusions. The only factor which guides the viewer is their own pre-existing view of the most important issues during the election and it allows the viewer to reflect on their personal priorities. Using the Martini Glass Structure, the glass would have a short and wide stem with a very wide mouth. Absence of author-driven narrative encourages reader-driven critical thought about the information they have engaged. This encourages critical consideration of various viewpoints ultimately allowing the viewer the opportunity to form well-founded opinions based on the data and information they have engaged with. (Pagliarello, et al., 2023)

It is important to note Al Jazeera is regulated in the UK by Ofcom (Ofcom, 2023). Ofcom is independent of government and ensures the companies it regulates report impartial and accurate information (Taylor, 2018). The data presented in this infographic is sourced by trusted polling and public opinion collection company, YouGov, allowing the viewer to trust the data is accurate and not misleading. This addresses the potential problem when a viewer assumes visualised information and data is accurate assuming without evidence that it is based on reputable scientific or academic research.

Table 3 Assessment and Analysis of the Al Jazeera Election Information Infographic

Criteria	Considerations	Assessment Rating
Elegance	Simplicity, comprehensibility	High
Trust	Accuracy of visual encoding	High
Accessibility	Ability of audience to engage and access	High
Narrative Function	Degree of audience-driven engagement	High
Effectiveness	Achievement of author's intended outcome	High
Effect on Political Literacy	Overall net contribution to political literacy of audience	Likely to be Positive

Chapter 5: US Infographic Analysis

5.1 2020 Election Misinformation Infographic

Figure 12 is a screen shot of a State election count infographic showing Joe Biden had apparently added 100% of 138,339 votes counted overnight, while Trump's votes did not increase. This was a mistake, which was quickly reported by Michigan state authorities and corrected by the election data company, Decision Desk. Over the next hours the screenshot circulated around message board '8kun' popular with far-right Trump supporters (Giles, et al., 2020). On the message board it was strongly suggested that this was evidence of election fraud. The sharing power of social media combined with perceived objectivity of visualised data allowed this minor voting data input error to be quickly used as material to push the unfounded right-wing narrative of election fraud across thousands of screens via Twitter and other platforms in a matter of hours (Giles, et al., 2020).

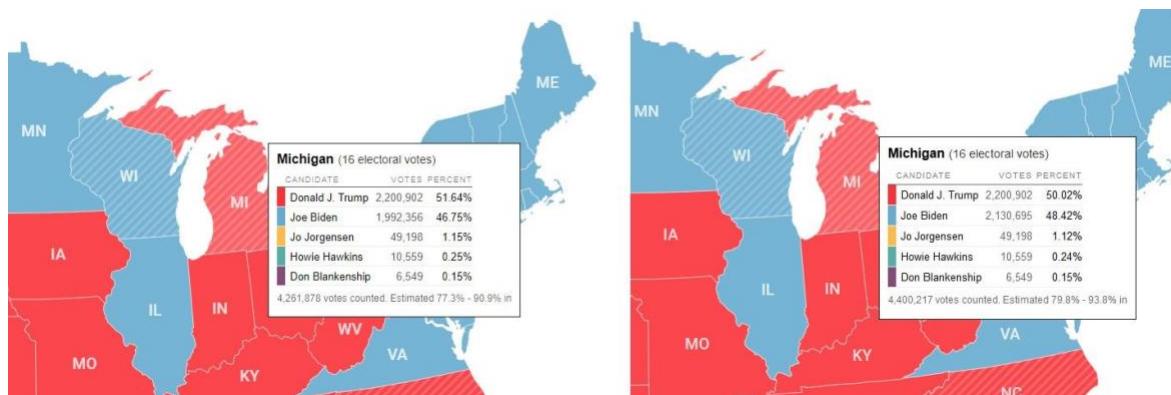


Figure 12 The screenshot of the voting data misinput (@OffGaurdian, 2020)

The infographic's intended objective was to accurately inform the US population of the election results as they were counted. The erroneous data was visualised and allowed people to quickly recognise the data anomaly. In this instance the infographic used effective and simple visual encoding of the data representing the number of votes for each candidate from certain areas of Michigan state. This infographic meets Kirk's principles (Kirk, 2016, p. 26) in its simple and elegant data encoding, widely accessible and clear visual data representations without manipulation, in theory making it trustworthy. It could be argued the quick identification of the data error by the public shows the infographic was effectively performing its intended function. However, when

official voting data is visualised, it is assumed to have been rigorously fact-checked due to its democratic importance. This assumption of objectivity was used to fuel suspicions that the data had been deliberately manipulated to Trump's disadvantage, despite the speedy correction. This conclusion can be seen in figure 13 and 14 with figure 14 also visually representing the false data on a line graph to better show the apparent jump in Biden's votes.

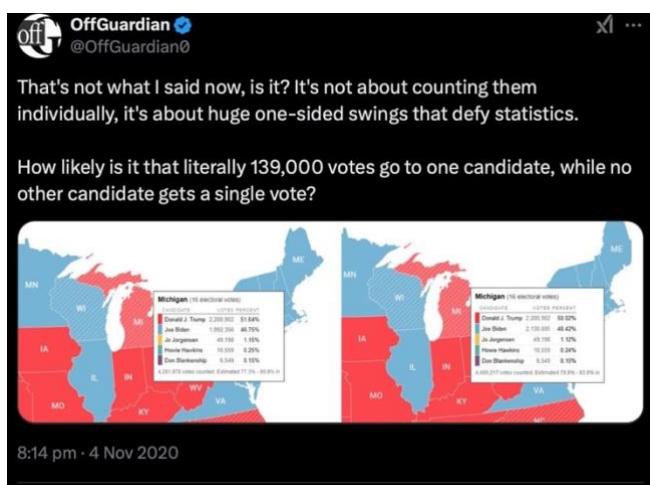


Figure 13 Twitter user @Offguardian sharing their suspicions of election fraud based on the mistake (@OffGuardian, 2020).

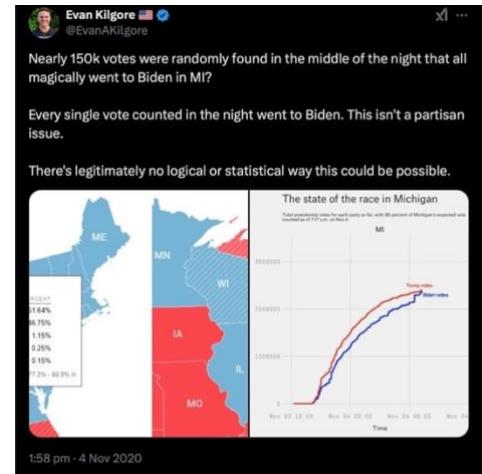


Figure 14 Twitter user @EvanAKilgore also sharing a line graph to better show the jump in votes (@EvanAKilgore)

Matt Mackowiak retweeted the infographic (figure 15), but later stated he saw the graphic on conservative news outlet The Federalist, and “thought it was an anomaly” (Giles, et al., 2020, p. Section 2).

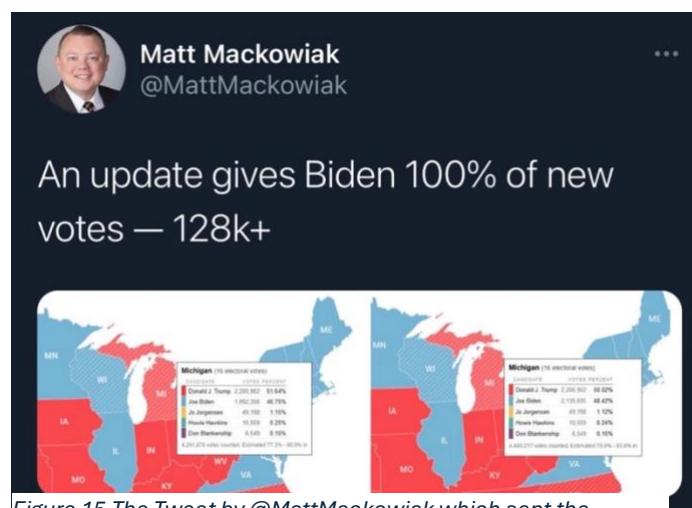


Figure 15 The Tweet by @MattMackowiak which sent the infographic viral (@MattMackowiak, 2020)

The tweet gained virality evoking outrage from Trump supporters. Finally, the tweet reached the attention of Trump who retweeted the infographic with the caption “WHAT IS THIS ALL ABOUT?” (figure 16) (Giles, et al., 2020, p. Section 2). The deliberately ambiguous caption suggested suspicion of election fraud was justified - yet not directly stating it was evidence of this.



Donald J. Trump  @realDonaldTrump · Follow

WHAT IS THIS ALL ABOUT?

 Matt Walsh  @MattWalshBlog

Some or all of the content shared in this Post is disputed and might be misleading about an election or other civic process. [Learn more](#)

This is reason enough to go to court. No honest person can look at this and say it's normal and unconcerning.

3:35 PM · Nov 4, 2020

 106.3K  Reply  Copy link

[Read 23.5K replies](#)

Figure 16 Donald Trump retweets the false infographic (@realDonaldTrump)

The ability for misinformation to be shared from the fringes of the internet to high profile accounts in hours enables misinformation to affect thousands of people on important political events and issues (Bozkurt, et al., 2024). This public failure or unwillingness to recognise and critically engage with this false information stems from a lack of basic understanding of political events. Cindy Otis, vice-president of analysis at the Alethea Group comments:

“The vast majority of false information we are seeing about the election, including false claims of fraud, is based on a lack of understanding of how the electoral process and things like vote counting work,” (Giles, et al., 2020, p. Section 3 Para 3).

Media outlets used fact-checkers to highlight the misinformation being spread, but the infographic was shared so widely it was ineffective in mitigating the spread of misinformation. The exact role figure 15 (and other posts using this graphic) played in the build-up to the January 6th US Capitol insurrection is not possible to assess. However, it can be concluded that it contributed to raising suspicions of election fraud.

The consequences of misinformation spread using this infographic were exacerbated by lack of political literacy among those who engaged with it most. Social media algorithms circulated it among conservative audiences who were already alert to suspicions of election fraud and were unwilling to critically assess the infographic as it appeared to confirm their baseless suspicions. This is otherwise known as confirmation bias which is the tendency to seek out or favour information which supports preconceived ideas or beliefs (Gallo & Langtry, 2020).

Table 4 Analysis and Assessment of 2020 Election Results Infographic Tweet

Criteria	Considerations	Original Purpose: Assessment	Secondary Purpose: Assessment
Elegance	Simplicity, comprehensibility	High	High
Trust	Accuracy of visual encoding	Low (error)	Low (deliberate)
Accessibility	Ability of audience to engage and access	High	High
Narrative Function	Degree of audience-driven engagement	High	Low
Effectiveness	Achievement of author's intended outcome	High	High
Effect on Political Literacy	Overall net contribution to political literacy of audience	Positive	Negative

5.2 2024 CISA Post-Election Process Infographic

Figure 17 was published on the CISA website and a link of the infographic on posted X (twitter) the day after the election (November 6th, 2024). CISA are part of the Department of Homeland Security (DHS) and involved in ensuring the security of US presidential elections. Figure 17 provides an initial overview of a more detailed and information-heavy infographic series. This series is part of a wider campaign started by the CISA called 'Rumour vs Reality' which aims to address common disinformation narratives by providing accurate information related to elections (CISA, 2022). The campaign is aimed at election officials and voters to provide the necessary informational tools, including a range of infographics.



Figure 17 An infographic from a CISA scheme to better educate the US population about the electoral process (CISA, 2021)

The CISA decided to take a proactive approach to educate the US population during the 2024 election when compared with the approach taken in 2020. Little evidence was found to show that CISA took effective steps during the 2020 election cycle to educate the US population about how to recognise and report misinformation or providing a basic understanding of political processes, events and issues. The CISA received heavy criticism about the security of the 2020 election from Donald Trump, who claimed the election was fraudulent. This resulted in Trump firing Christopher Krebs, former director of the CISA (Rivas, 2020) after releasing the statement:

“There is no evidence that any voting system deleted or lost votes, changed votes, or was in any way compromised” (CISA, 2020).

As well as recognising “there are many unfounded claims and opportunities for misinformation about the process of our elections” (CISA, 2020).

The infographic uses iconography (figure 18) to visually represent the post-election process, so they are simplified for easier comprehension. The information below the icons gives the useful context such as specific dates and timeframes. The icons are laid out in a clear order showing the post-election timeline. Using Kirk’s infographic design principles (Kirk, 2016, p. 26), the infographic uses simple and clear visual encoding representing steps taken from election to inauguration. The infographic also makes use of the CISA’s visual style to ensure information presented is attributed to them, to instil trust that the information is from a credible source. Although the infographic does not present a lot of information it is useful in its function as an overview before detailing the post-election processes in the subsequent pages.



Figure 18 A crop from figure 15 showing the simple use of icons to represent the many steps of the post-election process (CISA, 2021)

This infographic is purely for educational purposes and does not support any narrative. For this reason, the infographic can be viewed as politically impartial and therefore trustworthy. The information used in the infographic can be trusted as it comes directly from a government source (DHS) with the purpose to educate and not to persuade. Although the infographic's design is effective, public engagement with the infographic was minimal on Twitter partly due to the CISAs poor social media presence. It was primarily used as part of a wider campaign providing educational tools to state, local and territorial election officials to use to educate their populations on post-election processes and issues. This campaign has been largely successful and has a particular focus on building resilience against disinformation narratives about election security, an area focussed on since the 2020 election.

Although the infographic and campaign has had a positive impact on political literacy in the US in the 2024 election, this was only implemented due to the consequences of disinformation spread during the 2020 election. Ultimately the aim of mitigating disinformation through political education would have been more effective if implemented sooner.

Table 5 Analysis and Assessment of CISA Post Election Process Infographic

Criteria	Considerations	Assessment Rating
Elegance	Simplicity, comprehensibility	High
Trust	Accuracy of visual encoding	High
Accessibility	Ability of audience to engage and access	Medium
Narrative Function	Degree of audience-driven engagement	High
Effectiveness	Achievement of author's intended outcome	Medium
Effect on Political Literacy	Overall net contribution to political literacy of audience	Likely to be Positive

Chapter 6: Conclusion

This dissertation set out to address the question: What role have infographics played in shaping political literacy in the UK and US since 2016? By analysing selected examples from a pivotal period in recent political culture and evaluating them against criteria of good design, functionality as a means of political understanding, success in achieving intended purpose, and likely effect on political literacy, instructive conclusions can be drawn.

We have seen infographics used to inform people on democratic processes and decision-making in the UK and US, fig 10 top election issues in the UK and fig 17 CISA US election process series. Both exemplify the important role infographics play in directly developing political literacy by making complex political information and data accessible, to help an audience participate effectively in their democratic systems (Kennedy & Lucy Hill, 2017). Neither example is associated with a strong narrative, and both rely on a viewer-driven approach to engaging with the topic. We can recognise that this approach to design rates highly on Kirk's three criteria – elegance, trustworthiness, and accessibility - and helps prevent visualisations of complex information being interpreted in an oversimplified or unbalanced way (Ware, 2019). By promoting an exploratory and non-biased presentation of information, these infographics foster critical consideration of the topic and contextual information, including challenging the audience's existing views (Pugliese, 2021). This supports the claim that infographics which are well-designed with the intent to engage and inform an audience, are effective in the development of critical engagement with political media (Pagliarello, et al., 2023) and understanding the political landscape and the ability to effectively participate in it (political literacy) (Velemirovich, 2019).

By contrast, the examples of deliberate misuse of infographics to promote misinformation narratives (EU Immigration example, fig 7) or unbalanced reporting (Coronavirus Spread fig 2), show how the perceived objectivity of infographics (Kennedy & Lucy Hill, 2017) (Allen & Amit-Danhi, 2024) makes poorly-designed or mis-applied

infographics, coupled with a strong narrative, a potent means for those with a political agenda or malicious intent to spread biased, harmful or false narratives. The EU migration example could be categorised more appropriately as propaganda, rather than as an infographic, which makes use of the form and characteristics of infographics, including perceived objectivity and trustworthiness.

The effect on political literacy of misused, low-quality infographics like the Brexit immigration graphic, or the climate temperature chart, is negative. The highly effective propounding of a misleading, oversimplified and fear-based anti-immigration message (Drainville, 2016) distracted a significant section of the audience from consideration of many other complex but relevant issues during the Brexit vote. Similarly, a narrative aiming to trivialise the scale of climate change, underpinned by misleading charts, aimed to move the audience's attention away from the complex issues involved in combating it. Infographics like these take advantage of generally poor media literacy in the UK and US. They are easy spread via social media, but viewers have limited ability to identify flawed infographics. This group of infographics negatively affect political literacy to the extent that people might be persuaded to act against their own interests (loss of EU access, employment rights and opportunities) (King, 2019) and well-being (impacts of climate change). The potential to misinform and mislead on a population-wide scale can be viewed as the 'Achilles heel' of infographics. The forward-looking question of how to address this vulnerability is urgent and recommendations are outlined here.

The spread of mis- and disinformation through infographics coincides with the dominance of social media in political discourse, since around 2016. Specifically, algorithm-driven content facilitates 'echo chambers' or 'information bubbles' of like-minded audiences sharing content, including misinformation (Gallo & Langtry, 2020). The baseless narrative of election fraud surrounding the Michigan vote tally error (fig 13, 14, 15 and 16) shows the shows how critical thinking and impartial information are rare and unwelcome amongst the audience within such an 'echo chamber' (Gallo & Langtry, 2020). To effectively correct and counteract this requires viewers willing and able to engage critically with media (media literacy), and the political process (political

literacy) (Tam, 2016). Concerted efforts have been made by governments, news media and independent organisation campaigns aimed at better equipping the population of the UK (Tam, 2016) and US to engage in the democratic processes (Ooi, et al., 2021). These political literacy campaigns consistently use infographics as an educational tool (like the CISA example) and are nearly always supported by other infographics and wider relevant context and have been fact-checked. However, the comparative assessment in Ch 4 and 5 shows that to effectively counter narrative-driven misinformation, these positive campaigns need a more sharply defined narrative focus, coupled with speed and reach to maximise accessibility. The missing element is an audience's openness to view infographics that allow them to explore and critically challenge their existing views, without feeling mistrustful or fearful of the source. This positive challenge is one that designers of infographics must embrace with skill and purpose, so that elegant, viewer-led engagement with trustworthy visualised information competes successfully with misinformation and narratives that seek to manipulate rather than inform.

Final Word Count: 6491

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