Challenging selective exposure:

Do people expose themselves only to online content that fits their interests and preferences?

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Abstract

Today's online news environment has made it easy to select news outlets that cover the topics one is personally interested in and contain the political viewpoints one shares. This might lead to a fragmentation of the audience along these two lines. Previous research often has been limited to either examining the diversity of the media offer or of the audience's media choices. This study of online news use in Austria does both to systematically assess whether such an effect exists. It first investigates actual content differences between online news outlets based on an automated content analysis (N=3,607) of content overlap and a manual content analysis (N=2,069) of topics and political bias of the coverage. In a second step, we use survey data (N=2,829) to investigate in how far online news users select outlets with topics and viewpoints that match their interests and political preferences. Results indicate that the content of different news outlets differs in terms of the topics covered, but not in terms of a general political leaning. While this precondition for audience fragmentation thus is met to some extent, we found only little evidence that people use these differences to match them with their personal interests.

Since the advent of the Internet, a wide range of different online news outlets, diverse in topics they cover and political viewpoints they convey, is available at virtually no costs to everyone. Never before, even the most specialized outlets have been as accessible as they are now. But also, more than ever before, an increasingly atomized audience has been feared: The availability of specialized content would encourage people to select only those outlets that fit their personal interests and preferences. This can be dangerous for a deliberative democracy, because the common core of societal issues discussed by as many citizens as possible may vanish (Chaffee & Metzger, 2001; Pariser, 2011; Prior, 2007; Sunstein, 2001). Instead of a common discourse, pessimists argue, 'issue publics', 'filter bubbles' and 'echo chambers' would emerge: Exposure to a set of different topics and viewpoints, conveyed by traditional mass media, would be replaced by exposure to likeminded sources with limited topical scope only.

Ironically, these increasing possibilities to expose oneself to personalized news and specialized topics that one is interested in, first have been praised as a liberation by early Internet scholars (Negroponte, 1995). But it did not take long before others started to warn about the consequences of such a fragmented media use (Sunstein, 2001): the emergence of fragmented audiences because of the sheer number of outlets people can choose from. The higher the number of outlets, the argument goes, the easier it is to ignore public-affairs content without having to abstain from media consumption (Prior, 2007).

Such a development has already been observed when the number of available media outlets increased substantially for the first time, during the rise of cable television (Webster, 2005). And without any doubt, the number of possible news outlets on the Internet is tremendously higher than on television.

While the argument that the audience therefore becomes more dispersed intuitively makes sense, it is not consistently backed up by empirical data.

Nevertheless, there is some evidence that news site visitors often pursue their very own interests – which may be in sports or celebrities – and are not that much exposed to political news content any more (Tewksbury, 2003). If audiences indeed are fragmented along the lines of *topical interests*, a common public discourse would vanish (Sunstein, 2001; Tewksbury, 2005).

Selective exposure scholars have feared a second type of fragmentation: Being less interested in the audience's topical preferences, they argue that those who are exposed to political topics use the abundance of different outlets to align their media choices with their political preferences. Thus, even if being exposed to the same topics, audiences can fragment along the lines of their *political orientation*: Left-leaning people could consume left-wing media news, right-leaning people right-wing news, which can fuel a spiral process of increasing polarization (e.g., Iyengar & Hahn, 2009). Especially in the United States this has been observed (see, e.g., Stroud, 2011). An explanation for this behavior is provided by the concept of selective exposure, originating from Festinger's (1957) theory of cognitive dissonance: Whenever possible, people expose themselves to standpoints they agree with and avoid anything that might be in conflict with what they think.

Empirical studies suggest more complex relationships (e.g., Holbert, Garrett, & Gleason, 2010). True, people seem to select information according to their political predispositions (Frey, 1986; Lazarsfeld, Berelson, & Gaudet, 1944; Sears & Freedman, 1967; Zillmann & Bryant, 1985). And of course, people nowadays have more possibilities to follow these preference than ever (Prior,

2005). But these observations are nuanced by recent research showing that people's increasing possibilities to be selective in their media choices are not necessarily realized: Conflicting sources are not eschewed completely (Garrett, 2009a, 2009b; Garrett, Carnahan, & Lynch, 2011; Kobayashi, 2009; Stroud, 2008). For example, those who expose themselves to partisan websites indeed are mainly supporters of the respective candidate, party, or policy. But the same people *also* use an above-average level of general-interest news in traditional media (Bimber & Davis, 2003; Garrett et al.; Zaller, 1992). This argument is also supported by recent people-meter data suggesting that audiences of both large and very small online and television outlets largely overlap (Webster & Ksiazek, 2012).

Most studies in the tradition of research in selective exposure and fragmentation implicitly or explicitly explain a user's choice for a specific online outlet by content differences. Of course, one could also think of a number of other reasons, like presentation style or ease of use, to name only two. It is remarkable that few studies in this tradition investigate empirically whether it is the content that affects the media choices. Therefore, this study investigates if the alleged link between content differences and user choices exists and aims to integrate both content and user characteristics. It first investigates in how far online news content is differs before investigating if distinct audiences emerge that use news according to their preferences.

Content fragmentation as precondition for audience fragmentation

A process of partisan people exposing themselves to partisan media content and therefore become even more partisan, requires partisanship of both content and

audiences (Slater, 2007). Before negative consequences like increased polarization and the vanishing of a common public discourse can be analyzed and attributed to audience fragmentation, it makes sense to investigate if the underlying theoretical ideas about audience selectivity actually are true.

Instead of analyzing these consequences of fragmentation, we rather take one step back and aim to investigate if a process of fragmentation, in which people use only that content that fits their interests, exists. To this end, we test each of the assumptions that are made within this framework and start with decomposing the fragmentation hypothesis, which essentially consists of two arguments:

(1) There are differences in topics covered and political viewpoints articulated between outlets.

(2) People will match their own topical interests and political viewpoints with these differences.

Studying the second argument only makes sense if we know if the first argument is true. Especially *falsifying* the fragmentation hypothesis as a whole cannot be done by only falsifying the second point, i.e. audience selectivity. The fragmentation hypothesis only is falsified if it turns out that people are not matching their preferences with their content selection *although* the content allows them to do so.

From this follows that while one can find supportive evidence for fragmentation by first investigating audience behavior and then check if these selections are driven by content differences, one can only falsify it by first investigating actual content differences and then check if people are making selections in line with these differences.

Such a causal relationship is claimed by Tewksbury (2005) who argues that specialized content attracts specialized audiences, which is why he calls specialized content "the seeds of audience fragmentation". Employing this metaphor, one could say that a comprehensive study on fragmentation first has to analyze these seeds, before turning to the question whether it bears fruit, i.e. in how far the audience really fragments.

Despite the importance content specialization has, conclusive evidence that the content different online news outlets offer differ is lacking. In fact, the rank order of topics covered in US blog posts and mainstream media seems to be almost identical (Lee, 2007), and in both French online mainstream media and blogs, coverage centers around a small number of topics that receive huge attention across all media outlets (Smyrnaios, Marty, & Rebillard, 2010). Studies focusing on news flows and news production offer an explanation for this, as they show that online news outlets depend heavily on copy from press agencies (Paterson, 2005). But one cannot assume too quickly that all online news sites are just different outlets for the same stories: For example, a study of Austrian newspaper and television websites found that the share of articles written exclusively for the website varies greatly between outlets and over time (Brantner, Lojka, & Wippersberg, 2009).

Hypotheses

This study aims to systematically test the argument that the diversity of online news outlets leads to fragmentation, as audiences tend to selectively use only those outlets that match their interests and viewpoints. We have argued that the fragmentation hypothesis can be split into two components: The existence of

specialized content and an audience that matches their preferences with exposure to outlets offering this specialized content.

Building on this argument, we now further decompose the fragmentation hypothesis into a set of small-scale hypotheses. The first set of hypotheses addresses content specialization, the second set in how far people match their preferences with their patterns of exposure. If both sets receive support, the fragmentation hypothesis as a whole is supported as well. If the hypotheses on content specialization receive support, but not those on audience selectivity, this is strong evidence that the fragmentation hypothesis as a whole seems not to be true. And if audiences turn out to be specialized, but the content in fact does not differ, no conclusions can be drawn whether the fragmentation effect exists.

At the first and very basic level, content can hardly be fragmented if outlets do not produce a substantive share of own, exclusive, content. In other words, if two outlets publish mainly the same press agency copy, then fragmentation cannot be an issue. This leads to the first hypothesis:

(H1a) Online news outlets publish mainly exclusive content, i.e. content not published by their competitors as well.

Publishing exclusive content, however, does not necessarily mean content that systematically differs. Those who fear fragmentation rather expect systematic differences in the topics covered (Sunstein, 2001; Tewksbury, 2005) or the political viewpoints conveyed (Iyengar & Hahn, 2009). We test if the assumption of specialized content is met:

(H1b) Online news outlets differ systematically in terms of topics they cover.

(H1c) Online news outlets differ systematically in terms of balance and political bias of their coverage.

If these hypotheses receive support, the preconditions for a fragmented audience are met: In this case, if it is true that peoples strive to match their interests and preferences with content, they have the opportunity to do so. Thus, having established topical and political differences between outlets, we can test if people really act in such a rational and attitude-reinforcing rather than attitude-challenging way:

(H2a) People use those outlets that serve their topical interests.

(H2b) People use those outlets that share their political viewpoints.

Method

Research context

The vast majority of research on selective exposure and fragmentation has been conducted in the United States. However, North and Central European media systems differ from the United States in terms of polarization of the political system and the media landscape, but also the use of newspapers, television news, online news, and blogs (Bakker & Paterson, 2011; Hallin & Mancini, 2004; Perlmutter, 2008; cf., for example, Tenscher, 2008; Van der Meer, Lubbe, Van Elsas, Elff, & Van der Brug, 2012). Our study sets out to test selective exposure in a Non-US context, namely in Austria. While Austria is commonly placed in Hallin and Mancini's group of Nothern and Central European media systems, it has been argued that Austrian journalism is characterized by political parallelism and therefore is more partisan than in other countries of this group (Karmasin, Kraus, Kaltenbrunner, & Bichler, 2011; Seethaler & Melischek, 2006). Therefore, fragmentation of online news use potentially could take place rather easily in Austria.

For the purpose of our study, we analyze only the Austrian online news landscape. While of course selection processes can also occur offline, we showed that it is argued that they are more likely to occur online. For example, the availability of Austrian offline news outlets depends heavily on the region of residence (Trilling & Schoenbach, 2012), while all online news outlets are equally accessible to all citizens regardless of their place of residence. Similarly, as all outlets we study are accessible free of charge, affordability does can be eliminated as a reason to chose for a specific outlet.

Content analysis

Constructing our sample of online news outlets, we strived to include as diverse online news outlets as possible according to different criteria: (1) They should, according to the survey data, have a substantial reach to allow for linking; (2) they should comprise websites of newspapers, magazines, public service media, and not primarily journalistic sites; (3) the profiles of the media should be as diverse possible. Table 1 gives an overview.

From these outlets, we retrieved all news items published in the week from 9 to 15 November 2011 via the website's RSS-feeds – a week in which no unusual news events took place[1]. From these feeds, we generated a database of URLs, article titles and teasers. Subsequently, all articles were downloaded automatically.

[1] We used the websites' main RSS feed and not special-interest feeds that some websites additionally offer, like feeds focused on economic issues for example. By this approach, we grab the frontpage items that users of the outlets are most likely to be exposed to.

<<<TABLE 1 ABOUT HERE>>>

Content overlap. We measured content overlap with an automated procedure. Using trigram comparisons, we identified (nearly) identical titles[2] – for example, copy from press agencies published by several outlets. To detect cases where the whole headline was changed, we repeated the procedure and compared the first paragraph of the articles.

The remaining variables were coded manually coded by four trained coders based on a random sample of n=250 articles per outlet.

The *main topic* (intercoder reliability, n=75: Krippendorff's alpha=.95) of the article was coded with 37 categories. If a *second topic* was present, it was coded in a separate variable as well (alpha=.74). The second topic was defined as the topic to which less space was devoted in the article. Subsequently, topics were aggregated to broader categories matching those used in the survey.

The political bias was measured using two constructs: On a more abstract level as balance (or, in other words, the absence of biasedness) and on a more concrete level as the bias towards specific political parties.

Balance (Krippendorf's alpha: .90) was measured as an ordinal variable with the categories 'balanced', 'unbalanced, but both positions mentioned', and 'unbalanced, opposing position only mentioned briefly', and 'opposing position

[2] To do so, we linked duplicates with the software MergeToolbox (Schnell, Bachteler, & Bender, 2004). We chose a trigram-based linkage method, which has the advantage to allow for little differences like typos or change of single words. To ensure best possible linkage quality, we preprocessed our database and removed special characters and HTML-tags before the actual linkage process. After record linkage, we verified the plausibility of the results by manually inspecting the resulting datasets.

not mentioned at all'. Non-controversial topics and genres that obviously are not indebted to objectivity like op-eds or reviews were coded as missing.

Positivity/Negativity towards political parties (alphas between .93 and 1.0) was coded on a five-point scale from extremely negative to extremely positive for each political party. It was not necessary that the author made an explicit judgment – rather, clearly negative topics like scandals and clearly positive topics like overwhelming victories in elections were coded as such.

Survey

The audience data draws on a secondary analysis of data collected for a study by Trilling & Schoenbach (2012). This web-based survey draws on a large sample representative for the Austrian population aged 14 years and older with Internet access. From a panel with about 201.000 members, research bureau XXXXXXXX drew a sample. Quota were used to match age and place of residence with the Austrian population. The survey was in the field in November 2010 and a response rate of 17% was achieved, resulting in a sample size of 2,954 after removal of invalid cases. For the purpose of this paper, we further removed 125 respondents under the legal voting age of 18 years, as adolescents' media behavior tends to differ – which was not the focus of our study. Therefore, our analyses are based on a sample of N=2,829.

Exposure to specific news outlets was measured as the number of days in a typical week. For this paper, we use the variables measuring exposure to those online outlets that were included in the content analysis.

Interest in 16 different news topics was measured on a seven-point scale. For analytic purposes and to match with the content analysis data, categories

were grouped together into politics, economics, social affairs and policy, crime, sports, culture, and human interest news – each variable ranging from 1 to 7.

Political orientation was measured on an 11-point scale ranging from left to right.

Results

Content fragmentation

We identified matching headlines and teasers, while allowing for spelling mistakes or slight modifications: Even if an editor changes a few words, we are able to identify the headlines as identical. As Table 2 shows, the majority of headlines and first paragraphs does not appear in more than one outlet. In general, overlap seems to be very limited. In fact, manual inspection of the results showed that sometimes, one outlet published two articles on the same subject, which may even lead to an overestimation of the small overlap.

For example, out of the 734 articles gmx.at published, no other outlet published more than 10% of these articles as well, judging on headline and first paragraph. While presse.at and kleine.at are overlapping for a comparably high degree with other outlets, standard.at does show much less overlap.

<< TABLE 2 ABOUT HERE >>

As a cross-check, we look at the sources as identified in the manually coded sample. The most likely source for overlap is press agency copy. And indeed, presse.at, which has a rather high overlap with other sources, relies for a large extent on press agency copy (Table 3).

<<< TABLE 3 ABOUT HERE >>>

It becomes immediately clear that some outlets seem to largely rely on press agency copy while others do not. Still, in the light of the fact that both gmx.at and presse.at seem to be largely dependent on press agency copy, it is astonishing how small the actual content overlap is – which can be seen as a sign of fragmentation.

H1a thus receives substantial support, which means that the basic requirement for fragmentation is met: Outlets offer to a large extent non-overlapping content.

<<< TABLE 4 ABOUT HERE >>>

A reason might be that the editors of these outlets structurally select different articles, even when relying on press agency copy. And indeed, the share of articles on the topics of politics, economics, societal issues, and soft topics differed significantly between the sources.

Table 4 shows these content differences and enables us to identify outlets with distinct profiles – which we need to be able to link the survey data to in a second step. An outlet that should, according to the fragmentation thesis, attract those who are uninterested in politics, is gmx.at: It published significantly less political topics than all other outlets. Krone.at also has a remarkably low share of political content, significantly less than standard.at and presse.at, which have 1/2 and 2/3 more political articles, respectively. Similarly, there are enough

opportunities to tailor media choices according to differences in the coverage of economics (standard.at and presse.at offer much coverage, krone.at, kleine.at, and gmx.at do not), societal issues (standard.at and kurier.at might satisfy this need), crime (prevalent in krone.at and news.at), human interest news (pretty much neglected on google.at, krone.at, standard.at; but covered substantially by gmx.at and news.at), disasters (covered the most by GoogleNews), sports (not covered at all by the GoogleNews frontpage, but extensively by kleine.at and gmx.at).

H1b thus is supported: Outlets seem to have clear profiles, especially with regard to the share of articles devoted to hard politics as opposed to human interest news. With regard to news topics, the content requirement for fragmentation seems to be met.

Most outlets seem to include a considerable amount of judgment (in other words, non-neutral copy) in their coverage. Even though genres and topics that by their very nature are subjective were excluded (like reviews or op-ed pieces), the remaining n=652 articles that – according to journalistic standards of objectivity – should not include subjectivity are far from meeting this norm: 25% of all articles in the sample do not meet it. On top of this, two groups can be distinguished[3]: gmx.at (M=.90, SD=1.29), google.at (M=.80, SD=1.18), krone.at (M=.91, SD=1.26), news.at (M=.97, SD=1.20), orf.at (M=.76, SD=1.24), and standard.at (M=.78, SD=1.23), which publish significantly more biased copy than kleine.at (M=.24, SD=.75), kurier.at (M=.31, SD=.85), and presse.at (M=.17, SD=.68), $F(8, 1040)=10.15$, $p<001$.

[3] One-way ANOVA with post-hoc Bonferroni tests. Scale ranging from 0 (balanced) to 3 (extremely one-sided).

However, for none of the outlets, we were able to detect a political bias towards a specific party. As Table 5 shows, political parties are treated roughly the same, but above all were not mentioned too often. One-way ANOVAs did not show a significant relationship between source and positivity towards the parties. Only in the case of the right-wing populist party FPÖ, the model was significant, $F(8, 59) = 2.32$, $p < .05$. In spite of the overall significance, post-hoc Bonferroni tests did not find any significant differences between specific outlets.

<< TABLE 5 ABOUT HERE >>>

H1c is not supported: There is no evidence for a systematic bias towards political parties in our sample.

Audience fragmentation

We identified outlets whose content is rather specialized regarding the share of exclusive content, topics covered, and bias. For example, gmx.at publishes few political and much human interest content, and sports is not part of GoogleNews main news feed. But do people match their interests with these content characteristics and use only those outlets that seem to fit? We examine whether audiences are fragmented along the lines of topical interests and/or political orientation.

Evidence whether people with different interests use different sources is ambivalent. Sometimes this is the case (Table 6): Those who are interested in politics, economics and societal issues would rather read standard.at than gmx.at

– the readers of the latter are significantly less interested in these topics[4]. Those interested in sports often seem to choose for gmx.at. Who is interested in crime is quite often a reader of krone.at. The other way round, those who are interested in human interest news are less likely to read presse.at. In fact, this is perfectly in line with what the content of these sources offer – and therefore, in line with H2a, indicates fragmentation along the lines of the content.

However, although it is easy to come up with such examples, differences should not be overemphasized: Overall, differences are very limited. For those interested in politics, for example, the majority of outlets seem to be an equal choice. Major clear-cut differences cannot be detected. H2a is only partially supported.

<<< TABLE 6 ABOUT HERE >>>

In some cases, political orientation influence media choices: There is some evidence that right-wing readers chose other news outlets than left-wing readers. While the most left-wing person has a chance of 31% of reading krone.at, the most right-wing person has a chance of 52%, age, gender, and education being equal (b=.10, SE=.02, p<.001)[5]. At the same time, the most left-wing person has a chance of 35% of reading standard.at, compared to only 9% for the most right-wing person (b=–.17, SE=.02, p<.001). Still, as political

[4] Assuming normal distributions, two means differ significantly (p<.05) if the difference between the means is larger than 1.96 times the square root of the sum of the squares of the standard errors: 4.33 – 3.84 = 0.49 > 1.96 · √(.05^2 + .05^2) = 0.14

[5] Percentages according to Montecarlo simulations using the Clarify-package in combination with Stata's logit-command (King, Tomz, & Jason Wittenberg, 2000).

orientation follows a normal distribution, very few people belong to these extreme categories.

Differences also seem to be limited to using these two newspaper sites: Exposure to other newspaper sites, the public broadcast website orf.at, or the online-only outlets gmx.at and google.at show is not related to political orientation. As we did not find any biased content between the only two outlets whose readers are significantly more right- respectively left-wing than average, we have no evidence for fragmentation along the lines of political content. H2b is not supported.

Conclusions and Discussion

This study aimed to test a mechanism that has received much attention in the last decade: the notion that an increasingly diverse, easily accessible news offer would make people use exactly those outlets that match their interests and viewpoints. We argued that it is crucial to show that news outlets actually differ on these dimensions before claiming that people behave in such a selective way. Still, to our knowledge, this study is the first to first systematically compare actual content differences based on content analysis data before investigating audience fragmentation with survey data. Although content differences turned out to exist, our results cast doubt on the assumed effect that this is said to have on audience selectivity. Only on a very limited scale, we were able to detect such an effect.

The fragmentation thesis is based on the assumption that news outlets differ in terms of content they publish and viewpoints they convey. And indeed, in the online news landscape that we studied, some structural differences in the topics covered were found. Thus, people would have the chance to use only online outlets that cover those topics they are interested in.

However, this is not exactly what happens. People seem to be much less selective in their online media choices than selective exposure scholars tend to assume. Only in comparably few cases, people matched their content preferences with the content that was actually published. This study therefore offers strong evidence that even if content differences exist, and even if people can without any problem use the one that fits their personal interests best, they often do not do so. We argue that this shows that people actually appreciate a diversity of topics in news outlets and are not as keen on reading about their pet subjects as the fragmentation thesis assumes.

We furthermore could find no substantive evidence that people select a medium that reflects their political orientation. Coverage of political parties did not differ between outlets, and consequently, also the audiences showed little tendencies of fragmentation. Yes, it can be shown that readers of standard.at are more left-wing then readers of presse.at. But this does not seem to be based on the actual content of these outlets does not seem to differ much on this dimension.

The question remains why political orientation influences media choice in these two cases. One explanation might be that the media choices are quite stable over time. Maybe during election times or political campaigns, these two outlets are indeed more favorable towards left- or right-wing parties. Maybe

these outlets in the long run indeed show a content bias that leads to selective exposure. Whether this is the case has to be investigated empirically.

Of course, our analysis also cannot capture fine-grained differences in political coverage. An extensive frame analysis might find some differences between outlets in how political parties are framed, or how coverage of specific policies might suffer from a partisan bias. As we found a substantive share of unbalanced articles, there seems to be a possibility for slanted representations in one way or the other. This is in fact with what earlier research suggested: Austrian journalists seem to be less strict in the separation of news and opinion than journalists in other countries (Seethaler & Melischek, 2006). It might also be the case that differences between the coverage of political parties are more pronounced during election periods, for example.

In the specific Austrian media landscape, pure online-only news outlets are not commonplace yet. Probably, some differences that we found rather reflect the image that their offline counterparts have: The print edition of Der Standard is commonly regarded as more left wing and Kronen Zeitung as more right wing – which is reflected in our analysis of their online audiences as well. It remains speculative if other, new, online-outlets might emerge in the future that have more distinct profiles, both with regard to the topics they cover and their political stance.

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Tables

Table 1. Overview of news outlets included in the sample.

Medium	*Type*	*Articles published*
gmx.at	Portal hosted my email-provider	734
news.google.at	Automated news aggregator	164
kleine.at	Website of regional newspaper	520
krone.at	Website of tabloid newspaper	384
kurier.at	Website of popular national daily	125
news.at	Website of weekly magazine	64
orf.at	Website of public service broadcaster	644
presse.at	Website of conservative national newspaper	546
standard.at	Website of progressive national newspaper	426
Total N		*3607*

Table 2. Content overlap.

	GMX (n=734)	Standard (n=426)	Krone (n=384)	Kurier (n=125)	news.at (n=64)	ORF (n=644)	Google (n=164)	Presse (n=564)
Standard (n=426)	6 / 3							
Krone (n=384)	32 / 58	20 / 0						
Kurier (n=125)	13 / 2	7 / 0	15 / 0					
news.at (n=64)	2	0	2	1				
ORF (n=644)	52	44	55	24	4			
Google (n=164)	4 / 8	10 / 1	8 / 8	5 / 4	1	16		
presse (n=564)	50 / 9	37 / 1	54 / 12	33 / 3	5	121	15 / 11	
kleinezeitung (n=520)	50 / 72	27 / 3	57 / 44	29 / 4	1	65	7 / 6	89 / 12

Note. Number of identical articles according to trigram comparisons. The first number gives the number of articles with an identical headline. The second number gives the number of articles with matching first paragraphs. ORF and news.at do not provide the first paragraph in their RSS-feeds, hence, in these rows and columns only one number is listed.

Table 3. Sources of published copy.

	own staff	combination own staff and agency	agency	guest/reader	not marked
google.at	32%	18%	16%	0%	35%
kleine.at	20%	0%	36%	0%	44%
krone.at	62%	34%	0%	0%	4%
kurier.at	60%	15%	14%	0%	10%
news.at	20%	70%	0%	2%	10%
orf.at	2%	0%	0%	0%	98%
presse.at	16%	14%	67%	0%	2%
standard.at	58%	7%	30%	3%	2%
gmx.at	4%	2%	66%	0%	28%
Total	29%	12%	29%	0%	28%

Note. Row percentages. Pearson chi2(32) = 1.8e+03 p< 0.001

Table 4. Topics of content.

	politics	economics	social	crime	disaster	sport	culture	human
google.at	40% $_{ab}$ (4)	30% $_{abc}$ (4)	22% $_{a}$ (3)	23% $_{abc}$ (3)	16% $_{ac}$ (3)	1% $_{a}$ (1)	0% $_{a}$ (0)	11% $_{a}$ (3)
kleine.at	32% $_{b}$ (3)	18% $_{a}$ (2)	14% $_{a}$ (2)	12% $_{ad}$ (2)	6% $_{bc}$ (2)	32% $_{c}$ (3)	8% $_{b}$ (2)	19% $_{ab}$ (2)
krone.at	30% $_{b}$ (3)	16% $_{a}$ (2)	24% $_{a}$ (3)	30% $_{b}$ (3)	12% $_{cd}$ (2)	17% $_{b}$ (2)	1% $_{a}$ (1)	14% $_{a}$ (2)
kurier.at	50% $_{a}$ (4)	30% $_{abc}$ (4)	39% $_{c}$ (4)	22% $_{abc}$ (4)	8% $_{abc}$ (2)	3% $_{a}$ (2)	1% $_{a}$ (1)	14% $_{ab}$ (3)
news.at	35% $_{ab}$ (7)	17% $_{ab}$ (5)	7% $_{a}$ (4)	31% $_{bc}$ (6)	2% $_{abc}$ (2)	6% $_{ab}$ (3)	0% $_{a}$ (0)	33% $_{bc}$ (6)
orf.at	35% $_{ab}$ (3)	27% $_{ab}$ (3)	21% $_{a}$ (3)	19% $_{a}$ (2)	10% $_{abc}$ (2)	8% $_{ab}$ (2)	10% $_{b}$ (2)	23% $_{ab}$ (3)
presse.at	28% $_{b}$ (3)	40% $_{c}$ (3)	18% $_{a}$ (2)	18% $_{ac}$ (2)	8% $_{abc}$ (2)	6% $_{a}$ (1)	6% $_{ab}$ (2)	25% $_{b}$ (3)
standard.at	44% $_{a}$ (3)	31% $_{bc}$ (3)	36% $_{bc}$ (3)	7% $_{d}$ (2)	3% $_{b}$ (1)	6% $_{a}$ (1)	5% $_{ab}$ (1)	13% $_{a}$ (2)
gmx.at	12% $_{c}$ (2)	18% $_{a}$ (2)	17% $_{a}$ (2)	15% $_{ab}$ (2)	6% $_{bd}$ (2)	28% $_{c}$ (3)	10% $_{b}$ (2)	36% $_{c}$ (3)
Total	33% (1)	26% (1)	22% (1)	18% (1)	8% (1)	14% (1)	6% (1)	21% (1)
ANOVA[6]	F(8, 1816) = 11.45, p < .001	F(8, 1816) = 8.23, p < .001	F(8, 1816) = 9.08, p < .001	F(8, 1816) = 7.92, p < .001	F(8, 1816) = 3.85, p < 001	F(8, 1816) = 26.01, p < 001	F(8, 1816) = 6.40, p < 001	F(8, 1816) = 9. 40, p < 001

Note. Percentage of articles dealing with politics, economics, societal issues, soft topics. Rows add up to more than 100% as both mentioning as main and secondary topic qualified for inclusion in the table. SE's between brackets. Different subscripts indicate significant differences according to Bonferroni post-hoc tests, p<.05.

[6] We are aware that an ANOVA strictly speaking requires a continous dependent variable. However, as for example Lunney (1970) showed, this type of analysis is in many cases also acceptable for dichotomous outcome variables. For the sake of presentation clarity, we therefore chose to report ANOVAs and post-hoc tests. Additional chi2-tests were run to dubbel-check the interpretation and yielded similar results.

Table 5. Positivity/Negativity of coverage of political parties.

		SPÖ	ÖVP	FPÖ	Grüne
google.sav	M (SE)	-.10 (.17)	-.06 (.17)	.00 (.21)	.25 (.18)
	n	29	32	14	12
kleine.sav	M (SE)	-.33 (.20)	-.62 (.17)	-.15 (.10)	.30 (.15)
	n	21	32	13	10
krone.sav	M (SE)	.21 (.21)	-.16 (.18)	.00 (.41)	.25 (.25)
	n	19	19	4	8
kurier.sav	M (SE)	-.27 (.13)	-.24 (.15)	-.57 (.30)	-.11 (.20)
	n	22	21	7	9
news.sav	M (SE)	-.33 (.88)	-.88 (.35)	2.00 (.)	1.50 (.50)
	n	3	8	1	2
orf.sav	M (SE)	.13 (.38)	-.15 (.22)	.33 (.33)	.75 (.48)
	n	15	20	6	4
presse.sav	M (SE)	-.47 (.27)	-.62 (.20)	.00 (.00)	.29 (.18)
	n	17	16	4	7
standard.sav	M (SE)	-.07 (.16)	-.36 (.16)	-.07 (.23)	.50 (.22)
	n	43	42	15	20
gmx.at.sav	M (SE)	-.33 (.42)	-.60 (.40)	.75 (.25)	.80 (.49)
	n	6	10	4	5
Total	M (SE)	-.14 (.08)	-.35 (.07)	.00 (.09)	.38 (.09)
	n	175	200	68	77

Note. Negativity/positivity of coverage of political parties. Scale ranging from –2 to +2. The party BZÖ was excluded due to small cell sizes.

Table 6. Topical interest of the users of different news sites.

Variable	*gmx.at*	*google.at*	*kleine.at*	*krone.at*	*kurier.at*	*news.at*	*orf.at*	*presse.at*	*standard.at*
	M (SE)	M (SE)	M (SE)	M (SE)	M (SE)	M (SE)	M (SE)	M (SE)	M (SE)
Politics	3.84 (.05)	3.84 (.05)	4.05 (.06)	4.00 (.04)	4.28 (.06)	4.20 (.05)	4.08 (.03)	4.41 (.07)	4.33 (.05)
Economics	4.00 (.05)	4.00 (.05)	4.33 (.06)	4.20(.04)	4.53 (.06)	4.40 (.06)	4.31 (.04)	4.64 (.07)	4.49 (.05)
Social	4.40 (.04)	4.40 (.04)	4.60 (.05)	4.52(.04)	4.81 (.05)	4.67 (.05)	4.65 (.03)	4.88 (.06)	4.86 (.05)
Crime	4.55 (.06)	4.55 (.06)	4.65 (.07)	4.85 (.04)	4.71 (.06)	4.82 (.06)	4.63 (.04)	4.56 (.08)	4.48 (.06)
Sport	4.83 (.07)	3.83 (.07)	4.19 (.09)	4.05 (.06)	3.98 (.08)	4.33 (.08)	4.04 (.05)	3.87 (.10)	3.77 (.08)
Culture	3.71 (.06)	3.71 (.06)	3.74 (.07)	3.69 (.05)	3.99 (.07)	3.90 (.07)	3.83 (.04)	4.03 (.08)	4.11 (.07)
Human int.	3.55 (.06)	3.55 (.06)	3.43 (.08)	3.57 (.05)	3.25 (.07)	3.64 (.07)	3.83 (.05)	3.09 (.08)	3.17 (.07)
N=	836	602	542	1181	600	573	1448	401	600