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### Images of older workers

*Content, causes, and consequences*

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#### Publication date

2017

#### Document Version

Other version

#### License

Other

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#### Citation for published version (APA):

Kroon, A. C. (2017). *Images of older workers: Content, causes, and consequences*.

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## Chapter 5

# EFFECTS OF MEDIA STEREOTYPES OF OLDER WORKERS ON THE AGGREGATE LEVEL

**This chapter is under review as:** Kroon, A. C., Trilling, D., Vliegthart, R., and Van Selm, M. *Biased media? How news content influences age discrimination claims.*

## Abstract

**Information distributed via the news media is acknowledged as a potential source of negative beliefs about, and biased behaviors towards, older workers. Focusing on the Netherlands, the current study explains age discrimination claims filed by older workers by investigating the impact of visibility and media stereotypes of older workers in the news media, while controlling for real-world events and older workers' expectations of unemployment (2004 – 2014). The results, based on time-series analysis, reveal that the visibility of older workers in the news media is associated with higher levels of age discrimination claims. This effect can be partly explained with the visibility of the negative media stereotype that older workers experience health problems in the content of news coverage. Furthermore, unemployment expectations decreased the number of age discrimination claims. These results offer support for the notion that the news environment is a source of variation in the experience of age discrimination at the workplace.**

## 5.1 Introduction

Equality in employment is one of the core labor market principles of the European Union. Yet, the experience of prejudice and discrimination is a reality in the lives of members of diverse social groups in the EU, amongst which older workers. Unfair treatment on the ground of age is among the most commonly experienced form of discrimination (Abrams et al., 2011; Andriessen et al., 2014). Cumulating evidence suggests that across Europe, older workers experience unequal access to employment, training, promotion, as well as job retention, with negative consequences for individual career prospects, life quality and health (Abrams and Swift, 2007; Bal et al., 2011; Finkelstein et al., 2013). Notwithstanding the fact that the European Union has outlawed age discrimination over a decade ago, it remains a significant social issue affecting both individual and societal well-being (Abrams and Swift, 2007, p. 3). The implications of these findings are alarming, particularly in light of the current aging of workforces, and signal the importance of understanding the factors that trigger age discrimi-

nation.

The limited body of literature that addresses variation in the experience of age discrimination at the workplace has offered mostly static explanations based on experimental or cross-sectional data. The experience of discrimination is, however, not a stable process, but instead varies across time and as a consequence of contextual factors (Rippon et al., 2015). Most scholarly investigations into over time dynamics of prejudice and discrimination have focused on the context of minority groups and public attitudes, and show that public opinion and real-world developments affect anti-minority sentiment and support for discrimination (Boomgaarden and Vliegthart, 2009; Coenders and Scheepers, 1998). Older workers cannot be considered a minority group, yet; the categorization between “older” versus “other” or “younger” workers elicits group-based bias, which may be affected by contextual cues in a comparable manner.

In addition to mapping the influence of exogenous events and public opinion data, the current study includes media coverage as an exogenous variable explaining age discrimination claims. A long-standing history of research has consistently demonstrated that media portrayals of diverse groups in society can be biased, and have the potential to activate, reinforce and cultivate recipients’ stereotypes, and promote its application in later interactions (e.g. Ramasubramanian, 2011; Ramasubramanian and Oliver, 2007). In that way, the news media may fulfill a role in strengthening dominant stereotypical beliefs about older workers (Chapter 4, which are seen as important enablers of age discrimination (Abrams and Swift, 2007; Krings et al., 2011).

The far-reaching implications hereof prompt the study to ask whether variation in news coverage about older workers affect the filing of age discrimination claims. The study relies on time-series data of news coverage and age discrimination claims filed by older workers in the Netherlands over a ten-year period (2004 – 2014) to answer this question. We consider media coverage both in terms of the visibility of older workers in the news media as well as dominant stereotypes that prevail in such coverage.

The current investigation contributes to the understanding of the dynamic relationship between media coverage and age discrimination claims. Despite the centrality of contextual factors in explaining the ex-

perience of age discrimination, previous research has not yet adopted an overtime approach to its study. Explanations for variations in biased behaviors are generally studied on the individual level and within a laboratory setting. Researchers have warned that the over-reliance on experimental methods in this domain “creates a theoretical echo chamber in which ideas are not cross-fertilized by research conducted in real-world settings” (Paluck and Green, 2009). The results furthermore add to the understanding of the consequences of workers’ age-related media stereotypes, an issue that is generally neglected both in the field of gerontology and organizational studies (where issues of mass media’s portrayals have not been the focus of inquiry), and intergenerational communication (where interest in issues related to employment bias has only recently started to emerge (see McCann and Giles, 2006).

## 5.2 Age Discrimination and News Coverage

Scholars have identified media representations of older adults as a source of deeply rooted negative societal beliefs about, and biased behavior towards, older workers (Abrams et al., 2015; Kotter-Grühn, 2014). Our study investigates the relationship between news coverage and age discrimination claims at the aggregate level. Information distributed via the news media has the potential to influence the experience of age discrimination notwithstanding real-world developments – such as unemployment and key events – as well as actual performance characteristics of older workers, as journalists’ version of reality may be distorted (Shoemaker and Reese, 1996). News coverage may affect societies at large, as information from news stories can be diffused via online and offline interpersonal communication, or picked up by other media (Boomgaarden and Vliegenthart, 2009; Bright, 2016), and reach individuals that were not initially exposed to the content. The current study considers the influence of both the visibility of older workers in the news, as well as media stereotypes about older workers. Media visibility refers to the prominence of older workers on the news agenda, while media stereotypes are defined as generalizing characterizations of older workers in media content in either positive or negative terms. Older workers are defined as those above 45 years of age, as from this age limit it becomes increasingly difficult for individuals to re-enter

the labor market after job loss in the Netherlands (Bierings and Loog, 2013).

The question is then how the visibility of older workers in the news media may affect discrimination outcomes. We expect a positive relationship between older workers' media visibility and age discrimination claims, for three reasons. First, it is assumed that news about older workers is generally negative in nature. News value theory predicts that journalists are prone to select news with negative characteristics (Harcup and O'Neill, 2001). The issue of older workers is connected to negative real-world developments, such as high long-term unemployment and the experience of age discrimination, which have attracted journalistic attention (see Chapter 2). In addition, and more generally, news about economic issues tends to be negative in tone (Soroka, 2006).

Second, we assume that news coverage about older workers creates opportunities for negative social comparison, as "news media can influence people's readiness to categorize others" (Boomgaarden and Vliegthart, 2009). The literature on age group categorization suggests that people use age group categories, such as "young workers", "middle-aged workers", and "older workers" to categorize themselves and others (Bytheway, 2005). Following Social Identity Theory, these categorization processes affect how we think about others and ourselves, between "us" and "them" (Tajfel and Turner, 1979). When older workers are salient in the media environment, this may remind people of their distinct identities and highlight perceived differences with older workers. Experimental research shows that when the age category "older worker" is made salient, people's beliefs about this group become activated and influence consequent decision-making. As beliefs about older workers are generally unfavorable, employment outcomes thereof are negative for older workers (Finkelstein et al., 1995).

Third, it is assumed that the effect of negative news coverage about older workers outweighs the effect of positive news coverage about older workers. We base this assumption on evidence for 'the negativity bias', which has demonstrated that, in the context of economic news, public responses to negative information are much greater compared to public responses to positive information (e.g., Soroka, 2006; Soroka and McAdams, 2015).

In sum, assuming that news about older workers is negative, offers

opportunities for social categorization and comparisons, and that negative effects likely outweigh positive effects, it is hypothesized that increased visibility of older workers in the news media will create the opportunity for age discrimination. We hypothesize:

- H1 The visibility of older workers in the news will positively affect the number of age discrimination claims filed by older workers.

In addition to the visibility of older workers in the news media, our study investigates the influence of media stereotypes on the filing of age discrimination claims. Ample evidence suggests that stereotypical inferences have a persuasive effect on employers' and employees' ability to make fair judgments regarding older workers (Krings et al., 2011). At the same time, age stereotypes offer justifications for biased behavior (Finkelstein et al., 2000). For example, stereotypes relating to older workers' problematic health status and high wages offer financial arguments that may rationalize the process of age discrimination.

Although the processing and consequences of stereotypes about older adults are often studied at the individual level, they have been shown to vary at the cultural/ national level (Bowen and Skirbekk, 2013; Löckenhoff et al., 2010). These so-called 'societal' level stereotypes are argued to be especially influential, as people tend to internalize dominant societal beliefs and reinforce processes of age discrimination in the labor market (Bowen and Skirbekk, 2013). The origins of these societal level stereotypes have been partly ascribed to media's representation of older workers, as individuals base their perceptions of others partly on information provided by the mainstream media (Schlueter and Davidov, 2013).

Both at the individual and the societal level stereotypes about older workers are mixed in terms of valence (Bal et al., 2011; Bowen and Skirbekk, 2013; Shiu et al., 2015). Positive dispositions relate to older workers' "soft" skills, in particular their assumed loyalty and reliability (Bal et al., 2011), while negative dispositions relate to "hard" skills, such as low physical capacity to deal with workload (i.e., problematic health status), competence and productivity (Bal et al., 2011; Posthuma and Champion, 2009; Van Dalen et al., 2010). Previous research indicates

that these positive and negative stereotypes are partly reproduced by the news media (Chapter 3). Relying on a content analysis of Dutch news coverage, the authors show that from a broad diversity of negative media stereotype categories, the representation of older workers in terms of problematic health status and low productivity are among the most prevalent. Regarding positive media stereotypes, relatively much attention is paid to the reliability and involvement of older workers, as well as their knowledge and experience (Chapter 3). As a result, in this study we focus on these specific media stereotype categories.

Media stereotypes might influence the filing of age discrimination claims. Media stereotypes have the power to shift beliefs in the direction of the portrayals and to generate stronger biased beliefs (e.g. Ramasubramanian, 2011). This, however, does not mean that positive media stereotypes are equally powerful as negative media stereotypes. The effects of negative stereotypes on individuals' perceptions of older workers are (much) stronger; when exposed to mixed-media stereotypes, the negative stereotype component outweighs the positive component, resulting in a negative net effect (Chapter 4; Krings et al., 2011). In fact, a meta-analysis of experimental research reveals that negative age priming effects elicit three times greater effect on behavior when compared to positive age priming effects (Meisner, 2012). Hence, although positive stereotypes might attenuate the relationship between negative media stereotypes and discrimination claims; it is unlikely that positive media stereotypes can offset the effects of negative stereotypes on the filing of discrimination claims.

As a result of the focus on the individual level, previous studies have failed to substantiate this relation on the aggregate level. Based on the available evidence, it is anticipated that negative media stereotypes about older workers will exert a stronger effect on perceptions about older workers than positive ones, which in turn affect decision-making processes in organizational contexts, such as regarding whom to hire, promote, demote, or fire. The perceived or actual inequality of such decisions will subsequently trigger the filing of age discrimination claims. In line with this assumption, previous research shows that negative stereotypical inferences underlie age discrimination (Krings et al., 2011). We hypothesize:



- H2 The positive influence of negative media stereotypes on the filing of age discrimination claims by older workers will be stronger than the negative influence of positive media stereotypes.

### 5.3 Data and Methods

The study relies on the period from the second quarter (q2) of 2004 till the second quarter (q2) of 2014, as for this time frame discrimination claims were available. The data was requested and provided by The Netherlands Institute for Human Rights (NIHR). When Dutch citizens experience discrimination, they can start a procedure by filing a discrimination claim to NIHR, after which an investigation and possible legal proceedings will be set in motion. In the research period, the NIHR dealt with 437 discrimination claims on the basis of age in the domain of employment made by people between 45 – 64 years of age, compared to 166 discrimination claims made by people younger than 45 years of age. Of 289 people, age was not registered.

The dependent variable ‘age discrimination claims’ was computed by taking the quarterly number of claims made by older workers (45 – 64 years of age). We rely on the moment that the claim is filed, as this is most closely related in time to the actual experience of age discrimination in the workplace, and therefore preferable to the date of the legal judgment (which causes a delay of up to six months). 33 claims were removed because the moment that the claim was filed was not available. The final number of discrimination claims is 404, with an average of 9.61 age discrimination claims per quarter ( $SD = .62$ ).

To explain variation in these discrimination figures, we make use of the following data types: exogenous events, public opinion data, and media content data. To start, two exogenous key events were identified that may affect variation in age discrimination claims: the financial crisis and the debate about the state pension age. First, the financial crisis marks a period in which workers of all ages may have felt more threatened in their job, with possible consequences for the likelihood that they feel and report being discriminated. A dummy variable was included capturing the time frame of the financial crisis (2008q1 –

2010q4). Second, the history of the debate leading towards the formal postponement of the retirement age can be characterized as being fairly turbulent. A dummy was added capturing the key events in the debate about the postponement of the retirement age. That is, the following time points were set to one: The period 2008q4 – 2009q4, capturing the initial phase of the debate about the postponement of the state pension age. In this period, two draft laws aimed at a more flexible and higher retirement age were proposed. Next, the period 2011q2 – 2011q3 was included. During this timeframe, the previously proposed law was withdrawn after being declared as controversial, and a new proposal was introduced. Finally, the period 2012q2 – 2012q3 was included, capturing the moment that the final law proposal was introduced and approved by the Dutch parliament.

Next, we move to our public opinion data. Expected unemployment was measured among Dutch citizens (both employed and unemployed) in the age category 45 – 65 with the following question: “*How do you think the unemployment in the Netherlands will develop in the next 12 months? Will it, according to you, go up, go down, or remain the same?*” (5 = *clearly rise*, 1 = *clearly fall*). The mean level of respondents’ answers was computed and varies on the quarterly level ( $M = 3.63$ ,  $SD = .10$ ). The data is obtained from *Statistics Netherlands*.

Last, we discuss our media variables. For the research period, all news articles referring to older workers published in the five largest Dutch national newspapers were retrieved: de Volkskrant, De Telegraaf, Trouw, Algemeen Dagblad, and NRC Handelsblad. The following search string was used: “older worker\* OR older employee\*”. This resulted in a final sample of 2123 news articles.

Second, a weighted score for older workers’ visibility was created: news articles that refer more frequently to older workers are assigned a higher score and news articles that mention older workers at the beginning of the news article weight more heavily than articles that refer to older workers at the end of the article. Specifically, the following equation is used to compute our measure of older workers’ visibility:

$$v(\text{visibility}) = \sum_{a \in \text{articles}} ((\ln(\text{referrals search terms})) * (\ln(\text{position first search term})) / n \text{ words}) * 100$$

Whereby  $v(\text{visibility})$  is the visibility of older workers in a news article. The score is dependent upon the number of referrals to the search terms (i.e., “older worker\*” OR “older employee\*”) in both the headline and the body of the text ( $\ln(\text{referrals search terms})$ ). The number of referrals to older workers adds sublinearly to their visibility within a specific news article; When the news article already contains a search term compared to when this is not the case, each additional search term contributes less to its overall visibility. Second, the score is made dependent upon the proportional position of the first referral ( $\ln(\text{position first keyword})$ ), so that the first word of the article is assigned a weight of ( $\ln(100)$ ), and the last word as ( $\ln(1)$ ). Consequently, if a search term appears in the headline or first paragraph, a higher weight is assigned compared to when the search term firstly appears at the end of the article (for a comparable approach: Boomgaarden and Vliegenthart, 2007; Boomgaarden et al., 2010)<sup>1</sup>. The relative scores were aggregated to the quarterly level ( $M = 72.22$ ,  $SD = 4.73$ ).

Next, we move to our media stereotype measures. The media stereotype variables were composed with the use of a computer-assisted content analysis (CACA). A top-down approach was employed (Boumans and Trilling, 2016) as we have a clear sense of relevant stereotype categories based on previous research (Chapter 3). A Python script was developed for the purpose of the study, using regular expressions to generate extensive search strings that automatically detected four distinct stereotypes in the news content. The author manually and rigorously verified the output of the CACA and modified the Python script in reiterative steps, until the script produced satisfactory results.

Two dominant negative stereotypes about older workers were measured: ‘problematic health status’ and ‘low productivity.’ The media stereotype ‘problematic health status’ was presented if the following keywords were mentioned in one sentence with referrals to older workers: unhealthy, physically weak, tiredness, lack of energy. The stereotype ‘unproductive’ was present when the following keywords appear in one sentence with referrals to older workers: unproductive, slow, sluggish, inattentive, apathetic, passive, depreciated, incapable, and unmotivated.

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<sup>1</sup>Bivariate correlation between the absolute and relative measure of visibility shows that the measures overlap ( $r = .94$ ,  $p < .001$ ).

The following positive stereotypes were measured: ‘reliable and involved’ and ‘experienced’. The stereotype ‘reliable and involved’ was present when older workers and the following keywords appear in one sentence: reliable, involved, honest, loyal, and collegial. The stereotype ‘experienced’ was present when older workers are referred to with the following terms: experience, knowledge, and wisdom. The choice of these stereotypes was based on previous research (Chapter 3; Bal et al., 2011).

In a final step, the score of negative and positive stereotypes is weighted upon their frequency and position within news articles. For each article, the number and position of referrals to the search terms was obtained to capture the visibility of stereotypes within articles. The same equation used to compute the visibility of older workers was used to calculate the visibility of the four stereotypes:

$$v(\textit{stereotype}) = \sum_{a \in \textit{articles}} ((\ln(n \textit{stereotype referrals})) * (\ln(\textit{position first keyword})) / n \textit{words}) * 100$$

Whereby  $v(\textit{stereotype})$  is the visibility of a specific stereotype within a certain text. The score is dependent upon the number of referrals in both the headline and the body of the text ( $\ln(\textit{stereotype elements})$ ) and the proportional position of the first stereotypical referral ( $\ln(\textit{position first keyword})$ ). When the news article already contains referrals compared to when this is not the case, each additional keyword denoting the stereotype contributes less to its overall visibility. Again, when keywords referring to media stereotypes are used more frequently, one additional single term adds less. The scores were aggregated to the quarterly level (see Table 5.1).

### 5.3.1 Analysis

For analysis, Autoregressive Distributed Lag (ADL) techniques were used to identify both effect sizes and delays of the temporal, public opinion and media variables on variation in discrimination claims over time. This model accounts for overtime variations by allowing the in-

clusion of lagged values of the dependent variable as well as current and lagged values of the explanatory variables. Several steps were taken to account for the specific time-series structure of the data. First, the series should be non-stationary; the mean should not be dependent on the time of observation. Augmented Dickey-Fuller test yields significant results for our dependent series, suggesting no unit-root and thus confirming stationary processes. As a consequence, the dependent series do not need to be differenced<sup>2</sup>. Second, an autoregressive term (AR(1) component) was added, representing the influence of the dependent series' past values on the current value (t-1). This means that we model the influence of discrimination claims of the previous quarter on the current values herewith accounting for the overtime dependency of the series.

After inclusion of the AR-term, we attain a model with residuals that are white noise. The Ljung-Box Q-test indicates that both residuals and squared residuals are non-significant for the specified models, indicating no autocorrelation in the residuals (see Table 5.2).

Several models were tested, adding the independent variables to the univariate ADL model step by step. This approach allows evaluating the effect of the explanatory variables, the goodness of model fit, and the explanatory power of the models. Model fit was inspected using the Akaike Information Criterion (AIC), which corrects for the inclusion of independent variables. Here, lower indices indicate better fit. The explanatory power of the models was assessed using  $R^2$ . As displayed in Table 5.1, the positive and negative media stereotype series are significantly correlated and therefore partly overlap. To avoid issues with collinearity, we include the series of the negative and positive stereotypes in separate models.

Before adding the independent variables to the model, the delay of the effects (lags) needs to be determined. We allowed a maximum lag time of three-quarters, as we assume that a timeframe of nine months should be sufficient for the predictor variables to exert their effect. Within

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<sup>2</sup>One of the independent variables, expected unemployment, is not stationary and should therefore be differenced. However, with differencing a lot of information get lost. Moreover, if one start working with a model with differenced independent variables, also the dependent variable must be differenced. As results do not differ substantially when differencing the series, the model with non-differenced series is presented.

this theoretically defined range, the appropriate lag lengths are established statistically and a priori based on an analysis of the cross-correlation functions (CCF) of the independent and dependent variable. This is a preferable method compared to fitting the data in several models and thereby capitalizing on chance (Boomgaarden and Vliegenthart, 2009). The analysis suggests an appropriate lag length of two-quarters for expected unemployment, older workers' visibility and stereotype visibility (see Table 5.2).

## 5.4 Results

Before discussing the ADL-models explaining age discrimination claims, the different time series are described. Figure 5.1 displays the visibility of older workers in the news media, the number of age discrimination claims and the mean expected unemployment. The trend of age discrimination claims follows an erratic pattern, with peaks at the end of 2004, mid -2008/ -2009, and again in 2011. Likewise, the trend of media salience of older workers follows a comparable erratic pattern. We see a peak at 2007, which likely marks the attention for changes in redundancy rights, a topic that received considerable political attention at the time. Next, attention peaks again around 2009, and again in 2012, when the postponement of the state pension age was a topic of debate. Finally, expected unemployment decreases until 2007q2, but increases sharply at the start of 2008 as a consequence of the financial crisis. After 2009, the depression goes somewhat down, to rise again after 2011, presenting the so-called 'double dip' of the Dutch financial crisis (De Graaf-Zijl et al., 2015).

Figure 5.2 shows the series of the negative and positive stereotypes. The visibility of both the negative stereotype 'unproductive' and the positive stereotype 'experience' peak around 2009, at a crucial moment of the debate about the postponement of the state pension age. The combined visibility of both negative stereotypes ( $M = 2.96$ ,  $SD = .38$ ) is comparable to the visibility of both positive stereotypes ( $M = 3.52$ ,  $SD = .52$ ) ( $t(41) = -1.23$ ,  $p = .225$ ). This suggests a balance between the here-studied negative and positive stereotypes about older workers in the news media. As displayed in Table 5.1, the negative and positive stereotypes are weak to moderately correlated over time.

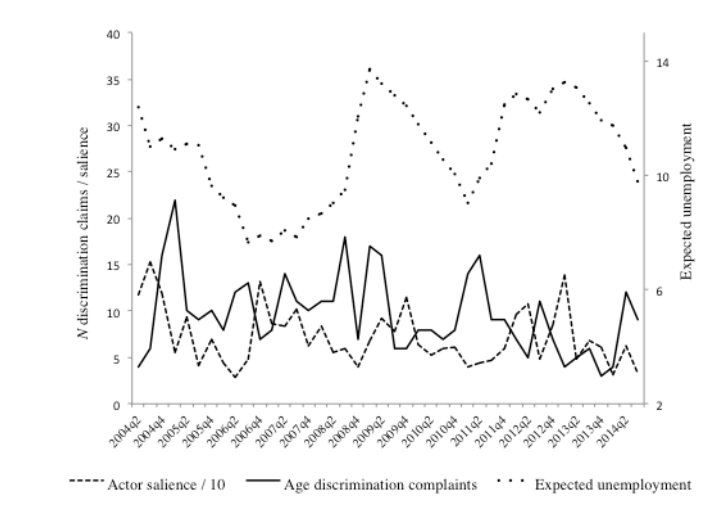


Figure 5.1: News media attention for older workers

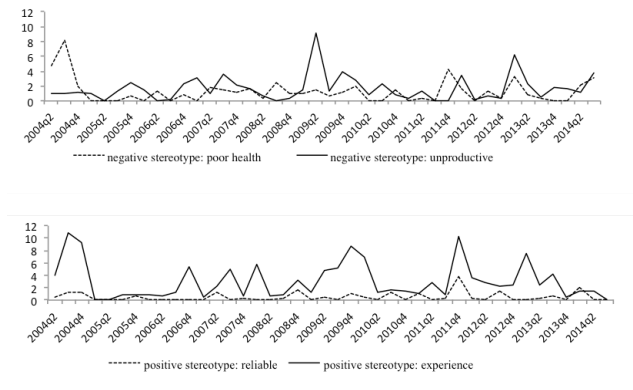


Figure 5.2: Negative (upper) and positive (lower) stereotypes about older workers

Table 5.1: Bivariate correlations

	1.	2.	3.	4.	5.	6.	7.	8.	M	SD
1. Age	1								9.619	0.661
discrimination claims	0.094	1							0.286	0.071
2. Crisis	0.088	0.312*	1						0.214	0.064
3. Postponement retirement age	-0.292†	0.163	0.408**	1					3.629	0.098
4. Expected unemployment	-0.224	-0.067	-0.022	0.153	1				72.221	4.731
5. Visibility older workers	-0.113	-0.066	-0.160	0.155	0.501**	1			1.266	0.246
6. Neg <sub>MS</sub> : Problematic health status	-0.065	0.153	0.110	0.190	0.338*	0.125	1		1.695	0.273
7. Neg <sub>MS</sub> : Unproductive	-0.087	-0.028	0.055	0.205	-0.035	0.327*	-0.137	1	0.481	0.118
8. Pos <sub>MS</sub> : Reliable	-0.199	0.094	0.087	0.316*	0.656***	0.636***	0.251	0.474	3.039	0.451
9. Pos <sub>MS</sub> : Experienced										

Note. Neg<sub>MS</sub> = Negative media stereotype, Pos<sub>MS</sub> = Positive media stereotype. †  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .



We now proceed to the statistical testing of the hypotheses. In the univariate model (Table 5.2, Model 1) only the AR(1) term was added. The amount of age discrimination claims significantly influence the number of age discrimination claims in the next period. The two exogenous events (financial crisis and postponement of the retirement age), as well as the expected unemployment, were added in the contextual model (Table 5.2, Model 2). The AIC decreases, indicating better model fit compared to the univariate model. The two exogenous events do not influence age discrimination claims, indicating that these events did not alter the likelihood that older workers file a discrimination claim. We do, however, find a significant relationship between the mean expected unemployment and the dependent variable's series. The results show that the lagged values ( $t-2$ ) of expected unemployment negatively influence discrimination claims ( $B = -2.32$ ,  $SE = 1.09$ ,  $p < .05$ ). This finding indicates that one unit increase in the mean expected unemployment leads to 2.32 less age discrimination claims six months later.

Next, we turn to the first media model (Table 5.2, Model 3a). Here, we added the variable older workers' visibility. AIC again decreases, while the proportion explained variance increases. The effect of expected unemployment remains negative and significant. We anticipated that increased visibility of older workers would increase the number of discrimination claims filed by older workers. The results offer support for this assumption: the lagged values ( $t-2$ ) of the series older workers' visibility increase the number of discrimination claims ( $B = .05$ ,  $SE = .02$ ,  $p < .05$ ). A one-unit increase in visibility leads to .05 more discrimination claims six months later, keeping other factors constant. Although the effect size is small, it can be considered substantial given the variability of the variable's series; peaks in visibility - as displayed in Figure 1; a one SD change in visibility results in a .25 change in age discrimination claims. We accept H1.

Next, the media stereotype variables were added to the model, to test the hypothesis that the positive influence of media stereotypes on the filing of age discrimination claims by older workers is stronger for negative (vs. positive) media stereotypes. First, the series of the two negative media stereotypes were added (Table 5.2, Model 3b). AIC suggests that this is the best model under investigation. The model explains 44 percent of the variance in age discrimination claims. The

results show that the effect of visibility becomes non-significant, while the negative effect of expected unemployment remains significant. The lagged values (t-2) of the series visibility of the negative stereotype that older workers' health is poor increases the number of discrimination claims ( $B = .96, SE = .45, p < .05$ ). A one-unit increase in the visibility of this stereotype leads to .96 more age discrimination claims six months later. Contrary to expectations, the series of the negative stereotype that older workers are unproductive did not exert an influence.

In Table 5.2, Model 3c, the negative media stereotypes were exchanged for positive media stereotypes. AIC value suggests that the model fit slightly decreases in comparison to the model with negative stereotypes. The series expected unemployment and visibility significantly influence the dependent variable. Both positive stereotypes do not exert an effect on the number of discrimination claims. The full model is displayed in Table 5.2, Model 3d and confirms that the positive effect of the negative media stereotype that older workers face health problems remains significant after controlling for the positive media stereotypes. These results offer partial support for H2.

Table 5.2: Explaining age discrimination claims with exogenous events, public opinion data and media variables.

	Lags	Model 1: Univariate model		Model 2: Contextual model		Model 3a: Media model		Model 3b: Media Model		Model 3c: Media Model		Model 3d: Full Model	
		B	(SE)	B	SE	B	SE	B	SE	B	SE	B	SE
AR	1	0.307	(0.149)*	0.153	(0.168)	0.119	(0.157)	0.055	(0.153)	0.109	(0.163)	0.086	(0.154)
Crisis	0			0.352	(1.467)	0.202	(1.350)	0.723	(1.323)	0.640	(1.517)	1.286	(1.415)
Postponement state pension age	0			0.643	(1.706)	1.589	(1.612)	1.029	(1.575)	1.292	(1.704)	0.439	(1.622)
Expected unem- ployment	2			-2.322	(1.096)*	-2.857	(1.032)**	-3.009	(0.978)**	-2.820	(1.112)*	-2.499	(1.017)*
Visibility of older workers	2					0.053	(0.020)*	0.032	(0.026)	0.068	(0.032)*	0.051	(0.031)
NegMS: Problematic health status	2							0.960	(0.453)*			1.431	(0.539)*
NegMS: Unproductive	2							-0.345	(0.383)			-0.260	(0.382)
PosMS: Reliable	2									0.790	(1.168)	-0.260	(0.382)
PosMS: Experienced	2									-0.234	(0.395)	-0.595	(0.390)
Constant		6.803	(1.569)***	16.531	(4.816)**	14.717	(4.498)**	16.880	(4.348)***	13.863	(5.024)*	14.312	(4.574)**
N		41		40		40		40		40		40	
R <sup>2</sup>		0.098		0.1912		0.330		0.440		0.340		0.488	
AIC		233.587		229.805		224.260		221.121		227.651		221.486	
LBQ (R)		15.875		11.782		14.109		22.656		13.297		17.599	
LBQ (R <sup>2</sup> )		25.473		19.074		30.568		12.789		23.670		16.631	

Note. NegMS = Negative media stereotype, PosMS = Positive media stereotype. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

## 5.5 Discussion

As workforces are aging rapidly, it has become increasingly important to understand the factors that drive unequal treatment of older workers at the workplace. Previous research offers cross-sectional and individual-level explanations for the experience of age discrimination but has neglected the influence of contextual variables on its emergence. The current study adopted a novel approach by investigating the dynamic relation between news coverage about older workers and the filing of age discrimination claims by this group while controlling for key events and older workers' expectations of unemployment rates. The findings, which are discussed below, provide new insights regarding the sources of variation in age discrimination claims over time.

Based on the notion of asymmetrical influences of negative news, i.e., Soroka (2006) negativity bias, and the premises of Social Identity Theory (Tajfel and Turner, 1979), it was anticipated that increased visibility of older workers in the news would increase the number of age discrimination claims. We find support for this assumption: The visibility of older workers in the news media was associated with higher levels of age discrimination claims. This effect occurred with a lag of two quarters, indicating that it takes some time before discriminatory processes emergence as a result of changes in media attention for older workers.

In addition, it was anticipated that increased attention for negative stereotypes in the news media would increase the number of age discrimination claims. The findings offer only support for the influence of a single negative media stereotype: News media's attention for older workers' problematic health status was associated with higher levels of age discrimination claims. This stereotype does not correspond to reality; meta-analyses suggest that the relationship between workers' age and physical and particularly mental health problems is generally weak (Ng and Feldman, 2012,1). Moreover, the variability of older workers' health is large. In other words, a large group remains healthy and employable at high age (Nauta et al., 2004). Yet, concerns about older workers' health status and associated health insurance premiums hamper managers' willingness to hire older workers, as they fear an increasing gap between labor costs and productivity (Conen et al.,

2011). When these generalized beliefs about older workers' health inform organizational decision-making processes regarding individual older workers, age discrimination is the likely outcome (Ng and Feldman, 2013). The here-presented findings suggest that information distributed via the news media may have reinforced negative beliefs about older workers' health status, with consequences for the extent to which older workers' report being discriminated.

Surprisingly, we did not find a significant effect of the stereotype that older workers are unproductive. Previous research has shown that negative beliefs about older workers' competencies are triggered by stereotypical portrayals in the news media (Chapter 4) and that such beliefs underlie age discrimination (Krings et al., 2011). A potential explanation for this null result is that individuals' personal experiences with older workers' productivity interacted with the influence of the media stereotype. Such individual differences may have canceled out its effect on the aggregate level.

Last, and contrary to expectations, the visibility of the positive media stereotypes that older workers are reliable, highly involved and experienced did not exert an influence on the number of age discrimination claims. Moreover, the influence of the negative media stereotype that older workers' health status is problematic remained significant when controlling for positive media stereotypes. This is congruent with previous experimental research, which shows that positive stereotypes about older workers do not offset the effect of negative stereotypes on processes of age discrimination (Chapter 4; Krings et al., 2011; Meisner, 2012).

Last, and not anticipated, the study shows that older workers' unemployment expectations negatively influenced the number of age discrimination claims. How can we explain this finding? The experience of discrimination has been shown to elicit fear of being inadequately valued or rejected in the future (Maner et al., 2007; Richman and Leary, 2009). One's fear to encounter future rejections may be heightened when unemployment figures are on the rise – as employment elsewhere is less certain. In times of high-perceived unemployment, older workers may therefore be more inclined to sidestep confrontations with employers – that could potentially lead to unemployment – and therefore not report discrimination incidents. Future research should further in-

investigate this relationship.

The presented findings have important implications for our understanding of the sources of variation in the experience of age discrimination at work. Mass media's capacity to influence biased attitudes and behaviors regarding minority groups has been demonstrated on the individual- and macro-level outside the context of the workplace (Arendt, 2013; Boomgaarden and Vliegenthart, 2009; Ramasubramanian and Oliver, 2007; Van Klingeren et al., 2014); yet – to the best of our knowledge – this study is first to demonstrate the link between news media coverage and the experience of age discrimination in a real-world setting. Herewith the study illustrates the extent to which individual-level mechanisms – as demonstrated in the laboratory (e.g., Krings et al., 2011) – are influential and measurable on the aggregate level. In sum, the findings highlight the important role of media in shaping discriminatory outcomes in the workplace.

The study's limitations are discussed. First, as the study relies on quarterly data, relatively long time periods are situated between the measurement points. We explicitly aimed to explain macro-level dynamics in age discrimination claims; yet, the relatively high aggregation level comes at the expense of variations at a lower aggregation level. Second, the study focused on a restricted number of dominant negative and positive stereotypes about older workers. It should be acknowledged, however, that more stereotypes about older workers exist (Bal et al., 2011; Posthuma and Campion, 2009). Last, the study assumed a unidirectional influence of news content on the experience of age discrimination. We encourage future research to further unravel the underlying dynamics of this relationship. Previous research has suggested that media selection and biased attitudes reinforce each other (Schemer, 2012), with media acting as a mediator in the process of reinforcing spirals. Unraveling this process in more detail may provide additional explanations for the emergence of discrimination experiences as a result of media coverage (see also Valkenburg and Peter, 2013).

The here presented findings offer tentative support for the hypothesis that the news environment is a source of variation in employment-related age discrimination claims. The findings should be regarded as a basis for future research. Nonetheless, the study demonstrates that the influence of information distributed via the news media reaches further

than attitudes, by actually affecting the experience of unfair treatment by older workers. The consequences hereof for individual careers, organizations, and societies at large can be far-reaching given the physical, mental, and financial costs associated with discrimination. The findings indicate that a macro-level perspective on the issue can – in combination with studies focusing on individual-level processing of ageist beliefs – help our understanding of age discrimination dynamics move forward.

## 5.6 References

- Abrams, D., Russell, P. S., Vauclair, C. M., and Swift, H. (2011). *Ageism in Europe*. Age UK, London.
- Abrams, D. and Swift, H. J. (2007). Experiences and expressions of ageism: Topline results (UK) from round 4 of the European Social Survey. Technical Report November, Centre for Comparative Social Surveys, London.
- Abrams, D., Swift, H. J., Lamont, R. A., and Drury, L. (2015). The barriers to and enablers of positive attitudes to ageing and older people, at the societal and individual level Future of an ageing population: Evidence review. Technical report, Foresight, Government Office for Science, London.
- Andriessen, I., Fernee, H., and Wittebrood, K. (2014). Perceived discrimination in the Netherlands. Technical report, The Netherlands Institute for Social Research, The Hague.
- Arendt, F. (2013). News stereotypes, time, and fading priming effects. *Journalism & Mass Communication Quarterly*, 90(2):347–362.
- Bal, A. C., Reiss, A. E. B., Rudolph, C. W., and Baltes, B. B. (2011). Examining positive and negative perceptions of older workers: A meta-analysis. *The journals of gerontology. Series B, Psychological sciences and social sciences*, 66(6):687–698.
- Bierings, H. and Loog, B. (2013). Verwachte baanvindduren werkloze 45-plussers [expected job-finding duration among workers above 45 years of age]. Technical report, Statistics Netherlands, Den Haag/Heerlen.
- Boomgaarden, H. G. and Vliegenthart, R. (2007). Explaining the rise of anti-immigrant parties: The role of news media content. *Electoral Studies*, 26(2):404–417.
- Boomgaarden, H. G. and Vliegenthart, R. (2009). How news content influences anti-immigration attitudes: Germany, 1993-2005. *European Journal of Political Research*, 48(4):516–542.
- Boomgaarden, H. G., Vliegenthart, R., de Vreese, C. H., and Schuck, A. R. (2010). News on the move: exogenous events and news coverage of the European Union. *Journal of European Public Policy*, 17(4):506–526.
- Boumans, J. W. and Trilling, D. (2016). Taking stock of the toolkit: An overview of relevant automated content analysis approaches and



- techniques for digital journalism scholars. *Digital Journalism*, 4(1):8–23.
- Bowen, C. E. and Skirbekk, V. (2013). National stereotypes of older people's competence are related to older adults' participation in paid and volunteer work. *The journals of gerontology. Series B, Psychological sciences and social sciences*, 68(6):974–83.
- Bright, J. (2016). The social news gap: How news reading and news sharing diverge. *Journal of Communication*, 66(3):343–365.
- Bytheway, B. (2005). Ageism and age categorization. *Journal of Social Issues*, 61(2):361–374.
- Coenders, M. and Scheepers, P. (1998). Support for ethnic discrimination in the Netherlands 1979-1993 : Effects of period, cohort, and individual characteristics. *European Sociological Review*, 14(4):405–422.
- Conen, W. S., Henkens, K., and Schippers, J. J. (2011). Are employers changing their behavior toward older workers? An analysis of employers' surveys 2000-2009. *Journal of aging & social policy*, 23(2):141–58.
- De Graaf-Zijl, M., van der Horst, A., van Vuuren, D., Erken, H., and Luginbuhl, R. (2015). Long-term unemployment and the great recession in the Netherlands: Economic mechanisms and policy implications. *Economist (Netherlands)*, 163(4):415–434.
- Finkelstein, L. M., Burke, M. J., and Raju, M. S. (1995). Age discrimination in simulated employment contexts: An integrative analysis. *Journal of Applied Psychology*, 80(6):652–663.
- Finkelstein, L. M., Higgins, K. D., and Clancy, M. (2000). Justifications for ratings of old and young job applicants: An exploratory content analysis. *Experimental Aging Research*, 26(3):263–283.
- Finkelstein, L. M., Ryan, K. M., and King, E. B. (2013). What do the young (old) people think of me? Content and accuracy of age-based metastereotypes. *European Journal of Work and Organizational Psychology*, 22(November):633–657.
- Harcup, T. and O'Neill, D. (2001). What is news? Galtung and Ruge revisited. *Journalism Studies*, 2(2):261–280.
- Kotter-Grühn, D. (2014). Changing negative views of aging. Implications for intervention and translational research. *Annual Review of Gerontology and Geriatrics*, 35(1):167.
- Krings, F., Sczesny, S., and Kluge, A. (2011). Stereotypical inferences

- as mediators of age discrimination: The role of competence and warmth. *British Journal of Management*, 22(2):187–201.
- Löckenhoff, C. E., Terracciano, A., McCrae, R. R., and Alcalay, L. (2010). Perceptions of aging across 26 cultures and their culture-level associates. *Psychology and Aging*, 24(4):941–954.
- Maner, J. K., DeWall, C. N., Baumeister, R. F., and Schaller, M. (2007). Does social exclusion motivate interpersonal reconnection? Resolving the "porcupine problem". *Journal of personality and social psychology*, 92(1):42–55.
- McCann, R. M. and Giles, H. (2006). Communication with people of different ages in the workplace: Thai and American data. *Human Communication Research*, 32:74–108.
- Meisner, B. A. (2012). A meta-analysis of positive and negative age stereotype priming effects on behavior among older adults. *The Journals of Gerontology: Series B*, 67(1):13–17.
- Nauta, A., Bruin, M. D., and Cremer, R. (2004). *De mythe doorbroken: Gezondheid en inzetbaarheid oudere werknemers [Beyond the myth. Health and employability of older employees]*. TNO Arbeid, Hoofddorp.
- Ng, T. W. H. and Feldman, D. C. (2012). Evaluating six common stereotypes about older workers with meta-analytical data. *Personnel Psychology*, 65(4):821–858.
- Ng, T. W. H. and Feldman, D. C. (2013). Employee age and health. *Journal of Vocational Behavior*, 83(3):336–345.
- Paluck, E. L. and Green, D. P. (2009). Prejudice reduction: what works? A review and assessment of research and practice. *Annual review of psychology*, 60:339–367.
- Posthuma, R. A. and Campion, M. A. (2009). Age stereotypes in the workplace: Common stereotypes, moderators, and future research directions. *Journal of Management*, 35(1):158–188.
- Ramasubramanian, S. (2011). The impact of stereotypical versus counterstereotypical media exemplars on racial attitudes, causal attributions, and support for affirmative action. *Communication Research*, 38(4):497–516.
- Ramasubramanian, S. and Oliver, M. B. (2007). Activating and suppressing hostile and benevolent racism: Evidence for comparative media stereotyping. *Media Psychology*, 9(3):623–646.
- Richman, L. S. and Leary, M. R. (2009). Reactions to discrimination,

- stigmatization, ostracism, and other forms of interpersonal rejection: Forms of interpersonal rejection. *Psychological review*, 116(2):365–383.
- Rippon, I., Zaninotto, P., and Steptoe, A. (2015). Greater perceived age discrimination in England than the United States: Results from HRS and ELSA. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, 70(6):925–933.
- Schemer, C. (2012). The influence of news media on stereotypic attitudes toward immigrants in a political campaign. *Journal of Communication*, 62(5):739–757.
- Schlueter, E. and Davidov, E. (2013). Contextual sources of perceived group threat: Negative immigration-related news reports, immigrant group size and their interaction, Spain 1996–2007. *European Sociological Review*, 29(2):179–191.
- Shiu, E., Hassan, L. M., and Parry, S. (2015). The moderating effects of national age stereotyping on the relationships between job satisfaction and its determinants: A study of older workers across 26 countries. *British Journal of Management*, 26(2):255–272.
- Shoemaker, P. J. and Reese, S. D. (1996). *Mediating the message. Theories of influences on mass media content*. Longman Trade/Caroline Hous, New York.
- Soroka, S. N. (2006). Good News and Bad News: Responses Asymmetric Information to Economic Information. *The Journal of Politics*, 68(2):372–385.
- Soroka, S. N. and McAdams, S. (2015). News, politics, and negativity. *Political Communication*, 32(1):1–22.
- Taijfel, H. and Turner, J. (1979). An integrative theory of intergroup conflict. In Austin, W. and Worchel, S., editors, *The Social Psychology of Intergroup Relations*, pages 33–47. Brooks-Cole, Monterey, CA.
- Valkenburg, P. M. and Peter, J. (2013). The differential susceptibility to media effects model. *Journal of Communication*, 63(2):221–243.
- Van Dalen, H. P., Henkens, K., and Schippers, J. (2010). How do employers cope with an ageing workforce? *Demographic Research*, 22:1015–1036.
- Van Klingeren, M., Boomgaarden, H. G., Vliegenthart, R., and De Vreese, C. H. (2014). Real World is Not Enough: The Media as an Additional Source of Negative Attitudes Toward Immigration,

Comparing Denmark and the Netherlands. *European Sociological Review*, pages 1–16.