Running Head: TESTING THE SPIRAL OF SILENCE

Speaking up or Silencing out in the Face of Rising Right-Wing Populism: A Dynamic Test of the Spiral of Silence across 15 European Countries

Frédéric Olivier Thurre, Jessica Gale & Christian Staerklé

University of Lausanne

Reference:

Thurre, F., Gale, J., & Staerklé, C. (2019). Speaking up or silencing out in the face of rising right-wing populism: A dynamic test of the spiral of silence across 15 European countries. *International Journal of Public Opinion Research*. https://doi.org/10.1093/ijpor/edz034

Frédéric Olivier Thurre, Rue du Collège 3, CH-1920 Martigny, fthurre@me.com

Jessica Gale, University of Lausanne - SSP, Institute of Psychology, Quartier Mouline - Geopolis Building 5128, CH-1015 Lausanne, Jessica.Gale@unil.ch

Christian Staerklé, University of Lausanne - SSP, Institute of Psychology, Quartier Mouline - Geopolis Building 5141, CH-1015 Lausanne, Christian.Staerkle@unil.ch

Abstract

The spiral of silence theory (Noelle-Neumann, 1993) posits that when a given political position comes to be seen as the majority opinion, perceivers holding alternative views will feel pressured to become silent, thereby contributing to the growing public decline of the minority camp. Testing the theory across 15 countries (N = 195,194) with data taken from the European Social Survey (2002–2016), we examined whether recently rising right-wing populist positions silenced supranational opinions or whether, on the contrary, they were silenced by established norms of democratic governance and social inclusiveness. The proposed modeling overcomes two limitations of prior research by using a macroscopic and dynamic approach that allows the detection of the 'spiraling' normative conformity process in nationally representative samples.

Keywords: spiral of silence, opinion climate, conformity, right-wing populism, normative conflict

Speaking up or Silencing out in the Face of Rising Right-Wing Populism: A Dynamic Test of the Spiral of Silence across 15 European Countries

People express more readily their opinion when they perceive their own opinion to be in line with the majority view in a given social context. Known as the spiral of silence (Noelle-Neumann, 1974, 1993), this phenomenon occurs when people who perceive growing support for their viewpoint become more prone to speak up, while people who perceive their opinion to be facing a hostile opinion climate become increasingly reluctant to voice their view (Glynn, Hayes, & Shanahan, 1997; Matthes, 2015). In this study, we propose a macroscopic and a dynamic test of Noelle-Neumann's theory across 15 European countries[1] in a competitive normative context that pits the nationalist positions of rising right-wing populist movements on one side against their supranational counter-movements fueled with liberal Western values of tolerance and inclusiveness on the other. Over the past two decades, highly publicized right-wing populist parties have positioned immigration threat and (relative) independence from the European Union (EU) as core political themes in the respective national political agendas (Judis, 2016). Applying Noelle-Neumann's theory of public opinion, we examine whether the increased visibility of right-wing populist opinions in the public sphere has been concomitantly accompanied by a decreased expression of opinions favorable to immigrants and supranational integration, or whether on the contrary normatively discredited right-wing populist positions are silenced out (as right-wing populists claim themselves) against the backdrop of supranational norms calling for international integration and social inclusiveness.

In order to test spiral of silence effects in a competitive normative context across European countries, we implement a dynamic macro approach that implies (1) that we do not rely on *perceived* opinion climate, but rather use *actual* opinion climate to gauge whether opinion expression depends on opinion climate; and (2) that we do not predict in which direction the silencing effect will go. Indeed, depending on the political power structure and

media coverage of national contexts, it is equally plausible that the rise and visibility of right-wing populist opinions over the last two decades has created an impression of majority opinion climate for many, or, alternatively, that pre-existing norms of Western liberalism and tolerance of otherness prevail or are reaffirmed, leading on the contrary to the silencing of exclusionary opinions. In the following, we describe the central features of a dynamic macro approach of the spiral of silence theory and show how our modelling provides the opportunity to test Noelle-Neumann's core assumptions with widely available international survey datasets, supporting her claim that the spiral of silence provides a general theory of public opinion that is internationally applicable (Noelle-Neumann, 1993).

Spiral of Silence Research

Prior research on the spiral of silence can be organized along two dimensions: (a) the static vs. dynamic nature of the silencing process, and (b) the microscopic vs. macroscopic level of analysis. In this section, we discuss each of these characteristics of spiral of silence research as well as the connections between them.

Conformity versus change hypothesis. The link between opinion climate and public outspokenness can be seen from either a static or from a dynamic perspective. In a static perspective, a spiral of silence is diagnosed by testing the main effect of opinion climate on public outspokenness and observing that individuals who believe they hold a minority opinion will feel pressured to conform to the majority opinion or will stay silent in fear of social isolation (Glynn & Park, 1997). This assumption is called the *social conformity* (Matthes, 2015) or the *silence* (Bodor, 2012a) hypothesis. This conceptualization attempts to catch a spiral of silence effect at a given point in time, focusing on the "product" or the "end result" of the process (Glynn, Ostman, & McDonald, 1995).

From a dynamic perspective, the individual conformity process extends into a spiraling macro process towards silence that can eventually establish the opposing opinion as the new majority (Glynn et al., 1997; Noelle-Neumann, 1974; Noelle-Neumann & Petersen, 2004). A

potential *spiral* of silence pattern is unraveled by testing the aforementioned conformity hypothesis over time, yielding the *change hypothesis* (Matthes, 2015). This approach tests the presence of a silencing process as an explanation for public opinion change, a process evidenced through the interaction between time and opinion climate on opinion expression.

The two perspectives can be articulated by considering the different time frames examined by each approach. Inherent to the static approach, the focus on a single time point makes the choice of an adequate time frame for the empirical test crucial. For example, the test may not detect a spiral of silence process that actually occurs if it intervenes too soon. Reviewing 15 static studies in addition to the 17 studies meta-analyzed by Glynn et al. (1997) on the issue of timing, Bodor (2012a) concluded that 28 out of the 32 studies did not pay attention to the time at which the test was carried out, or even misplaced it. However, even with a carefully timed test of the theory, the static approach still faces another temporal risk, as we will illustrate in our study. In situations where the opinion actually expressed by the majority loses ground, the conformity hypothesis might easily miss the ongoing spiral of silence. Unless the test replaces the perception of the *current* opinion climate with that of its *future trend* as the independent variable (Gearhart & Zhang, 2015), as recommended by Noelle-Neumann (1974), the static approach may lack sensitivity to public opinion trends or shifts. In contrast, the dynamic approach incorporates time frames that include multiple time points, thereby capturing potential long-term trends in public outspokenness.

Micro- versus macroscopic level of analysis. Prior research also differs with respect to the level of analysis assigned to the spiral of silence theory. The microscopic approach aims to ascertain the individual-level link between *perception* and compliance, in relation to the majority opinion of one's country (perception of "macro-climates", Noelle-Neumann, 1974) or of one's reference group (perception of "micro-climates" among family members, friends or neighbors, Oshagan, 1996). Therefore, opinion climate is conceived either as one's perception of the distribution of opinions on a given issue, or as the perceived congruity

between one's own and the perceived public (reference group) opinion. By testing the theory through its "core hypothesis" (Noelle-Neuman & Petersen, 2004), this microscopic operationalization of opinion climate attempts to catch a spiral of silence effect on two groups of individuals: those who feel congruent vs. those who feel incongruent with the perceived opinion climate.

The macroscopic approach, in turn, aims to ascertain the link between actual public opinion and individual-level compliance. Focusing on the *actual opinion camps* in a national controversy, this approach positions individuals on one or the other side of the debate (i.e., the pros and the antis) as a function of their own opinions. To gauge the national distribution of opinions–by assessing which opinion will meet with social approval and which may lead to public sanctions–people are equipped with a *quasi-statistical sense* (Noelle-Neumann, 1977), a *social skin* (Noelle-Neumann, 1993): Out of fear of isolation, they are motivated to stay constantly informed of the direction in which the wind blows.

Micro and macro approaches form two complementary analyzes of Noelle-Neumann's hypotheses, each following its own strategy (Donsbach, 1987; see also Roessing, 2009). Following a *psychological* strategy, the micro approach tests the individual conditions of the spiral of silence framework, investigating the willingness to speak out one's opinion as a function of perceived support for that opinion. Following a *sociological* strategy, the macro approach tests whether the above micro conformity dynamics that animate the two core groups can explain public opinion formation at the national level. Here, the macroscopic division between the two competing camps replaces the microscopic partition into two virtual camps (i.e., accurate vs. inaccurate perceivers), each containing opinions of both sides. Under study is "the dynamic center" of the spiral of silence theory (Moscovici, 1991), where the increasing flow of those who take the voice (because they feel less and less isolated) is accompanied by the reflux of those with an opposing opinion who, fearing ostracism, withdraw into silence.

Combining these two criteria differentiating prior research, the spiral of silence has been tested either as a static or as a dynamic theory in connection with either a microscopic or a macroscopic view. Most studies have adopted a static micro approach, testing primarily the conformity hypothesis (e.g., Dalisay, Hmielowski, Kushin, & Yamamoto, 2012; Hayes et al., 2011; Matthes, Morrison, & Schemer, 2010; Yun, Park, & Lee, 2016), in particular with respect to reference groups (Moy, Domke, & Stamm, 2001; Oshagan, 1996). Two meta-analyses (Glynn et al., 1997; Shanahan, Glynn, & Hayes, 2007) have demonstrated small, but significant effects of perceived congruency with opinion climate on willingness to speak out. A third meta-analysis (Matthes, Knoll, & Sikorski, 2018) has revealed a stronger and more robust positive relationship (r = .10) between opinion climate perception and opinion expression, regardless of whether the climate refers to the national population or to one's reference group. All meta-analyzed studies were based on the micro view, although some combined it with a dynamic perspective. Criticizing this "renunciation" to test the societal scope of the theory, some studies have followed Noelle-Neumann's own recommendation for a macro approach (Fox & Warber, 2015; Huge & Glynn, 2012; Scheufele & Eveland, 2001).

In contrast, "hardly any studies have actually tried to observe the dynamic aspects of the theory" (Matthes, 2015, p. 155). While Matthes (2015) offered a statistical modeling of the link between opinion climate change and opinion expression change, the dynamics were tested embracing the microscopic view. Thus, apart from election outcome studies that are by definition located on the macro-level (Baldassare & Katz, 1996; Bodor, 2012b; McDonald, Glynn, Kim, & Ostman, 2001), only a few have analysed the dynamic and macro spiralling process (e.g., Clemente & Roulet, 2015; Shamir, 1997; Wells et al., 2017).

Modeling the Spiral of Silence

Although the spiral of silence proposes an "integrated model of opinion formation and change" (Glynn & Park, 1997), it has been predominantly tested on the micro-level. In contrast, we model the reciprocal link between aggregate-level formation of the majority

opinion (a growing opinion camp gaining influence over another) and individual-level behaviors (individuals holding majority views increasingly speaking up, while individuals endorsing opposite views silencing out). Individual-level measurements of the two competing opinions and overt political behaviors allow for sound comparisons between countries (Scheufele & Moy, 2000) while avoiding the threat of ecological fallacy within countries (Matthes, 2015). The proposed modeling addresses the three major criticisms of the operationalization of the theory discussed below.

Opinion climate as the actual two parties in a public controversy. Bodor (2012a) has questioned the "traditional" operationalization of *opinion climate*—the central independent variable—as *opinion congruity* with the perceived opinion climate. Measures combining one's own opinion with one's perception of the opinion climate are tied to the individual level of analysis and thereby thwart the crucial distinction between the actual two camps in a given controversy. Indeed, a macroscopic spiral of silence process only occurs "*if* and *when*" a normative conflict (such as the one raised by right-wing populist movements) arises between members of a society (Bodor, 2012a). Furthermore, perception of the opinion climate occurs through an unconscious process, as emphasized by Noelle-Neumann herself (2001). Therefore, asking people whether they believe that they think like the majority or asking them to evaluate the proportion of people who share the same opinion are inadequate operationalizations. We therefore use the actual aggregated opinions of nationally representative samples over time as the indicator of opinion climate.

Incorporating opinion change over time. A second criticism concerns the omission of *time* as a factor affecting public outspokenness, an omission that prevents "observing the 'spiral' in the spiral of silence" (Matthes, 2015). The change hypothesis asserts that time will *interact* with opinion climate in order to determine public outspokenness. Indeed, there cannot be any spiral of silence during a public controversy *before* a clear shift in the opinion climate that begins to exert pressure on one of the two sides (Bodor, 2012a). We therefore

analyze the spiral of silence over a time span of 14 years (2002-2016) and examine outspokenness as a function of the actual positions (the opinion "locus") during this period.

Actual public outspokenness rather than willingness to speak out. Inadequate operationalization of *public outspokenness*—the central dependent variable—has been suspected to underlie small effect sizes in earlier studies (Bodor, 2012a, 2012b; Scheufele, Shanahan, & Lee, 2001). Indeed, many studies have measured hypothetical *willingness to speak out* instead of actual *public outspokenness* (Noelle-Neumann, 1993; Scheufele & Moy, 2000). Yet, people notice changes of public opinion through perceptible behaviors rather than private dispositions (Petrič & Pinter, 2002). Heeding calls for more realistic measures driven by an authentic fear of social isolation (Glynn et al., 1997; Noelle-Neumann & Petersen, 2004), we therefore use actual outspokenness as the dependent variable, assessed via survey questions asking for the frequency of entering the public debate by signing petitions, publicly exposing one's stances, and participating in demonstrations (self-censorship of "publicly observable political activity", Hayes, Scheufele & Huge, 2006).

At first glance, our operationalization is akin to traditional political participation measurements. Yet, it is rooted in Noelle-Neumann's (1993) conceptualization of silence in response to issues with a clear moral dimension: "Wearing a campaign button, putting a bumper sticker on the car–these are ways of talking; not doing these things, even if one has firm convictions, is a way of keeping quiet" (p. 22). In her view, people are looking for the "good" thing to do in order to avoid being socially rejected (Lasorsa, 1992). This perspective, however, implies a consensual conception of morality in which it is commonly agreed what a "good" opinion or behavior is, or what the "consensus" is. In our view of a normative conflict, in contrast, this moral dimension of participation needs to be understood in intergroup terms: What is good and moral for one group is bad and immoral for the other, and vice versa (Mason, 2018). People from one side of the debate may indeed convince themselves that they speak out because they are on the right side, but so can people from the

opposing side, referring to their own moral standards. In other words, because morality is in the eye of the beholder (Graham, Haidt & Nosek, 2009), and because there is a struggle over the predominance of two moralities (in our study a nationalist morality rooted in right-wing populist movements and a supranational morality anchored in Western values of international integration), the spiral of silence can plausibly occur for either side.

Taken together, these three critiques suggest that the weak empirical support for the spiral of silence theory may be due to two types of reductionism of the original theory: an exclusive focus on the micro-level of analysis and a static conceptualization of a fundamentally dynamic process. These criticisms also plead for keeping any test of the theory close to the specific context of a national controversy, in relation to the particular forms of public outspokenness citizens express in reaction to the evolution of the opinion climate.

The political context in Europe

Over roughly the past two decades, several countries in Europe have experienced the emergence of right-wing populist parties promoting exclusionary policies based on two core themes: limitation of immigration and national sovereignty over the European Union (EU) (Staerklé & Green, 2018; Müller, 2016). In some countries, the electoral share of right-wing populist parties has increased substantially (Judis, 2016): Finland (from 1% in 2001 to 9.4% in 2018), France (from 3.6% in 1995 to 21.3% in 2017), Germany (from 0.1% in 2001 to 12.6% in 2017), Sweden (from 0.3% in 2001 to 17.6% in 2018), Switzerland (from 14.9% in 1995 to 29.4% in 2015), or the UK (from 1.7% in 2001 to 12.7% in 2015). Right-wing governments have been in place since 2010 in Hungary and since 2006 in Poland. The repeated debate around the positions they defend has given the exclusionary opinions greater publicity and legitimacy (Portelinha & Elcheroth, 2016), even though they still remain minority positions in the larger society. In this context of increasing visibility, growing media coverage and deepening political polarization, it is plausible to assume–wearing Noelle-Neumann's lenses–that anti-immigrant and anti-EU positions have gradually become

considered as majority opinions by a substantial part of the electorate. From such a perspective, a spiral of silence would occur for those holding pro-immigration and pro-EU positions, pressured to silence out in the context of these newly revived nationalist norms, whereas anti-immigration and anti-EU positions would be expressed more frequently.

On the other hand, it also plausible to assume that longstanding Western ideals of tolerance and inclusiveness—independently of their actual implementation—are not easily dislodged by right-wing populist movements. As illustrated by numerous public demonstrations in favor of inclusive policies and supranational integration (e.g., against Brexit in the U.K.), many people speak out against nationalist norms and advocate supranational norms instead, driven by a need to express their deeply cherished values when faced with a hostile climate (Shamir, 1997). This public resistance and defense of liberal democratic values may come from individuals who, not feeling isolated, express their support of widely shared supranational norms (Chan, 2018).

In such a complex and contested normative context, it is not possible to put forward a general prediction of a hypothetical "majority" opinion on the sole basis of survey data. With the prevalence of one normative position over the other depending on the political power structures in national contexts at a given time, as well as the portrayal of the opinion climate by the mass media ("dual climate of opinion", see Noelle-Neumann, 1993), it is an empirical question whether people feel that one or the other side represents the "majority" (or the "consensus" and "society"; Noelle-Neumann, 1993). In particular, identifying the normative opinion conveyed by the mass media would require a content analysis of their coverage (e.g., Eveland, McLeod & Signorielli, 1995) which is beyond the scope of the present research.

Testing the Spiral of Silence

The spiral of silence theory can be tested both as a static and as a dynamic theory. Using a static approach, the *social conformity (silence) hypothesis* predicts that opinion climate directly influences opinion expression at a specific time point. In order to reach the

macroscopic scope of the theory and avoid the individual-level reductionism, this hypothesis needs to be tested by comparing actual opinions according to their locus on one or the other side of the national controversy. A spiral of silence is diagnosed when, at a given moment in time, the proportion of those speaking up on one side is lower than that of the opposite side. Having no empirical means of designating which side represents the majority opinion, we put forward two alternative hypotheses:

H1a: According to the conformity hypothesis of a *supranational spiral of silence*, individuals holding pro-immigration and pro-EU opinions (i.e., supranational opinions) will be *less* prone to speak out compared to individuals holding nationalist opinions (negative association between supranational opinions and opinion expression).

H1b: According to the conformity hypothesis of a *nationalist spiral of silence*, individuals holding pro-immigration and pro-EU opinions will be *more* prone to speak out compared to individuals holding anti opinions (positive association between supranational opinions and opinion expression).

Crucial to the static approach is the timing of the test. If the test shows no significant association at a given time, it is still possible that the social conformity process has not yet begun or has already been completed. Conversely, if the test reveals the expected association, the most outspoken opinion may still be in a declining trend. Consequently, static studies must both anticipate the precise occurrence of a spiral of silence and measure the direction of the opinion climate shift.

Using a dynamic approach that provides remedy to the reductionism inherent to the static approach, the *change hypothesis* predicts that time will moderate the relationship between opinion locus and opinion expression. A spiral of silence is diagnosed when, over time, the proportion of those who speak out on one side decreases while it increases on the opposite side. By directly observing the typical pattern of public outspokenness (the spiral) predicted by the theory, the dynamic test reveals both the occurrence and the direction of a

spiral of silence, making it unnecessary to measure whether individuals consider the issues of immigration and EU to be morally charged or whether they perceive a clear majority climate. Our second alternative hypothesis is therefore:

> H2a: According to the change hypothesis of a *supranational spiral of silence*, individuals holding pro-immigration and pro-EU opinions (i.e., supranational opinions) will be *decreasingly* prone to speak out over time compared to individuals holding nationalist opinions (negative interaction effect between time and supranational opinions on opinion expression).
>
> H2b: According to the change hypothesis of a *nationalist spiral of silence*, individuals holding pro-immigration and pro-EU opinions will be *increasingly* prone to speak out over time compared to individuals holding anti opinions (positive interaction effect between time and supranational opinions on opinion expression).

Method

Data

Data for fifteen countries from the European Social Survey (ESS) were used, collected between 2002 (Round 1) and 2016 (Round 8) (see supplementary materials for the list of countries, their general sample size across the eight rounds and descriptive characteristics after listwise deletion of missing values). In general, the samples were composed of primarily (if not exclusively) citizens, with roughly equal parts of male and female respondents. The mean age ranged from 46.16 in Norway to 50.90 in Portugal and the average years of formal education was the lowest in Spain with 12.31 years and the highest in Ireland with 13.81 years. Political orientation was normally distributed around the mid-point of the left-right political continuum in each country (0 = *left* 10 = *right*; means ranging from 4.48 or slightly left of center in Spain to 5.68 or slightly right of center in Finland). Level of interest in politics was moderate (recoded from 1 = not *at all interested* to 4 = *very interested*; means ranging from 2.21 in Spain and Portugal to 2.80 in Germany).

Measures

Locus of opinion. Locus of opinion served as the central independent variable for each of the two topics of interest. Two loci were constructed by aggregating individual attitudes towards each topic and were used as continuous variables in subsequent regression analyses.

Immigration issue. Opinion on immigration was composed of six items. The first three indicated the degree to which participants thought that their respective country was positively or negatively (economically, culturally, and in general) affected by people from other countries coming to live there. They were measured on an 11-point Likert scale ranging from 0 (*"bad for the economy", "cultural life undermined", "worse place to live"*) to 10 (*"good for the economy", "cultural life enriched", "better place to live"*). The other three items indicated the degree to which participants believed various immigrant categories ("people of the same race or ethnic group", "people of a different race", "people from the poorer countries outside Europe") should be allowed to come and live in their respective country, all measured on a 4-point scale ranging from *none* (1) to *many* (4). In order to permit construction of a single composite score, these items were recoded into the same 11-point scale used for the first three items (i.e., 1 = 0, 2 = 3.33, 3 = 6.66, 4 = 10). Higher scores referred to pro-immigration opinions and lower scores to anti-immigration opinions (see supplementary materials for overall means by country as well as means by wave for each country). All items were averaged into a single score and standardized for hypothesis testing.

European Union issue. Opinion on the European Union (EU) was assessed with two items, asking respondents (1) how much they personally trusted the European Parliament, on a scale from 0 *("no trust at all")* to 10 *("complete trust")*, and (2) if they thought European unification *"had gone too far"* (score 0) or *"should go further"* (score 10). Higher scores referred to pro-EU opinions and lower scores to anti-EU opinions (see supplementary materials for overall means by country as well as means by wave for each country). The two items were averaged into a single score and standardized for hypothesis testing.

Change over time. The time factor was operationalized by the ESS round identification variable. This ordinal variable ranged from 1 to 8, following the chronology of the eight available ESS rounds (1=2002–2003, 2=2004–2005, 3=2006–2007, 4=2008–2009, 5=2010–2011, 6=2012–2013, 7=2014-2015, and 8=2016-2017). We also introduced a squared measure of time (Time2) in order to account for the possibility of a non-linear evolution of opinion expression over time, for example a swelling effect.

Public outspokenness. The central dependent variable, *public outspokenness*, was measured by combining three items. Participants were asked whether they had (a) signed a petition, (b) worn or displayed a campaign badge/sticker, and (c) taken part in a lawful public demonstration in the past year. The three items were summed up into a single index that dichotomized individuals who had publicly expressed their opinion in any of the three retained modes (coded as 1), and individuals who did not speak out at all (coded as 0) (see supplementary materials for percentages of public outspokenness by country and by wave).

Since the measure does not specify on which issues respondents expressed their opinion, the operationalization of public outspokenness lacked explicit connection with the opinion locus. To validate this measure, we computed the predominant position (pro or anti) among those who spoke out. Among those who spoke out, between 40.3% in Hungary and 88.7% in Sweden reported pro-immigration attitudes (with Hungary being the only country below 50%). These findings underscore that the major part of public outspokenness on immigration concerns the expression of supranational opinions that are at odds with the nationalist right-wing populist views.

Plan of Analysis

Analyses were run using SPSS 25 and the PROCESS macro (v3.1; Hayes 2015; 2018).[2] In SPSS, a hierarchical logistic regression[3] was first conducted for each country regarding the two issues (immigration, European Union). The binary variable of public outspokenness was the dependent variable. The independent variables were the opinion loci of the two issues

under scrutiny. Age, gender, formal education level, political orientation, political interest, national citizenship, as well as hardcore individuals[4] were used as control variables. ESS does not provide measures of perceived opinion climate and media use.[5]

Table 1 shows results of these analyses, by country. The first block included the control variables as well as the focal independent variables, namely the locus of opinion on both issues, time, and time squared. The conformity hypothesis was tested through the main effect of locus of opinion on public outspokenness. The second block included two interaction terms created with standardized variables: locus of opinion x time, and its quadratic equivalent locus of opinion x time^2. For assessing the size of the camp affected by the spiral of silence effect, as well as the size of the voicing camp (i.e., the source of social influence), the interaction effect was decomposed using PROCESS and the "Johnson-Neyman" technique. This technique identifies the regions of significance of the interaction term as well as "the percent of cases in the data with values of the moderator above or below the points of transition in significance" (Hayes, 2016). Setting time as the independent variable and locus of opinion as the moderator allowed the identification of those who were "speaking up" and those who were "silencing out", and the prevalence of these two groups (Shamir, 1997).

Results

Table 1 shows that young, more educated, and more politically interested respondents showed greater outspokenness in all countries, as did men (in all countries except Portugal, Hungary, Poland and Switzerland; Portugal showed the reverse-effect) and national citizens (in all countries except Hungary, Poland and Slovenia). Existing research indeed shows that individuals with these characteristics are generally less fearful of social isolation (Matthes et al., 2010; Noelle-Neumann, 1993). Left-wing political positioning was also related to greater outspokenness, in all countries except Hungary and Poland where right-wing respondents were more outspoken, and Slovenia (no association). Surprisingly, hardcore individuals were not necessarily more outspoken, their level of public expression varying across countries and

across issues.

Conformity hypothesis

Immigration Issue. While *hypothesis 1a* received no support, pro-immigration opinions were positively related to public outspokenness in all countries, consistent with *hypothesis 1b* (step 1 in Table 1). Hence, over the 14 years under scrutiny, individuals who were relatively more favorable to immigration were from 1.11 times in Norway to 1.32 times in Poland *more* likely to express themselves publicly, as opposed to keeping silent, than people supporting anti-immigration views. Besides being more outspoken, pro-immigration individuals also represented the actual opinion majority in all countries except Hungary and Portugal (see means in supplementary materials).

European Union Issue. In the logistic regression analysis regarding opinions towards the European Union, results were consistent with *hypothesis 1a* in Finland, Ireland, Poland, Switzerland, Sweden and the UK. In these countries, pro-EU individuals were significantly *less*[6] likely to speak out compared to the antis. For all other countries, the effect was in the same direction, but statistically non-significant, providing no support for *hypothesis 1b*.

Change hypothesis

Moving into the dynamic perspective, the second block of the logistic regression analyses (that included the linear and quadratic interaction terms) significantly improved the goodness of fit of the model[7] in seven out of 15 countries: France, Germany, Hungary, Ireland, Poland, Switzerland, and the UK.

Immigration Issue. *Hypothesis 2a* was supported in France, Ireland and Switzerland, where the linear interaction term was negatively and significantly associated with public outspokenness (step 2 in table 3). This negative interaction signals a decreasing likelihood of individuals holding favorable opinions towards immigration to speak up over time. The dynamic was linear, with non-significant quadratic interaction effects. In Germany, Hungary, Poland and the UK, in turn, the linear interaction term was *positively* associated with public

outspokenness (*hypothesis 2b*), demonstrating that over time, the likelihood that individuals holding *favorable* opinions on immigration were speaking up was *increasing*. Moreover, in all of these countries except Germany, the quadratic interaction was also positive and significant, suggesting that this increase in outspokenness has mostly occurred in recent times.

Figure 1 shows the conditional effect of time on public outspokenness at three values on the pro-immigration scale (mean and ±1 SD), for four selected countries, two of which pertain to the immigration issue. For figures of all countries with significant interaction terms (including the seven described here for the immigration issue), see supplementary materials. In Switzerland and France, consistent with the supranational spiral of conformity *hypothesis 2a*, the silencing process concerned primarily individuals holding favorable immigration opinions (+1 SD; b = -0.06, SE = 0.01, $p < .001$; b = -0.04, SE = 0.01, $p < .001$, respectively), who were *less and less* likely to speak out over time. It also affected individuals with moderate opinions (mean of the scale; b = -0.04, SE = .01, $p < .001$; b = -0.02, SE = 0.01, p = .017, respectively). The silencing process did not affect individuals with unfavorable immigration opinions ($p > .05$, see supplementary materials for betas and standard errors). Conversely, in Ireland, all effects were quite small and only individuals holding unfavorable immigration opinions became significantly more outspoken (-1 SD; b = 0.03, SE = 0.01, p = .046). Those with moderate or favorable opinions did not significantly change in their degree of outspokenness.

The Johnson-Neyman technique was used to probe the interactions and to determine the significance *region* ($p < .05$) on the opinion scale. Table 2 shows the results of this technique for all significant interactions, providing the standard deviation from the mean in each country which represents the cut-off of the significance region (the respective score on the original scale is also provided), as well as the percentage of respondents in the sample comprised in this significance region. In France, for example, public outspokenness has

decreased significantly over time for individuals whose score on the original scale was superior to -0.25 SD (equivalent to > 4.87). Positioned on the pro-immigration side, these respondents represented 58.3% of the sample. Because the interaction was negative, more favorable immigration opinions were associated with a stronger silencing effect.

For all countries with a positive interaction term, individuals holding *favorable* immigration opinions (+1 SD) became *increasingly more* outspoken, linearly in Germany (b = 0.04, SE = 0.01, $p < .001$) and quadratically in the UK (b = 0.03, SE = 0.01, $p < .001$), in Hungary (b = 0.04, SE = 0.01, $p < .001$), and in Poland (b = 0.04, SE = 0.01, $p < .001$). Those with *moderate* opinions (mean of the scale) were also quadratically more prone to speak up in the UK (b = 0.02, SE = 0.00, $p < .001$) and in Poland (b = 0.03, SE = 0.01, $p < .001$), while remaining unchanged in Germany (non-significant linear effect) and in Hungary (non-significant quadratic effect). Those with *unfavorable* immigration opinions (-1 SD) were silencing out linearly in Germany (b = -0.03, SE = 0.01, p = .005) while remaining quadratically unchanged in the UK, in Hungary, and in Poland.

European Union Issue. *Hypothesis 2a* for the European Union issue was supported in Germany, Ireland and Switzerland. In Germany and Switzerland, the linear interaction term was negatively and significantly associated with public outspokenness, signaling that round after round, individuals holding favorable opinions towards the EU were becoming less likely to speak out. In Ireland, the moderating squared effect of time was significant, suggesting that these same changes occurred especially in recent years. Two countries showed a significantly positive effect (*hypothesis 2b*), Hungary (linear), and Poland (quadratic). All other countries had non-significant negative linear effects, with the exception of the UK, where the effect was positive, but still non-significant.

Figure 1 shows the conditional effect of time on public outspokenness at three positions on the pro-EU scale (mean and ±1 SD). In both Germany and Switzerland, the silencing process concerned individuals with favorable EU opinions (+1 SD; b = -0.02, SE = .01, p

= .045; b = -0.06, SE = .01, p < .001; respectively) who were *less and less* likely to speak out over time. In Switzerland, it affected also individuals with moderately favorable opinions (mean of the scale; b = -0.04, SE = .01, p < .001) who were less and less likely to speak out, while in Germany it did not affect these people. In Switzerland, the silencing process did not affect individuals with unfavorable EU opinions, although in Germany, these individuals gradually spoke out *more* over time (b = 0.03, SE = .01, p = .009). In Ireland, everyone spoke out more and more as time passed (and especially in recent years), although this was more pronounced for those with unfavorable EU opinions (-1SD; b = 0.04, SE = .01, p < .001), compared to those with moderate (b = 0.03, SE = .00, p < .001) or favorable opinions (b = 0.02, SE = .01, p = .002).

For all countries with a positive interaction term (i.e., Hungary and Poland), individuals holding *favorable* EU opinions became (at least marginally) more outspoken (+1 SD; b = 0.05, SE = 0.03, p = .063 for linear effect in Hungary; b = 0.05, SE = 0.01, p < .001 for quadratic effect in Poland). In Hungary, this was the only simple effect approaching significance, such that those with moderate or unfavorable opinions did not change in their degree of outspokenness. In Poland, those with moderate opinions were still increasingly more prone to speak out (b = 0.03, SE = 0.01, p < .001), while those with unfavorable opinions were not.

In summary, when the spiral of silence was tested through the *conformity hypothesis*, pro-immigration individuals were more outspoken in all 15 countries, while pro-EU individuals were less outspoken in six countries: Finland, Ireland, Poland, Switzerland, Sweden and the UK. In contrast, when the theory was tested through the *change hypothesis*, pro-immigration individuals were silencing out at a linear chronological pace in three countries (France, Ireland and Switzerland), but were increasingly speaking up in four countries: Germany (linearly), as well as Hungary, Poland and the UK (both linearly and quadratically). Pro-EU individuals were also silencing out in three countries, linearly in

Germany and Switzerland, and quadratically in Ireland, but were increasingly speaking up in Hungary (linearly) and Poland (quadratically). In all other countries where the four interaction terms entered in step 2 failed to significantly improve the goodness of fit of the model, the immigration and EU issues did not yield any conformity process.

Discussion

The present research aimed to uncover spiral of silence effects across 15 European countries in a competitive normative context pitting nationalist against supranational norms. We reasoned that the recent rise and visibility of right-wing populist movements may have led many citizens to believe that nationalist norms defended by right-wing populist movements have become the new "consensus" or the new majority, thereby silencing supranational opinions. Alternatively, pre-existing norms of democratic governance and social inclusiveness may have prevailed as the commonly agreed consensus, leading on the contrary to the silencing of exclusionary opinions.

Our macro-level approach distinguished static from dynamic spiral of silence effects. Providing a snapshot of public outspokenness, results from the static *conformity hypothesis* indicated that people endorsing pro-immigration opinions were *more* prone to express their opinion than people holding anti-immigration positions in all 15 countries. In fact, the results of *any* of the eight rounds constituting the 14-year period under scrutiny indicated that pro-immigration opinions were always positively associated with public expression, most often significantly, signaling the occurrence of a nationalist spiral of silence. Therefore, the static approach would have missed several time points in the countries where pro-immigration opinion expression was on the rise (Germany, Hungary, Poland and the UK). Worse, it would have led to misleading conclusions in countries where pro-immigration opinion expression was declining (France, Ireland and Switzerland) or remained stable, even if the timing of the empirical test had been carefully chosen, as recommended by Bodor (2012a). Thus, no conclusions for the existence of a spiral of silence should be drawn from a snapshot on a

singular time period. Instead, the spiral of silence should be diagnosed from the contextualized comparison between at least two time points.

Regarding the EU issue, the static results indicated that pro-EU opinions were either negatively associated with public outspokenness (Finland, Ireland, Poland, Switzerland, Sweden and the UK), or were not associated at all. Considering that over the 14 years pro-EU individuals have been silencing out in three countries (Germany, Ireland and Switzerland) while speaking up in two countries (Hungary and Poland), the static approach has either wrongly reported the presence and direction of a spiral of silence or has not detected it, except in Ireland and Switzerland.

The *change hypothesis*, in turn, made it possible to directly observe the evolution of actual public outspokenness across the 15 scrutinized countries. Our results revealed contrasted dynamics of public opinion formation regarding immigration. First, a *supranational spiral of silence* was captured in France, Ireland and Switzerland. Although pro-immigration opinions were still the majority view in 2016 (in congruence with conformity hypothesis 1b), this position was nonetheless shown to lose ground over the years, in line with change hypothesis 2a. In other words, in these three national contexts we observed contradictory results for the conformity and change hypothesis. For Ireland, once the size of the two competing groups in the public sphere was identified, we found that a minority group (16.8% of the sample) of people advocating strong anti-immigration positions was responsible for the significant negative interaction effect found. This finding supports Chan's (2018) recommendation to focus not only on the group of those who are silencing out (as usually tested) but also to picture the group of those who are speaking up as an extension of the scope of the theory. Although there is no strong explicitly anti-immigrant political party, these Irish citizens may have expressed growing disagreement with the ostensibly liberal government policy, where migrants are housed in small towns throughout the country, remaining there for the long run largely isolated from the local communities. In case they

perceived the media coverage as biased, these people may well have engaged in public debate in order to take "corrective actions" (Rojas, 2010). Regarding France and Switzerland, the growing electoral successes of populist parties, which attempt to portray themselves as the "winning" party, the party that represents the "people", or the party that represents the "true" national values (Müller, 2016), may have created a majority impression that encourages those who feel less and less isolated to speak up.

Second, a *nationalist spiral of silence* was revealed in Germany, Hungary, Poland and the UK, where citizens holding pro-immigration opinions were increasingly speaking up. The quadratic pace of this process in Hungary, Poland and the UK indicated that the conformity process unfolded above all in recent years. Indeed, by omitting the last ESS Round, the conformity processes would no longer have been present. Given the stigma attached by German history to far-right positions, it is plausible to see the observed conformity dynamics as a reaction to the rise of right-wing populist parties whose supporters are claimed to be "racists". Numerous public demonstrations in favor of inclusive policies took place in Germany, just as in the UK in the perspective of Brexit. As Hungary and Poland already have right-wing governments, those in favor of immigration and the EU may arguably have taken increasing note of the fact that they have joined the opposition camp.

Our macro-level approach was also able to offer a modeling of the public opinion process theorized by Noelle-Neumann that fruitfully complements the established micro relationship (r = .10) between opinion climate perception and political opinion expression (Matthes et al., 2018). Taken together, the average zero-order correlation coefficients between opinion climate and public outspokenness found in this study (see supplementary materials) were positive, in all countries for the immigration issue (ranging from r_{bp} = .09, p < .001 in Hungary to r_{bp} = .23, p < .001 in France), and in 11 countries for the EU issue (ranging from r_{bp} = .02, p < .05 in Ireland and the UK to r_{bp} = .09, p < .001 in Belgium and Germany). It is however also likely that the positive views on immigration evidenced in our

findings are at least partially due to social desirability effects, as a result of normative pressures of non-discrimination (Janus, 2010). But public opinion formation about societal controversies is an ongoing and often long-lasting process. It requires the presence of long-term social pressure over one camp and thus multiple measures over time. Overall, our findings suggest that a strong relationship existed between opinion locus and expression on controversies about immigration and about the European Union in seven countries. The opinion locus on these political issues dynamically influenced the propensity of citizens to publicly express their point of view. This contextualized relationship subsisted after multiple controls and fluctuated over time.

As a major limitation of this study, public outspokenness was used as a generic dependent variable and thereby lacked a specific connection with the four opinion climates. We used the proportions of the respective pro- and anti-positions among those who spoke out as a proxy for checking that they were at least likely to have expressed their opinion in line with the corresponding issue. This was unambiguously the case for the immigration issue where we found a positive relationship between pro-immigration and outspokenness in all countries except Hungary. For the EU issue, the findings were less convergent, the proportion of pro-EU attitudes among those speaking up being between 27.6% in the UK and 62.1% in Belgium. In any case, the spiraling dynamic predicted by the theory concerns the way in which individuals adapt their overt political behavior, given their personal positions on issues that are debated in the public sphere. Thus, a spiral of silence can be observed for a generic measure of public outspokenness, as long as it yields two strong contrasting trends over time, specific to each of the debating camps.

As an additional pitfall inherent to our use of international comparative survey data, we were unable to articulate the modeling of macrosocial formation of public opinion with the underlying microlevel processes posed by the theory. To the extent possible, future research should incorporate variables that explain why and how holders of majority opinions speak up

and those of minority opinions silence out, namely the measurement of a) individuals' perception of the opinion climate (Noelle-Neumann & Petersen, 2004), b) the sources that determine this perception (normative opinion conveyed by the mass media, interpersonal discussions, and social media platforms; Neubaum & Krämer, 2017), and c) the motivational factor that stimulates the search for information about the opinion climate (trait-like and issue-related fear of isolation; Hayes, Matthes, & Eveland, 2013; Neubaum & Krämer, 2017). Likewise, datasets containing a measure of opinion certainty can help to better capture the group of hardcore individuals (Matthes et al., 2010).

Conclusion

Our research has attempted to take stock of the competitive normative contexts generated by the recent rise of right-wing populist movements by examining which position has gained prominence in the public sphere and which has been silenced out of public opinion. In so doing, we hope to have contributed to the growing literature investigating the consequences of right-wing populism, in particular with respect to the increased public legitimacy of ideas that not long ago were normatively discredited. On the one hand, our findings show that populist movements can intimidate mainstream attitudes, which lends a wider lens to studies showing how liberal opinions have been silenced out of public discourse by the massive vote for Trump in American rural communities (Van Duyn, 2018) or how the willingness to express them is affected by situational factors such as expectation of sanctions from social environment or anticipation of a loss of control over reactions of the audience (Neubaum & Krämer, 2018). On the other hand, the impact of populist movements on opinion expression is not as powerful as could have been expected on the basis of their increased public visibility, thereby supporting the idea that in many contexts, norms of inclusiveness and international integration stand firm against the attacks.

References

Baldassare, M., & Katz, C. (1996). Measures of attitude strength as predictors of willingness to speak to the media. Journalism and Mass Communication Quarterly, 73(2), 147–158. doi.org/10.1093/ijpor/6.1.1

Bodor, T. (2012a). The issue of timing and opinion congruity in spiral of silence research: Why does research suggest limited empirical support for the theory? *International Journal of Public Opinion Research, 24*(3), 269–286. doi:10.1093/ijpor/eds016.

Bodor, T. (2012b). Hungary's "Black Sunday" of public opinion research: The anatomy of a failed election forecast. *International Journal of Public Opinion Research, 24*(4), 450-471. doi:10.1093/ijpor/edr039.

Chan, M. (2018). Reluctance to talk about politics in face-to-face and Facebook settings: Examining the impact of fear of isolation, willingness to self-censor, and per network characteristics. *Mass Communication and Society, 21*(1), 1–23. doi:10.1080/15205436.2017.1358819

Clemente, M., & Roulet, T. J. (2015). Public opinion as a source of deinstitutionalization: A "spiral of silence" approach. *Academy of Management Review, 40*(1), 96–114. doi:10.5465/amr.2013.0279

Dalisay, F., Hmielowski, J. D., Kushin, M. J., & Yamamoto, M. (2012). Social capital and the spiral of silence. *International Journal of Public Opinion Research, 24*(3), 325–345. doi:10.1093/ijpor/eds023.

Donsbach, W. (1987). Die Theorie der Schweigespirale. In M. Schenk, *Medienwirkungsforschung* (pp.324–343). Tübingen: Mohr Siebeck.

Eveland, W. P., McLeod, D. M., & Signorielli, N. (1995). Actual and perceived U.S. public opinion: the spiral of

Fox, J., & Warber, K. M. (2015). Queer identity management and political self-expression on social networking sites: A co-cultural approach to the spiral of silence. *Journal of*

Communication, 65, 79–100.

Gearhart, S., & Zhang, W. (2015). Gay bullying and online opinion expression: Testing spiral of silence in the social media environment. *Social Science Computer Review, 32,* 18–36. doi:10.1177/0894439313504261

Glynn, C. J., Hayes, A. F., & Shanahan, J. (1997). Perceived support for one's opinion and willingness to speak out: a meta-analysis of survey studies on the 'spiral of silence'. *Public Opinion Quarterly, 61,* 452–463. doi:10.1086/297808.

Glynn, C. J, Ostman, R. E., & McDonald, D. G. (1995). Opinions, perception, and social reality. In T. L. Glasser and C. T. Salmon (Eds.), *Public Opinion and the Communication of Consent* (pp. 249–277). New York: Guilford Press.

Glynn, C. J., & Park, E. (1997). Reference groups, opinion intensity, and public opinion expression. *International Journal of Public Opinion Research, 9*(3), 213–232. doi:10.1093/jipor/9.3.213.

Graham, J., Haidt, J., & Nosek, B.A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology,* 96, 1029-1046.

Hayes, A. F. (2015). Hacking process for estimation and probing of linear moderation of quadratic effects and quadratic moderation of linear effects. Unpublished white paper, retrieved from http://www.afhayes.com.

Hayes, A. F. (2016). Addendum to Appendix A of Introduction to mediation, moderation, and conditional process analysis. Retrieved from http://www.processmacro.org.

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). New York: The Guilford Press.

Hayes, A. F., Matthes, J., & Eveland, W. P. (2013). Stimulating the quasi-statistical organ: Fear of social isolation motivates the quest for knowledge of the opinion climate. *Communication Research,* 40(4), 439–462. doi.org/10.1177/0093650211428608.

Hayes, A. F., Scheufele, D. A., & Huge, M. E. (2006). Nonparticipation as self-censorship:

Publicly observable political activity in a polarized opinion climate. *Political Behavior, 28,* 259–283. doi:10.1007/s11109-006-9008-3

Hayes, A. F., Shanahan, J., & Glynn, C. J. (2001). Willingness to express one's opinion in a realistic situation as a function of perceived support for that opinion. *International Journal of Public Opinion Research, 13*(1), 45–58.

Huge, M. E., & Glynn, C. J. (2012). Hesitation Blues: Does minority opinion status lead to delayed responses? *Communication Research, 1*(21), 1–21. doi: 10.1177/0093650211435505.

Janus, A. L. (2010). The influence of social desirability pressures on expressed immigration attitudes. *Social Science Quarterly, 91,* 928–946.

Judis, J. (2016). *The populist explosion: How the great recession transformed American and European politics*. New York: Columbia Global Reports.

Kreft, I. G., & De Leeuw, J. (1998). *Introducing multilevel modeling.* London: Sage Publications.

Lasorsa, D. L., (1991). Political outspokenness: Factors working against the spiral of silence. *Journalism & Mass Communication Quarterly, 68,* 131–140. doi:10.1177/107769909106800114

Mason, L. (2018). *Uncivil agreement: How politics became our identity*. Chicago: University of Chicago Press.

Matthes, J. (2015). Observing the "spiral" in the spiral of silence. *International Journal of Public Opinion Research, 27*(2), 155–176. doi:10.1093/ijpor/edu032

Matthes, J., Knoll, J., & Sikorski, C. (2018). The "spiral of silence" revisited: A meta-analysis of the relationship between perceptions of opinion support and political expression. *Communication Research, 45*(1), 3–33.

Matthes, J., Morrison, K. R., & Schemer, C. (2010). A spiral of silence for some: attitude certainty and the expression of political minority opinions. *Communication Research,*

37, 774–800. doi:10.1177/0093650210362685.

McDonald, D. G., Glynn, C. J., Kim, S.-H., Ostman, R. E. (2001). The spiral of silence in the 1948 presidential election. *Communication Research, 28,* 139-155. doi: 10.1177/009365001028002001.

Moscovici, S. (1991). Silent majorities and loud minorities. In J. A. Anderson (Ed.), *Communication Yearbook*, (Vol. 14, pp. 298–308). Newbury Park: Sage.

Moy, P., Domke, D., & Stamm, K. (2001). The spiral of silence and public opinion on affirmative action. *Journalism & Mass Communication Quarterly, 78*, 7–25. doi:10.1177/107769900107800102

Müller, J.-W. (2016). *What is populism?* Philadelphia, PA: University of Pennsylvania Press.

Neubaum, G., & Krämer, N. C. (2018). What do we fear? Expected sanctions for expressing minority opinions in offline and online communication. *Communication Research, ,45*(2), 139–164. doi:10.1177/0093650215623837

Neubaum, G., & Krämer, N. C. (2017). Monitoring the opinion of the crowd: Psychological mechanisms underlying public opinion perceptions on social media. *Media psychology, 20,* 502–531. doi:10.1080/15213269.2016.1211539

Noelle-Neumann, E. (1974). The spiral of silence: A theory of public opinion. *Journal of Communication, 24*, 43–51.

Noelle-Neumann, E. (1991). The theory of public opinion: The concept of the spiral of silence. In J. A. Anderson (Ed.), *Communication yearbook*, (Vol. 14, pp. 256–287). Newbury Park: Sage.

Noelle-Neumann, E. (1993). *The Spiral of Silence. Public Opinion–Our Social Skin,* 2nd ed., Chicago: University of Chicago Press.

Noelle-Neumann, E. (2001). Commentary. *International Journal of Public Opinion Research, 13*(1), 59–60.

Noelle-Neumann, E., & Petersen, T. (2004). The spiral of silence and the social nature of

man. In L. L. Kaid (Ed.), *Handbook of political communication research* (pp. 339–357). Mahwah: Lawrence Erlbaum.

Oshagan, H. (1996). Reference group influence on opinion expression. *International Journal of Public Opinion Research, 8*, 335–354. doi:10.1093/ijpor/8.4.335

Petrič, S. D., & Pinter, A. (2002). From social perception to public expression of opinion: A structural equation modelling approach to the spiral of silence. *International Journal of Public Opinion Research, 14*, 37–53. doi:10.1093/ijpor/14.1.37

Portelinha, I., & Elcheroth, G. (2016). From marginal to mainstream: The role of perceived social norms in the rise of a far-right movement. *European Journal of Social Psychology, 46*, 661–671. doi:10.1002/ejsp.2224

Roessing, T. (2009). *Milestones in spiral of silence research*. Paper presented at the WAPOR Conference in Lausanne. Retrieved from http://www.roessing.org/wp-content/uploads/2014/12/roessing_milestones_in_spiral_of_silence_research.pdf

Rojas, H. (2010). "Corrective" actions in the public sphere: How perceptions of media and media effects shape political behaviors. *International Journal of Public Opinion Research, 22*, 343–363. doi:10.1093/ijpor/edq018

Scheufele, D. A., & Moy, P. (2000). Twenty-five years of the spiral of silence: A conceptual review and empirical outlook. *International Journal of Public Opinion Research, 12*(1), 3-28. doi:10.1093/ijpor/12.1.3.

Scheufele, D. A., Shanahan, J., & Lee, E. (2001). Real talk: Manipulating the dependent variable in spiral of silence research. *Communication Research, 28*(3), 304–324. doi: 10.1177/009365001028003003

Shamir, J. (1997). Speaking up and silencing out in face of changing climate of opinion. *Journalism & Mass Communication Quarterly, 74,* 602-614. doi:10.1177/107769909707400313.

Shanahan, J., Glynn, C. J., & Hayes, A. (2007). The spiral of silence: A meta-analysis and its

impact. In R. W. Preiss, B. M. Gayle, N. Burrell, M. Allen & J. Bryant (Eds.), *Mass media effects research: advances through meta-analysis* (pp. 415–427). Mahwah: Lawrence Erlbaum.

Staerklé, C. & Green, E. (2018). Right-wing populism as a social representation: A comparison across four European countries. *Journal of Community & Applied Social Psychology, 28,* 430–445. doi:10.1002/casp.2369

Van Duyn, E. (2018). Hidden democracy: political dissent in rural America. *Journal of Communication, 68,* 965–987. doi: 10.1093/joc/jgy042

Wells, C., Cramer, K. J., Wagner, M. W., Alvarez, G., Friedland, L. A., Shah, D. V., Bode, L., Edgerly, S., Gabay, I., & C. Franklin (2017). When we stop talking politics: The maintenance and closing of conversation in contentious times. *Journal of Communication, 67,* 131–157. doi:10.1111/jcom.12280.

Yun, G. W, Park, S.-Y., & Lee, S. (2016). Inside the spiral: Hostile media, minority perception, and willingness to speak out on a weblog. *Computers in Human Behavior, 62,* 236–243.

Footnotes

[1] We included all the countries where European Social Survey data were available for each Round (from 1 to 8, 2002–2016), that is Belgium, Finland, France, Germany, Hungary, Ireland, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland and the UK.

[2] As PROCESS is unable to take into account sampling weights (see http://processmacro.org/faq.html), all results presented in this manuscript were found using unweighted data. However, analyses were also conducted with application of post stratification weights, in a regular logistic regression model in SPSS, to verify the validity of results on a representative sample of the Swiss and French populations. Interpretation of results was the same.

[3] Given that 15 countries were included in our analysis, we opted for this comparative approach as opposed to a nested design which requires a larger number of level 2 units (see Kreft & DeLeeuw, 1998).

[4] Hardcore individuals were used as a "conceptual control variable" (Bodor, 2012a) and identified with a measure of attitude extremity (the absolute value of the difference between the individual score and the scale midpoint, see Matthes et al., 2010). Both issues were measured on 11-point scales, therefore the scores ranged from 0 to 5. Higher scores indicated more extreme attitudes.

[5] A measure of media use (consumption of TV news about politics) was only available for the first seven ESS rounds. Analyses were conducted with inclusion of this control variable for all countries over the 2002-2014 period. Interpretation of results was largely the same, with the following exceptions: In Germany, the linear interaction between EU and time was non-significant, in Norway the quadratic interaction between EU and time was significant, and in Portugal the linear interaction between immigration and time was significant. Moreover, in the UK, Hungary and Poland, all interactions were non-significant, although this was due to the exclusion of the final round where major changes were seen in these countries, driving the effects found in our main analyses.

[6] Odds ratios are reported in the table 1: a value >1, resulting from a positive beta, means more likely; a value <1, resulting from a negative beta, means less likely.

[7] Significant chi-square values indicate significant improvement of fit between predicted and observed values on public outspokenness by adding the interaction terms to the model.