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Patterns of News Consumption in Austria: How Fragmented Are They?

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In today's media landscape with an abundance of news outlets, it is often assumed that news media use becomes increasingly fragmented and polarized. Based on a large-scale survey of the Austrian population, fine-grained patterns of news exposure are explored. Criteria for the interpretation of these patterns as fragmented and polarized are discussed. We find that most people use several outlets. Most of their outlets overlap, and only some additional preferences really differ. Although Austria offers many news sources on the national level, the region of residence largely determines the choice for a specific news diet—which indicates that selectivity based on personal attitudes and psychological traits may play a less important role than situational or structural context factors.

Introduction

In many countries, the reach of television news and newspapers has steadily declined. Younger cohorts especially are said to instead increasingly rely on online media (e.g., Best & Engel, 2011). Observing this development, optimists are glad about the huge amount of information freely available to everyone and the possibility of finding information on even the most specialized topic. Our society should profit from a citizenry that is more informed about public affairs than ever before in history (Negroponte, 1995; Shirky, 2008). Pessimists, however, fear that the integrating function of mass media vanishes because of a fragmentation of the audience (Bennett & Iyengar, 2008; Chaffee & Metzger, 2001). This integrating function, Katz (1996) argues, depends on a common core of information for virtually everyone. This common core could, for example, be established by a TV newscast that the vast majority of citizens watches and discusses. But such a common discourse about current affairs might become more difficult, because, on the one hand, people now have enough choices to easily avoid public affairs information completely. On the other hand, even if they don't, they may turn only to sources that fit their predispositions (Pariser, 2011; Sunstein, 2001, 2007). And indeed, those who are not motivated to follow the news seem to increasingly avoid news content (Prior, 2007). In earlier times, Prior argues, those with

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a high *entertainment preference* and a low *political interest* would have been trapped by the news in offline media due to the lack of alternative content better fitting their preferences.

To put it more generally, due to a greater autonomy of the audience, the characteristics of its members could play an increasingly important role in being exposed to news compared to the influence of the media structure (see, e.g., Trilling & Schoenbach, 2013). The lack of the sense of a *civic duty to keep informed* or a perception of one's only weak *political efficacy* has always made people avoid news (Aarts & Semetko, 2003; Kenski & Stroud, 2006; Poindexter & McCombs, 2001; Tewksbury, Hals, & Bibart, 2008). The same seems to apply to a low *need for cognition*: People who are not curious and do not like to reflect have exposed themselves less frequently to public affairs (Cacioppo & Petty, 1982; Das, Echambadi, McCardle, & Luckett, 2003; Kraaykamp & Van Eijck, 2005), and may now skip news even more. It is also plausible that *introverts* should be less than ever interested in topical overviews of what is going on in the world—although evidence on this is mixed (Finn, 1997; Kraaykamp & Van Eijck, 2005; Mondak & Halperin, 2008; Shim & Paul, 2007). All these characteristics could have greater consequences in today's abundant media offerings.

Concerns about the effects of this abundance also address the ease with which one can find news content that is consistent with one's predispositions. Research on selective exposure indeed shows that people's *political orientation* is becoming more important for their selection of news (for a recent overview, see Stroud, 2011). To counteract such effects of selectivity, some have suggested making exposure to a diversity of both viewpoints and topics a policy goal (Helberger, 2011).

According to Webster (2005), both audience fragmentation and audience polarization are to be feared. Audience fragmentation means that much of the population's media exposure is no longer concentrated in a few outlets but is spread across a large number of channels, each with a very small market share. Audience polarization, in Webster's terms, describes the strict separation of media audiences—not only does each individual choose his or her own preferred channels and use them extensively but he or she also *avoids* other outlets.

Although there is some evidence that partisans indeed use a lot of partisan media, they typically also turn to mainstream media extensively—which inevitably also contain information they may not like (Bimber & Davis, 2003; Garrett, 2009; Garrett, Carnahan, & Lynch, 2011; Kobayashi, 2009; Stroud, 2008; Zaller, 1992). Consequently, as with offline media, a few online mainstream media still dominate the news market (Hindman, 2009). Ideologically consistent exposure is further limited by some types of outlets that do not take ideologically extreme positions but have a wide reach—such as local media—and therefore are part of strong partisans' diets as well (LaCour, 2012). This means that media recipients in general do not use one single news outlet, but one of several typical combinations of news outlets—so-called media repertoires or media diets (Handel, 2000; Hasebrink & Popp, 2006; Hasebrink & Schmidt, 2012; Meyen, 2007; Trilling & Schoenbach, 2011; Van Cauwenberge, d'Haenens, & Beentjes, 2010; Van Rees & Van Eijck, 2003).

People stick to relatively fixed repertoires to reduce the complexity that comes with the overwhelming number of choices (Webster, 2011). Based on Giddens' structuration theory, Webster

argues that every agent is free to decide which media content to use. But in the aggregate, he adds, media use is highly predictable due to structural factors. Consequently, as a precondition for actors to act strictly rationally, such as selectively exposing themselves to specific media content, media resources must provide agents with the structures to do so. Thus, rather than every person having his or her highly individual media diet, aggregate patterns of exposure emerge, and people tend to choose from only a few types of repertoires. But studies on media diets have made two fairly arbitrary decisions: First, how fine-grained was the analysis of media exposure? Plausibly, sweeping measures such as "watching TV" or "reading a newspaper" inevitably produce lower estimates of fragmentation and polarization than asking questions about which newscasts or newspapers precisely people use. The second arbitrary decision about how to discern patterns of media use concerns the statistical techniques to find combinations of exposure. They offer the researcher much freedom in how many diets to distinguish. For instance, a hierarchical cluster analysis is supposed to group users with similar media diets. But how many groups the analysis discerns is up to the researcher.

Both decisions present a dilemma. Because the aim of every study on news diets is the reduction of complexity, the number of news repertoires to be detected should be as high as necessary but as small as possible. However, what is "necessary" or "possible" is not an empirical but a normative question. Its answer depends on what amount and kind of fragmentation one deems problematic. Ultimately, the degree of the possible dangers of media use patterns for society define the sensitivity with which to measure news exposure and to extract clusters.

This study examines two media use patterns that could emerge as a result of increasing media choice: audience fragmentation and audience polarization (Webster, 2005). Audience fragmentation means that much of the population's media exposure is spread across a large number of outlets with little reach. Audience polarization, in Webster's terms, describes the strict separation of media audiences—not only does everybody have his or her own news diet but he or she also avoids other outlets. Polarization, therefore, can be defined as people's tendency to move toward extremes and either not use an outlet at all or use it extensively. The existence of specialized outlets in fragmented media environments might be a fertile breeding ground for polarization.

In principle, two extreme media use patterns could be considered dangerous for society, or at least dangerous in the sense of making deliberation impossible—that is, a democratic discourse of virtually everybody might emerge (see Coleman & Blumler, 2009; Habermas, 1962). At first glance, one news diet to worry about is avoiding news completely. Which share of news avoidance is problematic, however, and depends on the theory of democracy one's argumentation is based on. Theories such as procedural democracy do not require a majority to participate in a democratic discourse (Strömbäck, 2005).

The other problematic media use pattern is turning only to news outlets with one specific ideological position or a very limited thematic scope. Although less obvious, one could also argue that concentrating on a specific media genre (such as only tabloids, broadsheets, soft news programs, or the TV evening news) or even channels (such as only television, newspapers, or the Internet) restricts one's horizon and therefore is bad for the democratic discourse (Helberger, 2011). But is it bad if people spend, say, 80% of their media time on media outlets tailored to their needs but share 20% of their media

behavior with others? And, if so, how many others? In light of these definitional problems, it makes sense to see fragmentation and polarization not as a binary characteristic of an audience but as a continuum (Handel, 2000). Rather than to state that country X has a fragmented or polarized audience, it makes more sense to state that country X is more fragmented than country Y or that it is more fragmented than country X itself some time ago. This study, therefore, does not aim to conclusively answer whether the Austrian media landscape is fragmented or polarized, but rather it explores some indications for a fragmented and polarized media use in Austria today.

Mapping News Use in Austria

Much research on fragmentation and selective exposure stems from the United States, although some studies from other countries exist. For example, Kim and Webster (2012) found minimal evidence that increased TV channel choice in South Korea has widened the gap between news avoiders and heavy viewers. Although it seems natural that people avoid media content they do not like, media systems differ greatly regarding the role of public service media, the degree to which media typically differ in their political standpoints (Hallin & Mancini, 2004), and the extent to which citizens are subject to cross-cutting exposure to outlets of divergent political stances (Goldman & Mutz, 2011). The same applies to the political and electoral systems, to public culture, and to levels of interest in politics and political participation.

Consequently, results could be contingent on the context in which research is conducted. The reason for this is that agents and structures interact; in other words, agents are dependent on structures in their media choices (see, e.g., Webster, 2011). Structures, however, differ between media landscapes. The generalizability of these studies, therefore, even for other Western democracies, is precarious. For example, U.S. research relatively easily distinguishes between Democratic- and Republican-leaning news outlets and blogs (Iyengar & Hahn, 2009; see Morris, 2007). In European consensus democracies and multiparty systems, these straightforward distinctions are often harder to make (e.g., Van der Meer, Lubbe, Van Elsas, Elff, & Van der Brug, 2012). The aim of this study, therefore, is also to test findings from previous studies (Trilling & Schoenbach, 2011, 2013) in a different media system, in Austria.

Austria, with a little more than 8 million inhabitants, is one of the smaller European countries. It consists of nine states with notoriously strong regional identities. In Hallin and Mancini's (2004) typology of the relationship between the political system and journalism, Austria belongs to the North/Central European or democratic-corporatist model. Compared to other members of this model, the Austrian media landscape is assumed to be characterized by more political parallelism in media and politics (Karmasin, Kraus, Kaltenbrunner, & Bichler, 2011). If this description is accurate, it should be easier for Austrians to find a media outlet matching their political preferences.

At the same time, the newspaper and TV landscape is characterized by a national oligopoly. The tabloid newspaper *Kronen Zeitung* reaches almost 40% of the population, an exceptionally high share compared to other countries. In the broadcast sector, commercial stations were introduced as late as the 1990s and still hold a weak position compared to the public service organization ORF (Karmasin et al., 2011). The Austrian television market is also considerably influenced by stations from neighboring

Germany, which shares the same language (Steinmaurer, 2009). Compared to other small countries, Austrian media are more regionalized (Bardoel & Van Reenen, 2009; Steinmaurer, 2009). The online media landscape in Austria is characterized by a moderate level of Internet penetration: According to the European Union's *Eurostat*, in 2012, 75% of Austrian households had access to the Internet—thus, it falls in between some European countries with well above 90% penetration such as the Netherlands and other, mainly postcommunist, countries with Internet penetration below 60% (European Commission, 2012). Structurally, online-only news sites play a marginal role in Austria; most online news outlets are spin-offs of an offline counterpart (Steinmaurer, 2009).

Studies specifically on fragmentation and polarization that include exposure to *all forms* of today's news outlets in Austria do not exist. Such a comprehensive approach seems necessary, because patterns of news consumption are usually relatively diverse and include local and national outlets of very different types (e.g., Ksiazek, Malthouse, & Webster, 2010). We conducted the first survey exploring patterns of news exposure in Austria taking into account both online and offline outlets. In doing so, we were especially interested in

- the size and composition of groups in society with (almost) no news exposure at all,
- the size and composition of groups with a highly concentrated and specific news diet, and
- the overlap of different diets.

Based on Webster's (2005) argument that audience polarization can proliferate in a fragmented media environment, we pursue an explorative approach to find signs of both. Specifically, we pose the following research questions:

RQ1. To what extent do particular types of users spread their news media exposure across different outlets?

RQ2. How much fragmentation and polarization of news media exposure in Austria can be observed?

To assess whether the often-discussed personal attitudes and preferences really are the factors that drive media choices or whether more structural factors are at work, we ask:

RQ3. Which factors are related to the choice for specific news media use diets?

Method

Sample

From a panel with about 201,000 members age 14 years and older, research bureau Marketagent.com drew a sample using quotas to match age, gender, and place of residence with the Austrian population. Our Web-based survey was conducted in November 2010. A response rate of 17% was achieved, resulting in a sample size of 2,954 after removal of invalid cases. Although this response rate is lower than desired, the sample size is still suitable for our purpose. The main aim of our study is to explore general patterns of media exposure among Austrian Internet users—patterns that should not be significantly influenced by a nonresponse bias. Additionally, we removed 125 respondents under age 18,

because adolescents' media behavior tends to differ, and this was not the focus of our study. Therefore, our analyses are based on a sample of 2,829 participants.

Measurement

News exposure. Our questionnaire gauged news use separately for a total of 80 general news outlets. These sources range from newspapers to television programs to news websites. We included all newspapers, all news and current affairs programs on Austrian television channels and the four major German channels, the websites of these offline outlets, magazines, radio news, and teletext. In addition, we compiled an extensive list of websites that are not linked to any offline source but that offer at least some general interest news. For each source, we asked respondents for the number of days it is used in a typical week.

Independent variables. To describe the composition of those who use a specific news diet, we used characteristics of the respondents with an established relationship to news consumption in general (see above). They were measured using 7-point scales, unless stated otherwise¹:

- Entertainment preference. The respondents indicated on three 10-point scales whether they use newspapers, television, and the Internet, respectively, for information or for entertainment purposes.
- Political interest. We asked: "Generally speaking, how interested are you in politics?"
- Civic duty to keep informed. We measured agreement with the statement "It is important that people in society are informed about news and current affairs."
- Political efficacy. Both an internal efficacy scale, consisting of four items (Cronbach's $\alpha = .78$), and an external efficacy scale (three items, Cronbach's $\alpha = .78$) were inspired by Niemi, Craig, and Mattei (1991).
- Need for cognition. We shortened a scale provided by Cacioppo, Petty, and Kao (1984) (Cronbach's $\alpha = .84$).
- Extraversion. We selected four items used by Stefanone and Jang (2008) as well as by McCrae and Costa (1996) (Cronbach's $\alpha = .72$).
- Sociodemographics. Age, gender, and education were gauged. For the latter, we used a 7-point scale, ranging from elementary education or less to a university degree. To measure region of residence, we asked in which of the nine states of Austria the respondent resides.

¹ The exact wording of the questions can be seen at <http://www.uva.nl/profile/d.c.trilling>.

- Finally, we measured political orientation as a predisposition for selective exposure to news outlets. We used an 11-point scale ranging from "left" to "right." The strength of one's ideological position was calculated as the distance from the midpoint of this scale.

Analysis

We calculated the Herfindahl-Hirschman Index (HHI) for each user to assess her or his media consumption pattern. Is the total amount of exposure concentrated on few outlets or scattered over many outlets? The higher this value, the more concentrated someone's news consumption pattern is. Because this index is highly skewed, we took its natural logarithm (a common transformation in such a case; see, e.g., Aron, Aron, & Coups, 2008) and regressed the independent variables on it to assess the effects that personal and structural factors can have on dispersed media use.

The composition of news diets was explored by means of a hierarchical Ward's linkage cluster analysis. Unlike another widely used data reduction technique, factor analysis, which aims to identify *variables* measuring the same concept, a cluster analysis tries to find similar *cases*, which is exactly what a study to identify people with similar patterns of news exposure needs to do. Starting with as many clusters as there are respondents, the analysis merges step-by-step those clusters with the highest similarity—a process that obviously ends in one large cluster. As discussed above, the researcher thus has to decide on when to stop the process, using tools such as statistical stopping rules or plots for inspection such as dendrograms or scree plots; but interpretability and theoretical considerations also should be taken into account (e.g., Norušis, 2011).

The cluster analysis becomes shaky if outlets with a strongly skewed distribution are included. This is why we included only those 42 outlets in the cluster analysis that were used by more than 10% of the population. Unfortunately, a cluster analysis is not able to find a potential group of users whose news diet may consist of a considerable proportion of very small outlets. However, an inspection of those who use the excluded outlets showed that such a group is virtually nonexistent, which is in line with previous research (Webster & Ksiazek, 2012).

In a second step, we analyzed how our independent variables relate to the choice for one of the news diets identified by the cluster analysis. To this end, we estimated the likelihood of being a member of a specific cluster by means of a hierarchical multinomial logistic regression.

Results

Dispersed Patterns of Media Use

A graphic representation of the days each outlet is used in an ordinary week shows that, apart from radio news, the tabloid *Kronen Zeitung*, and the main TV broadcasts (the bars on the left of Figure 1), exposure is distributed among a large number of outlets—a possible sign of fragmentation.

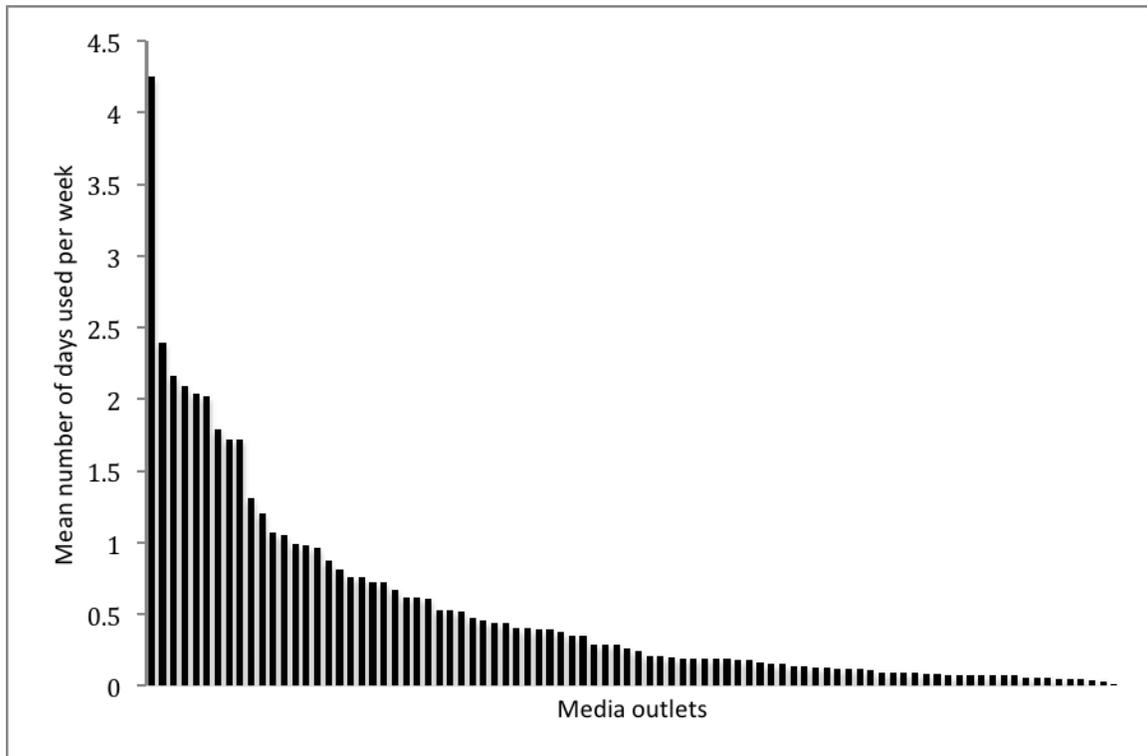


Figure 1. Reach of media outlets.

Our measure of individual exposure diversity, the Herfindahl-Hirschman Index (HHI), shows a mean of 0.11 ($SD = 0.12$), which, in line with what Figure 1 suggests on the aggregate, can be interpreted as a sign of an individually somewhat dispersed media use, as it can range from 1 divided by the number of sources ($= 0.0125$) to 1. What is it determined by?

Dispersed patterns, with less concentration on a few sources (represented by lower HHI values), are more common among older people, extroverts, people with a stronger political interest, those who feel a higher political efficacy and a stronger duty to keep informed, those with a low need for cognition, and those with a low entertainment preference (see Table 1). On the other hand, political orientation and the strength of ideology, while dominating the academic discussion, do not seem to affect the degree to which people use a large variety of sources.

**Table 1. Whose Media Diets Are Dispersed?
Ordinary Least Squares Regression to Predict Concentration of Media Use.**

	b	SE
State of residence: Lower Austria	-0.01	0.04
Burgenland	-0.12+	0.07
Upper Austria	-0.01	0.04
Styria	0.01	0.04
Carinthia	0.02	0.05
Salzburg	0.01	0.05
Tyrol	0.02	0.05
Vorarlberg	0.11+	0.06
Age	-0.01***	0.00
Education	-0.01+	0.01
Gender	-0.00	0.02
Internal efficacy	-0.02+	0.01
External efficacy	-0.03**	0.01
Political interest	-0.06***	0.01
Political orientation	-0.01	0.01
Ideology strength	0.01	0.01
Entertainment preference (TV)	0.01*	0.00
Entertainment preference (newspaper)	0.00	0.01
Entertainment preference (Internet)	0.01*	0.00
Civic duty to keep informed	-0.02*	0.01
Extraversion	-0.03*	0.01
Need for cognition	0.03*	0.01
Constant	-1.75***	0.10

R^2 : 0.12

Note. $N = 2,794$. State of residence: The reference category is the state of Vienna. Dependent variable: Natural logarithm of the HHI ($M = -2.48$, $SD = 0.65$, $min = -4.36$, $max = 0$).

+ $p < 0.10$. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Patterns of News Exposure

To which extent is there polarization—small clusters of people using similar media extensively and avoiding others, driven by the same motivations? To answer this question, we look at how groups of people combine the different outlets. Our analysis starts with a model with as few clusters as reasonably possible, according to the dendrogram, the Duda-Hart stopping rule, and its interpretability. As shown in Table 2, five major patterns of combining news media in Austria can be distinguished. One of them contains half of the sample. We call these people occasional users (cluster 1), because they are exposed to a limited number of news media and do not show clear preferences for one or the other outlet—except for radio news, which most of them listen to on a regular basis.

A second group shows exactly the opposite behavior: Heavy users (cluster 5, comprising 8.8% of the sample) differ from all the other groups mainly by much higher frequencies of exposure to all outlets. But like the occasional users, heavy users do not show specific preferences in their media choice. They also use some additional sources that are not part of any other news diets, such as the tabloid newspaper *Österreich*, several television programs from Germany, and less popular Austrian TV programs on all stations. Occasional users and heavy users are mainly characterized by their amount of exposure rather than by what they are exposed to.

Three more distinct news diets were identified; these media users were distinguished by their preference for regional media (cluster 2), tabloid media (cluster 3), and public service media (cluster 4). These preferences persist across media channels: Readers of regional (cluster 2) or tabloid (cluster 3) newspapers visit the websites of these newspapers as well, and those who watch public service television news (cluster 4) also visit the respective station's website.

Table 2. Cluster Analysis of News Media Exposure.

Title	Type	1 Occasional users	2 Regional users	3 (Public Service) TV fans	4 Tabloid reader s	5 Heavy users
<i>Österreich</i>	Tabloid newspaper	0.7	0.5	0.7	0.8	2.2*
<i>Kurier</i>	National newspaper	0.3	0.2	2.8*	0.5	1.1
<i>Die Presse</i>	National newspaper	0.4	0.4	0.6	0.1	0.8
<i>KronenZeitung</i>	Tabloid newspaper	1.2	2.1*	1.4	6.1*	4.3*
<i>Heute</i>	Free newspaper	1.0	0.1	0.9	1.1	1.8
<i>Der Standard</i>	National newspaper	0.5	0.4	0.5	0.1	0.8
<i>Kleine Zeitung</i>	Regional newspaper	0.3	6.6*	0.2	0.4	0.9
<i>Oberösterreichische Nachrichten</i>	Regional newspaper	0.4	0	0.2	0.3	1.2
Zeit im Bild 1	Public service news	1.1	2.3*	3.9*	2.4*	5.1*
Zeit im Bild 2	Public service news	0.9	2.2*	3.8*	2.0*	5.4*
Zeit im Bild 20	Public service news	1.0	2.0*	2.6*	1.5	4.5*
Zeit im Bild 24	Public service news	0.5	0.7	1.4	0.7	2.8*
Weltjournal	Public service current affairs	0.2	0.3	0.4	0.3	1.6
Tagesschau	German Public-Service News	0.2	0.4	1.1	0.3	2.0*
Tagesthemen	German Public-Service News	0.2	0.3	0.7	0.3	1.5
Heute	German Public-Service News	0.2	0.4	0.8	0.3	1.9
HeuteJournal	German Public-Service News	0.2	0.3	0.8	0.2	1.6
RTL Aktuell	Commercial TV news	0.9	1.0	0.8	1.1	2.1*
Stern TV RTL	Commercial TV current affairs	0.4	0.4	0.4	0.6	1.5
Austria News	Commercial TV news	0.9	0.7	0.6	1.0	2.1*

Arte Journal	German/French TV news	0.1	0.2	0.3	0.1	1.2
Plus 4 Austria News	Commercial TV news	0.6	0.5	0.5	0.7	2.2*
ATV Aktuell	Commercial TV news	0.5	0.7	0.7	0.8	2.4*
ZIB Flash	Public service TV news flash	1.1	2.0*	2.5*	1.9	3.6*
Heute in Österreich	Public service current affairs	0.4	1.1	1.5	1.2	4.0*
Regional TV	Regional TV	1.0	2.6*	3.6*	2.6*	4.6*
krone.at	Tabloid newspaper website	1.0	1.2	0.8	2.0*	3.0*
heute.at	Free newspaper website	0.2	0.1	0.2	2.0*	3.0*
oe24.at	Tabloid newspaper website	0.3	0.3	0.4	0.5	1.5
kleinezeitung.at	Regional newspaper website	0.3	3.0*	0.3	0.3	1.1
kurier.at	National newspaper website	0.4	0.3	1.5	0.4	1.6
nachrichten.at	Regional newspaper website	0.2	0.1	0.3	0.3	1.4
derstandard.at	National newspaper website	0.7	0.3	1.2	0.2	1.2
diepresse.com	National newspaper website	0.3	0.3	0.6	0.2	1.0
news.at	Magazine website	0.5	0.5	0.5	0.6	1.6
orf.at	Public service TV website	1.4	1.8	2.7*	1.9	2.4*
gmx.at	Portal	1.3	1.2	0.7	1.1	1.6
msn.at	Portal	0.5	0.5	0.3	0.5	1.2
kronehit.at	Radio station website	0.3	0.4	0.2	0.6	1.5
news.google.at	News aggregator	0.5	0.7	0.7	0.9	1.9
radio news		3.5*	5.0*	5.2*	4.9*	5.1*
news on teletext		1.4	2.0*	3.1*	2.4*	3.3*
n=		1470	275	385	451	248

Note. Numbers indicate the average number of days per week the source is used. Outlets used on at least 2 days per week are marked with an asterisk.

Regional users (cluster 2, comprising 9.7% of the sample) are mostly defined by reading the regional paper *Kleine Zeitung* and the corresponding website *kleinezeitung.at*. They sometimes read the tabloid paper *Kronen Zeitung* as well. Frequently they watch one of the many editions of the public service news broadcast *Zeit im Bild*, without showing a specific preference for one of them in particular. Their regional interest is also reflected in their exposure to regional television news.

Regional television news is also watched by the (public service) *television fans* (cluster 3, comprising 13.6% of the sample). Compared to regional users, television fans are mainly characterized by more frequent exposure to television news programs. Furthermore, they do not read regional newspapers, but rather the national newspaper *Kurier*. Their preference for public service television is also reflected in their regular visits to the public service television's website.

Tabloid readers (cluster 4, comprising 16.4% of the sample) show a television viewing behavior comparable to regional users. Next to the tabloid *Kronen Zeitung*, they read the paper's website *krone.at* and the website of a free paper, *heute.at*, on a regular basis.

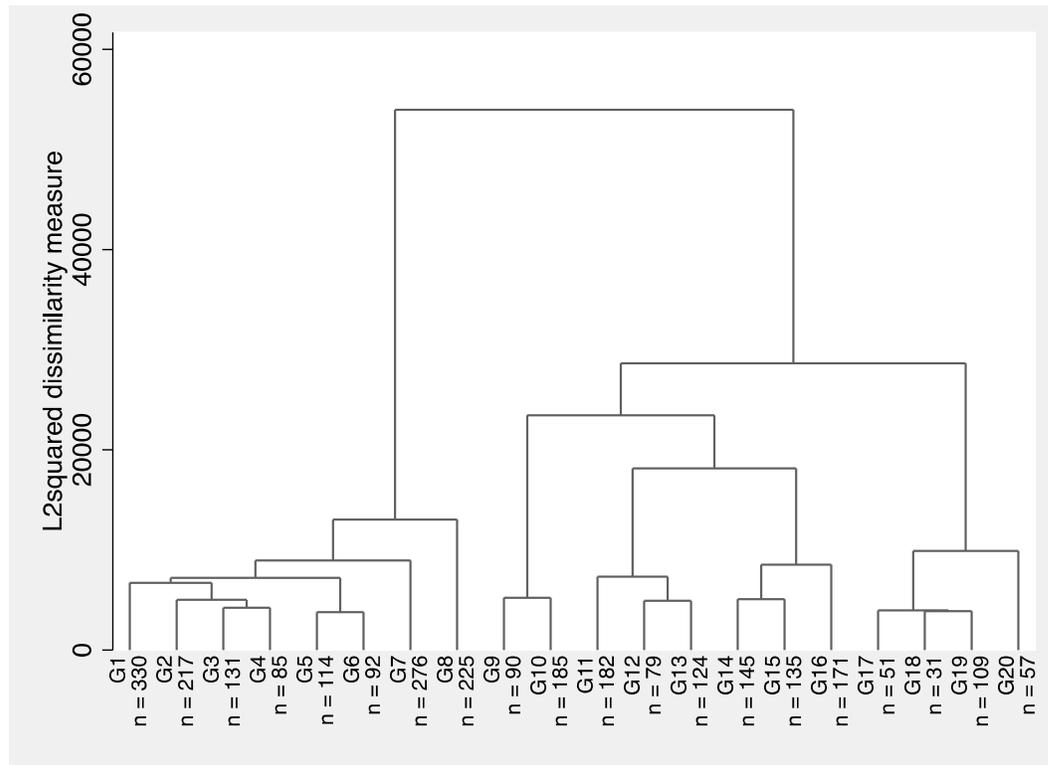


Figure 2. Dendrogram.

But is it justified to distinguish only five groups? This normative question will now be further explored by allowing more clusters. Once we increase the number of clusters to six, the group of occasional users (more than half of the sample) is split into two groups. One of the clusters uses slightly more media than the other, but does not show an interpretable, specific combination of outlets. This is represented in the dendrogram (see Figure 2) by the split of the branch on the left. Similarly, after allowing one more cluster—seven now—much the same distinction shows up in the group of heavy users (formerly 8.8 % of the sample) on the right side of the dendrogram. In other words, if we increase the number of clusters by two, the new patterns are not characterized by a different selection of outlets, but only by the level of their use.

Not until we allow for as many as 15 clusters can signs of polarization be observed. At this point, the group of tabloid readers is divided into three subclusters ($n = 145$, $n = 135$, and $n = 171$). Their most obvious difference is that the third subgroup does not use the tabloid papers' websites, which the other

groups regularly do. The last subgroup also uses fewer sources in general. Compared to the second subgroup of the tabloid readers, the first subgroup uses some additional (online) sources. But most importantly, other mainstream outlets—such as public service television news—are still an element of all three subgroups' news diets.

The original group of *occasional users* is split into four different diets, consisting of between 206 and 330 users with more specific preferences. The first group listens to the radio 5.7 days per week—what the others do only 3.4 to 3.7 days; the second group reads the free tabloids *Heute* and *Österreich* and the paid tabloid *Kronen Zeitung* and its website about twice a week; the third group watches more television and uses teletext more often than the other occasional user groups—4.5 days per week; and the fourth group turns to more Internet sources—for example, the print magazine website news.at 4.0 days per week and the national paper website standard.at 2.1 days per week.

Typical Users of the News Diets

To what extent are specific personal characteristics related to the choice of different news diets? We conducted all analyses for several numbers of clusters with comparable results, but as a practical example of a typology of news diets, we will present the results of the five-cluster analysis in more detail.

For this purpose, we use multinomial logistic regressions to analyze which personal preferences and characteristics enable us to distinguish between *occasional users* and those with a more pronounced preference (clusters 2, 3, and 4).² We use the occasional users as reference category because they are the biggest group and have the least pronounced media preferences (see Table 3).

**Table 3. Who Is a Member of Which Cluster?
Multinomial Logistic Regressions to Predict Cluster Membership.**

	M0 exp(b)	M1 exp(b)	M2 exp(b)
Cluster 2—regional users			
Lower Austria	0.54	0.5	0.54
Burgenland	6.63+	7.21+	7.58*
Upper Austria	0.64	0.66	0.73
Styria	220.28***	259.4***	306.21***
Carinthia	121.65***	151.88***	172.24***
Salzburg	0.00	0.00	0.00
Tyrol	5.37	6.2*	7.37*
Vorarlberg	1.79	1.93	2.04

² This is what the odds ratios in Table 2 show. They predict how a one-unit increase of the independent variable changes the odds of being a member of each cluster *compared to cluster 1*, which is the reference category. For direct comparisons between all the other clusters (as well as b coefficients and standard errors), see the additional material provided at <http://www.uva.nl/profile/d.c.trilling>.

Age		1.05***	1.05***
Education		1.07	1.05
Gender		1.01	0.85
Internal efficacy			1.11
External efficacy			0.96
Political interest			1.09
Political orientation			1.06
Entertainment preference (TV)			1.00
Entertainment preference (Newspaper)			0.90*
Entertainment preference (Internet)			0.98
Civic duty			1.20**
Extraversion			0.92
Need for cognition			0.92
Cluster 3—TV fans			
Lower Austria	1.11	1.07	1.15
Burgenland	1.4	1.73+	1.91*
Upper Austria	0.5***	0.58*	0.60*
Styria	0.47**	0.63+	0.72
Carinthia	0.25***	0.36*	0.41*
Salzburg	0.85	1.18	1.33
Tyrol	0.79	1.03	1.20
Vorarlberg	0.62+	0.76	0.85
Age		1.08***	1.07***
Education		1.14***	1.07+
Gender		1.56***	1.35*
Internal efficacy			0.99
External efficacy			1.07
Political interest			1.19***
Political orientation			0.99
Entertainment preference (TV)			0.96
Entertainment preference (Newspaper)			0.96
Entertainment preference (Internet)			0.98
Civic duty			1.16***
Extraversion			1.06
Need for cognition			1.05
Cluster 4—tabloid readers			
Lower Austria	1.26	1.21	1.31
Burgenland	0.97	1.04	1.13
Upper Austria	1.57**	1.47*	1.65**
Styria	1.71**	1.87**	2.04***
Carinthia	1.05	1.29	1.37

Salzburg	1.36	1.54+	1.69*
Tyrol	1.05	1.15	1.29
Vorarlberg	0.04***	0.04**	0.05**
Age		1.05***	1.04***
Education		0.84***	0.86***
Gender		0.94	0.92
Internal efficacy			1.01
External efficacy			0.96
Political interest			1.09*
Political orientation			1.11***
Entertainment preference (TV)			0.98
Entertainment preference (Newspaper)			0.92**
Entertainment preference (Internet)			1.08***
Civic duty			1.11**
Extraversion			1.12+
Need for cognition			0.88*
Cluster 5—heavy users			
Lower Austria	0.92	0.89	0.91
Burgenland	0.95	1.16	1.28
Upper Austria	1.45+	1.57*	1.54+
Styria	0.75	0.99	1.00
Carinthia	0.94	1.36	1.33
Salzburg	1.29	1.82*	2.02*
Tyrol	0.35**	0.44*	0.48+
Vorarlberg	0.57	0.68	0.66
Age		1.09***	1.08***
Education		0.95	0.92+
Gender		1.2	1.07
Internal efficacy			1.06
External efficacy			1.03
Political interest			1.19***
Political orientation			1.03
Entertainment preference (TV)			0.91**
Entertainment preference (Newspaper)			0.95
Entertainment preference (Internet)			1.02
Civic duty			0.95
Extraversion			1.38***
Need for cognition			0.80***
Cragg-Uhler pseudo-R²	.304	.449	.492
Δpseudo-R²		.145***	.043***

Note. $N = 2,829$. Reference cluster is cluster 1 (occasional users). State of residence: Reference category is Vienna.

+ $p < 0.10$. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

To account for the highly regional structure of the Austrian media landscape, we proceed in a hierarchical way. First, and even before including other sociodemographics, we control for the region of residence—which is a proxy for easy access to specific offline media outlets in Austria’s highly regionalized media landscape. Indeed, most of the fit of the final model (M2) is already accounted for by the region of residence (M0).³ As an example, the regional diet of *Kleine Zeitung* together with *kleinezeitung.at* (cluster 2) occurs almost only in the states of Styria and Carinthia. Virtually no one from another state uses this repertoire. And the news diet that is mainly characterized by reading the tabloid newspaper *Kronen Zeitung* is rare in the state of Vorarlberg. Compared to inhabitants of Vienna, the odds that someone from Vorarlberg—more than 600 kilometers west of Vienna—chooses this diet decrease by 95%, once all other variables are controlled for.⁴

In a second step, we inserted demographic variables. The people in all four other clusters are significantly older than the occasional users. In fact, age is the variable most strongly related to the choice for a nonavoiding news diet—with the exception of the region of residence variable, but only for some diets. Being 15 years older (which equals one standard deviation) increases the odds of being a regional news user by a factor of 1.95, the odds of being a television fan by 2.66, the odds of being a tabloid reader by 1.87, and the odds of being a heavy user by 3.25. In addition, tabloid readers are less educated, whereas public service TV fans seem to have enjoyed a comparably good education. Frequent public service TV viewers also tend to be male, which is the only gender difference we find in our analysis.

In a final step, we entered the variables that we expected to have a substantial impact on the choice for a specific news diet.⁵ Although they seem to explain the choices to a much lesser extent than the sociodemographic variables do, they point to some interesting differences between the users of the respective news diets. Compared to occasional users, other groups are more interested in politics and feel a higher civic duty to keep informed. An increase of a single point on the 7-point political interest scale increases the odds of being either a TV fan or a heavy user of all media by 19% and the odds of being a tabloid reader by 9%, all other variables being equal. The duty to keep informed has similar effects: A 1-

³ Unlike in ordinary least squares regressions, this pseudo- R^2 cannot be directly interpreted as explained variance; it rather reflects the improvement of the model fit. However, it is comparable in the sense that it also ranges from 0 to 1 and equals 1 if the model perfectly predicts the outcome.

⁴ All odds ratios are based on the final model (M2).

⁵ Ideology strength is not included here, because, unlike in our first analysis, which explained someone’s general tendency toward dispersed media use, it would not make sense to expect that a specific diet is used especially by people with extreme, but opposite, viewpoints. Including only political orientation is therefore more appropriate. This expectation is confirmed by an additional analysis we ran, including both political orientation and ideology strength as well as another one in which we also included the interaction of both.

point increase in this scale increases the odds of being a regional user by 20%, a TV watcher by 16%, and a tabloid reader by 11%. Entertainment preference seems to have an ambivalent influence. Internal and external political efficacy have no significant impact on any news diet. Psychological traits explain the choice for a specific news diet: Compared to occasional users, tabloid readers and heavy users are more extroverted but have a lower need for cognition.

Surprisingly, political orientation had no influence on news diets except on the group of tabloid readers—and, there, it is remarkably strong: Leaning only 1 point more to the right on the 11-point orientation scale increases the odds of belonging to the cluster of tabloid readers by 11%. Or the other way around, people with strong left-wing attitudes are very unlikely to be tabloid readers, even if all other variables are controlled for.

Interestingly, as cross-cluster comparisons of the model show, most user characteristics mainly predict whether people use *any* of the four other news diets compared to the occasional users.⁶ Individual differences in these independent variables have a considerable impact on whether someone uses a significant amount of news at all, but this difference does not really determine the choice of the outlets one uses for that purpose. For example, the members of all clusters, except the occasional users, do not differ in terms of their political interest. Political interest, then, does not explain whether someone is a tabloid reader or a heavy user, for instance. But all of these groups are more interested in politics than the occasional users. In general, this is also true for the civic duty to keep informed, although a higher civic duty also significantly *decreases* the likelihood of being a member of the cluster of heavy users: The group with the highest exposure, thus, does not necessarily feel the highest duty to keep informed.

Conclusion and Discussion

This study investigated fragmentation and polarization in Austria and explored how people combine the use of different news outlets in that media landscape. At first glance, investigating RQ1, we found some evidence that can be interpreted as individually dispersed media use and, on the aggregate, as a sign of fragmentation: Apart from a few big outlets such as the radio news, *Kronen Zeitung*, and the major TV newscasts, exposure is spread among many outlets. But a closer look reveals that this pattern of media use has little in common with the scenario many observers of fragmentation, polarization, and selective exposure are afraid of: the emergence of small issue publics of like-minded people, centered on like-minded media. Political orientation, in particular, does not seem to drive people into such patterns of media use.

Regarding RQ2, taking a closer look at signs of fragmentation and polarization, we found that the overwhelming majority of Austrians combine a variety of outlets that overlap—even if their respective main source of information differs. Thus, although the era in which everyone reads his or her daily newspaper and watches one daily news broadcast is certainly over, groups that use completely different media than the rest of the population do not emerge. One should keep in mind, however, that people tend to overreport news exposure in surveys (LaCour, 2012; Prior, 2009). In addition, the rather low response

⁶ For details, see the additional material provided at <http://www.uva.nl/profile/d.c.trilling>.

rate might have caused a bias, because it is possible that people with higher levels of media use were especially likely to take part in the survey.

Looking more closely into Austrians' media consumption patterns, they largely seem to be determined by the choice for specific offline outlets. We could not identify patterns of news consumption that were mainly characterized by the choice for specific online outlets. Even more strongly, the choice for offline outlets often defines the online preferences: Those who read tabloid newspapers tend to visit these newspapers' websites as well. The same pattern can be observed for readers of regional papers as well as for those who prefer information provided by public service broadcasting.

If we discern five major groups of news Austrian news users—and results do not differ substantially if we specify more groups—we find occasional users and heavy users with no specific preference for any news outlet. The rather large group of occasional users, whose sociodemographic characteristics differ from regular news users, is consistent with Prior's (2007) and Ksiazek, Malthouse, and Webster's (2010) findings on news avoidance. The seemingly accidental behavior of heavy users, which includes exposure to a wide but rather unspecific range of sources, is interesting, because one might expect this highly engaged group to be especially susceptible to polarized patterns—that is, to use a source not at all or heavily. In contrast to the occasional and heavy users, three groups do have distinct news outlet preferences: users of mainly regional media, of public service television, and of mainly tabloids. The choice for one of these five diets, which RQ3 aimed at, seems to depend heavily on sociodemographics, especially the region of residence, but also on extroversion and need for cognition, on political interest, on the feeling of a civic duty to keep informed, and—less consistently—on entertainment preference. The influence of the last three variables suggests that the choice for *any* heavier media diet (as opposed to being only an occasional user) is a fairly conscious one: Personal characteristics drive the decision to use news more frequently. But *which* media diet someone chooses seems to be influenced less by conscious considerations—these three variables matter much less here. This is not trivial, because it seems to show that the audiences of, for instance, tabloids as opposed to media that are deemed of higher quality might not differ that much.

Although in the Austrian media landscape many news outlets are said to have clear political profiles, the political orientation of the users did not exert a great influence. The only exception we found was among the right-leaning group of tabloid readers. From a democratic point of view, our results thus suggest that content selectivity plays a weak role when it comes to people's means of keeping up with public discourse. The increasing number of choices in today's media environment may have less impact on the public discourse than feared.

Instead, the choice for a specific news diet in Austria first of all seems to be highly contingent on the region of residence. Plausibly, a regional newspaper may not often be read by people whose region it does not cover. But in Carinthia and Styria, readers of the regional newspaper also do not differ much in the other outlets they combine with that paper. This is remarkable because, irrespective of the availability of regional print newspapers, politically right-leaning people could choose right-leaning newspaper websites regardless of where they live. Instead, they seem to visit mainly websites of their regionally available newspaper. Therefore, similar to LaCour's (2012) findings in the United States, local media in

Austria might act as a powerful counterforce to ideological polarization. Because large parts of Austria are served by only one or two local papers (Seethaler & Melischek, 2006), using a local paper almost necessarily means that one is not only exposed to attitude-consistent information. After all, in the absence of a variety of local papers to choose from, it is in the local paper's interest to reach broad audience, which is most likely reached by being ideologically balanced.

In the light of the finding that attitudes and preferences only partly explain the choice for a specific news diet, we argue that future research on news media use should take into account structural and situational factors to explain media use, in addition to audience selectivity as a consequence of these individual interests and preferences. Especially the influence of political variables—such as political interest, efficacy, orientation, and civic duty—might be considerably weaker than the influence of structural, and less commonly included, factors such as, in the Austrian case, the region of residence. This is in line with the observation by Wonneberger, Schoenbach, and Van Meurs (2009, 2011), who found that motivational factors, including political interest, exert much less influence on television news viewing than situational factors such as viewer availability. It also fits what Webster (2011) argued on a more general level: that the rationality of media users' choices is bounded by structural forces, which explains why political variables, which should matter much for a strictly rational news choice, had only a moderate influence.

Future research could focus on why, at first glance, people combine similar news outlets. Habits might play a role, but it might also be that politically interested people want to verify information from different sources or want to compare different perspectives and viewpoints. On a more fundamental level, studies that investigate patterns of media use within the framework of fragmentation have to develop some clear criteria for when the patterns found can be interpreted as fragmented or polarized: How different do news diets have to be and how tiny may distinct groups be before this becomes dangerous for democratic discourse? In our analysis, once we allowed clusters of news users to become smaller than 10% of the sample size, indeed some groups can be identified that concentrate their exposure on only a few distinct news outlets. But even those clusters show some overlap with some others. Thus, avoiding mainstream outlets is not a widespread phenomenon, and audience polarization seems to be rather limited.

For the case under study, we found little evidence for Webster's (2005) argument that polarization might hide beneath the veneer of fragmentation. To put it bluntly, Austrians differ in the amount of news they consume, and they may differ in terms of outlets they prefer, but they generally choose a comprehensive news diet, including a bit of everything from a broad range of sources. Tight enclaves of similar media used by homogeneous groups of people are not a common phenomenon. Similarly, Webster (2005) reports only "modest" levels of polarization, and Webster and Ksiazek (2012) speak of "the myth of enclaves" (p. 49) and "a massively overlapping culture" (p. 51).

But do we need to worry about the tiny subgroups that use only a narrow media diet? Yes, but only if democracy means that virtually everybody should use high-standard media, and that they do so extensively. This is where the evaluation of fragmentation and polarization still falls short: We have to

look at the consequences of media use for participation in the political process to determine whether a specific media diet is harmful enough to call for action.

Here, a thorough normative discussion is still lacking. Based on theories of democracy, one would first have to discuss the necessary proportion of citizens who are informed enough to keep democracy working. Second, agreement on how to evaluate overlap of media use is also needed. For example, one could argue that as long as users of a specific news diet use one single outlet on a regular basis that is also used by the majority of the population, then the further composition of their news diet does not matter. And our study suggests that this could actually be a prominent media use pattern: Despite all possible fragmentation in the long tail, the use of mainstream news media is largely independent from people's attitudes and hardly polarized.

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