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# Perceiving the news landscape as toxic: A longitudinal, cross-national analysis of Flanders and Ireland (2017-2025)

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# Abstract

In today’s hybrid media environment, where information overload, negativity, and news fatigue are increasingly common, the news can feel *toxic*. However, little research has examined how users experience this toxicity and adjust their news practices in response. This study addresses that gap through a longitudinal, cross-national analysis of Flanders and Ireland. Drawing on the Digital News Report data from 2017 to 2025, and employing Latent Class Analysis, we identify three archetypal news repertoires: Panoramic, Limited, and Traditional. Our findings reveal a shift towards more limited repertoires, particularly among younger and less socio-economically advantaged groups, while panoramic repertoires have shrunk but deepened, and traditional repertoires have remained stable. These shifts are associated with negative news attitudes, such as distrust, avoidance, and disinterest, which function as drivers of repertoire reconfigurations. The cross-national comparison highlights sharper transitions in Flanders, whereas Irish users retained relatively higher levels of engagement, though early signs of disengagement emerged. By linking toxic news perceptions with changes in news repertoires, this study contributes to audience research and underscores the need to reconsider the journalism-audience relationship in a context where disengagement is no longer marginal but increasingly mainstream. From a user perspective, the findings highlight that (temporal) repertoire reconfigurations may function as a welcome *detox*.

**Key words:** news repertoires; agency; toxicity; disengagement; latent class analysis; comparative; longitudinal; Ireland; Flanders.

# Introduction

Numerous studies, including the Digital News Report (DNR), spanning media markets worldwide, have indicated an ever more clouded relationship between news users and the news. For instance, users have become increasingly distrustful and avoidant of the news (Newman et al., 2017-2025). These more critical and/or negative stances can be ascribed to how the media landscape has evolved in the 21st century.

The current media landscape is information-dense. All kinds of information, including news, reaches users both intentionally and incidentally (Gil de Zúñiga et al., 2021; Fletcher and Nielsen, 2018), and perceived information overload (Xu et al., 2024) and negative affect around the news have been associated with disengagement or avoidance (Palmer et al., 2020). Moreover, the current hybrid media system (Chadwick, 2017) may be perceived by users as “unhealthy”, “damaging”, and/or “detrimental” for one's well-being. A participant in Mathews and colleagues’ study formulated it as a media landscape “almost radioactive, prone to inflict unpredictable forms of damage” (2022, p. 9); in other words, an environment perceived as *toxic*. We treat these observations as contextual conditions under which selective agency (Picone et al., forthcoming) is exercised through news repertoire reconfiguration, rather than as causal mechanisms we can identify in observational data.

We separate ‘toxicity’ into three levels: the content level (message features such as dis/misinformation, incivility, hate speech), the interactional level (dynamics such as trolling, harassment, adversarial dynamics, amplification), and the user level (users’ *perceptions* that the media environment is harmful, draining, or untrustworthy). We study the user level, operationalised as an attitude construct derived from items available across all DNR datasets and indicating negative stances (news disinterest, distrust and avoidance, concerns about fake news and perceived exposure to fake news). Accordingly, we do **not** estimate the prevalence of toxic content nor platform behaviours.

Although various media types are perceived as toxic to a certain extent, this perception appears most strongly attributed to news (Mathews et al., 2022). News content may evoke frustration, fear, or anger, illustrating the emotional underpinnings of news use (Wahl-Jorgensen, 2020), and heightening toxic news perceptions.

Therefore, this study provides a longitudinal and cross-national analysis of these heightened perceptions of toxicity in the news landscape. We compare Ireland, which falls under the Liberal model, with Flanders, which falls under the Democratic Corporatist model (Hallin and Mancini, 2004). We make use of the Digital News Report data from these regions with differing media-political systems, spanning 2017 to 2025 (Newman et al., 2017-2025), to test whether co-occurring with these perceptions of toxicity, users have recomposed their news repertoires. Furthermore, we explore whether subgroups of news users (e.g., lower-educated users) differ in both perceptions of toxicity and changes in repertoire composition. Also, the period studied enables an exploration of the lasting impact of the COVID-19 crisis, witnessed as a pivotal time in the spread of toxic content (e.g., disinformation about vaccines) (Boekee et al., 2020).

Our study contributes to the field of repertoire studies by complementing earlier work (Vandenplas and Picone, 2023; Valenzuela et al., 2025). We operationalise archetypal news repertoires as stable news practices within a population. Furthermore, we combine changes in news use with changes in toxic news perceptions over time, adding to the discussion on the intersection of the architecture of news landscapes perceived as ever more toxic and users’ selective agency to reconfigure or even completely tune out the news. In this way, we also add urgency to a reconsideration of the journalism-audience relationship, a call echoing in journalism (studies) (Downie and Schudson, 2009; Peters and Broersma, 2016) and reinvigorated by the uptick in news avoidance (Palmer et al., 2023).

In sum, this approach allows us to comprehend the interplay between changes in news repertoires, news disengagement and perceptions of toxicity, adopting a radical audience perspective by seeing news users as first and foremost agentic (Swart et al., 2022).

We first construct our theoretical framework, consisting of user agency, changes in news repertoires, and toxic news. Furthermore, we formulate our research questions and hypotheses based on the literature review. The methodology provides a thorough step-by-step explanation and argumentation of the analyses. Next, in the results, we describe the identified news repertoires, test the hypotheses, and compare the findings from Flanders and Ireland. The discussion and conclusion bring into concert the theoretical framework and key findings, and provide an answer to the main research questions.

# Literature review

## Navigating the high-choice media landscape

The high-choice media landscape refers to the contemporary information environment characterised by an abundance of media options available to users, contrasting with earlier eras of limited choice (Van Aelst et al., 2017). This environment offers news users “many more opportunities to choose or avoid the news” (Edgerly, 2015, p. 1). This shift is primarily driven by the mainstreaming of digital technologies and social media platforms.

The architecture of the hybrid media ecosystem (Chadwick, 2017) comes with an ever more agentic user (Kleut et al., 2018). Agentic means that users have room to manoeuvre or navigate the media landscape autonomously. In this study, we perceive news users as these agentic, active actors (Das and Ytre-Arne, 2017). Furthermore, in line with Picone, Courtois and Paulussen (2015), we envision agency as an active, participatory form of media use that plays out on three dimensions. First, selective activity encompasses how news users make changes to the media they use, due to, for instance, heightened perceptions of toxicity (see infra). Second, interpretative activity entails how users give meaning to the news, for example, by classifying sensationalism as entertainment. Third, productive activity encompasses the engagement in the production, distribution or evaluation of news, for instance, by offering a more positive take on the news in the comment section (Picone et al., forthcoming).

This study focuses on selective activity by exploring how users introduce, maintain or reform elements in their news diets; in other words, how they reconfigure their news repertoires (Peters and Schrøder, 2018). News repertoires are a part of users’ media repertoires. The latter can be defined as the complete set of users’ media practices, including the devices, technologies, and content, they regularly engage with (Hasebrink and Popp, 2006; Kim, 2016). In this way, a media repertoire approach enables a cross-media perspective on media practices. The same goes for news repertoires, logically encompassing habitual cross-media news practices (Ksiazek et al., 2019).

Reviewing recent studies with a news repertoire approach, some commonalities emerge. All these studies identify users with a broad repertoire. These users frequently consult news through a wide range of devices, channels and sources. These repertoires are depicted as ‘plural’, ‘omnivore’ or ‘panoramic’. That said, users with a narrow repertoire are found. They rarely use news and rely on a limited number of channels and sources. These repertoires are nicknamed ‘minimalists’, ‘avoiders’ or ‘limited’ (e.g., Andersen et al., 2022; Picone and Vandenplas, 2022; Castro et al., 2022; Park et al., 2025; Qu and Lu, 2025).

Earlier studies envisioned repertoires as relatively stable, changing only incrementally over time (Hasebrink and Domeyer, 2012; Hasebrink and Hepp, 2017). Recently, the emphasis has shifted to envisioning repertoires as dynamic (Peters and Schrøder, 2018). Particularly in the current hybrid media system, inherently volatile and omnipresent, exploring the evolution of repertoires is ever more important (Vulpius et al., 2023).

Circling back to the concept of agency, we are aware that reconfigurations of news repertoires are not necessarily initiated by users themselves or on their terms. News use ebbs and flows due to, for instance, alterations of the media landscape (Graber, 1990; Castro et al., 2021) or technical affordances (Hase et al., 2022). On a user level, life-stage transitions can evoke reconfigurations (Barnhurst and Wartella, 1991; Westlund and Weibull, 2013). Furthermore, users’ news attitudes and engagement fluctuate, prompting them to adopt different news practices. In this study, we focus on the user level, examining both their reconfigurations of news repertoires as well as changes in news attitudes occurring alongside these reconfigurations.

In sum, the high-choice media landscape empowers users with unprecedented control over their news use, leading to diverse news repertoires but also challenges such as fragmentation and polarization (Hartley and Petrucci, 2024; Tóth et al., 2022). It is a common perception that users have somehow limited their use of news - or replaced it with other forms of media (Prior, 2009; Vandenplas and Picone, 2023; Vliegenthart et al., 2025).

An extreme version of news repertoire recomposition is consuming no news at all or active news avoidance. This complete disengagement from news had a major uptick over the past decade in several regions worldwide, including Flanders and Ireland (Newman et al., 2025). Other trends highlight a widening gap between ‘news enthusiasts’ and ‘infrequent news users’, both in proportional size, with the first group diminishing and the latter growing; and in news practices, such as the frequency of news use and the diversity and prominence of news channels and sources (e.g., Vliegenthart et al., 2025; Andersen et al., 2021).

Although we explore these recompositions predominantly through a news repertoire lens, acknowledgement of socio-political characteristics shaping news practices is required. Previous studies indicated that differences in news practices exist between distinct socio-political groups (e.g., Truyens and Picone, 2021; Vandenplas and Picone, 2023). Gender, age, education level, income level, and political preference are common distinguishing characteristics of news use (Toff and Palmer, 2019; Klopfenstein et al., 2023; Peters et al., 2021; van Rees, 2003; Strömback et al., 2013). It is therefore possible that changes in the composition of news repertoires could be more pronounced amongst specific subsets of users.

## Perceiving the news landscape as toxic

In line with changing news uses, news users - or at least a proportion of news users - have become more negative or more critical of the news. Distrust of news has increased, news avoidance is at an all-time high, disinterest in news is rising, and more and more people feel worn out by the (volume of) news. Furthermore, concerns about fake news and perceived exposure to fake news have increased during and in the aftermath of the COVID-19 crisis. These trends are mainly observed in western markets, including Flanders and Ireland (Newman et al., 2017-2025).

Hybridisation and digitalisation thus come at a cost. Contemporary media ecosystems seem to be infested with toxic content (Salminen et al., 2020), and users are exposed to toxic behaviours (Anderson et al., 2018). During the COVID-19 pandemic, such harmful content and behaviours flourished, causing an ‘infodemic’ and ‘toxification’ of online environments (Dori-Hacohen et al., 2021). Especially on social media platforms, which for a growing number of people are their main gateways to news and information (Kalogeropoulos et al., 2019), toxic content thrives. Influencers, conspiracy theorists, alternative news accounts, and so on, push toxic content on the social media timelines of users around the world. Some of these actors spread toxic content intentionally, such as disinformation. Some spread it unintentionally, such as misinformation (Hanscom et al., 2024; Wardle and Derakshan, 2017).

Drawing on these manifestations in the hybrid media system, we distinguish three levels of toxicity. On the content level, there is a long list: disinformation, misinformation, dominance of negativity, hate speech, polarizing content, to name a few (Santana, 2016; Crilley and Gillespie, 2019; Chipidza, 2021). On the interactional level, users can be confronted with trolling, harassment and other adversarial dynamics (Hardaker, 2010; Hosseinmardi et al., 2015; Addai et al. 2025). The user level unfolds in perceptions that the media environment is harmful, draining, or untrustworthy (Mathews et al., 2022)).

In this study, we focus on the user level. We envision the above-mentioned negative and/or critical stances towards news and perceptions of news toxicity as communicating vessels. Moreover, in response to these evolutions in the news landscape, users (are found to) reconfigure or drastically change their news repertoire. Therefore, the selective activity can be reconsidered as a strategy of users to demonstrate their disengagement with a news ecosystem they perceive as harmful.

# Research questions

The architecture of the hybrid media system and the agentic users navigating it, provide an ideal backdrop for exploring shifts in the composition of news repertoires; which subsets of users are more selectively active in changing these compositions; and how these evolutions are co-occurring with increased perceptions of toxicity.

The research questions reviewed here are:

* **RQ1.** What news repertoires have Flemish and Irish users adopted, and how have users within these identified news repertoires shifted between 2017-2025?
  + **SQ1.** What news repertoires exist and what news practices distinguish them from one another?
  + **SQ2.** How do socio-political characteristics influence user news repertoires?
* **RQ2.** Have negative perceptions of the news led users to adopt more limited news repertoires between 2017-2025?

We expect that, given the combination of ever-growing choice in news with an increased awareness of potential harms and toxicity, users will actively reconfigure their news use towards more limited repertoires. From the extant literature, we expect that these changes will be especially pronounced amongst specific subsets of users.

From these expectations, we draw the following hypotheses:

* **H1.** Users have shifted to a more limited news repertoire.
* **H2.** Younger and less socio-economically advantaged groups have been quicker to adopt more limited news repertoires.

As we expect these shifts to be driven at least in part by increasingly negative stances towards news in concert with heightened toxic news perceptions, we also test this assumption with the final hypothesis:

* **H3.** Users with more critical/negative views of news will adopt more limited news repertoires.

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# Methodology

Our research design builds upon news repertoire studies of Vandenplas and Picone (2023) and Valenzuela and colleagues (2025). We make use of the Digital News Report data (Newman et al., 2025). In this way, we are able to do a longitudinal (2017-2025) and cross-national (Flanders and Ireland) analysis. We use Latent Class Analysis (LCA) to construct news repertoires (cf. Vandenplas and Picone, 2023), and Multinomial Regression Analyses (MLR) as the main method for inter- and intrarepertoire comparisons.

By adding the context of the Flemish and Irish news landscapes, media systems, and their political systems (using the framework of Hallin and Mancini, 2004), we can question the perceptions of news toxicity in dissimilar media ecosystems. For instance, how does the architecture of the news landscape in which users navigate relate to perceptions of that landscape as more toxic? Conversely, how does the architecture of the news landscape elicit perceptions of toxicity?

### The Flemish news landscape

Belgium is categorised as a Democratic Corporatist Model (Hallin and Mancini, 2004). This model displays high reach of the press market, relatively high degrees of political parallelism, strong professionalisation, and strong state intervention, in the form of strong public service broadcasters and subsidies for the press.

Flanders, as the northern part of Belgium, is one of the three linguistic communities, the others being French-speaking and German-speaking. Due to several state reforms, the community authorities were given powers to regulate the radio and television broadcasting markets. Therefore, the communities have their own media law and media regulators. Distinct media markets exist, also from an economic point of view, with media companies focusing usually on servicing one language community. Logically, we focus in this study on one region, being the Dutch-speaking region of Flanders. Five media companies dominate the Flemish media landscape, among which is a strong public service media (Hendrickx et al. 2021; Picone et al., 2025).

The average Flemish news user consults the news fairly frequently and trusts the news sources they use. Over the past decade, however, a growing proportion of the population has become news avoidant, distrustful and disinterested. The COVID-19 crisis amplified these more negative attitudes, in particular among younger, less affluent and less educated people. Moreover, most of these news attitudes have not returned to pre-COVID-19-times (yet) (Newman et al., 2025; Picone et al., 2025).

Belgium has faced political turmoil over the past 20 years or so. Communitarian issues hamper government formations, and critics claim that these issues bring policy to a standstill. In Flanders, the political landscape has been more stable, with the Flemish nationalists (N-VA) providing the Minister-President since 2014. The N-VA governs in tandem with the Christian Democrats (CD&V). Previously, the Liberals (Open VLD) completed the tripartite; for the current cycle, the Socialists (Vooruit) entered the Flemish government. Nevertheless, populist parties, especially the far-right party (Vlaams Belang), have gained popularity. A decline in political trust and engagement was also evident in the moderate turnout following the abolition of compulsory voting for local elections in 2024.

### The Irish news landscape

The Irish media landscape belongs to the Liberal Model, characterized by high reach of the press market, low degrees of political parallelism, highly professionalised journalism, and a weak role of the state (Hallin and Mancini, 2004). While some of these elements are certainly present and valued within the Irish media system, the primacy and centrality of the state broadcaster, RTÉ, is an important caveat for understanding the news habits of the Irish public (Donders, 2019).

Irish news users have been consistently identified as displaying a high level of interest and trust in the news in comparison to the UK, US, and most European countries (Doyle, 2024; Murrell et al., 2024). Despite recent crises in the state broadcaster and more systemic challenges, such as the rise of social media and online news, RTÉ remains the most commonly used and trusted news brand.

The Irish media landscape displays a high degree of internationalisation. All sectors of the Irish media market are predominantly owned by foreign conglomerates such as Newscorp, Mediahuis, and Bauer (Flynn, 2024). Given the physical and cultural proximity to the United Kingdom, this is especially pronounced for British-owned brands which have significant market penetration in Ireland. This includes British newspapers and magazines, British digital news outlets such as Sky News, and Irish sister titles to prominent British-owned brands such as the Daily Mail or the Sun (Flynn et al. 2016). The BBC is especially successful in Ireland being the third most trusted and used source among the Irish public nationally (Lloyd et al., 2025).

Unlike many European countries, Irish political culture thus far has been largely resilient against populist challenges. Although the financial crisis of 2008 had a significant negative impact on the party-political system and on trust towards politicians (which has remained in a pattern of steady decline), the media landscape has largely avoided polarization and populist discourses even with the speedy adoption of online news and social media platforms (O’Sullivan et al., 2014; Suiter et al., 2018). However, in recent years, the rise of anti-immigration sentiment has led to the emergence of some alternative news brands, far-right social media influencers, nascent political parties, and numerous incidents of violent disorder. This could be seen to echo the previous wave of populist challenge in Europe that Ireland largely avoided, and may have an influence on current and future news user habits.

The Flemish versus Irish news landscape

Both systems show strong journalistic professionalisation and high press reach, but differ in the role of the state. Flanders features a more corporatist model, with subsidies and a multipolar broadcaster landscape, while Ireland aligns more with the liberal tradition but paradoxically hosts an exceptionally dominant PSM (RTÉ). Flanders is a news market with a domestic dominance, whereas Ireland is a more open market with heavy cross-border influences from the UK and some other countries.

The majority of Flemish users frequently engage with news and trust it. However, younger and lowly-educated Flemish people trend towards news distrust and avoidance. Irish news users remain engaged and trusting, though potential shifts may occur due to emerging populist pressures.

## Three-step data preparation

Each year the Digital News Report (DNR) project of the Reuters Institute for the Study of Journalism surveys news users across 46 markets worldwide (Newman et al., 2025). This dataset is highly suitable for analysing shifts in news uses and news attitudes over the past decade.

Before news repertoires could be constructed, the data had to be prepared in three steps. First, recoding of key variables ensured consistency across the year-by-year DNR data sets (2017-2025)(1). Second, the recoded data sets were cleaned to maintain relevant variables and make the data sets more lean for further analyses. Third, these recoded and cleaned data sets were merged. A one-to-many merger was executed, adding year by year. This resulted in a ‘pooled’ data set (cf. Valenzuela et al., 2025). Appendix A provides an overview of the data preparation.

## Constructing and comparing news repertoires

Latent Class Analysis (LCA) is used to identify underlying classes (or ‘clusters’) within a dataset based on the patterns of responses or characteristics. The method assumes that the studied population is a mixture of latent classes, and each class has its distinct pattern of responses to the observed variables (Schreiber and Pekarik, 2014).

To answer **RQ1**, we used LCA to construct news repertoires. According to Hasebrink and Popp (2006) this way of categorising users, who have mutual characteristics concerning news use, but also differ distinctly from other news users, is the most suitable way of coming to a set of repertoires. LCA puts the user front and centre. It clusters users not based on variables but on how they have responded on these variables (Collins and Lanza, 2010). Moreover, this approach enabled the combination of categorical and continuous variables into the model. Additionally this approach allows us to present and compare several goodness-of-fit statistics, enabling a more rigorous selection of the optimal number of clusters than alternative methods (Hagenaars and McCutcheon, 2002).

The LCA is performed on the ‘pooled’ Digital News Report dataset (cf. Valenzuela et al., 2025). After recoding, the variables included in the LCA were:

* Frequency of access to news: measured on a scale ranging from ‘less than weekly’ to ‘multiple times a day’.
* (Main) sources of news: measured with a binary scale, asking respondents whether or not they use TV, radio, print, online (excl. social media), social media, or none of these as a (main) source of news.
* Use of news brands: measured on a scale consisting of ‘non use’, ‘used in the last week’, and ‘used more than 3 times a week’ (see Appendix B for a detailed overview).

Based on parameters such as BIC, AIC and entropy, and our methodological approach (see infra), it was decided that three classes should be retained (see Table 1).

*Table 1. Model fit measures for subsequent class solutions*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Flanders** | | | | | |
| **Parameters** | **2 Classes** | **3 Classes** | **4 Classes** | **5 Classes** | |
| **AIC** | 257.703 | 252.160 | 248.918 | 246.329 | |
| **BIC** | 258.240 | 252.969 | 250.000 | 247.683 | |
| **LogLikelihood** | -1.287.764 | -1.259.669 | -1.243.079 | -1.229.753 | |
| **Entropy** | 0,7042 | 0,8013 | 0,7949 | 0,8218 | |
| **Cluster sizes** | **1** | **2** | **3** | **4** | **5** |
| **K2 Model** | 58% | 42% |  |  |  |
| **K3 Model** | 53% | 25% | 22% |  |  |
| **K4 Model** | 34% | 27% | 20% | 18% |  |
| **K5 Model** | 28% | 24% | 19% | 18% | 12% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ireland** | | | | | |
| **Parameters** | **2 Classes** | **3 Classes** | **4 Classes** | **5 Classes** | |
| **AIC** | 110,1359 | 108,7471 | 107,6917 | 106,8997 | |
| **BIC** | 110,3880 | 109,1257 | 108,1967 | 107,5313 | |
| **LogLikelihood** | -550356.3 | -543250.4 | -537881.4 | -533,689 | |
| **Entropy** | 0.7783 | 0.8207 | 0.8379 | 0.8372 | |
| **Cluster sizes** | **1** | **2** | **3** | **4** | **5** |
| **K2 Model** | 54% | 46% |  |  |  |
| **K3 Model** | 34% | 29% | 35% |  |  |
| **K4 Model** | 32% | 22.5% | 12% | 33% |  |
| **K5 Model** | 26% | 9% | 10% | 31% | 22% |

We do not align with Valenzuela and colleagues’ (2025) methodological approach completely. They took an intermediate step in their analysis to test whether a constrained or unconstrained model is required. As previously mentioned, we perform our analysis on the ‘pooled’ data set and envision the identified classes as archetypal clusters. We thus ‘steer’ the LCA and build upon Vandenplas and Picone’s study of the 2020 and 2021 DNR data resulting in a Panoramic, Limited and Traditional news repertoire (2023). Repertoires with similar news uses and compositions emerged in the Flemish and the Irish DNR data.

This rather innovative way of exploring repertoires enables envisioning the found classes as robust variables, with subsets of users retaining a repertoire across time or shifting to another. In this way, the focus can be placed on proportional changes. To make this more concrete, for instance, particularly less educated users shifted to a Limited repertoire, alongside heightened perceptions of toxicity.

With the news repertoires in place, we conducted binary logistic regressions (BLR) to test which users, according to their key socio-political characteristics, belong to each repertoire. For instance, less educated users are more likely to feature a Limited repertoire; highly-educated users are more likely to feature a Panoramic repertoire. Furthermore, we test for news practices, such as directly accessing the news and using social media for news, to highlight the differences between the repertoires, and to substantiate the naming (see Tables 2 and 3).

Finally, we used a multinomial logistic regression analysis (MLR) to test our previously formulated hypotheses and to answer **RQ2**. MLR models the relationship between a multi-category dependent variable and one or more independent variables (Petrucci, 2009). In this case, the news repertoires are the dependent variables. MLR indicates the likeliness of someone featuring repertoire A in comparison to repertoire B. For instance, we can test if someone featuring a Limited repertoire is more likely to be news avoidant over time compared to someone featuring a Panoramic repertoire; or test if someone featuring a Traditional repertoire is less likely to distrust news compared to someone featuring a Panoramic repertoire.

Our approach enables to observe and test changes in the news repertoires of both Flemish and Irish users on three levels (cf. the hypotheses):

1. We test proportional changes of the identified repertoires.
2. We test whether certain subsets of news users have broadened or limited their repertoires.
3. We test whether users featuring one of the identified repertoires have experienced/perceived the news as more toxic.

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# Results

The Results section is divided into two sub-sections. First, we identify and describe Flemish and Irish users’ news repertoires, using Binary Logistic Regression (BLR). Second, we test our hypotheses about shifts in users’ repertoires since 2017 using Multinomial Logistic Regression (MLR).

## Identification of user news repertoires

### Three Flemish news repertoires

The LCA approach identified three news repertoires from the pooled Flemish dataset. Drawing upon the results of BLRs shown in Table 2 and basic descriptive statistics, we can infer the distinct repertoires identified by this clustering approach.

Cluster 1 is the largest (53%). People belonging to this cluster are the most frequent users of news, with over double the odds of using news daily than the other clusters. They make use of a wide range of sources and news brands (both on- and offline). Cluster 1 is by far the most likely to directly access the news (Exp(B)=4,9). These news users trend toward a higher socio-economic class, and have an outspoken, centrist political preference. Given the frequent use of news across a diverse set of sources and channels, we refer to this cluster as the **Panoramic news repertoire**.

Cluster 2 is featured by 25% of the sample. People belonging to this cluster are the least frequent users of news, with the odds of daily use dropping by 64%. They use a narrow range of sources. If they access news, it is mainly through social media (Exp(B)=1.280). This cluster builds on a limited number of news brands, mostly from legacy news organizations. Unlike the Panoramics, people featuring this repertoire tend to be of lower socio-economic class and are mostly found among younger demographics and men. They are fairly muted about their political preferences (Exp(B)=1.537) or prefer the right (Exp(B)=1.263). We refer to this cluster as the **Limited news repertoire**.

Cluster 3is the smallest (22%). People belonging to this cluster are rather infrequent users of online news, with lower odds of using the news daily in comparison to the Panoramics. They make use of a quite narrow range of sources, mainly traditional sources, such as TV, radio and print. Accessing news via social media is less common. A limited number of news brands, mostly from tabloid news organizations (offline), is part of their repertoire. People with this repertoire are on average older than the other two. Cluster 1 trends toward the less educated. We refer to this cluster as the **Traditional news repertoire**.

*Table 2. BLR of main socio-political characteristics and news uses (Flanders)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Cluster 1**  **Panoramic** | | **Cluster 2**  **Limited** | | **Cluster 3**  **Traditional** | |
| B | Exp(B) | B | Exp(B) | B | Exp(B) |
| Gender (Female) | -0.266\*\*\* | 0.767 | 0.268\*\*\* | 1.308 | 0.155 | 1.168 |
| Age | 0.0017\*\*\* | 1.017 | -0.039\*\*\* | .962 | 0.024\*\*\* | 1.025 |
| Education: Medium | 0.231\*\*\* | 1.259 | -0.004 | .996 | -0.201\*\* | 0.818 |
| Education: High | 0.719\*\*\* | 2.053 | -0.358\*\*\* | .699 | -0.549\*\*\* | 0.578 |
| Income: Medium | 0.117 | 1.124 | 0.123 | 1.131 | -0.108 | 0.898 |
| Income: High | 0.170\* | 1.185 | 0.135 | 1.144 | -0.173 | 0.841 |
| Political preference: Left | -0.051 | 0.950 | -0.013 | .987 | 0.028 | 1.029 |
| Political preference: Right | -0.251\*\*\* | 0.778 | 0.233\*\* | 1.263 | 0.007 | 1.007 |
| Political preference: Muted | -0.779\*\*\* | 0.459 | 0.430\*\*\* | 1.537 | 0.110 | 1.116 |
| Directly accessed online news (Yes) | 0.834\*\*\* | 4.855 | 0.033 | 1.033 | -1.145\*\*\* | 0.318 |
| Daily news use (Yes) | 1.580\*\*\* | 2.302 | -0.449\*\*\* | .638 | -0.637\*\*\* | 0.529 |
| Social media news use (Yes) | 0.303\*\*\* | 1.354 | 0.247\*\*\* | 1.280 | -0.430\*\*\* | 0.650 |
| *Base model: Male; Low education level; Low income level; Centrist political preference.* | | | | | | |
| *Significance levels: \*\*\* <0.001, \*\*<0.01, \*<0.05.* | | | | | | |

These news repertoires share some common characteristics: Flemish users featuring these repertoires predominantly rely on domestic news sources, regardless of device or channel, indicating a robust Flemish news sector; digital news uses are a component of each repertoire and traditional news uses seem to be declining, although for some users they remain a staple.

### Three Irish news repertoires

The LCA approach identified three news repertoires from the pooled Irish dataset. Drawing upon the results of BLRs shown in Table 3 and basic descriptive statistics, we can infer the distinct repertoires.

Cluster 1is the largest in the Irish case (37%). This cluster makes the most frequent use of news through all channels, including on- and offline sources, with more than triple the odds of consuming news daily than the other clusters. Individuals within this cluster indicate a reasonably high level of engagement with a diversity of national, local, and international brands. Importantly, they have 78% higher odds of using social media for news, indicating that this is an important component of their repertoire, and are also the most likely to directly access online news sources. People with this repertoire also trend towards higher socio-economic and educational class and have 33% lower odds of being female. They are also very unlikely to not be able to identify their political preferences, which points towards a higher level of engagement with politics and, potentially, the news. Given the high level of engagement across a diversity of sources and formats, we refer to this cluster as the **Panoramic news repertoire**.

Cluster 2 is the smallest cluster (29%). This group does not seem to consume news as frequently as those belonging to the Panoramic cluster, with insignificant results around daily news use. However, they still display quite broad engagement with offline news brands, indicating that they are not news avoidant. Importantly, we observe lower levels of engagement with online news brands and statistically significant negative results around accessing online and social media news. These results indicate that those who engage with online and social media news have the lowest odds of adopting this repertoire. Individuals within this cluster also trend towards being older, female, and of lower socio-economic status. We also see that these individuals are significantly less likely to display a left-wing political preference in comparison to the centrist reference group. From these results we can infer that this cluster represents an engaged but more traditional news user, more reliant on offline brands and especially unlikely to engage with social media news. We refer to this cluster as the **Traditional news repertoire**.

Cluster 3 is the second largest cluster (34%). This cluster represents the least interested and least engaged type of news user. Those who consume social media news frequently have 25% greater odds of belonging to this cluster, and they have very low odds of using news daily. They also have more than double the odds of being unable or unwilling to express their political preferences, indicating a lower level of political interest or knowledge. The plurality of responses for offline sources indicate that they use no offline sources, while being the most likely to identify online and social media sources as their primary source of news. We observe a significant inverse relationship between income and belonging to this cluster. Those in the lower age groups also have greater odds of belonging to this cluster. Given the identified trends in their news use habits, we refer to this cluster as the **Limited news repertoire**.

Despite these observed differences between repertoires, there are some strong consistencies, the most obvious of which is the dominance of RTÉ (PSM) across each of their online and offline platforms.

*Table 3. BLR of main socio-political characteristics and news uses (Ireland)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Cluster 1**  **Panoramic** | | **Cluster 2**  **Limited** | | **Cluster 3**  **Traditional** | |
| B | Exp(B) | B | Exp(B) | B | Exp(B) |
| Gender (Female) | -0.395\*\*\* | 0.674 | 0.286\*\*\* | 1.33 | 0.193\*\*\* | 1.21 |
| Age | 0.011\*\*\* | 1.010 | -0.484 | 1.620 | 0.410\*\*\* | 0.664 |
| Education: Medium | 0.431\*\*\* | 1.540 | -0.266 | 0.766 | -0.089\*\* | 0.915 |
| Education: High | 0.948\*\*\* | 2.580 | -0.885\*\*\* | 0.413 | -0.127\*\*\* | 0.881 |
| Income: Medium | 0.298\*\*\* | 1.350 | 0.070 | 1.070 | -0.319\*\*\* | 0.727 |
| Income: High | 0.635\*\*\* | 1.890 | -0.249 | 0.780 | -0.440\*\*\* | 0.644 |
| Political preference: Left | 0.125\* | 1.130 | -0.415\*\*\* | 0.661 | 0.174\*\* | 1.190 |
| Political preference: Right | 0.189\*\* | 1.210 | -0.199\* | 0.819 | -0.093 | 0.911 |
| Political preference: Muted | -1.206\*\*\* | 0.299 | 0.174\* | 1.190 | 0.785\*\*\* | 2.190 |
| Directly accessed online news (Yes) | 0.521\*\*\* | 1.680 | -0.357\*\*\* | 0.700 | -0.309\*\*\* | 0.734 |
| Daily news use (Yes) | 1.242\*\*\* | 3.46 | 0.127 | 1.140 | -1.049\*\*\* | 0.350 |
| Social media news use (Yes) | 0.576\*\*\* | 1.780 | -0.933\*\*\* | 0.393 | 0.224\*\*\* | 1.250 |
| *Base model: Male; Low education level; Low income level; Centrist political preference.* | | | | | | |
| *Significance levels: \*\*\* <0.001, \*\*<0.01, \*<0.05.* | | | | | | |

These repertoires were identified through identical but separate clustering processes. So, statistically, the ‘Limited’ repertoire in Flanders cannot be considered exactly the same as the ‘Limited’ repertoire in Ireland. However, we draw upon existing literature and the binary logistic regressions to demonstrate that they remain broadly comparable. Table 4 demonstrates the shared characteristics of each repertoire across both countries:

*Table 4. Typology of the news repertoires*

|  |  |  |  |
| --- | --- | --- | --- |
| **Characteristic** | **Panoramic** | **Traditional** | **Limited** |
| News Access | Very frequent, daily use. | Less frequent. | Very infrequent if at all. |
| News Sources | Broad engagement including traditional, online, and social media news. Diversity of Brands. | Primarily engages with traditional sources such as TV, radio and print.  Less diversity of brands. | Primarily engages with news through social media and incidental online news. Very few news brands. |
| Sociopolitical Characteristics | Higher socio-economic status, skew male, more defined political preferences. | Older, lower socio-economic status than Panoramics, skew female. | Youngest, lower socio-economic status, skew female, with least clear political preferences. |

## Testing the hypotheses

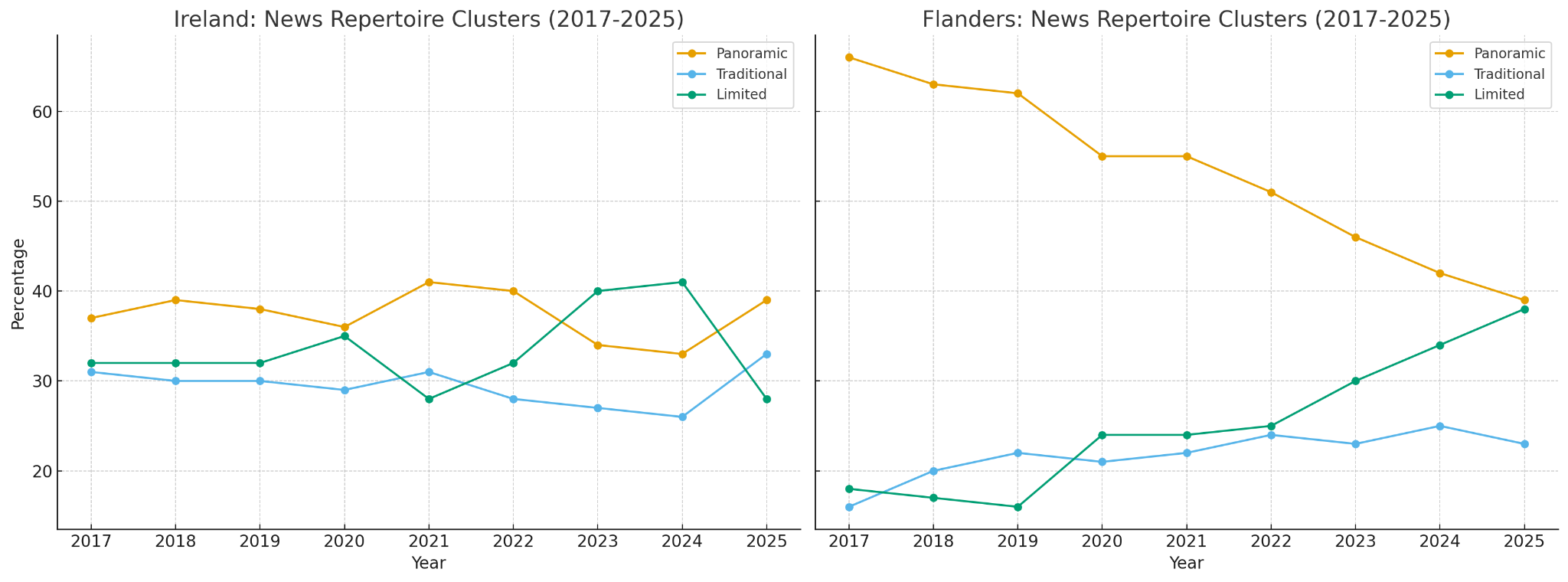
### H1. Users have shifted to a more limited news repertoire

We hypothesise that news users have shifted towards the Limited repertoire within the observed period. To test this, we first carried out a simple MLR to assess the relationship between dataset year and displaying one of the repertoires with the Panoramic repertoire as the reference group.

Two multinomial logistic regressions were conducted to examine whether the year of the dataset predicted cluster membership across both datasets. Both of these models significantly improved fit over the null models (Flanders: χ²(2) = 366.451, p < .001; Ireland: χ²(2) = 73.783, p < .001).

Specifically, for each additional year: The odds of being in the Limited vs. the Panoramic repertoire increased by 19.6% in Flanders and by 5.3% in Ireland. We can compare the pseudo-R-square values of the models between countries to understand the comparative importance of dataset year. This model explained 4% of the variation in Flanders, but only 0.5% for Ireland. This indicates to us that the dataset year carries more explanatory power in the case of Flanders. Plotting the relative cluster sizes against year in Figure 1, we can see that there is much clearer and more linear temporal variation in cluster membership.

In 2017, the majority of Flemish people featured a Panoramic repertoire (66%). Given the steady decline, the Panoramics are almost overtaken by the group featuring the Limited repertoire. This cluster increased from 18% to 38%. The percentage of Flemish people with a Traditional repertoire stayed roughly the same, fluctuating around 20%. In comparison, Ireland has some similar trends but much less variation aside from notable shifts during the COVID-19 pandemic. The Panoramic repertoire is the most common in 2017, with 36% of that year’s sample rising to 41% in 2021 before being overtaken by the Limited repertoire in 2023 and finishing at 34% in 2025. In the same time, the Limited repertoire rose from 32% to 39% while the Traditional remained rather static declining from 31% to 28%.

*Figure 1. Repertoire sizes by year*

Overall, these results allow us to reject the null hypothesis and argue that users have shifted towards a more limited news repertoire. In both countries we observe a move away from the Panoramic and the Traditional repertoire towards the Limited repertoire. This effect is especially pronounced in Flanders, but remains statistically significant in Ireland.

### H2. Younger and less socially-economically advantaged groups have been quicker to adopt more limited news repertoires

Multinomial logistic regressions were conducted to evaluate how interactions between year and various sociodemographic characteristics predict cluster membership (with the Panoramic repertoire as the reference). The model significantly improved over a null model in both countries (Flanders χ²(26) = 411.450 p <.001; Ireland χ²(50) = 3360.21,p < .001). Using the pseudo-R-square values, we can see that the Irish model accounts for 27% of the variation, compared to 4% in Flanders. This indicates that sociopolitical variables explain a greater degree of variation in the Irish dataset than the Flemish. Despite this greater explanatory power, we find some support for our hypothesis in the Flemish model but no such support in the Irish analysis.

Looking at specific sociopolitical indicators in Flanders, we find mixed support for our hypothesis. Younger users do seem to be moving towards the Limited repertoire more quickly than other groups, For each passing year: Individuals aged 34–44 had 12.1% increased odds per year while those aged 24–44 saw their odds rising by 10–12% each year compared to the Panoramic. Interestingly, we find results counter to our expectations around education in Flanders. Highly educated users show a greater yearly increase in displaying the Limited repertoire than other groups. One notable trend providing support to our hypothesis was a 9.7% annual increase in odds for those with no outspoken political preference featuring the Limited news repertoire. In contrast, we find no statistically significant result for these interaction effect variables in Ireland and in neither country do we find significant differences in yearly patterns between users of different income levels.

With these results we find some support for the idea that younger users in Flanders are more quickly adopting the Limited repertoire. We do not find support for this in relation to income and education, except that those unable or unwilling to indicate a political preference were more likely to adopt the Limited repertoire each year. Overall, we have partial support in the case of Flanders but we completely fail to reject the null hypothesis with the Irish model.

*Table 6. MLR of socio-political characteristics (Ireland)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **vs Traditional** | | **vs Limited** | |
| **Term** | **Cluster (B)** | **Cluster Exp(B)** | **Cluster (B)** | **Cluster Exp(B)** |
| Age 18-24 | 0.696\* | 2.005 | 0.107 | 1.113 |
| Age 25-34 | 0.357 | 1.428 | -0.092 | 0.912 |
| Age 35-54 | 0.105 | 1.111 | -0.033 | 0.968 |
| Age 55+ | 1.420\*\*\* | 4.139 | -0.184\*\* | 0.832 |
| Gender (Female) | -0.109 | 0.897 | -0.026 | 0.975 |
| Political Preference: Left | 1.851\*\*\* | 6.367 | -0.174\*\* | 0.841 |
| Political Preference: Right | -0.292 | 0.747 | -0.06 | 0.942 |
| Political Preference: Muted | 1.941\*\*\* | 6.968 | -0.176\*\* | 0.839 |
| Income: Medium | -1.307\*\*\* | 0.271 | -0.019 | 0.982 |
| Income: High | 0.570\*\*\* | 1.768 | -0.039 | 0.962 |
| Education: Medium | 0.229 | 1.257 | 0.025 | 1.026 |
| Education: High | -0.497\*\* | 0.608 | 0.013 | 1.013 |
| Year | -0.392\* | 0.675 | 0.072\* | 1.074 |
| Age 18-24 \* Year | -0.071 | 0.931 | -0.043 | 0.958 |
| Age 25-34 \* Year | 0.009 | 1.009 | -0.029 | 0.971 |
| Age 35-54 \* Year | 0.628\*\* | 1.874 | 0.079 | 1.082 |
| Age 55+ \* Year | 1.155\*\*\* | 3.174 | 0.071 | 1.073 |
| Gender (Female) \* Year | -0.112 | 0.894 | -0.024 | 0.976 |
| Political Preference: Left \* Year | -0.761\*\*\* | 0.467 | 0.056 | 1.057 |
| Political Preference: Right \* Year | -0.707\*\*\* | 0.493 | 0.033 | 1.033 |
| Political Preference: Unknown \* Year | -1.193\*\*\* | 0.303 | 0.057 | 1.059 |
| Income: Medium \* Year | -0.268 | 0.765 | -0.054 | 0.947 |
| Income: High \* Year | -0.173 | 0.841 | -0.044 | 0.957 |
| Education: Medium \* Year | -1.101\*\*\* | 0.333 | -0.03 | 0.97 |
| Education: High \* Year | -0.506\* | 0.603 | -0.056 | 0.946 |
| *The reference category is the Panoramic News Repertoire (Cluster 1).* | | | | |
| *Significance levels: \*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05.* | | | | |

### H3. Users with more critical attitudes towards news will adopt a more limited news repertoire

Using two multinomial logistic regressions, we examined how interactions between year and various news attitudes predict cluster membership, using the Panoramic repertoire as the reference group. In both datasets, the models significantly improved over their respective null models (Flanders: χ²(14) = 191.767, p < .001; Ireland: χ²(26) = 438.641, p < .001). Pseudo-R-square values indicated small to moderate explanatory power accounting for 11% and 23% of the variation respectively. Several interaction terms with year were statistically significant in both cases providing substantial support to our hypothesis.

We again see some cross-national variation with the disinterest variable. In Flanders, the odds of a disinterested user adopting the Limited repertoire increases more than 900% each year. In contrast to this strong effect, we do not find a significant relationship in the Irish case.

We include distrust in both consumed news and in news more generally in our models. In Ireland, we find significant support for our hypothesis in both variables. We observe a 7% increase in odds of belonging to the Limited repertoire for those who distrust the news they consume and a larger increase of 15% if they distrust news generally each year. In Flanders, we only observe a significant effect in the general distrust variable, but with the odds more than doubling each year, this is a much larger effect.

We also included a variable indicating whether the user claimed to actively try to avoid news. We find support for our hypothesis in both countries, observing a yearly increase in odds of 83% in Flanders and 12% in Ireland. We do not observe a significant relationship between variables about concern at or exposure to fake news and cluster membership over time.

We can therefore reasonably reject the null hypothesis and argue that users with more critical attitudes have shifted more quickly towards the Limited repertoire than those with more positive views. We especially see this for those who claim they want to avoid and have a distrust of news in both countries. Irish users seem to be less likely to adopt the Limited repertoire than Flemish users based on their attitudes with generally smaller effect sizes, and no observed shifts based on the disinterest variable.

*Table 7. MLR of negative attitudes toward news (Flanders)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Term** | **vs. Limited** | | **vs. Traditional** | |
| B | Exp(B) | B | Exp(B) |
| Disinterest in News | -2.378\*\*\* | 0.093 | -1.850\*\*\* | 0.157 |
| Distrust in News Generally | -0.477\*\*\* | 0.621 | 0.120 | 1.127 |
| Distrust in Consumed New | -0.614\*\*\* | 0.541 | -0.693\*\*\* | 0.500 |
| Avoidant of News | -0.459\*\*\* | 0.632 | -0.264\*\* | 0.768 |
| Concerned about Fake News | 0.250\*\* | 1.285 | 0.087 | 1.091 |
| Perceived Exposure to Fake News | 0.016 | 1.017 | 0.172 | 1.188 |
| Year | -0.423\*\*\* | 0.655 | -0.230\*\* | 0.795 |
| Disinterest in News \* Year | 0,733\*\*\* | 9,248 | 0,599\*\*\* | 6,097 |
| Distrust of Consumed News \* Year | 0,069 | 1,28 | -0,168 | 0,612 |
| Distrust of News Generally \* Year | 0,262\*\*\* | 2,25 | 0,336\*\*\* | 2,758 |
| Avoidant of News \* Year | 0,16\*\* | 1,832 | 0,141\* | 1,566 |
| Concerned about Fake News \* Year | -0,037 | 0,944 | 0,071 | 1,266 |
| Perceived Exposure to Fake News \* Year | -0,07 | 1,008 | -0,09 | 0,832 |
| *The reference category is the Panoramic News Repertoire (Cluster 1).* | | | | |
| *Significance levels: \*\*\* <0.001, \*\*<0.01, \*<0.05.* | | | | |

*Table 8. MLR of negative attitudes toward news (Ireland)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Term** | **vs Traditional** | | **vs Limited** | |
| **B** | **Exp(B)** | **B** | **Exp(B)** |
| Disinterest | -0.062\*\*\* | 0.939 | -0.312\*\*\* | 0.732 |
| Distrust in Consumed News | 0.047\*\*\* | 1.049 | 0.237\*\*\* | 1.267 |
| Distrust in News Generally | 0.080\*\*\* | 1.084 | 0.401\*\*\* | 1.494 |
| News Avoidant Attitude | 0.003 | 1.003 | 0.016 | 1.017 |
| Perceived Exposure to Fake News | 0.003 | 1.003 | 0.013 | 1.013 |
| Concerned about Fake News | -0.012\* | 0.988 | -0.062\* | 0.940 |
| Year | 0.018\*\* | 1.018 | 0.090\*\* | 1.095 |
| Disinterest in News \* Year | 0.002 | 1.002 | 0.012 | 1.012 |
| Distrust in Consumed News \* Year | 0.014\*\* | 1.014 | 0.071\*\* | 1.073 |
| Distrust in News Generally \* Year | 0.027\*\*\* | 1.027 | 0.135\*\*\* | 1.145 |
| News Avoidant Attitude \* Year | 0.024\*\*\* | 1.024 | 0.121\*\*\* | 1.128 |
| Perceived Exposure to Fake News \* Year | -0.005 | 0.995 | -0.023 | 0.977 |
| Concerned about Fake News \* Year | -0.004 | 0.996 | -0.020 | 0.981 |
| *The reference category is the Panoramic News Repertoire (Cluster 1).* | | | | |
| *Significance levels: \*\*\* <0.001, \*\*<0.01, \*<0.05.* | | | | |

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# Discussion and conclusions

This study examined how news repertoires in Flanders and Ireland evolved between 2017 and 2025, and how these changes co-occurred with perceptions of toxicity in the news environment.

​​Synthesising our results, we observe that news users in Flanders and Ireland have substantially reconfigured their repertoires over the past decade. In both cases, three archetypal repertoires were identified: Panoramic, Limited and Traditional. These repertoires resemble earlier work in repertoire studies (e.g., Vandenplas and Picone, 2023). Our longitudinal analysis shows how their composition and proportional size have shifted over time. Most notably, the Limited repertoire grew steadily, while the Panoramic repertoire contracted, although those who remained panoramic tended to deepen their engagement. The Traditional repertoire persisted as a relatively stable minority.

These shifts co-occurred with increasingly negative attitudes towards news. Disinterest, distrust and avoidance were strongly associated with the Limited repertoire in particular, but even Panoramic and Traditional users became more critical/negative over time. This pattern suggests that perceptions of toxicity in the news landscape are not confined to disengaged users, but cut across repertoires. Still, different groups responded in different ways. Younger, less educated and less affluent users were quicker to move into the Limited repertoire, while higher-educated and socio-economically advantaged users consolidated the Panoramic repertoire. A shift from the latter users to the Limited repertoire is also observed. This uneven distribution of repertoire change points towards widening informational inequalities.

Comparing Flanders and Ireland, both cases show parallel developments, yet with notable differences. Flemish users displayed sharper transitions into the Limited repertoire, despite the vibrant domestic news market and the strong public service presence (Picone et al., 2025). Irish users retained relatively higher levels of engagement, consistent with earlier observations of trust in RTÉ (PSM) and established brands (Lloyd et al., 2025). Nonetheless, signs of increasing disengagement are also visible in Ireland, with the Limited repertoire gaining ground. This indicates that even resilient news systems are not immune to broader user dynamics of news disinterest, distrust and avoidance.

Taken together, these findings underline that perceptions of toxicity are an important backdrop to understanding how repertoires evolve. Rather than seeing disengagement as an inevitable by-product of choice in the hybrid media system, our results suggest that news users actively rationalise their news practices in response to perceived harms. Some withdraw into limited repertoires, while others reinforce their panoramic use. In this sense, toxicity functions as a structuring condition for selective agency in the news environment, prompting both retreat and reinforcement.

While the study advances repertoire research by linking user agency with toxic news perceptions, it is not without limitations. Survey data restricts our ability to capture deeper motivations, and our operationalisation of “toxicity” focuses on user-level attitudes rather than content or interactional harms. Future work should extend the analysis to other media systems and employ qualitative or mixed methods to explore how users themselves make sense of toxicity.

For journalism, the persistence of limited repertoires - especially among younger cohorts - underscores the urgency of rebuilding trust and rethinking the journalism-audience relationship in an era where disengagement is no longer marginal but mainstream.

For users, limiting or broadening their news repertoires could act as a cure for toxicity. The first reconfiguration may temporarily provide a welcome *detox*. The emphasis should be on temporary or periodic withdrawal, as opposed to long-term, systematic withdrawal from the news which widens informational inequalities and forms fertile ground for polarisation and detachment within society. The latter reconfiguration introduces new channels and sources, which may function as countermeasures against information overload, dominance of negativity and intrusion of disinformation.

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**Notes**

1. We take 2017 as a starting point, because sampling changed between 2016 and 2017, in particular for the Flemish Digital News Report data. Since 2017, representative sampling has been ensured for Flanders (refer to the [DNR method section](https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2025/methodology) for more details) .

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The authors report there are no competing interests to declare.

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# Appendix

1. **Codebook**

**Table A. Recodes of all used variables in the Results section.**

|  |  |  |
| --- | --- | --- |
| **Variable** | **Original Values** | **Recoded Values** |
| Gender | 1 = Male  2 = Female | 1 = Male  2 = Female |
| Age | Numeric, age of respondent | 1 = 18-24  2 = 25-34  3 = 35-44  4 = 45 - 54  5 = 55+ |
| Education level | 1 = Low  2 = Middle  3 = High | 1 = Low  2 = Middle  3 = High |
| Income level | 1 = Low  2 = Middle  3 = High  4 = NA | 1 = Low  2 = Middle  3 = High |
| Political preference | 1 = Very left-wing  2 = Fairly left-wing  3 = Slightly left-of-centre  4 = Centre  5 = Slightly right-of-centre  6 = Fairly right-wing  7 = Very right-wing  8 = Don’t Know | 1 = Left (1-2)  2 = Centre (3-5)  3 = Right (6-7)  4 = Unknown (8) |
| Frequency of news use | 1 = 10+ times a day  2 = 6-10 times a day  3 = 2-5 times a day  4 = Daily  5 = 4-6 times a week  6 = 2-3 times a week  7 = Weekly  8 = Less than once a week  9 = Less than once a month  10 = Never | 1 = Less than Weekly (8-10) 2 = Weekly or more (4-7)  3 = Daily or More (1-3) |
| Sources for news | Binary indicators of use for 13 types of news source ranging from Magazines to AI Chatbots.  0 = No use  1 = Use | Categorized similar sources into binary variables for:  TV  Radio  Print  Online  Social Media.  0 = No use  1 = Use |
| Main sources for news | Binary indicators for 13 types of news source ranging from Magazines to AI Chatbots indicating their primary source of news.  0 = Not main source  1 = Main source | Grouped similar sources and converted binary indicators into a single categorical variable.  TV = 1  Radio = 2  Print = 3  Online = 4  Social Media = 5  None = 6 |
| News brands | Two binary variables for each brand in the dataset.  The first indicates use in the past week.  0 = No use,  1 = Use in the past week.  The second indicates if it has been used more than 3 days in the last week.  0 = Not more than 3 days,  1 = 3 or more days in the last week. | For each of these brands, a single categorical variable was created.  1 = No use  2 = Use in last week  3 = Use across more than 3 days last week. |
| Directly accessed a news website or app | Binary Variable indicating if the user accessed a news website or app directly in the last week. | Binary Variable indicating if the user accessed a news website or app directly in the last week. |
| Disinterest in News | Categorical Variable indicating levels of news interest .  1 = Extremely interested  2 = Very interested  3 = Somewhat interested  4 = Not very interested  5 = Not at all interested | Converted into a binary variable  0 = Interested (1-2)  1 = Uninterested (3-5) |
| Trust in news generally | Categorical variable indicating level of trust in news generally.  1 = Strong distrust  2 = Tend to distrust  3 = Neither trust or distrust  4 = Tend to trust  5 = Generally distrust | Converted to a binary variable.  0 = Distrust (1-3)  1 = Trust (4-5) |
| Trust in consumed news | Categorical variable indicating level of trust in consumed news.  1 = Strong distrust  2 = Tend to distrust  3 = Neither trust or distrust  4 = Tend to trust  5 = Generally distrust | Converted to a binary variable.  0 = Distrust (1-3)  1 = Trust (4-5) |
| News avoidance | Categorical variable indicating whether the user actively tries to avoid news.  1 = Often  2 = Sometimes  3 = Occasionally  4 = Never | Converted to a binary variable.  0 = Non-avoidant (3-4)  1 = Avoidant (1-2) |
| Concerns about fake news | Categorical indicator of concerns around fake news.  1 = Strong disagree  2 = Somewhat disagree  3 = Neither agree or disagree  4 = Tend to agree  5= Strongly agree | Converted to a binary variable.  0 = Not concerned (1-3)  1 = Concerned (4-5) |
| Perceived exposure to fake news | Range of binary variables indicating means by which an individual has been exposed to fake news about a subject. | We use these variables to create a binary indicator of perceived exposure.  0 = The respondent does not believe they have received fake news on any of the topics.  1 = The user indicated they received fake news on at least one topic. |

1. **Class news use patterns for Flanders and Ireland.**

**Table B. Class news use patterns**

*Flanders*

|  |  |  |  |
| --- | --- | --- | --- |
| **Indicators** | **Class 1** | **Class 2** | **Class 3** |
| **Class Size** | 53% | 25% | 22% |
| **frequency\_news** |  |  |  |
| less than weekly | 0% | 10% | 9% |
| multiple times a week | 7% | 19% | 20% |
| once a day | 20% | 31% | 40% |
| multiple times a day | 72% | 40% | 32% |
| **source\_tv** |  |  |  |
| no | 18% | 79% | 20% |
| yes | 82% | 21% | 80% |
| **source\_radio** |  |  |  |
| no | 47% | 90% | 64% |
| yes | 53% | 10% | 36% |
| **source\_print** |  |  |  |
| no | 48% | 95% | 69% |
| yes | 52% | 5% | 31% |
| **source\_online** |  |  |  |
| no | 15% | 21% | 78% |
| yes | 85% | 79% | 22% |
| **source\_socials** |  |  |  |
| no | 57% | 46% | 77% |
| yes | 43% | 54% | 23% |
| **source\_none** |  |  |  |
| no | 98% | 99% | 100% |
| yes | 2% | 1% | 0% |
| **main\_source** |  |  |  |
| main source TV | 40% | 0% | 66% |
| main source radio | 9% | 1% | 15% |
| main source print | 15% | 0% | 16% |
| main source online (excl social media) | 32% | 67% | 0% |
| main source social media | 4% | 32% | 2% |
| **publicservice\_offlinenews** |  |  |  |
| non use | 15% | 60% | 51% |
| used in the last week | 14% | 17% | 11% |
| frequent use (more than 3 times a week) | 71% | 23% | 38% |
| **broadsheet\_offlinenews** |  |  |  |
| non use | 76% | 94% | 96% |
| used in the last week | 11% | 4% | 2% |
| frequent use (more than 3 times a week) | 14% | 2% | 2% |
| **tabloid\_offlinenews** |  |  |  |
| non use | 22% | 45% | 41% |
| used in the last week | 14% | 15% | 9% |
| frequent use (more than 3 times a week) | 64% | 41% | 50% |
| **regional\_offlinenews** |  |  |  |
| non use | 65% | 88% | 82% |
| used in the last week | 16% | 7% | 8% |
| frequent use (more than 3 times a week) | 19% | 5% | 10% |
| **international\_offlinenews** |  |  |  |
| non use | 90% | 91% | 84% |
| used in the last week | 6% | 3% | 4% |
| frequent use (more than 3 times a week) | 4% | 5% | 12% |
| **none\_offlinenews** |  |  |  |
| non use | 99% | 73% | 93% |
| used in the last week | 0% | 18% | 4% |
| frequent use (more than 3 times a week) | 1% | 10% | 3% |
| **publicservice\_onlinenews** |  |  |  |
| non use | 52% | 76% | 92% |
| used in the last week | 15% | 10% | 3% |
| frequent use (more than 3 times a week) | 33% | 15% | 5% |
| **broadsheet\_onlinenews** |  |  |  |
| non use | 64% | 88% | 98% |
| used in the last week | 12% | 6% | 1% |
| frequent use (more than 3 times a week) | 24% | 5% | 1% |
| **tabloid\_onlinenews** |  |  |  |
| non use | 22% | 45% | 74% |
| used in the last week | 11% | 10% | 5% |
| frequent use (more than 3 times a week) | 67% | 44% | 21% |
| **regional\_onlinenews** |  |  |  |
| non use | 70% | 85% | 92% |
| used in the last week | 9% | 6% | 3% |
| frequent use (more than 3 times a week) | 21% | 9% | 5% |
| **international\_onlinenews** |  |  |  |
| non use | 84% | 87% | 87% |
| used in the last week | 8% | 7% | 5% |
| frequent use (more than 3 times a week) | 7% | 6% | 8% |
| **none\_onlinenews** |  |  |  |
| non use | 98% | 80% | 51% |
| used in the last week | 0% | 14% | 43% |
| frequent use (more than 3 times a week) | 2% | 6% | 6% |

*Ireland*

|  |  |  |  |
| --- | --- | --- | --- |
| **Indicators** | **Class 1** | **Class 2** | **Class 3** |
| **Class Size** | 33.6% | 28.9% | 34.5% |
| **frequency\_news** |  |  |  |
| less than weekly | 1% | 5% | 13.8% |
| multiple times a week | 4% | 8% | 13.1% |
| once a day | 10% | 31% | 28% |
| multiple times a day | 85% | 56% | 44% |
| **source\_tv** |  |  |  |
| no | 17% | 2% | 85% |
| yes | 83% | 97% | 14.7% |
| **source\_radio** |  |  |  |
| no | 42% | 54% | 82% |
| yes | 58% | 46% | 18% |
| **source\_print** |  |  |  |
| no | 51% | 70% | 90% |
| yes | 49% | 30% | 10% |
| **source\_online** |  |  |  |
| no | 11% | 60% | 44% |
| yes | 89% | 40% | 56% |
| **source\_socials** |  |  |  |
| no | 42% | 67% | 45% |
| yes | 58% | 33% | 55% |
| **source\_none** |  |  |  |
| no | 100% | 99% | 92% |
| yes | 0% | 1% | 8% |
| **main\_source** |  |  |  |
| main source TV | 32% | 73% | 0% |
| main source radio | 12% | 14% | 9% |
| main source print | 6% | 4% | 5% |
| main source online (excl social media) | 39% | 5% | 44% |
| main source social media | 10% | 3% | 42% |
| **publicservice\_offlinenews** |  |  |  |
| non use | 13% | 20% | 63% |
| used in the last week | 11% | 10% | 14% |
| frequent use (more than 3 times a week) | 75% | 70% | 22% |
| **broadsheet\_offlinenews** |  |  |  |
| non use | 13% | 27% | 33% |
| used in the last week | 7% | 12% | 9.7% |
| frequent use (more than 3 times a week) | 80% | 62% | 57% |
| **tabloid\_offlinenews** |  |  |  |
| non use | 68% | 77% | 84% |
| used in the last week | 13% | 13% | 9% |
| frequent use (more than 3 times a week) | 19% | 10% | 7% |
| **regional\_offlinenews** |  |  |  |
| non use | 52% | 64% | 73% |
| used in the last week | 17% | 12% | 10% |
| frequent use (more than 3 times a week) | 30% | 24% | 17% |
| **international\_offlinenews** |  |  |  |
| non use | 25% | 50% | 73% |
| used in the last week | 15% | 14% | 11% |
| frequent use (more than 3 times a week) | 60% | 36% | 15% |
| **publicservice\_onlinenews** |  |  |  |
| non use | 20% | 52% | 68% |
| used in the last week | 17% | 13% | 13% |
| frequent use (more than 3 times a week) | 63% | 35% | 19% |
| **broadsheet\_onlinenews** |  |  |  |
| non use | 12% | 31% | 17% |
| used in the last week | 10% | 6% | 12% |
| frequent use (more than 3 times a week) | 78% | 63% | 71% |
| **tabloid\_onlinenews** |  |  |  |
| non use | 69% | 90% | 85% |
| used in the last week | 12% | 5% | 8% |
| frequent use (more than 3 times a week) | 19% | 5% | 7% |
| **regional\_onlinenews** |  |  |  |
| non use | 73% | 86% | 87% |
| used in the last week | 12% | 5% | 6% |
| frequent use (more than 3 times a week) | 14% | 9% | 7% |
| **international\_onlinenews** |  |  |  |
| non use | 18% | 57% | 54% |
| used in the last week | 12% | 12% | 14% |
| frequent use (more than 3 times a week) | 70% | 30% | 32% |
| **none\_onlinenews** |  |  |  |
| non use | 98% | 80% | 51% |
| used in the last week | 0% | 14% | 43% |
| frequent use (more than 3 times a week) | 2% | 6% | 6% |