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Exploring the Differences between Heavy and Light Users of Internet News Websites

Summary

Online publishing is one of the recent and emerging issues of information technologies. Although news has a different value, updateability gives news web sites and online newspapers the competitive edge against printed ones. The choices of the news source, time spend for news viewing and expectations from the source differ for every user.

The purpose of this study is to explore the major preference differences of heavy and the light users of online newspapers in Turkey. In order to determine and understand the main differentiating criteria of these two behavioral classes named the heavy and light user, the polarized contrasting groups were taken into comparative statistical analyses.

Key Words: Online newspaper, electronic publishing, online media, heavy-light users, Turkey.

I. INTRODUCTION

With the internet domination in the new era of cyber age, like most of the mass communication system did, the newspapers also gain a new form to adopt themselves. Because of most of the advantages of this new medium, like easy updateability or larger number of audiences; online news mediums build a sustainable place in mass communication sector.

In recent years, significant numbers of researches have been done to understand the general characteristics of online news mediums, the effects and the outcomes of the revolution of printed newspapers though internet. Since the ongoing technological developments reflect on the adaptation process of the online readers and the online news medium itself, studies about online newspapers should be developed continuously. The online news reading behavior should be another headline of online news researches in order to determine the reading habits and predict the potential of online news medium.

With this perspective, the purpose of this study is to explore the differences between heavy and light online news medium viewers in Turkey. Understanding the behavioral differences about time spend on online news viewing could help to determine different reader groups and give opportunity to extent the online news market more specifically. The major research questions are; do these two behavioral groups differ from each other with their expectations from news websites and in which ways light and heavy users of online news websites differ from each other. It is also studied if these groups differ in terms of their demographical characteristics.

In order to find out the answers of these questions a multi stage research has been designed and implemented. It is an exploratory research to understand and discuss the source of this behavioral difference of heavy and light users.

II. LITERATURE REVIEW

In order to follow up the development of the mass communication and the role of the technology in the change of the mass communication systems and viewers' behaviors, the chronological development of communication history should be carefully examined.

The invention of the movable printing press was the first breaking point for mass communication. With this innovation of Gutenberg, it became possible to share the same content of information with uncountable number of people as long as the paper and ink stays. This makes the newspaper the main medium for mass communication for a long time until the arrival of radio and TV (Peng, Tham & Xiaoming, 1999). The newspapers are giving the previous days news while radio and TV has the ability to bring out more recent updates on any subject. This disadvantage creates problems for printed newspapers like, decreasing readership and revenue (Bressers & Bergen, 2002).

The second break through in news expansion begins with the diffusion of WWW (World Wide Web). Technological developments create new mediums that make information transaction easier. In 1994 newspapers started to use internet to publish online, by 1999 nearly all newspapers has an online version in United States (Boczkowski, 2004). Newspapers still increasing their investments on WWW (World Wide Web) (Lin, 2002). By this means, it is possible to arrogate that the growing development of communications through internet starts with publishing the digital versions of most of the printed newspapers and this caused consequential changes in the newspaper business (Flavián, Guinalíu & Gurrea, 2006). Newspapers got the advantage of access and updateability with internet like radio and TV after all. Internet even brings in more sophisticated features for newspapers. On the other hand, this situation could also be considered as the birth of the new competition for printed newspapers which are the online newspapers (Deleersnyder, Geyskens, Gielens & Dekimpe, 2002; Kimber, 1997).

Of course, the newspapers have the revenue concern while most of the online newspapers are free of charge and the readership numbers are declining (Ihlström & Palmer, 2002; Bressers & Bergen, 2002). Both printed and online newspapers have to find a way to keep their revenue while they have to satisfy the readers' expectations for updateability, interactivity, personalization alongside reliability, credibility and accuracy on their news view (Ihlström & Palmer, 2002). Online medium gives so many opportunities to generate revenue like advertisement revenues, company advertisement or subscription fees. On the other hand, online newspapers readers do not seem to be susceptible to pay for their online newspapers (Deleersnyder, Geyskens, Gielens, and Dekimpe, 2002; Tom, 1998) Turkish online newspaper readers do not like to pay for their online newspaper since there are many free

alternatives are available both as online newspapers and news web sites (Kurtulus, Kurtulus & Bulut, 2007). Because of this, newspapers tend to lower the online newspaper setup costs by spending less for their content and try to build revenues by promoting online versions (Rodgers, Jin, Choi, Sui & Brill, 2005; Ihlström & Palmer, 2002). It is very common for newspapers to use online newspaper as a promotion tool for their newspapers and even other convergence partners.

The best way to lower the cost for the content is "convergence" or "media cross-ownership" (Pedersen, 2006; Cooke, 2005; Welch, 2004; Mark, 2004). Convergence is the combination of different medium owned by the same company or news network. Building convergence gives the news group the opportunity to use one news source for all mediums (Pedersen, 2006; Cooke, 2005). At the same time, using the same news staff, writes and even administration able to parallel the news content (Cooke 2005; Mark, 2004; Boczkowski, 2004). Newspapers could countervail the revenue lose caused by the television networks, radios and online newspapers by convergence and even gain advantage. These mediums became a promotional tool for each other. With links to each other or associate projects they minimize the cost and maximize the promotion.

News networks use every advantage from each medium to build up a stronger convergence. Online newspapers automatically has the flexibility of the internet medium like; archives/search engines, interactivity features, audio, video, animation, multimedia, vertical form with unlimited newshole, increased user control and personalization (Bruce, 2006; Cooke 2005; Ihlström & Henfridsson, 2005; Welch 2004). Online newspapers do not have space limitations like printed versions. It is possible to build a large archive, attach news details and give more detailer visual and audial extra content with the news (Dibean & Garrison, 2001; Harper, 1996). These availabilities also develop the expectation of readers to see a different and more detailed content in online newspapers than printed versions (Hoffman, 2006). Different forms of content like text, graphics, animations, audio records, visual images or photographs could be combined to increase the effect of the news (Boczkowski, 2004). This is not just about the types of the news content, it could also affect the way the story structure of the news. The classical form of linear story telling changes by online newspapers and transfigure to a new and different form in which the story is supported by related links (Dibean & Garrison, 2001).

Updateability is the key of online news' success (Kaye & Johnson, 2000). Although most of the online newspapers use the exact same content of the printed newspaper, the medium gives the opportunity to up date the content more frequent than daily basis. With some exceptions, media convergence also able the online newspapers to be more up to date in content bases. When flash news is already organized for TV or radio news bulletins, it is also easy to use it to up date the online content (Kurtulus, Kurtulus & Bulut, 2007; Pedersen, 2006; Mark, 2004). Online structure also allows the medium to be up dated from any location with enough technical support. This helps to gather the flash news from all over the world for all kind of news medium.

Interactivity is another key attribute of online newspapers (Pedersen, 2006; Welch, 2004). Interactivity refers to use of public to public and one to one communication spaces such as forums, chat rooms, user-authored sites (Pedersen, 2006; Boczkowski, 2004; Welch, 2004). It is possible to define two broad dimension of interactive online journalism. One is content interactivity, defined generally as a degree how journalists technologically empower consumers over content. The second is interpersonal interactivity which news audiences can have computer-mediated conversations through journalists' technological largess (Massey & Levy, 1999). The possibilities of the internet technology could raise the quality of interactivity of the online news medium, it is important how much of these resources turn to account in favor of online journalism, (Rosenberry, 2005; Welch, 2004). But that does not mean every online news medium is interactive (Pedersen, 2006; Morris & Ogan 1996).

Personalization of the news medium is another availability the internet technology offers. Changing the original design of the online newspaper for personal needs or priorities is possible in today's web design technology (Rosenberry, 2005). Personalized news pages, polls, availability of writing comments on the news and up date alerts could be very attractive for online news papers' readers (Moore, 2002). Spaces for interpersonal communication, multimedia, and content that is hyperlinked, archived, updated frequently and available for personalized delivery are cited variously as hallmarks of the ideal interactive World Wide Web news site (Erwin, 2000).

The reliability and credibility of the information and news is also very important for both customers and publishers even in online news media (Kurtulus, Kurtulus & Bulut, 2007; Cassidy, 2005; Johnson & Kaye, 2000). Since the immediacy and update ability gets more

importance, the news people have limited time to check the reliability, credibility and accuracy of the information. Still, online newspaper readers do not want to abdicate reliability and credibility of the news even that means some delay (Kurtulus, Kurtulus & Bulut, 2007). This could give printed news media more credibility over online news media when there is any doubt about reliability, credibility or accuracy of the information (Johnson & Kaye, 2000).

Since online newspapers have so much to offer, it is important to understand what does the online newspaper reader really wants. It is obvious that there is more than one kind of reader/consumer for every online newspapers/news web sites. Online news reading behavior and adopting to online news source is also related with socio-economic characteristics (Nguyen & Western, 2007). Since there are many researches which are trying to distinguish the characteristics of online newspapers and what is offered to readers; (Kurtulus, Kurtulus & Bulut, 2007; Ihlström & Henfridsson, 2005; Boczkowski, 2004; Dibean & Garrison, 2001; Massey, 2000; Peng, Tham & Xiaoming, 1999; Schultz, 1999; Massey & Levy, 1999) readers characteristics should also be studied to see who is expecting what kind of an online newspaper/news web site.

Internet usage behavior of potential online newspaper or web site readers should be studied. Some research shows that the major aim to be online could affect the time spend online and that could have an effect on the web pages visited by the user. The connection point could also have an effect on the internet usage (Lin 2002; Sefton, 2000).

Online reading behavior should also be examined. Some research indicates that most of the internet users access internet daily and one of the most popular online activity is reading online (Lin 2002; Sefton, 2000). The internet access rate from work places is increasing and people check online news from their offices (Kurtulus, Kurtulus & Bulut, 2007). Online reading behavior could also be affected by access quality, time spent on news web site and online newspaper/news web site features.

News reading behavior is discussed in different perspectives. Although online news reading behavior is increasing, some studies indicate that public awareness and news topic range is higher in print newspaper readers (Schoenbach, de Waal and Lauf, 2005). Online reading like printed news reading has habitual behavior aspect. Stability could cause URL (Universal

Resource Locator) loyalty while rapid and continues changes could lower the reading time and continuity (Jeong, 2004). News recall from online and print newspapers show no certain differences between source but demographic characteristics and interest about the news topic influence the recall rate (D'Haenens, Jankowski & Heuvelman, 2004) It is also discussed that, readers may have different reading behavior patterns for local and national newspapers. Printed version of local newspapers is more preferred than online newspapers (Chyi & Lasorsa, 2002; Chyi & Lasorsa, 1999). Special groups like collage-age adults could prefer print newspapers over online versions (Bressers & Bergen, 2002). According to Jeong, newspaper reading behavior can be affected by variables like demographic factors, technology and reading subject information level and entertainment expectation of the features available on the news website (Jeong, 2004).

Although some characteristics could be defined with these researches for online newspaper and news web site readers, it is also important to identify these characteristics and behavioral structure for different cultures and reader segments. This study aims to scope the Turkish online newspaper and news web site readers and their preference differences according to their behavioral pattern.

III. RESEARCH METHODOLOGY

The objective of this study is to explore the differences of heavy and light online newspaper/news web site readers for their preferences by their importance level related to online newspaper features in Turkey. The research hypotheses are formulized as;

H_1: Heavy and light online news readers are significantly different from each other with their online newspaper feature preferences.

H_2: The polarized groups of heavy and light online news readers differ from each other with their online newspaper feature preferences.

H_3: Heavy and light online news readers have different demographic characteristics.

In order to collect data, an online survey was conducted for one week in May 2007. 355 respondents participated in the survey online from Turkey. All of the participants declare that

they are reading online newspapers or news from websites regularly. To be able to measure and classify heavy and light online newspaper readers, average daily time spend on online newspapers or news web sites were asked to the respondents. Demographics, internets using behavior, online news reading frequency and mostly viewed news web sites were also asked.

As it was explained in the literature review section, the most important headlines regarding to online news sources brought up together to form the preference measurement scale. This scale was develop based on the these variables;

IV.I. Basic News Source Qualifications: Reliability, credibility and accuracy of the information and the news source is very important for news readers regardless of the medium (Flavián, Guinalíu & Gurrea, 2006; Cassidy, 2005; Moore, 2002; Johnson & Kaye, 2000). It is reason why the importance level of these qualifications were included in the scale (v2, v3,v4,v5, v6, v11)

IIV.I. Online and Paper News Source Comparison: Since the technological developments gives online and print newspapers differ from each other, comparison questions were also included in to scale to understand if there is any difference in importance levels of paper and online newspapers features (Ihlström & Henfridsson, 2005) (v12,v13, v14,v15)

IIIV.I. Interactivity: Interactivity is one of the key attributes that internet technology ads online news mediums (Pedersen, 2006; Rosenberry, 2005; Boczkowski, 2004; Welch, 2004; Dibean & Garrison, 2001, Massey & Levy, 1999; Schultz, 1999). It is crucial to see if readers give this attribute any importance, and if this importance level differs from heavy and light users. (v7, v16, v21)

IVV.I. Updateability: Updateability is also a very important online feature which may close the gap between online newspapers and mass communication sources like TV. It is also included into the scale to see the importance level for respondents (Pedersen, 2006;Yüksel & Sekerkaya, 2003; Kaye & Johnson, 2000, Peng, Tham & Xiaoming, 1999) (v1,v20)

VV.I. Media Convergence: Convergence and relation between different news mediums and sources could effect perception of online news source. In order to see if there is any difference caused by media convergence, two variables were (v9, v10) are included in the scale (Cooke 2005; Mark, 2004; Boczkowski, 2004).

VIV.I. Economic: Internet source create economic return mostly by advertisements and sometimes by subscriptions. Online newspapers readers do not seem to be

susceptible to pay for their online newspapers; it is also included in the scale to see if the importance levels differ between two groups (Deleersnyder, Geyskens, Gielens, and Dekimpe, 2002; Ihlström and Palmer, 2002; Tom, 1998). (v8)

VIIV.I. Personalization: Adapting internet interface according to personal needs is an option which may create an easier online news view. This is also measured by variable 19, in order to see the importance level given to this feature (Rosenberry, 2005)

VIIIV.I. Technical Qualifications: The technical features given by internet technology may also have an effect on the importance level. There are items in the scale for measuring the importance level of the technical qualifications or design. (v17,v18, v22,v23,v24)

IXV.I. Extra Options: There may be extra options given by online news web site or newspaper which are not directly related to news viewing behavior. It was aimed to see if any of these option create significant importance for viewers (v25,v26,v27)

Thus, online newspaper readers' importance level related to online newspaper features for their preferences is measured by this 27 item 5 point scale (1-strongly agree/5 strongly disagree).

Several statistical analyses were used to test the research hypotheses. Firstly, to determine the heavy and light online newspaper/news web site users and explore the preference differences between these groups, t-tests were conducted after grouping heavy and light users.

Secondly, discriminant analysis was used after removing the moderate group and forming polarized groups of heavy and light online newspaper/news web site users. To form polarized groups only 43 respondents were included from heavy users group which indicated that they use online newspaper/news web site more than 2 hours a day. In order to form an equal size group from light users 43 respondents were randomly selected among 213 users who use online newspaper/news web sites less than 1 hour a day. After forming polarized heavy and light user groups discriminant analysis was conducted.

Finally, chi-square analyses were done to see if there is any difference between heavy and light users in terms of demographic characteristics.

IV.FINDINGS

IV.I. General Descriptives:

A total of 355 individuals response to the internet survey. The gender mode of the respondents is male (197, 55.5%) and the 26-35 age group is the largest group (177, 49.9%) in the sample. Dominant income level group is earning 1001-1500 YTL (113, 31.8%) and the education level mode is graduate level (185, 52.1%). 53.5 % of the respondents are single with 190 respondents. The 18.0% percent of the sample is public sector employee with 64 respondents.

The 49.9% (177) of the respondents also read printed newspaper every day. The 60.0% of the respondents (213 respondents) access internet from their work places. The most important reason for online reading seems to be reaching up-to-date news (44.5%), followed by reaching news without buying newspapers (26.8%) and reaching news through day in addition to newspapers (16.9%).

To define light and heavy internet news readers, the respondents' online news view were asked. The majority has spent less than one hour for online news view (213 people, 60.0%), which is defined as light users. 142 respondents spent more than one hour for online news view in a day which was named as heavy users. This group also includes moderate users.

Most viewed online newspapers are milliyet.com.tr (18.1%) and hurriyet.com.tr (14.8%). Most viewed news web sites turn up to be ntvmsnbc.com.tr (17,1%) and haberturk.com (8.7%).This results are parallel to the recent studies and general circulation rates (Yüksel & Sekerkaya, 2003; Kurtulus, Kurtulus & Bulut, 2007)

Scale reliability was tested by using alpha model (Crovbach Alpha). Reliability refers to the similarity of results provided by independent but comparable data of the same group (Churchill, 1996). For 27 item scale Cronbach Alpha value is 0.789. For the scale reliability, generally Cronbach Alphas were calculated and 0.70 was regarded as the minimum level. In some exploratory research Alpha level can go down to 0.60 (Hair, Anderson, Tatham & Black, 1998). 0.789 Cronbach Alpha value for the consumer preference scale of this research is greater than 0.70, therefore this scale is reliable and could be used for further analyses.

IV.II. Hypotheses Tests:

First research hypothesis was;

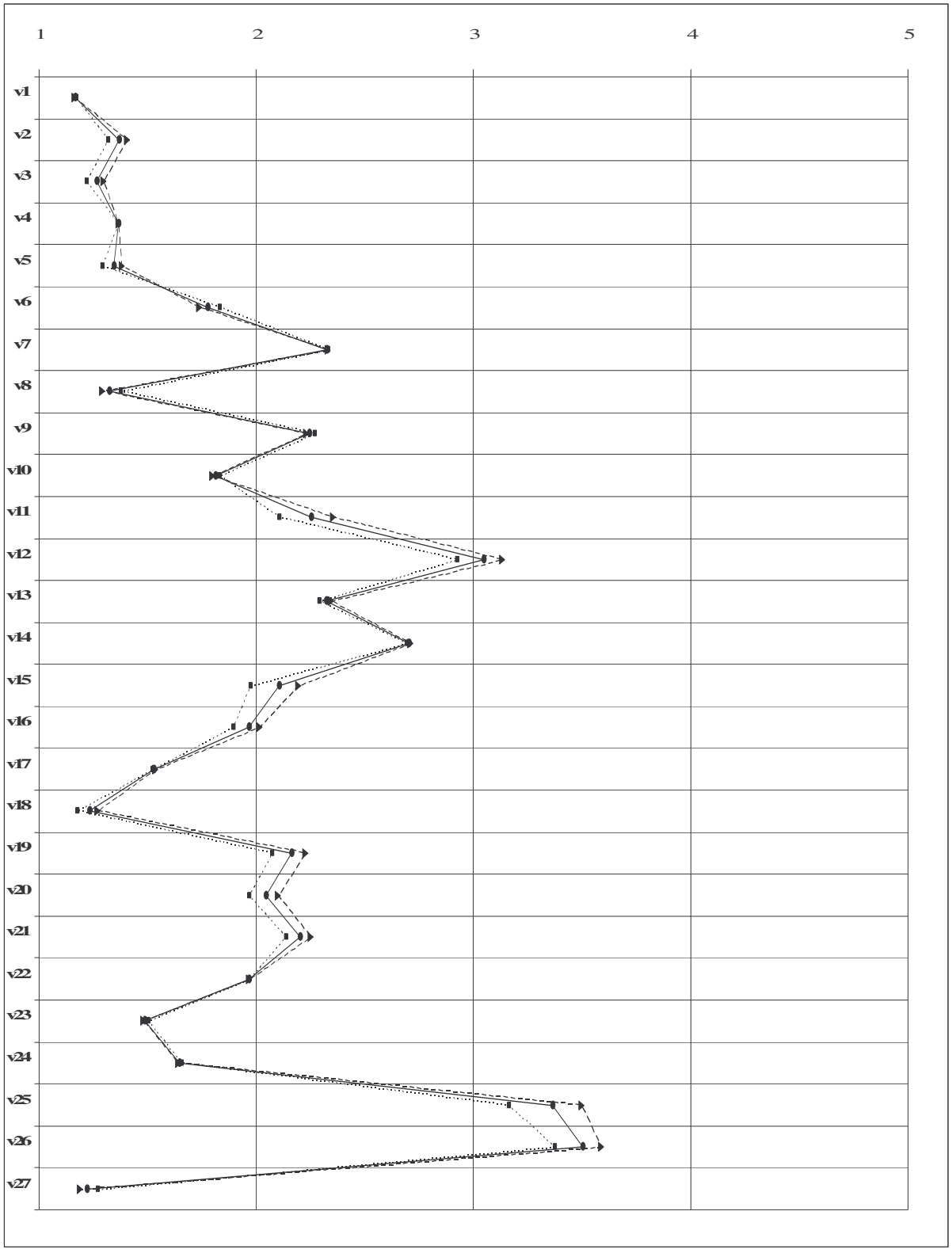
H_1: Heavy and light online news readers are significantly different from each other with their online newspaper feature preferences.

In the first step of the analysis, t-test was conducted to see the significant mean differences between heavy and light user groups in terms of 27 variables. The t-test results are shown in Table1 in the snake diagram Figure 1.

Table1. Independent Sample T-test Results

Independent Samples Test	**Levene's Test for Equality of Variances**		**t-test for Equality of Means**				
	F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**
Up to dateness	0.005	0.944	-0.101	353	0.920	-0.005	0.047
Objectiveness	1.926	0.166	1.129	353	0.260	0.087	0.077
Reliable source	6.356	0.012	1.339	353	0.181	0.077	0.058
Clear Language	0.342	0.559	0.000	353	1.000	0.000	0.058
Actuality	5.265	0.022	1.365	353	0.173	0.092	0.067
An expert newsman interpretation	1.365	0.244	-0.992	353	0.322	-0.094	0.095
Forum for readers	0.029	0.866	0.043	353	0.966	0.005	0.109
Free of charge	3.051	0.082	-1.199	353	0.231	-0.082	0.069
Links to TV etc.	0.028	0.868	-0.367	353	0.714	-0.038	0.102
Links to other news sources	0.747	0.388	-0.356	353	0.722	-0.033	0.092
Dissident interpretations*	**10.875**	**0.001**	**2.199**	**353**	**0.029**	**0.246**	**0.112**
*Design match of online and print newspapers***	*0.006*	*0.938*	*1.750*	*353*	*0.081*	*0.209*	*0.119*
Different writers for online paper	0.272	0.602	0.490	353	0.624	0.054	0.110
Different administration for online paper	2.963	0.086	0.163	353	0.870	0.019	0.115
Expanded online content*	**7.257**	**0.007**	**2.184**	**353**	**0.030**	**0.221**	**0.101**
Reader polls	0.578	0.448	1.258	353	0.209	0.120	0.095
Attractive design	0.000	1.000	0.209	353	0.834	0.014	0.067
Fast site upload	7.072	0.008	1.569	353	0.117	0.092	0.058
Site personalization	6.855	0.009	1.460	353	0.145	0.155	0.106
Update alert	1.256	0.263	1.302	353	0.194	0.134	0.103
Reader comments availability	6.115	0.014	1.091	353	0.276	0.115	0.105
Visual and audial news content	0.002	0.961	0.026	353	0.979	0.002	0.089
Smooth context	3.207	0.074	-0.326	353	0.745	-0.021	0.065
Clear and simple design	7.720	0.006	-0.222	353	0.825	-0.016	0.074
Extra features like games*	**0.470**	**0.493**	**2.472**	**353**	**0.014**	**0.336**	**0.136**
*Shopping availability***	*0.505*	*0.478*	*1.726*	*353*	*0.085*	*0.214*	*0.124*
Ads shouldn't cause an obstacle to read	4.317	0.038	-1.194	353	0.233	-0.080	0.067
* significanct at 95% and ** significant at 90%							

Figure 1. Independent Sample T-test Snake Diagram



As the sig. (2-tailed) results were examined, it is seen that 5 of the variables show significant difference between these two groups. “Dissident interpretations”, “Expanded online content”, and “Extra features like games” are significantly different for these two groups at 95% since

"Design match of online and print newspapers" and "Shopping availability" are significantly different at 90%. For all of these variables heavy users give more importance than light online news source users. Therefore H_1 is partially accepted since out of 27 variables, 5 variables found to be statistically significant. Group statistics of these 5 significant variables for heavy and light users are shown in Table 2.

Table 2. Group Statistics

Group Statistics	heavy_light	N	Mean	Std. Deviation	Std. Error Mean
Dissident interpretations	light	213	2.35	1.104	0.076
	heavy	142	2.11	0.920	0.077
Design match of online and print newspapers	light	213	3.13	1.104	0.076
	heavy	142	2.92	1.099	0.092
Expanded online content	light	213	2.19	0.984	0.067
	heavy	142	1.97	0.850	0.071
Extra features like games	light	213	3.50	1.250	0.086
	heavy	142	3.16	1.258	0.106
Shopping availability	light	213	3.59	1.119	0.077
	heavy	142	3.37	1.177	0.099

In order to define the differences of heavy and light online news readers, enter method discriminant analysis was also conducted for 355 respondents. Summary of canonical discriminant functions results denote canonical correlation was 0.357 and the square of the canonical correlation was 12.74 percent. This means, the discriminant model explains the 12.74 percent of the variance of the dependent variable preference. Discriminant function has eigenvalue of 0.146; canonical correlation coefficient of 0.357 and Wilks' lambda of 0.873. But the function is still significant with 0.012 Wilk's lambda sig. result. It would be more meaningful to see the differences of heavy and light users in the polarized or more extreme forms.

Second research hypothesis was;

H_2: The polarized groups of heavy and light online news readers differ from each other with their online newspaper feature preferences.

To test $H_{2\ \text{first of}}$ all, new groups of heavy and light users were formed by cutting out the moderate group of 99 people (27.9% of 355 respondents) who specify their online newspaper/news site view between one and two hours. Remaining 43 respondents with online

newspaper/news site view over 2 hours a day become polarized new group of heavy users. To be able to make a more objective comparison between these heavy and light user groups, 43 respondents were chosen randomly from 213 light online newspaper/news site views to form polarized light user group.

The characteristics of the new polarized sample of 86 respondents show that 55.8% of the sample is male (48 respondents), mainly between the ages of 26 and 35 (47, 54.7%) and married (47, 54.7%). The largest income group was between 1001-15000 with 24 respondents (27.9%) and occupation mode was private sector employees with 17.4% (15). The education level mode of the sample was graduate level (47, 54.7%). The 53.5% (46) of the respondents also red printed newspaper every day. The 62.8% of the respondents access internet from their work places. The most important reason for online reading seems to be reaching up-to-date news (45.3%), followed by reaching news without buying newspapers (22.1%).

In order to define the differences of polarized heavy and polarized light online news readers as it is formulated in H_2, enter method discriminant analysis was conducted. The aim of this analysis was to understand whether or not polarized heavy and polarized light online news readers differ from each other in terms of their importance level related to their news view source features.

Table 3- Summary of Canonical Discriminant Functions

Eigenvalues					
Function	**Eigenvalue**	**% of Variance**	**Cumulative %**	**Canonical Correlation (R)**	**R^2**
1	0.828(a)	100	100	0.673	0,4529
a First 1 canonical discriminant functions were used in the analysis.					

Wilks' Lambda				
Test of Function(s)	**Wilks' Lambda**	**Chi-square**	**df**	**Sig.**
1	0.547	42.513	27	0.029

When summary of canonical discriminant functions were examined (see Table 3); Discriminant function has eigenvalue of 0.828; canonical correlation coefficient (R) of 0.673, the square of the canonical correlation (R^2) was 45.29 percent and Wilks' lambda of 0.547. The discriminant model explains the 45.29 percent of the variance of the dependent variable preference.And the function is significant with 0.029. It is possible interpret the test of equality of group means results since the discriminant function is significant even in 97 percent.

Table 4 Test of Equality of Group Means

Tests of Equality of Group Means					
	Wilks' Lambda	**F**	**df1**	**df2**	**Sig.**
Up to dateness	0.987	1.113	1	84	0.29
Objectiveness	0.992	0.699	1	84	0.405
Reliable source	0.991	0.755	1	84	0.387
*Clear Language***	*0.959*	*3.627*	*1*	*84*	*0.060*
*Actuality***	0.960	3.518	1	84	*0.064*
An expert newsman interpretation	0.977	1.985	1	84	0.163
*Forum for readers***	*0.966*	*2.974*	*1*	*84*	*0.088*
Free of charge	0.969	2.692	1	84	0.105
Links to TV etc.	1.000	0.012	1	84	0.915
Links to other news sources	0.993	0.627	1	84	0.431
Dissident interpretations*	**0.932**	**6.086**	**1**	**84**	**0.016**
Design match of online and print newspapers	0.971	2.480	1	84	0.119
Different writers for online paper	1.000	0.014	1	84	0.907
Different administration for online paper	0.999	0.084	1	84	0.773
Expanded online content*	**0.922**	**7.065**	**1**	**84**	**0.009**
Reader polls*	**0.950**	**4.421**	**1**	**84**	**0.038**
Attractive design	1.000	0.039	1	84	0.844
Fast site upload	0.998	0.161	1	84	0.690
Site personalization*	**0.909**	**8.435**	**1**	**84**	**0.005**
Update alert	0.975	2.183	1	84	0.143
Reader comments availability*	**0.939**	**5.480**	**1**	**84**	**0.022**
Visual and audial news content	0.978	1.850	1	84	0.177
Smooth context	0.996	0.299	1	84	0.586
Clear and simple design	0.997	0.222	1	84	0.639
Extra features like games*	**0.891**	**10.249**	**1**	**84**	**0.002**
Shopping availability*	**0.950**	**4.405**	**1**	**84**	**0.039**
Ads shouldn't cause an obstacle to read*	**0.925**	**6.815**	**1**	**84**	**0.011**
* significanct at 95% and ** significant at 90%					

As the result of test of equality of group means show (see Table 4), 8 variables are significantly differ between polarized heavy and polarized light online news source users at 5% significance level and 3 variables differ at 10% significance level. This result actually

shows the measure of the differentiating variables of heavy and light online news users more precisely.

Table 5 shows standardized canonical discriminant function coefficients; explain the relative importance of discriminator variables forming discriminant function. The other consumer preference attributes are not significant so, it is not necessary to interpret their function coefficients. Because of this they are not shown on the table. “Clear language”, “actuality” and “forum for readers” were significant at 90% significance level, that are shown italic on the table. The standardized canonical discriminant function coefficients mean how much the dependent variable- online newspaper reading time would change with the change of that consumer preference when the other consumer preferences are fixed. The highest change would be possible with the higher function coefficients; weather the coefficient is positive or negative. As the results indicate the “dissident interpretations” has the highest effect on the function with 0.773 function coefficient.

Table 5- Standardized Canonical Discriminant Function Coefficients

Standardized Canonical Discriminant Function Coefficients	
	Function 1
*Clear Language**	*-0.435*
*Actuality**	*0.370*
*Forum for readers**	*0.136*
Dissident interpretations	0.773
Expanded online content	0.281
Reader polls	0.284
Site personalization	-0.007
Reader comments availability	0.211
Extra features like games	0.250
Shopping availability	0.103
Ads shouldn't cause an obstacle to read	-0.335
* significant at 90% others significant at 95%	

In Table 6 structure matrix; explains the loadings of the variables on the discriminant function. Higher loading of a variable indicates higher representation of that variable in the function. The highest loading on the discriminant function is 0.384 (Extra features like games), followed by 0.348 (Site personalization) and 0.319 (Expanded online content). Other significant function coefficients could be seen on the table.

Table 6- Structure Matrix

Structure Matrix	**Function 1**
Extra features like games	0.384
Site personalization	0.348
Expanded online content	0.319
Ads shouldn't cause an obstacle to read	-0.313
Dissident interpretations	0.296
Reader comments availability	0.281
Reader polls	0.252
Shopping availability	0.252
*Clear Language**	*-0.228*
*Actuality**	*-0.225*
*Forum for readers**	*0.207*
* significant at 90% others significant at 95%	

In Table 7 classification function coefficients; show polarized light and polarized heavy users' differences for every significance consumer preference. The greater difference between polarized heavy and polarized light users should be examined from this table since only the significant variables were shown. "Clear language" is the most important differentiating variable of two groups. Polarized light online news readers give less importance to "clear language" compared to the polarized heavy users. Polarized light online news readers give more importance to "dissident interpretations", "actuality" and "shopping availability" than polarized heavy readers.

Table 7- Classification Function Coefficients

Classification Function Coefficients	**polarized light**	**polarized heavy**
*Clear Language**	-0.851	0.684
*Actuality**	-0.279	-1.436
*Forum for readers**	2.740	2.480
Dissident interpretations	3.820	2.374
Expanded online content	3.602	2.979
Reader polls	4.984	4.274
Site personalization	1.373	1.387
Reader comments availability	0.425	0.032
Extra features like games	3.933	3.552
Shopping availability	3.768	3.612
Ads shouldn't cause an obstacle to read	5.002	6.044
(Constant)	-57.667	-49.983
Fisher's linear discriminant functions. * significant at 90% others significant at 95%		

Correct classifications of the discriminant function were also determined in Table 8. According to the classifications result, 83.7% of the polarized light online news source users and 76.7% of the polarized heavy online news source users were correctly classified. Discriminant function classified 80.2% of the sample correctly where random correct classification probability was 50%. Using the discriminant function gives a better classification result; therefore the disscriminant function could be used. But again the results should be viewed with the knowledge that this study was conducted to a small sample of 86 respondents.

Table 8- Classification Results

		Polarized Heavy Users-Polarized Light Users	Predicted Group Membership		Total
			Polarized Light Users	Polarized Heavy Users	
Original	Count	Polarized Light Users	36.0	7.0	43.0
		Polarized Heavy Users	10.0	33.0	43.0
	%	Polarized Light Users	83.7	16.3	100.0
		Polarized Heavy Users	23.3	76.7	100.0
a 80.2 % of original grouped cases correctly classified.					

As a conclusion, second research hypothesis H_2 is more supported by all of the results of these analyses.

Chi-square tests were also used to analyze and to define heavy and light online news readers' demographic characteristics to test H_3. Therefore to test the third research hypothesis H_3, demographic factors like gender, age, income, occupation, marital status, internet usage habits and online news readership status were examined in groups to find out if there is a significant difference between heavy and light online news readers. Only education level has a significant relationship with polarized online news reading behavior (this test gives p=0.002 asymp. sig. value). Kendall's tau_b correlation analysis was also applied, which shows a significant negative relationship between education level and heavy news reading behavior (correlation coefficient: -0.279; sig.: 0.007). Thus, two groups were not clearly differentiated

in terms of demographic variables. The major differentiating variable is education which is surprising since the education level seems to be the key factor in internet usage time.

V. CONCLUSION

This study was aimed to explore and discuss the differences between two groups of online news web site and newspaper reader. Groups were formed by the time spend for online news web site and newspaper viewing as heavy and light users..

T-tests were conducted to find out the differences between light and heavy users with 355 sample size. Significant mean differences between two groups show that heavy online news readers gives more importance to “dissident interpretations”, “expanded online content”, “extra features like games” , “design match of online and print newspapers” and “shopping availability”. Since this group spends more time on news web sites, it is understandable that they would be having more opportunity to use extra features like games and shopping. Different opinions about news subjects and in-depth content need could be the reason heavy readers spend more time online. These qualifications could even take printed news paper reader to online news sources. Although similar results were gathered by the discriminant analysis, significant variables were insufficient to explain all the differences between two groups.

To contrast these two groups, moderate users were dropped from the sample. Even with smaller sample, it was very useful to explore the extreme differences of these two groups. Polarized heavy users give more importance to “clear language”, “actualization”, “Ads shouldn't cause an obstacle to read” and “site personalization” than polarized light users. These features are clearly related to the reading atmosphere and content. More personalization on web sites is another feature that polarized heavy online news readers are interested in. Heavy users differ from light users with their desire to have an easier web news medium and they are more interested in the content.

Light online newspaper and news web site readers spend less than one hour on these web sites a day and they are more interested in “dissident interpretations”, “reader polls”, “expanded online content“, “reader comments availability”, “extra features like games“, “forum for readers” and “shopping availability”. Although light users spend less time on these online

news mediums, they would like to read news with different opinions and with extended content. These respondents are more open to share their own opinions trough online comment services, reader polls and forums as they like to hear different point of views. Although they spend less time they are more open to try features like games and shopping through online news web sites.

Finally, as the results of the chi-square and Kendall's tau_b correlation show polarized light online news readers are more educated. This result could be the outcome of small sample as may be the indicator of time limitations of higher educated online news source readers. This should be carefully interpreted and may be further studied in future by researches.

From the marketing point of view, it would be useful to build a stronger relationship with polarized light users and create an environment that they would spend more time through their news reading process. This group is more susceptible to try new things but it would be better to gather more information about them before you formulate your strategies.

Heavy users on the other hand, are more keen on their new reading availability and suitability for them. It would be better to inform these readers about personalization of the web site and create a comfortable reading environment.

For further research, it is recommend for researchers to study on more detailed attribute scales. Measuring the importance level of an attribute with more than one variable would easy to see deeper difference between groups. It would be very helpful to measure the information level of the respondents to the related online newspaper or news web site feature, too (Jeong, 2004).

Studying the differences between genders, age and education groups would produce an apparent conclusion and may help to identify more specific segments.

Internet usage hours and news web site or online newspaper reading hours appear to be related. Further research would be useful in Turkish market to distinguish the online reading behavior and the proportion of online reading among online activities.

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