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### The future of pensions

*Content and consequences of pension reforms in the media*

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# CHAPTER 2

## FRAMING PENSION REFORM IN THE NEWS: TRADITIONAL VERSUS SOCIAL MEDIA

This chapter is under review as: Van den Heijkant, L., Van Selm, M., Hellsten, I., & Vliegthart, R. (2021). Framing pension reform in the news: Traditional versus social media

## ABSTRACT

Next to traditional news media, social media are increasingly important in the news menu of media users. Differences in news production processes between traditional and social media may affect how political and societal issues are depicted, and this may, eventually, affect how citizens are being informed and respond to these issues. By comparing the framing of news content in traditional and social media, this study contributes to the larger question of how social media shape the public debate compared to traditional news media. We rely on a content analysis of newspaper articles and social media messages to compare news frames of the socially contested issue of raising the retirement age. Results reveal the similarity that both media types emphasize problems with (instead of solutions to) the retirement age issue. Our findings also confirm differences: While traditional news media emphasize conflict-related frames more often than social media, social media present more frame diversity in solutions.

## INTRODUCTION

In recent years, the nature of the news media landscape has changed. People increasingly use social media as a news source (Gil de Zúñiga et al., 2018). While news production in traditional news media is based on professional journalists and editors following institutional norms and routines, the rise of social media has integrated a wider array of actors in the news cycle, who are driven by rather different considerations (Bergström & Jervelycke Belfrage, 2018; Nielsen & Schröder, 2014). This shifting nature of the news media landscape may have an impact on the information that reaches citizens as the information on social media may be essentially different from the information in more traditional sources (Soroka et al., 2018). Eventually, this may have consequences for citizens' perceptions and opinions about current issues and events.

Scholars have recently started to examine differences in information across traditional and social media, hereby focusing on different content characteristics. Regarding the tone of information, Soroka et al. (2018) reveal that traditional media reflect a negativity bias in their reporting of the economy, while the economic information circulated through Twitter reflects a positivity bias. Other studies focus on the style and logic of journalists' news reporting across their own (traditional) platforms and social media (Hågvar, 2019; Welbers & Opgenhaffen, 2019). For example, Welbers and Opgenhaffen (2019) show that Facebook status messages of news organizations are more subjective and positive than headlines and leads of the actual news content.

The present study compares the *framing* of news content across traditional and social media. Investigating whether the framing of social and political issues is different in traditional and social media fosters our understanding of how social media shape public debate compared to traditional media. We examine this question in the context of a fundamental sociopolitical issue: the retirement age issue. As a response to an aging population, many governments around the world are pursuing pension reforms in which people are expected to retire later (OECD, 2017). The retirement age issue forms a rich case to compare framing across the two media types for two particular reasons. First, given the profound impact on citizens, the reform measure is controversial and subject of fierce public debate (Van Solinge &

Henkens, 2017), making it a prominent and dynamic news topic in traditional and social media. Second, a distinctive element of the retirement age issue is that it is about extending benefits available today to future generations, making the issue comparable to other future-oriented and contested issues (e.g., climate change). Remarkable is that working and older generations are biased to dislike the pension reform at hand due to (relative) short-term interests (Van Solinge & Henkens, 2017), while younger and future generations are the ones benefiting from it in the long run (Naumann, 2014). In terms of news consumption, older generations are more likely to primarily rely on traditional news media for (political) news, while younger generations mainly use social media for (political) information (Holt et al., 2013; Lauf & Scholtens, 2019). In the case of different information streams across these media types, this may produce differences in how citizens of various generations are being informed and respond to the reform measure, which may widen the gap in attitudes and opinions even further.

This study relies on a content analysis of Dutch newspaper articles and social media messages about the retirement age issue in the timespan 2009-2016. Doing so, we aim to uncover frames in the media content about the retirement age issue and explain systematic differences between how journalists frame the issue in traditional news media and how users frame it on social media, as well as explain systematic differences over time.

## APPROACH TO FRAMING

Framing deals with the presentation and meaning construction of issues (Ashuri & Halperin, 2017). Many of the conceptualizations proposed correspond to Entman's (1993) classical definition: "To select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described" (p. 52). Central to this definition is selection and salience: A frame draws attention to selected aspects of an issue at the expense of others by making them more salient, which refers to emphasis framing (De Vreese, 2005). Distinct from this is equivalence framing, which involves presenting logically equivalent information in different ways (Vliegenthart, 2012).

Framing provides an excellent way to systematically analyze variation across media content (Vliegenthart, 2012). In this study, we focus on some of the essential frame features in news reporting. Frames of the issue at hand are identified based on elements central to Entman's (1993) definition: the problem and solution definition. The problem formulation (*diagnosis*) and the solution formulation (*prognosis*) are conceptualized as two core frame features by Snow and Benford (1988). Diagnostic framing deals with identifying a problem, attributing responsibility for it, and identifying associated victims. Prognostic framing identifies a solution to the problem and attributes responsibility to the one accountable for solving the problem (Iyengar, 1991; Snow & Benford, 1988). This diagnostic and prognostic framing approach proved useful in studying variation in frames across a range of contexts. For example, in the context of framing social movements and events in traditional media (Snow, Vliegenthart, et al., 2007), framing immigration and integration in traditional media and parliament (Vliegenthart & Roggeband, 2007), and framing older workers' employability in traditional and corporate media (Kroon et al., 2017).

We rely on an inductive approach to identify diagnostic and prognostic frames in the news content of the issue at hand. Rather than analyzing a priori defined frames, frames emerge naturally from the data. An inductive approach is well-suited to assess variation in frames across traditional and social media, as it allows openness to frames used in *both* media types, avoiding the risk of overlooking relevant frames in one of the media types.

From the frame identification process, it became clear that conflict plays a key role in framing the retirement age issue in the news (full description of inductive procedure and outcomes is included in the Methods and Results sections). Many studies have identified the importance of conflict as a distinctive storytelling technique. For example, conflict proved to be an important news value. News values represent a set of guidelines that journalists and editors use to determine which events become news. According to the news value of conflict, events or issues are more newsworthy when they involve disagreement, controversies, or arguments (Harcup & O'Neill, 2017). Furthermore, the conflict frame has been identified as an often-used generic frame in traditional news media content, especially common in political news. In such a frame, aspects of conflict between individuals, groups, or institutions are emphasized (De Vreese et al., 2001;

Valkenburg & Semetko, 2000). Given the key role of conflict in media content in general as well as in the issue at hand, it is a relevant frame feature to include in studying variation in frames across traditional and social media.

## PRODUCTION OF NEWS CONTENT IN TRADITIONAL AND SOCIAL MEDIA

Due to distinctive features that characterize traditional and social media, there are vast differences in content production between them. Central to these differences is the concept of media logic, which concerns the processes through which media produce and transmit content. Following media logic, the way media communicate issues depends on the distinctive features of each medium, including format, style, production process, and routines (Altheide, 2013; Altheide & Snow, 1979). More concretely, media logic refers to “the news values and the storytelling techniques the media make use of to take advantage of their own medium and its format, and to be competitive in the ongoing struggle to capture people’s attention” (Strömbäck, 2008, p. 233).

Traditional news media, such as newspapers, have a distinct logic based on professional journalists following institutional norms and routines in their gatekeeping role (Singer, 2010). Dramatizing news, presenting negative or conflicting information, and ‘indexing’ content to the governmental discourse are some of the most identified tendencies in the news production of traditional news media. In contrast, news production on social media is driven by different considerations. On social media platforms, everyone can participate in producing and disseminating content. A diverse group of users produces social media content based on personal motivations and preferences rather than following specific norms and routines (Klinger & Svensson, 2015; Weeks & Holbert, 2013). Some studies argue for a social media logic characterized by particular dynamics (Enli & Simonsen, 2018). For instance, in the sense that content generation on social media comes from amateur production and so-called ‘produsage’ by (lay) users (Klinger & Svensson, 2015), and is based on a more interpersonal and subjective logic (Welbers & Opgenhaffen, 2019). The current study is in line with the

argumentation of these studies; however, we are careful to adopt the term of social media logic since we focus on multiple social media platforms and do not distinguish between different types of users.

## VARIATION IN FRAMES ACROSS TRADITIONAL AND SOCIAL MEDIA

Characterized by economic pressure and commercial influence, traditional news media need to compete with other outlets and sell news. To be competitive in this ongoing struggle for public attention, journalists and editors are inclined to dramatize news (Bennett, 2004; Kunelius, 2006). Previous research suggests that journalists and editors tend to highlight problems in the coverage of social issues more than providing a solution-focused perspective (Kroon et al., 2017; Snow, Vliegthart, et al., 2007). In the context of pension reforms, Hagelund and Grødem (2017) also find that newspaper articles problematize pension reforms, especially in terms of pension wealth distribution. In addition, traditional news media are faced with limited space for news stories. Consequently, journalists and editors need to decide what (not) to include in the news. To determine what kind of information is newsworthy and appealing to the audience, they use news values (Harcup & O’Neill, 2017; Kruikemeier, Gattermann, et al., 2018). Negativity is an important news value, and we know from previous research that frames that receive journalistic attention reflect news values (Luther & Zhou, 2005). Following this reasoning, we expect journalists to be more inclined to use diagnostic frames than prognostic frames.

Although social media are also about re-distributing traditional news stories, the production of content on social media does not follow a structured editorial process. Instead, social media users are driven by personal motives and, therefore, the content on social media (often) includes personal stories and commentary (Guggenheim et al., 2015; Smith et al., 2012; Soroka et al., 2018). Following this personalized character, previous research has suggested that social media content contains more emotional expressions than content in traditional sources (Guggenheim et al., 2015; Klinger & Svensson, 2015; Welbers & Opgenhaffen, 2019). The pension reform of raising the retirement age received fierce opposition from citizens, as the measure causes disruptions in long- and widely held expectations of

citizens' retirement (Eichhorst & Wintermann, 2006). Since many citizens may experience short-term implications of the measure but do not (necessarily) benefit from it, we expect negative emotions to be prevalent among citizens. This is also reflected in previous research in which older workers indicated to be angry and worried about working longer and retiring later (Van Solinge & Henkens, 2017). These emotionally engaged citizens are probably particularly likely to be actively involved in the debate on social media, mainly emphasizing problems related to the issue. For these reasons, we also expect social media content to be focused on diagnostic frames rather than prognostic frames.

**H1a.** Both traditional news media and social media content will contain more diagnostic frames than prognostic frames.

Journalists and editors are also characterized in their norms and routines by a heavy reliance on official sources that are associated with, for example, governmental departments or the policy-making process (Dimitrova & Strömbäck, 2009). The reliance on official sources is in line with the indexing theory about state-press relations, which refers to the notion that traditional news media primarily cover policy issues from the governmental perspective (Bennett, 1990; Neuman et al., 2014). We, therefore, anticipate that journalists depend on official sources in their news reporting on the retirement age issue, which will be reflected in how journalists frame the issue (Dimitrova & Strömbäck, 2009). Government officials probably focus on the purpose and (future) benefits of the measure and may release information related to solutions more than problems in an effort to collect support for the policy measure. Therefore, we expect that—although generally using more diagnostic frames—journalists and editors are also likely to provide an account of the retirement age issue from a solution-focused angle (using prognostic frames). Previous research has also suggested that journalists shift their attention from diagnostic to prognostic framing over time, as identifying solutions becomes the focal concern when a debate or event progresses (Snow et al., 2007). Hence, we expect that traditional news media content contains fewer diagnostic frames over time.

Since producing content on social media is guided by personal interests and motives, framing depends on users' own opinions and preferences. Due to opposition and negative emotional reactions such as anger and worry,

we expect that social media content contains prognostic frames to a lesser extent than traditional news media. Looking at social media content over time, we expect that negative emotional reactions become even stronger, especially after the government's official implementation of the pension reform. Hence, contrary to the decrease in diagnostic framing in traditional news media content over time, we expect that social media content remains focused on diagnostic framing.

**H1b.** Traditional news media content will contain more prognostic frames than social media content.

**H2a.** Over time, the presence of diagnostic frames will decrease in traditional news media content.

**H2b.** Over time, the presence of diagnostic frames will remain the same in social media content.

Adhering to the norm of objectivity, journalists and editors in traditional news media face the challenge of bringing more than one view into a news item. To balance different views, journalists try to highlight different interpretations of an issue in their reporting, thereby leaving the interpretation to the audience (Baden & Springer, 2014; Skovsgaard et al., 2013). In practice, this norm of objectivity means that journalists tend to present conflicting or opposing views (Bartholomé et al., 2015), especially in political news (Vliegenthart et al., 2011). Based on the prominent role of conflict in news content (e.g., Harcup & O'Neill, 2017; Valkenburg & Semetko, 2000), and given that conflicting interests dominate the retirement age issue, we expect journalists to be likely to present the issue in terms of conflict-related frames. Over time, however, we expect the presence of conflict-related frames to decrease because the level of disagreement declined, at least in political terms, as the reform process to raise the retirement age matured (Parlevliet, 2017).

Different from journalists following norms and routines, social media users are more independent in framing policy issues (Neuman et al., 2014). Frame construction is in the hands of many (ordinary) users. Social media platforms allow them to produce any issue interpretation, as no selection procedure exists for publication (Baden & Springer, 2014). In this sense, social media users can challenge discourses and share alternative perspectives (Loader

& Mercea, 2011). We anticipate that the content about the retirement age issue is divided across various frames, leading to the expectation that frame diversity is large for social media.

**H3a.** Traditional news media content will contain more conflict-related frames than social media content.

**H3b.** Over time, the presence of conflict-related frames will decrease in traditional news media content.

**H4.** Social media content will contain more frame diversity than traditional news media content.

## METHOD

### SAMPLE

Using manual content analysis, we investigated how the retirement age issue was framed in traditional and social media content over a period of eight years (2009-2016). This period covered the first moment the Dutch government introduced its plan to raise the retirement age (2009), the actual implementation (2012), and its aftermath in subsequent years. The Netherlands forms an exemplary case for many other European countries where the pension reform of raising the retirement age has led to heated public debates (Van Solinge & Henkens, 2017).

We selected newspapers to represent traditional news media in this study. Although television news programs are the main traditional news source for many people in the Netherlands, printed newspapers are still widely read (Newman et al., 2019). Besides, newspapers are the more generic form of traditional news media as journalistic norms and practices dominate the outlet. We included the five largest Dutch national newspapers: two popular newspapers (*Algemeen Dagblad*, *De Telegraaf*) and three quality newspapers (*De Volkskrant*, *NRC Handelsblad*, *Trouw*).

We selected Facebook, Twitter, and various blogs and forums to represent the diverse social media landscape. Facebook and (to a lesser extent) Twitter are among the most frequently used social media platforms for news in the

Netherlands (Newman et al., 2019). In addition, a large number of blogs and forums exist in the social media landscape (Smith et al., 2012). Content on social media can be produced by any actor, including politicians and journalists. As social media users can potentially be exposed to all these messages, we did not distinguish between different types of users and selected all content related to the issue.

We used an extensive search string to collect newspaper articles and social media messages via LexisNexis and Coosto<sup>1</sup>, respectively (see Chapter 1). We narrowed the focus by using a second search string, mainly to exclude items focusing on related subissues (e.g., sustainable employability, pension funds). Taking the message length of the different media into account resulted in two slightly different search strings: one for newspapers, blogs, and forums and one for Facebook and Twitter. Wildcards were used to account for plurals and grammatical variations of words. This search resulted in 1.072 newspaper articles and (after removing duplicates) 10.191 social media messages.

A stratified random sample of 414 newspaper articles (38.6%) and 2.771 social media messages (27.2%) was manually coded in our content analysis. Only media items explicitly referring to the pension reform of raising the retirement age in the Netherlands were further analyzed in the content analysis. For traditional news media, this resulted in 382 newspaper articles: 43 from *Algemeen Dagblad*, 84 from *De Telegraaf*, 100 from *De Volkskrant*, 81 from *NRC Handelsblad*, and 74 from *Trouw*. For social media, the process resulted in 2.130 social media messages: 875 from Twitter, 142 from Facebook<sup>2</sup>, and 1.113 from blogs (e.g., *50-plusser*, *De Dagelijkse Standaard*, *Effactory*) and forums (e.g., *Fok! Forum*, *DeBeurs*, *Vara Kassa Forum*).

### CODING PROCEDURE AND RELIABILITY

The coding procedure consisted of two phases. In the first phase, we inductively identified issue-specific frames through a qualitative pre-study. We analyzed a random subset of newspaper articles and social media messages with sensitizing questions to identify issue-specific diagnostic

<sup>1</sup> Coosto stores social media messages that are publicly available. This means that, for example, private Facebook posts are not included in our study.

<sup>2</sup> For Facebook, we could unfortunately only collect posts and comments from 2016.

and prognostic frames: “what is seen as the problem?”, “who is seen as responsible for causing the problem?”, “whose problem is it seen to be?”, “what should be done to solve the issue?” and “who is taking responsibility to solve the issue?” (for a similar approach, see Kroon et al., 2017; Vliegthart & Roggeband, 2007). We continued this qualitative analysis until no new framing elements emerged (theoretical saturation;  $n = 262$ ), resulting in seven diagnostic frames and five prognostic frames. Table 2.1 gives an overview of these frames.

In the second deductive phase, after developing the coding instrument based on the qualitative pre-study, four coders were trained in coding the materials until a satisfactory level of consensus on all categories in the codebook was reached. The coders coded media items using a series of closed-ended questions. Each question was designed to measure the presence of a frame, and multiple frames could be coded per unit.

Intercoder reliability was established, at different moments, on a representative sample of 245 randomly selected items from a popular and quality newspaper ( $n = 31$ ) and each social media platform ( $n = 214$ ). We relied on standardized Lotus coefficients to assess intercoder reliability, which corrects for agreement based on chance and is particularly suitable for dichotomous variables that are skewed or score low on “positives” (Aaldering & Vliegthart, 2016). Standardized Lotus coefficients and percentage agreement yielded satisfactory results (see Table 2.2).

**ANALYSIS**

We computed the scores of all diagnostic frames into one variable representing the presence of diagnostic frames, ranging from 0 to 5 diagnostic frames present in a media item. We did the same for the presence of prognostic frames, and this scale ranged from 0 to 3. Given the unequal number of seven diagnostic and five prognostic frames in our codebook, we recoded the scale of diagnostic frames into the same scale as prognostic frames for the analyses in which we compared the presence of both frame types. In the analyses in which we compared across media, we relied on the share (percentage) of a particular frame type relative to all frames. For H3a and H3b, we grouped inequality between groups, generational conflict, and political disagreement as conflict-related frames as these frames are the ones that emphasize disagreement between individuals, institutions, or countries (De Vreese et al., 2001).

**Table 2.1** The Identified Diagnostic and Prognostic Frames in Traditional and Social Media

Diagnostic frames	Typical examples	
	Traditional news media	Social media
<i>Disruption of financial plans</i> Financial problems, uncertainty, or disruption of life plan	‘The rise in the state pension age leads to an additional increase of elderly people needing social assistance benefits’ (De Volkskrant-August-2016).	‘Because the retirement age is shifting to 67 years and partner state pension is abolished for people born after 1-1-1950, I have a gap of more than €70.000’ (Facebook-December-2016).
<i>Confusion about pension</i> Confused, ignorant, or unrealistic about one’s own pension	‘Many young citizens don’t even know that their pension accrual rate was reduced the moment the retirement age was raised’ (Trouw-August-2015).	‘67 years is known information for many customers, but that the increase continues even further is new information for many people’ (Forum-October-2014).
<i>Inequality between groups</i> Ignorance of differences between individuals or groups	‘Quite a few people think that raising the retirement age is unfair and puts a disproportionate burden on certain, especially lower, income groups’ (De Volkskrant-October-2009).	‘Let’s be honest, in the better jobs, people take care of themselves, and there are many who can retire early. It is again the people in the jobs that are already struggling, physically, to reach the finish line, who suffer’ (Facebook-November-2016).
<i>Poor labor market position of older workers</i> Negative images and stereotypes of older workers	‘Raising the state pension age will not improve the willingness of employers to hire older workers’ (De Volkskrant-June-2015).	‘There is no point in #raising the state pension age as long as employers are not forced to hire and retain older people #cpb’ (Twitter-March-2012).
<i>Generational conflict</i> Pressure on the solidarity between young and older people	‘With the discussion about the retirement age, solidarity between generations has also come under pressure’ (Trouw-December-2010).	‘Criticism Council of State on bill #pensionagreement: State pension age increase too slow and imbalance in interests young and old’ (Twitter-October-2011).
<i>Political disagreement</i> Political negotiation and commotion around the pension reform	‘Raising the retirement age is a clear decision by coalition parties CDA, PvdA, and ChristenUnie, while opposition parties SP and PVV are resolutely against this idea’ (NRC Handelsblad-March-2010).	‘Senate agrees grumbly with the rise in the state pension age: The state pension age will increase in steps from January 1, 2013’ (Twitter-July-2012).



<i>Unjustified austerity measure</i> Pension reform serves the government's own financial problems	'Why should 2009 be the benchmark for linking the state pension age to life expectancy? Because it has become clear that a handful of greedy bankers have brought the world economy on the verge of collapse' (NRC Handelsblad-October-2009).	'The government has already reduced so much of our pension and increased the retirement age. Now they need more money, so the retirement age needs to be raised again' (Facebook-October-2016).
<b>Prognostic frames</b>		
<i>Alternative ideas</i> Alternative ideas and suggestions to improve the reform measure	'Jongerius sees more in a flexible setup. Workers should be able to choose when they retire, between the ages of 65 and 70 years. If you quit working later, you will also receive a higher benefit' (De Telegraaf-Februari-2010).	'You can think of a system where the group up to 40 years retires one month later, the group from 40 to 50 years retires half a month later, and always entitled to retire at 65 years after 40 years of working' (Forum-February-2009).
<i>Innovating labor market</i> Need for a modern labor market, improving the employability of (older) workers	'Minister Bos wants to oblige employers to take measures to keep workers fit, via a change in the legislation of working conditions' (Trouw-September-2009).	'Entitled to training, a mandatory career policy, fewer vacation days, and a lower salary. These are some measures that should make it more attractive for employers to keep employees working up to 67 years' (Blog-December-2009).
<i>Fostering individualization</i> People need to take responsibility for their own retirement	'A Dutch professor of pension sociology points to the possibility of individual saving in order to be able to retire earlier' (De Telegraaf-September-2010).	'If you are confronted with a reduction in your income, it is important to take a good look at your expenses' (Blog-November-2016).
<i>Improving communication about pension</i> Providing more insights into and overview of people's pensions	'During these three days, more than 250 organizations are committed to giving Dutch people more insights into and overview of their pension situation, now and later' (De Telegraaf-October-2014).	'A partnership between the government, business community, and other parties, is organizing the Pensioen3daagse. The aim is to encourage people to be actively involved in their own pension situation' (Blog-September-2011).
<i>Reversing the decision</i> Reversing the decision to raise the retirement age	'Nothing needs to be reversed. The bill for raising the retirement age to 67 years has not yet been passed by the chamber. The cabinet has resigned, so the bill is put on hold. It simply should not be introduced' (De Telegraaf-February-2010).	'The retirement age simply should be reversed to 65 years' (Facebook-November-2011).

Table 2.2 Intercoder Reliability Results

	Intercoder reliability	
	Standardized Lotus	Average pairwise percent agreement
<b>Diagnostic frames (n = 755)</b>		
Disruption of financial plans	.83	88.05
Confusion about pension	.92	96.45
Inequality between groups	.87	92.78
Poor labor market position of older workers	.92	96.82
Generational conflict	.91	95.83
Political disagreement	.80	86.00
Unjustified austerity measure	.92	96.92
<b>Prognostic frames (n = 755)</b>		
Alternative ideas	.80	87.15
Innovating labor market	.91	95.87
Fostering individualization	.92	97.48
Improving communication about pension	.93	98.13
Reversing the decision	.88	93.45

Note. n represents the number of codings on which the comparison is based.

For the hypotheses dealing with over-time expectations, we created a time variable that included all months in our research period, from month 1 to month 96. Finally, to measure how widely attention is distributed across frames, we relied on the Herfindahl Index, which is often used in economics to measure market concentration. The maximum score of 1 represents a complete concentration of one frame in the news, while a Herfindahl Index that approaches zero indicates more diversity in frames. We used the monthly share of each frame to calculate the Herfindahl Index for both media types.

## RESULTS

### DESCRIPTIVE RESULTS

Before testing the hypotheses, we start by describing the diagnostic and prognostic frames that emerged from the qualitative pre-study. These descriptions are presented in Table 2.1, including typical examples. Although representing the same diagnostic and prognostic frames in terms of content,

the qualitative analysis did reveal a clear difference in the language and style of framing across traditional and social media, which is in line with other comparative studies of these media types (Hågvar, 2019; Klinger & Svensson, 2015; Welbers & Opgenhaffen, 2019). Frames on social media exhibit a more subjective and emotional style, expressed from the author's perspective and state, which is marked as a distinctive feature of content production on social media (Welbers & Opgenhaffen, 2019). For instance, as shown in Table 2.1, a newspaper presents the frame inequality between groups rather objective and distant, while the same frame on social media is written from the emotional state of the author, which is reflected in the subjective language. Frames on social media also have a more personalized nature compared to the ones in traditional news media (Klinger & Svensson, 2015). This is, for example, reflected in the frame disruption of financial plans, where the example on social media showed a more personal focus than the one in a newspaper.

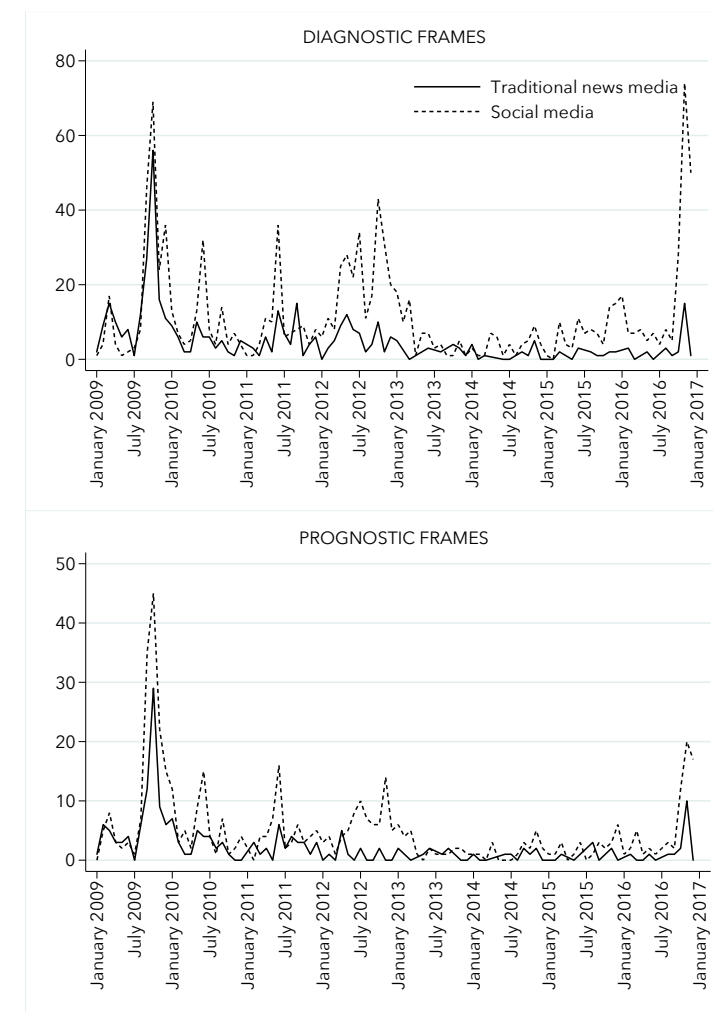
Beyond language and style, we examined the over-time presence of diagnostic and prognostic frames in traditional and social media (see Figure 2.1). We see a similar trend over time for the monthly presence of diagnostic frames and prognostic frames, as well as for the two media types. Table 2.3 shows similarities and differences in the presence of each issue-specific frame across traditional and social media. Regarding diagnostic frames, journalists in traditional news media highlight political disagreement most in their content, while social media users emphasize disruption of financial plans the most, being closely followed by political disagreement as well. When framing the retirement age issue from a solution-focused angle, alternative ideas are emphasized the most in both traditional and social media content, while reversing the decision is the second most prominent prognostic frame present on social media.

#### VARIATION IN FRAMES ACROSS TRADITIONAL AND SOCIAL MEDIA

We now address our hypotheses assessing the use of diagnostic and prognostic frames across traditional and social media. H1a predicted that both traditional and social media would cover more diagnostic frames than prognostic frames. To test this, two paired samples *t*-tests were performed—one for each media type—to compare the means of the presence of diagnostic and prognostic frames per item, on a scale from 0 to 3. For traditional news media, the average presence of diagnostic frames ( $M = 1.11, SD = .96$ )

was significantly higher than that of prognostic frames ( $M = .51, SD = .68$ ). This difference is statistically significant,  $t = 12.025, p < .001, df = 381$ . The same statistical difference was found for social media,  $t = 17.539, p < .001, df = 2129$ . The average presence of diagnostic frames ( $M = .52, SD = .74$ ) was significantly higher than that of prognostic frames ( $M = .22, SD = .48$ ). This means we accept H1a.

Figure 2.1 Over-Time Presence of Diagnostic and Prognostic Frames in Traditional and Social Media



Note. The graphs have different values marked along the y-axes.

**Table 2.3** The Presence of Diagnostic and Prognostic Frames Across Traditional and Social Media

	Traditional news media		Social media	
	<i>n</i>	%	<i>n</i>	%
<b>Diagnostic frames</b>	<b>263</b>	<b>68.8</b>	<b>846</b>	<b>39.7</b>
Disruption of financial plans	99	25.9	326	15.3
Confusion about pension	20	5.2	68	3.2
Inequality between groups	71	18.6	148	6.9
Poor labor market position of older workers	42	11.0	145	6.8
Generational conflict	38	9.9	62	2.9
Political disagreement	148	38.7	320	15.0
Unjustified austerity measure	20	5.2	46	2.2
<b>Prognostic frames</b>	<b>159</b>	<b>41.6</b>	<b>417</b>	<b>19.6</b>
Alternative ideas	103	27.0	212	10.0
Innovating labor market	42	11.0	85	4.0
Fostering individualization	19	5.0	46	2.2
Improving communication about pension	4	1.0	14	0.7
Reversing the decision	27	7.1	119	5.6

Note. Regarding the overall presence of diagnostic and prognostic frames (presented in bold), *n* and % represent the number of articles in which at least one diagnostic or prognostic frame was present.

H1b, which predicted that traditional news media would cover more prognostic frames than social media, was tested with an independent samples *t*-test to compare the share of prognostic frames (i.e., the presence of prognostic frames relative to the presence of all frames) across traditional and social media. Results show no significant difference in the share of prognostic frames across traditional news media ( $M = .28$ ,  $SD = .32$ ) and social media ( $M = .28$ ,  $SD = .38$ );  $t = .153$ ,  $p = .878$ ,  $df = 549.469$ ). Thus, H1b was not supported.

H2a proposed that, over time, the presence of diagnostic frames would decrease in traditional news media content. Linear regression analysis indicates that time is not a statistically significant predictor of the presence of diagnostic frames in traditional news media content,  $F(1,380) = 3.638$ ,  $p = .057$ ,  $R^2 = .009$ . Although the negative coefficient hints at a small decrease, it is not significant, and therefore we reject H2a. For social media,

we proposed in H2b that the over-time presence of diagnostic frames remained the same. Linear regression analysis shows that time is a statistically significant predictor of the presence of diagnostic frames in social media content,  $F(1,2128) = 5.702$ ,  $p < .05$ ,  $R^2 = .003$ . The negative coefficient points to a small decrease of diagnostic frames over time here, which means we reject H2b.

H3a proposed that traditional news media content would contain more conflict-related frames than social media content. We performed an independent samples *t*-test to compare the share of conflict-related frames across traditional and social media. Significant differences were found,  $t = 4.166$ ,  $p < .001$ ,  $df = 488.586$ . The average share of conflict-related frames in traditional news media content ( $M = .60$ ,  $SD = .41$ ) was significantly higher than that in social media content ( $M = .47$ ,  $SD = .46$ ). Hence, we accept H3a.

H3b predicted that, over time, the presence of conflict-related frames would decrease in traditional news media content. A linear regression analysis indicated that time is a statistically significant predictor of the presence of conflict-related frames in traditional news media,  $F(1,261) = 20.261$ ,  $p < .001$ ,  $R^2 = .072$ . For every additional month, the share of conflict-related frames in newspaper articles decreased by .004. Although this indicates a small decrease, we accept H3b.

H4 proposed that there would be more diversity across frames in social media content than in traditional news media content. To test this, two independent samples *t*-tests were performed to compare the Herfindahl Index across traditional and social media—one for diagnostic frames and one for prognostic frames. For diagnostic frames, there was more frame diversity in social media content ( $M = .46$ ,  $SD = .26$ ) than in traditional news media content ( $M = .52$ ,  $SD = .28$ ), but this difference is not significant ( $t = 1.417$ ,  $p = .158$ ,  $df = 168$ ). For prognostic frames, there was also more frame diversity in social media content ( $M = .60$ ,  $SD = .27$ ) than in traditional news media content ( $M = .71$ ,  $SD = .28$ ); and this difference is significant ( $t = 2.240$ ,  $p < .05$ ,  $df = 144$ ). Based on this, H4 can be accepted for prognostic frames, but needs to be rejected for diagnostic frames.

## DISCUSSION

Traditional and social media are powerful information sources able to influence public perceptions of issues, foremost by framing issues in a particular way. The present study compared the framing of the socially contested issue of raising the retirement age across traditional and social media. Comparing the framing of news content in traditional and social media is essential to contribute to the larger question of how social media shape public debate compared to traditional news media. Although traditional and social media differ considerably in content production, findings tell us that the framing of the retirement age issue on social media is not that different from the depiction of the issue in traditional news media. It seems, therefore, that different content production processes can, in some cases, still lead to similar outcomes and, in others, to differences that are ultimately not *that* strong.

First, as anticipated, we found that in both media types, emphasis was placed on problems with (rather than solutions to) the retirement age issue. Contrary to the expectation, this emphasis on diagnostic frames did not decrease over time in newspapers, while this was unexpectedly the case for diagnostic frames on social media. This potentially means that negative emotional reactions toward raising the retirement age have decreased as the reform measure matured, which is in line with previous research suggesting that public opinion in the Netherlands gradually developed to be more favorable toward later retirement (Parlevliet, 2017). Contrary to the expectation, traditional news media did not frame the issue more often in solution-oriented (or prognostic) terms compared to social media. It seems, then, that the tendency of traditional news media to highlight problems is strong for the complex and controversial issue of raising the retirement age.

Additionally, we found that newspaper articles contained more conflict-related frames than social media messages. As expected, the emphasis on conflict-related frames in newspapers decreased over time. Moreover, as anticipated, social media content about the retirement age issue is divided across more frames than traditional news media content. This implies that social media enable people to consider multiple views, while newspapers present only a limited range of perspectives, for which they are frequently criticized (Baden & Springer, 2017). However, this difference in frame diversity

was only significant for prognostic frames and not for diagnostic frames, indicating that social media present more frame diversity than newspapers when it comes to solving the issue, but not when it comes to problematizing the issue. Probably all kinds of solutions can be shared on social media, feasible or not, as no selection process exists before publication, while journalists may be more selective in publishing solutions to the problem in traditional news media. The lack of significant differences in frame diversity for diagnostic frames may be explained by the large amount of attention devoted to them in both media types: The more attention an issue receives, the more room to diversify interpretations (Boydston, 2013).

Although traditional and social media differ considerably in the production of content, our findings show that similarities exist in how both media types frame the retirement age issue. The most important similarities between traditional and social media are that more attention was devoted to diagnostic frames than to prognostic frames and that the share of prognostic frames was comparable. This is coherent with previous research suggesting that social media follow the agenda set by traditional news media in the context of the retirement age issue (Chapter 1). Interestingly, differences also exist in how the issue is framed in traditional and social media, although substantially relatively small. First, compared to traditional news media, the style and language of frames on social media are more subjective, emotional, and personalized. This may imply that (younger) people who follow the issue via social media respond more emotionally to raising the retirement age than (older) people who follow the issue by reading newspaper articles. Second, newspaper articles contain more conflict-related frames than social media messages. This means that (older) people who tend to follow news via traditional news media may perceive the retirement age issue as a conflicting issue and may respond therefore more negative to the issue relative to (younger) people who follow the issue on social media where the emphasis lies less on conflicts. Another important difference relates to frame diversity. Diversity across prognostic frames is larger for social media than for traditional news media, which potentially implies that (younger) people who are active on social media have a broader range of solution perspectives to choose from than (older) people who are generally exposed to a rather limited range of solutions in traditional news media. This may influence how people respond to the issue.

This study is not without limitations. Most notably, we considered social media as one type of media without looking further into the differences between various social media platforms. Some of these platforms (e.g., blogs) might be more similar to traditional news media in terms of use and purposes, while others (e.g., Twitter) might differ more from traditional news media. An interesting direction for future research would be to split social media into parts to which you can ascribe a certain logic. Moreover, although newspaper content is largely published by professional journalists following institutional norms and routines, some content might not be written in a journalistic style (e.g., guest columns, entertainment components). This can be problematic for our argumentation; however, we rarely encountered non-journalistic messages in traditional media during our qualitative pre-study and content analysis.

The present study moved beyond extant research by demonstrating important similarities and differences in issue framing across traditional and social media. More concretely, this study contributes by showing that traditional and social media focus on problems with (rather than solutions to) complex and controversial issues, as well as by showing that social media provide a platform with more openness to solutions. This knowledge on issue framing helps to understand information streams in these distinct media types, which is crucial to take a step toward understanding (differences in) public perceptions and support or opposition for issues with high social relevance.