

The influence of the Internet on Portuguese press

Helder Bastos, Helena Lima, Nuno Moutinho

Universidade do Porto

This study investigates how Portuguese print journalists evaluate changes that have occurred in the profession since the Internet has been integrated in newsrooms. The main purpose is to understand how these professionals perceive the influence of the Internet on journalism practices, roles and ethics. In order to answer these questions, it was carried out a survey of 40 journalists working for the four most-read Portuguese daily newspapers. Results confirm that Internet is considered a positive influence on journalism. Furthermore, journalists' perceptions seem to be explained by age in some cases and by the newspaper they work for in others. Gender and Internet use do not seem to be statistically relevant in this evaluation.

Key words: journalism, online journalism, journalists, press, Internet

Introduction

Technology, namely the Internet, has played an important role in the field of journalism. In terms of journalistic practice, one can identify two main levels of influence. The first level caused changes in the way traditional media journalists proceed in searching for content, the gathering of information and the contact with sources of information. The second main level involved exclusive news production to electronic media and, consequently, the emergence of online journalism (Bastos, 2000).

There is no doubt that the rise of the Internet as a technological innovation has influenced the profession. Certain transformations can be highlighted, such as shifts in the news flow, in the daily journalistic routines, and in professional accountability (Hermans et al, 2009). The hybrid nature of the Internet also has had implications in the production and consumption of journalistic information, due both to the emergence of new formats and the redefinition of the procedures for collecting and editing information material (Díaz Noci & Arriaga, 2003).

New media, in the form of the Internet and the Web, have had a revolutionary impact on journalism (Garrison, 2003). It is changing the role where the journalist has served as an intermediary, it offers a broad range of new technologies that facilitate the delivering of messages, creating its own form of journalism. The current technologies of new media make newsgathering and production more efficient, faster and cost-effective. These technologies also enhance producer creativity and encourage new approaches to old tasks.

According to Deuze (1999), the Internet is changing the profession of journalism in at least three ways: it has the potential to make the journalists' role as the essential intermediary force in democracy more or less superfluous; it offers the media professional a

vast array of resources and technological possibilities to work with; and it has created its own type of journalism on the Net, the digital or online journalism. In Portugal, cyberjournalism (*ciberjornalismo*) is the term more commonly used among both academics and professionals. Deuze also points out that the scholarly and trade publications dealing with journalism and journalists have more or less accepted the discourse of the Internet as the major player in redefining and rethinking 'traditional' journalisms. A specific example of the impact of Internet is the increasing trend among journalists to use it for research, interviews and story ideas (Deuze e Dimoudi, 2002). Technology has great influence on operational procedures and technological innovations and it has often been important for modifications of professional procedures, professional rules and in general for the distinction between technology and newsroom (Loosen, 2002).

As summarized by Fortunati et al (2009), in terms of journalism practices, there is evidence that the Internet have brought many changes. On the positive side, the new medium has been considered a source of new opportunities for journalists. It offers the possibility of enhancing their work and enables a faster and wider interactivity with readers. From a pessimistic perspective, the Internet has introduced a new breed of professionals devoted to preparing online editions, often young and underpaid, with tight deadlines, and forced by time pressures to focus on copy-and-paste work rather than writing articles. Most of their work is produced indoors at their desks.

Some of the most fundamental questions of journalism are related to professional roles, with the way journalists perceive themselves, how they describe themselves and the extent to which their views support the 'policy function' of the media (Quandt et al, 2006). In terms of professional identity, journalists have reacted with ambivalence towards the Internet. They have revealed defensive attitudes and preferences of traditional professional role conceptions. Journalists, both print and online, continue to rate the interpretative/investigative and disseminator functions as very important. Thus, even if journalists' tasks have changed, they continue to rate as crucial for their profession the investigation of governmental decisions, the analyses of complex issues, and the ability to get relevant and verified news to the public as quickly as possible. The Internet also has opened a new chapter in the relationships between publishers and journalists as regards professional identity: a story of modest wages, of precarious jobs, and of extreme flexibility (Domingo, 2006).

Journalism ethics seem to be changing and newcomers seem to be able to mingle traditional and new normative values. It is the case of Portuguese online professionals journalists: the majority believes that 'traditional' journalists and online journalists should share a common ground of ethical values and standards (Bastos, 2008). Today, they all face new and complex ethical dilemmas in a media industry context marked by cost-cutting strategies that have transformed journalists into scoop seekers at any cost and have imposed them the need to recycle stories and manipulate them in order to continuously provide readers with "new" content (Davies, 2008). The creation of content in the global news industry takes place under increasingly precarious conditions, as the reliance on agency feeds grows, and as journalists are expected to do more with less time, fewer resources and colleagues (Deuze e Marjoribanks, 2009).

The aim of this study is to provide an empirical approach to the perception that Portuguese press journalists have of the changes brought by the Internet in their everyday practice, professional role, and ethics. It is part of a wider research project on journalism and the Internet in Portuguese news media and follows closely the goals and

methodological approach used in a previous international study by Fortunati et al (2009). The current investigation has been conducted in the first semester of 2010. Our main research questions are: How are the features and innovations associated with the Internet perceived by Portuguese print journalists? What are the main changes that have occurred, or may occur, in the various fields of the profession following the advent of the Internet? In journalists' perception, do these changes raise or lower standards of journalism?

Over the past decade, these topics have been investigated in several countries, with different methods: in the USA, the works by Garrison (2000a), Pavlik (2001) and Boczkowski (2004); in Australia, Metcalfe and Gascoigne (2001); in Germany, Loosen (2002); in the United Kingdom, Ward (2002); in the Netherlands, Deuze and Dimoudi (2002); in Catalonia, Domingo (2008). In Portugal, Bastos studied the impact of the Internet in the main Portuguese media newsrooms (2000) and investigated practices, professionalism and ethics of Portuguese online journalists working in mainstream media (2008). In this country, scarce investigation was made in both these areas, and practically none focused on print journalists only.

Theoretical background

In order to interpret the changes occurring in the profession of journalism, one needs to consider how this profession is socially constructed, and how these socially shared meanings emerge from the relationships between journalists and their social context. Far from being static, these meanings and relationships are continuously reshaped and negotiated by social actors, with different levels of power (Fortunati et al, 2009). The theoretical framework assumed in this study follows the approach outlined by these authors. Based on previous propositions by other authors, they look at journalism as a "social construction", which coconstructed meanings are rooted in the social relationship between journalists, publishers and readers. It is a framework that points towards systemic complexity rather than simplification of analyses. Conceptualizing journalism in this way, they argue, allows us to see it as a phenomenon that is neither inevitable nor unilateral. In this framework, journalism is made of different images, ideologies, and perspectives that are generated by various actors and negotiated along the different lines of power existing in their relationships. In our study, though, the attention is focused mainly on journalists' perspective, foregrounding their acceptance, use, and vision of the Internet. Publishers and readers, however, remain on the scene as actors who influence the work environment in the newsrooms and with whom journalists confront.

In this context, it becomes relevant to understand how the adoption processes of digital technologies evolve in the profession of journalism. Over the last decade there has been much debate about the impact of the rise of the Internet and other digital technologies on traditional news media. One dominant focus in earlier studies was the technology-driven approach. These studies suggest that news content is determined by the available technologies. Hence, changes in journalism can be explained predominantly by technological developments (Hermans et al, 2009). Technological determinism is also common among journalists when reflecting on changes in their profession. Several studies show that journalists credit great power to technology. In their minds, many if not most of the changes taking place in contemporary journalism are essentially *technology driven* (Örnerbring, 2010). According to Örnerbring, there are at least two reasons for the

persistence of technological determinism as an explanatory factor among journalists with regard to their own work: first, technology is a highly integrated and therefore very tangible part of the everyday working life of journalists; and second, the technological paradigm for explaining change in journalism has deep historical roots.

Despite the insights provided by the initial technological determinism approach, later work dealing with the relationship between journalism and technology has generally rejected technological determinism in favor of more nuanced explanations. Hermans et al (2009) formulated one model that stems from the integrated perspective of social constructivism. Here, the adoption of innovations is seen as a complex interaction process between professional, organizational, and economic factors. With this in mind, the role of social context factors, such as working conditions, workplace organization, and professional values, should be taken into consideration when studying the adoption of technological innovations in news media. Hermans et al studied how the use of Internet applications by journalists working in mainstream news media is influenced by social context factors, such as background characteristics, work-related factors, and the perceived utility of Internet use as part of the daily journalistic routines. They suggest that implementation of technological innovations not only leads to changes in the daily routines of journalists, but also leads to redefining notions about themselves as professionals. Although journalists may be seen as a homogeneous occupational group, they are not expected to use all possibilities provided by the Internet to an equal extent and for the same purposes. Earlier studies indicate that differences occur between journalists in terms of how, and to what extent they use the Internet in their daily work (Garrison, 2000b; Bastos, 2000; Hui-Ming, 2001; Niebauer, Abbott, Corbin, & Neibergergall, 2000).

Research questions

The purpose of this research is to understand how journalists perceive and evaluate the changes occurring in their profession following the advent of the Internet. The main interest is to investigate this perception and evaluation across gender, age, length of work experience, intensity of Internet use, and degree of familiarity with the Internet.

As regards changes in journalist functions and practices, the research question is:

RQ1. Is the Internet considered a source of new opportunities in terms of work enhancement, speed, and opportunity to reach and interact with a wider audience?

Our hypothesis is:

H1) Younger journalists are more receptive in accepting the Internet and should appreciate more the opportunities that it provides for the improvement of their work practices.

As regards changes in professional identities, the research question is:

RQ2 Do journalists rate positively the changes wrought by the Internet on their traditional profile, especially on the gatekeeper, investigative, and disseminative functions?

Our hypothesis is:

H2) Most journalists may have difficulty to identify significant changes on their traditional role.

As regards to ethics, the research question is:

RQ3) Are journalists developing a new ethical outlook that mingles traditional and new values?

Our hypotheses are:

H3a) Older journalists may passively resist change, may seek to emphasize traditional roles, and may look at the online world as irreconcilable with traditional values.

H3b) Low and high Internet users, as well as male and female journalists, differ in the evaluation of the credibility of online news.

Sample and methodology

Four of the most-read generalist Portuguese newspapers, based on print newspaper sales, were selected. The convenience sample involved 40 journalists, working for print editions only. The research applies the questionnaire used in the international study of Fortunati et al (2009). The original questionnaire, elaborated in English, was translated and adapted by the researchers in to Portuguese. Afterwards, it was submitted to participants, through an online platform.

With the purpose of investigating the role of the Internet in newsrooms recognized or foreseen by journalists, we focused our study on some features of the profession: everyday practices, professional identity and ethics. All questions use the psychometric Likert scale, in which respondents specify their level of agreement to a statement. In order to compare all questions and calculate value means, we convert all the answers into a scale where 1 indicates a strong negative influence of the internet to that factor and 5 a strong positive impact. For each question we calculate the 95% confidence interval for the mean and the median (please refer to all tables presented in annex I).

We also obtained personal data such as gender, age, newspaper, length of work experience, intensity of use and degree of familiarity with the Internet. Group comparisons were explored through analyses of variance and post-hoc analyses. Composite factor scores were computed and submitted to regression models in order to identify the importance of the personal variables.

Participants

The majority of participants are from the newspapers Público and Jornal de Notícias, with 30,6% of journalists each. Females represent 51% of the total. The interval of age goes from less than 20 to more than 50 years old. Almost half of the professionals, 47,9%, are between 30-39 years old. Most of them develop working activity as journalists between 10 and 19 years (44,7%). Familiarity with Internet ranges from one year or less of use to more than fifteen years and 62,5% of respondents uses it in a interval of 10 to 15 years.

Results

Work enhancement

According to our sample, the answer to our first research question (“Is the Internet considered a source of new opportunities in terms of work enhancement, speed, and opportunity to reach and interact with a wider audience?”) is clear: on the whole, the Internet is considered as a positive influence in all these matters. For each individual, we calculate the mean of the values answered to questions related to work enhancement, speed and opportunity to interact.

Table 1 - Relevance of Internet on work enhancement, speed and opportunity to interact

			Statistic
WORK	Mean		3,95
	95% Confidence Interval for Mean	Lower Bound	3,74
		Upper Bound	4,16
	Median		4,11
SPEED	Mean		4,03
	95% Confidence Interval for Mean	Lower Bound	3,78
		Upper Bound	4,28
	Median		4,25
INTERACT	Mean		3,53
	95% Confidence Interval for Mean	Lower Bound	3,37
		Upper Bound	3,69
	Median		3,53

It is possible to confirm the positive perception of the Internet in their daily practices, specially to factors related to speed and work enhancement. Furthermore, if we analyze very closely each question, it is possible to conclude that journalists valorize mostly personal email, web search engines and information sites when it comes to finding information, with priority to national governmental documents and background material for investigation. If they stopped using the Internet, as we can see in the annex I, speed in the process of newsgathering would be the most negative effect. Here, Internet is seen as an accelerator of journalistic routines which gives journalists the opportunity to enhance their communicative performance regarding the interaction with their audience. News become faster and broader and effective interaction with readers is improved. According to the respondents, this kind of interactivity makes journalism more reliable in the public eye.

Journalists' assessment on the impact of online journalism is also positive in general. In their view, Internet opened new journalistic possibilities to daily press and multimediality is a new important way to present the news. Recognizing the importance of the development of new technological skills, they admit that the Web allows the development of new and more attractive informative formats and the publication of relevant news in real time. In online journalism, journalists have better tools to provide contextual information in comparison with print journalism and the combination of capabilities of printed and online media results in benefit to the public. The connection with the public is also an important advantage of digital journalism. There is a large consensus among our respondents around the statement according to which Internet opened new journalistic possibilities for daily newspapers and that, in the long run, online journalism is a necessary strategy and progression for newspapers. There is less enthusiasm when rating the two following statements: news should be published online as soon as possible regardless of the forecast time of publication of the printed journal; multichannel publishing is no more than a

sophisticated word to recycle the same content through multiple channels. They strongly disagree that online newspapers can be nuisance for the newspapers operation. On the other hand, they look at online journalists more as “news packagers”, producing superficial journalism, rather than original content creators: online journalism sacrificed accuracy in favor of speed.

Indeed, speed and opportunity to interact with the public are the most important variables in predicting variation in work enhancement. We used the stepwise method which adds predictor variables to the regression that best correlate with the dependent variable, and subtracts predictor variables that least correlate. This way one generates a regression equation using only the predictor variables that make a significant contribution to the prediction.

Table 2 – Coefficients obtained using Stepwise (Dependent Variable: WORK)

Model: R Square=0,107 Adjusted R Square=0,08	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	4,566	,336		13,603	,000
Age	-,471	,227	-,327	-2,073	,045

Table 3 – Coefficients obtained using Stepwise (Dependent Variable: SPEED)

Model: R Square=0,106 Adjusted R Square=0,08	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	4,736	,361		13,127	,000
Age	-,504	,244	-,325	-2,065	,046

Table 4 – Coefficients obtained using Stepwise (Dependent Variable: INTERACT)

Model: R Square=0,132 Adjusted R Square=0,107	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3,150	,185		17,014	,000
Newspaper	,170	,075	,364	2,276	,029

Age is the only variable that explains the perception of the Internet role on the work enhancement and speed, but it is not relevant to explain interaction with the audience. Regarding this last factor, the decisive variable is the newspaper that journalists work for, which may indicate that the culture of the enterprise must be particularly considered in this kind of analysis. Gender is not a significant variable in the explanation of all dependent variables. Furthermore, ANOVA testing reveals that one can not reject the hypothesis of

equality between this two group behaviors. Nevertheless, as we can observe in the boxplots presented in figure 1, female journalists tend to evaluate more positively the influence of the Internet on work enhancement practices.



As regards to our first hypothesis, according to which those who are more receptive to accepting the Internet and younger should appreciate more the opportunities provided by the Internet for the improvement of their work practices, it was confirmed. In fact, the study shows that older journalists are less enthusiastic regarding the Internet influence on all factors (work enhancement, speed, and opportunity to reach and interact with a wider audience). This is stated by the negative coefficient obtained by the stepwise method in the regressions.

Changes in professional role

As regards our second research question (“Do journalists rate positively the changes wrought by the Internet, on their traditional profile, especially on the gatekeeper, investigative, and disseminative functions?”) it is possible to confirm that respondents rate the changes as strongly positive: means and medians are superior to 3 in almost every questions (please refer to annex I). It was also calculated for each journalist the mean of the values obtained in all questions regarding the traditional profile.

On the whole, journalists ascribe great importance to the influence of the Internet in professional functions such as getting news as soon as possible, reaching the widest possible audience, signal new tendencies and ideas and maintaining contact with the public. These perceptions are identical to those of European journalists studied by Fortunati et al

(2009), who see the Internet as the driver of a new role, more visible and public, for the readership. Regarding the investigative side, they agree with the proposition that there is information available online that couldn't be found any other way. At the same time, Internet allows journalists to use a wider variety of sources. But respondents also state that, if they stopped using the Internet, the impact on the development of investigative journalistic projects would not be very negative. On the other hand, they perceive Internet as a tool that contributes to a more sedentary or at the desk journalism.

Bloggers and "citizen journalist" are often pointed as someone who can somehow dispute some of the functions of professional journalists. The assessment of our respondents regarding this discussion points towards devaluation. They share the perception that citizen journalism and blogs are not serious journalism and that the "do it yourself journalism" from the public is a not threat to daily newspapers. Another interesting conclusion is that our respondents strongly disagree with the statement according to which male journalists tend to use the Internet more than female journalists.

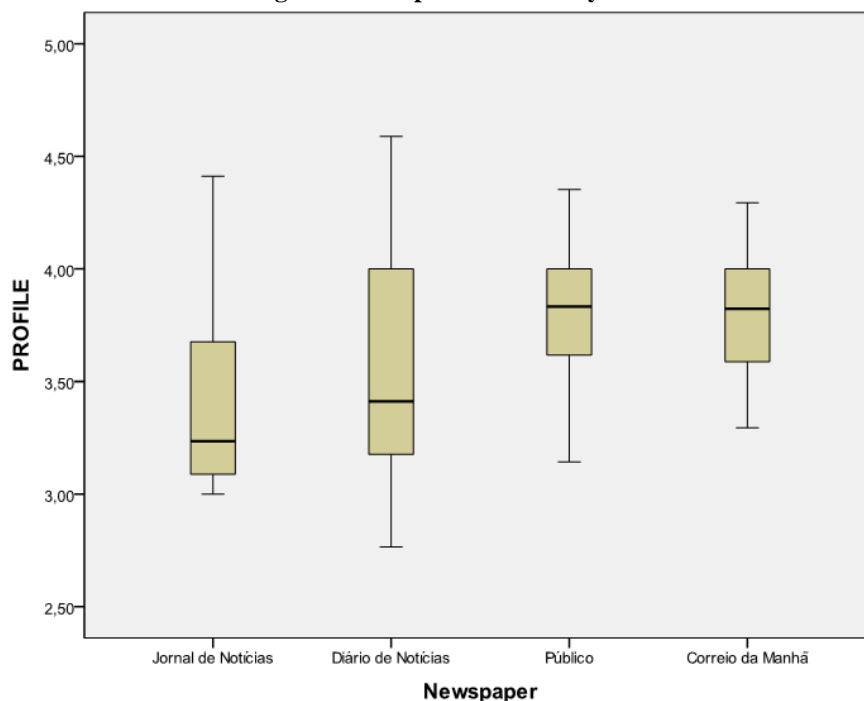
For our respondents, more traditional functions of journalists, such as being democracy watchdogs, providers of in-depth analyses, distributors of credible information and the role spokespersons for groups, are seen as less significantly influenced by the Internet. In other words, the Internet is not perceived as having a crucial role to play regarding these functions. The same for other two fundamental elements: the ability to influence the political agenda and the ability to influence public opinion. Even less importance is given to the Internet in the context of provision of entertainment or creation of an enhanced environment for advertisers.

In sum, and again in line with European journalists, the Internet is seen as a positive tool in respect to work practices, but not so influential when it comes to core functions of journalism. The Internet permits an enhancement of journalists' communicative performance, but is perceived as having a limited impact on traditional journalists' functions and journalism roles in a democratic society. These sorts of perceptions introduce a certain degree of ambivalence on the answer to our second hypothesis, according to which most journalists may have difficulty to identify significant changes on their traditional role, since they tend to emphasize empirical achievements instead of important changes in their professional identity.

Regarding the discussion of the factors that explain the perceptions of internet influence on the traditional profile, we calculate a variable collecting the mean of answers given by each respondent. Using the same stepwise method as before, we conclude that although older journalists are less optimistic about the advent of the Internet, the newspaper which they work for is the only factor that statistically explains changes wrought, after the advent of the Internet, on their traditional profile.

Table 5 – Coefficients obtained using Stepwise (Dependent Variable: PROFILE)

Model: R Square=0,106 Adjusted R Square=0,08		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,299	,180		18,325	,000
	Newspaper	,147	,072	,325	2,035	,050

Figure 2 – Boxplot of Profile by Gender

Age is decisive only if we consider the mean of the answers related to the investigative function of Internet. Female journalists also evaluate more positively this function than their male colleagues.

Table 6 – Coefficients obtained using Stepwise (Dependent Variable: INVESTIGATIVE)

Model: R Square=0,111 Adjusted R Square=0,086		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,422	,282		15,665	,000
	Age	-,405	,191	-,333	-2,120	,041

Professional ethics

The answer to our third research question, “Are journalists developing a new ethical outlook that mingles traditional and new values?”, is ambivalent. On the one hand, according to our sample, it is possible to confirm that, on the whole, journalists do not perceive Internet as being a threat nor to ethics or to the quality of journalism. In an almost complete coincidence with European journalists perceptions, portuguese journalists underline positive consequences of the Internet, such as the access to a greater variety of sources and an improvement in the ability to double-check stories. On the other hand, they

identify negative effects, such as the increased difficulty in differentiating false from true or inexact information. Similar perceptions with European journalists can be found in the answers (rating of 3 in a scale from 1 to 5) to items related to the sacrifice of news accuracy for speed and the narrowing of the information agenda as a consequence of media convergence.

In respect to our hypothesis H3a, according to which older journalists may passively resist change, may seek to emphasize traditional roles, and may look at the online world as irreconcilable with traditional values, it is somehow surprising to find out that older journalists have a more positive perception of the Internet in this matter. We calculate for each individual the mean of the values obtained in all questions regarding the influence of Internet on ethics. Age and newspaper are the two variables that combined explain this perception.

Table 7 – Coefficients obtained using Stepwise (Dependent Variable: ETHICS)

Model: R Square=0,375 Adjusted R Square=0,33	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1,923	,285		6,752	,000
Newspaper	,271	,067	,604	4,050	,000
Age	,328	,147	,332	2,228	,034

The coefficient of the age variable is positive, confirming the view that older journalist are globally more optimistic about the relationship between Internet and ethics. Nevertheless, old journalists are more sceptical as regards to double-checking and responsibility towards audience. Furthermore, they consider that interactivity does not turn journalism more reliable to the public eyes. Curiously, younger and older do not differ in the assessment that Internet does not affect the quality of journalism.

Table 8 – Influence of Age on some particular questions

	Age	Mean
The Internet makes it easier to double check information.	< 40 years	3,19
		2,92
The interactivity of the Internet makes journalism more trustworthy in the public eye.	< 40 years	2,76
		2,58
Digital journalists deal with information that is increasingly difficult to validate.	< 40 years	2,71
		2,67
The Internet threatens the quality of journalism.	< 40 years	3,57
		3,58

As regards to our hypothesis H3b, according to which low and high Internet users, as well as male and female journalists differ in the evaluation of the credibility of online news, it is interesting to notice that low and high Internet users, as well as male and female journalists do not differ in the evaluation of the credibility of online news. All ANOVA tests indicate that the hypothesis of group means being equal is not rejected for each case.

Conclusion

This research confirms, at a Portuguese level, the main results which have emerged in the study by Fortunati et al (2009) concerning the influence of the Internet on European journalism. Our study also allows the identification of two main ambivalent perceptions by Portuguese print journalists. On the one hand, they positively assess the impact of the Internet in major journalistic practices. Internet is seen as an optimizer of journalistic routines that gives them opportunity to enhance their communicative performance. On the other hand, Internet is perceived as having a limited influence on the political role of journalism in the context of a democratic society. In short, Portuguese print journalists tend to perceive the Internet above all as a useful tool that serves practical needs and purposes (speed, diffusion, information gathering, interaction) and not so much an instrument that enhances journalism traditional roles (watchdogging, influence upon political agenda and public opinion, analysis, interpretation).

On the whole, Portuguese journalists do not perceive Internet as being a threat nor to ethics or to the quality of journalism. In an almost complete coincidence with European journalists' perceptions, they underline positive consequences of the Internet, such as the access to a greater variety of sources and an improvement in the ability to double-check stories. On the other hand, they identify negative effects, such as the increased difficulty of distinguishing online credible content. They also do not perceive the Internet as a merely business-orientated medium or platform to advertisers.

Their assessment on the impact of online journalism is also positive in general. Internet opened new journalistic possibilities to daily press and multimediality is considered a new important way to present news. In contrast, they tend to disqualify online journalism as "news packaging" that produces superficial journalism.

Furthermore, this research confirms that journalists' perceptions depend on a series of variables, such as age, gender and the newspaper they work for. Gender, however, does not seem to be a globally and statistically relevant in the evaluation.

At this point, some caveats should be stressed regarding this study. Our respondents work for the four most-read generalist Portuguese newspapers. Thus, it is possible that the views expressed may not correspond entirely to the universe of Portuguese print journalists, including professionals working for weekly, specialized or local press. Further research, with enlarged and randomized samples, could expand our results taking in consideration other kind of newspapers and newsrooms. Although the sample of our study can be considered representative, the number of observations should be higher if one wants to include more parameters in the study.

The research, however, adds new perspectives in Portuguese journalism studies concerning the relation between print journalists and the Internet. Moreover, it is only the first pillar of a broader and deeper study on the influence of the Internet on Portuguese news media.

ANNEX I

Role of Internet to Work Enhancement

		Statistic
Access to sources	Mean	3,62
	95% CI Lower Bound	3,23
	Upper Bound	4,00
	Median	4,00
Access to government documents	Mean	3,97
	95% CI Lower Bound	3,63
	Upper Bound	4,31
	Median	4,00
Access to documents and other information from local authorities	Mean	3,85
	95% CI Lower Bound	3,50
	Upper Bound	4,21
	Median	4,00
Access to documents and other corporate information	Mean	3,85
	95% CI Lower Bound	3,54
	Upper Bound	4,16
	Median	4,00
Reception of press releases	Mean	3,74
	95% CI Lower Bound	3,41
	Upper Bound	4,06
	Median	4,00
Context information for research	Mean	4,29
	95% CI Lower Bound	4,03
	Upper Bound	4,56
	Median	4,00
Checking facts	Mean	3,65
	95% CI Lower Bound	3,25
	Upper Bound	4,05
	Median	4,00
Searching information from agenda	Mean	4,12
	95% CI Lower Bound	3,79
	Upper Bound	4,45
	Median	4,00
Updating Information	Mean	4,03
	95% CI Lower Bound	3,74
	Upper Bound	4,32
	Median	4,00

Effects of journalists stop using Internet

Browsing informative topics	Mean	3,48
	95% CI Lower Bound	3,06
	Upper Bound	3,91
	Median	4,00
Getting ideas for news	Mean	3,67
	95% CI Lower Bound	3,30
	Upper Bound	4,03
	Median	4,00
Finding sources	Mean	3,39
	95% CI Lower Bound	3,04
	Upper Bound	3,75
	Median	3,00
Connecting with other journalists	Mean	3,42
	95% CI Lower Bound	3,00
	Upper Bound	3,85
	Median	4,00
Keeping abreast of news	Mean	4,03
	95% CI Lower Bound	3,56
	Upper Bound	4,50
	Median	5,00
Speed time to gather information	Mean	4,39
	95% CI Lower Bound	3,94
	Upper Bound	4,85
	Median	5,00
Investigative journalism projects	Mean	3,30
	95% CI Lower Bound	2,87
	Upper Bound	3,73
	Median	3,00
Easily keeping in touch with newsroom when out on report	Mean	3,97
	95% CI Lower Bound	3,52
	Upper Bound	4,42
	Median	4,00
Live publication of relevant news	Mean	4,18
	95% CI Lower Bound	3,72
	Upper Bound	4,65
	Median	5,00

Digital archives	Mean		4,24
	95% CI	Lower Bound	3,91
	Upper Bound		4,57
	Median		5,00
Cost savings	Mean		3,91
	95% CI	Lower Bound	3,48
	Upper Bound		4,34
	Median		4,00
Interaction with readers	Mean		4,09
	95% CI	Lower Bound	3,70
	Upper Bound		4,48
	Median		4,00
Data checking	Mean		3,70
	95% CI	Lower Bound	3,36
	Upper Bound		4,03
	Median		4,00

Impact of the internet in attaining journalistic goals

Disseminating reliable information (objective)	Mean		3,66
	95% CI	Lower Bound	3,41
	Upper Bound		3,91
	Median		4,00
Providing analysis and interpretation on complex issues	Mean		3,60
	95% CI	Lower Bound	3,33
	Upper Bound		3,87
	Median		3,00
Getting news as soon as possible	Mean		4,34
	95% CI	Lower Bound	4,11
	Upper Bound		4,58
	Median		4,00
Achieving maximum audience	Mean		4,17
	95% CI	Lower Bound	3,89
	Upper Bound		4,45
	Median		4,00
Being a guardian ("watchdog") of democracy	Mean		3,34
	95% CI	Lower Bound	3,00
	Upper Bound		3,69

	Median	3,00
Identifying new trends and ideas	Mean	4,00
	95% CI Lower Bound	3,74
	Upper Bound	4,26
	Median	4,00
Maintaining contact with the public	Mean	4,20
	95% CI Lower Bound	3,93
	Upper Bound	4,47
	Median	4,00
Assuming the responsibilities given the reactions to journalistic work	Mean	3,74
	95% CI Lower Bound	3,43
	Upper Bound	4,06
	Median	4,00
Giving people a forum to express their ideals	Mean	4,03
	95% CI Lower Bound	3,73
	Upper Bound	4,32
	Median	4,00
Providing entertainment	Mean	3,46
	95% CI Lower Bound	3,09
	Upper Bound	3,82
	Median	4,00
Being a spokesperson for various groups	Mean	3,29
	95% CI Lower Bound	2,98
	Upper Bound	3,59
	Median	3,00
Influence upon the political agenda	Mean	3,29
	95% CI Lower Bound	3,01
	Upper Bound	3,56
	Median	3,00
Influence upon public opinion	Mean	3,49
	95% CI Lower Bound	3,20
	Upper Bound	3,77
	Median	4,00
Creating a good environment for advertisers	Mean	3,06
	95% CI Lower Bound	2,69
	Upper Bound	3,42
	Median	3,00
Providing a forum for civil liberties	Mean	3,66
	95% CI Lower Bound	3,36
	Upper Bound	3,96

	Median	4,00
--	--------	------

Perceptions and Opinions

	Statistic
Internet has opened new possibilities for daily newspapers.	Mean
	4,55
	95% CI Lower Bound
	4,35
The multimediality is an important new component to publish the news.	Upper Bound
	4,75
	Median
	5,00
News should be published online as soon as possible (regardless of the forecast time for publication of the printed papers).	Mean
	4,52
	95% CI Lower Bound
	4,28
In the long run, digital journalism is a necessary and progressive strategy for daily papers.	Upper Bound
	4,75
	Median
	5,00
The digital publication is a hindrance to the functioning of the newspaper.	Mean
	3,21
	95% CI Lower Bound
	2,91
Public journalism “DIY” is a threat to the daily papers	Upper Bound
	3,52
	Median
	3,00
The citizen journalism and blogs are not serious journalism.	Mean
	4,21
	95% CI Lower Bound
	3,91
The multichannel editing is no more than another sophisticated word for recycling the same content through multiple channels.	Upper Bound
	4,52
	Median
	4,00
The digital publication is a hindrance to the functioning of the newspaper.	Mean
	4,18
	95% CI Lower Bound
	3,80
Public journalism “DIY” is a threat to the daily papers	Upper Bound
	4,56
	Median
	5,00
The citizen journalism and blogs are not serious journalism.	Mean
	2,48
	95% CI Lower Bound
	2,06
The multichannel editing is no more than another sophisticated word for recycling the same content through multiple channels.	Upper Bound
	2,91
	Median
	2,00
The citizen journalism and blogs are not serious journalism.	Mean
	3,67
	95% CI Lower Bound
	3,29
The multichannel editing is no more than another sophisticated word for recycling the same content through multiple channels.	Upper Bound
	4,04
	Median
	4,00
The multichannel editing is no more than another sophisticated word for recycling the same content through multiple channels.	Mean
	3,21
	95% CI Lower Bound
	2,81
The multichannel editing is no more than another sophisticated word for recycling the same content through multiple channels.	Upper Bound
	3,62
	Median
	3,00

Journalistic Function

	Statistic
The digital edition (WWW) allows journalists to develop more attractive formats for reporting information	Mean 3,64
	95% CI Lower Bound 3,23
	Upper Bound 4,04
	Median 4,00
Working for multiple media makes journalistic work more rewarding.	Mean 2,55
	95% CI Lower Bound 2,12
	Upper Bound 2,97
	Median 2,00
Journalists can not find information on the Internet that they would have not found any other way.	Mean 3,52
	95% CI Lower Bound 3,15
	Upper Bound 3,88
	Median 4,00
The Internet increased a lot the importance of technological skills	Mean 4,15
	95% CI Lower Bound 3,95
	Upper Bound 4,35
	Median 4,00
A good print journalist is often also a good digital journalist.	Mean 3,24
	95% CI Lower Bound 2,82
	Upper Bound 3,67
	Median 3,00
Journalists from future daily newspapers can enhance their work by moving between different outputs (channels of publication)	Mean 3,97
	95% CI Lower Bound 3,68
	Upper Bound 4,26
	Median 4,00
The diaries will have to move to the Internet if they want to survive.	Mean 3,39
	95% CI Lower Bound 2,99
	Upper Bound 3,80
	Median 3,00
In digital journalism, journalists have better tools to provide contextual information than in print journalism.	Mean 3,36
	95% CI Lower Bound 2,93
	Upper Bound 3,80
	Median 3,00

Ethics

The Internet makes it easier to double check information.	Mean	3,09
	95% CI Lower Bound	2,77
	Upper Bound	3,40
	Median	3,00
The interactivity of the Internet makes journalism more trustworthy in the public eye.	Mean	2,74
	95% CI Lower Bound	2,41
	Upper Bound	3,06
	Median	3,00
Distinguishing between true and false or inaccurate information in the Internet is as easy as elsewhere.	Mean	2,56
	95% CI Lower Bound	2,19
	Upper Bound	2,93
	Median	2,50
Digital journalists deal with information that is increasingly difficult to validate	Mean	2,68
	95% CI Lower Bound	2,36
	Upper Bound	2,99
	Median	3,00
The Internet threatens the quality of journalism.	Mean	3,56
	95% CI Lower Bound	3,22
	Upper Bound	3,89
	Median	4,00
Digital journalism sacrificed accuracy in favour of speed.	Mean	2,71
	95% CI Lower Bound	2,35
	Upper Bound	3,07
	Median	3,00
Digital journalism brought a convergence of media to a narrowed information agenda.	Mean	3,00
	95% CI Lower Bound	2,67
	Upper Bound	3,33
	Median	3,00
The Internet allows journalists to use a wider variety of sources.	Mean	3,59
	95% CI Lower Bound	3,27
	Upper Bound	3,91
	Median	4,00

Public

	Statistic
The public demands that daily papers make use of the possibilities of the Internet.	Mean 3,71
	95% CI Lower Bound 3,43
	Upper Bound 3,98
	Median 4,00
The connection with the public is an important advantage of digital journalism.	Mean 3,97
	95% CI Lower Bound 3,67
	Upper Bound 4,27
	Median 4,00
Combining the capabilities of printed and digital media results in the benefit of the relation with the public	Mean 4,18
	95% CI Lower Bound 3,90
	Upper Bound 4,45
	Median 4,00
Print media serve the public better than digital media.	Mean 3,06
	95% CI Lower Bound 2,75
	Upper Bound 3,37
	Median 3,00
Print media provide a greater sense of reliability than the digital media.	Mean 3,03
	95% CI Lower Bound 2,65
	Upper Bound 3,41
	Median 3,00
On important issues, the public prefers the print media.	Mean 2,38
	95% CI Lower Bound 2,07
	Upper Bound 2,69
	Median 2,00
The public needs news, not interaction with journalists.	Mean 3,06
	95% CI Lower Bound 2,65
	Upper Bound 3,47
	Median 3,00

References

Bastos, Helder. (2008). 'Ciberjornalistas em Portugal: Práticas, Papéis e Ética'. Doctoral thesis on Communication Sciences. Faculdade de Ciências Sociais e Humanas, Universidade Nova de Lisboa. Lisboa, 275 pp.

- Bastos, Helder. (2000). *Jornalismo Electrónico: Internet e Reconfiguração de Práticas nas Redacções*. Coimbra: Minerva.
- Boczkowski, Pablo. (2004). *Digitizing the News: Innovation in online newspapers*. Cambridge, MA: The MIT Press.
- Davis, Nick. (2008). *Flat Earth News: An Award-winning Reporter Exposes Falsehood, Distortion and Propaganda in the Global Media*. London: Chatto & Windus.
- Deuze, Mark, & Marjoribanks, Tim. (2009). 'Newswork', *Journalism*, 10: 555-561.
- Deuze, Mark, & Dimoudi, Christina. (2002). 'Online journalists in The Netherlands: towards a profile of a new profession', *Journalism*, 3(1), 103-18.
- Deuze, Mark. (1999). 'Journalism and the Web: An Analysis of Skills and Standards in an Online Environment', *Gazette*, Vol. 61(5): 373-390.
- Díaz Noci, Javier, & Aliaga, Ramón Salaverría (coords.). (2003). *Manual de Redacción Ciberperiodística*. Barcelona: Ariel Comunicacion.
- Domingo, David. (2008). 'Interactivity in the daily routines of online newsrooms: dealing with an uncomfortable myth', *Journal of Computer-Mediated Communication*, 13, 680-704.
- Fortunati, L., Sarrica, M., O'Sullivan, J., Balcytiene, A., Harro-Loit, H., Macgregor, P., Roussou, N., Salaverría, R., and de Luca, F. (2009). 'The influence of the internet on european journalism', *Journal of Computer-Mediated Communication*, 14(4): 928-963.
- Garrison, Bruce. (2003). 'How newspaper reporters use the Web to gather news', *Newspaper Research Journal*, 24(3), 62-75.
- Garrison, Bruce. (2000a). 'Journalists newsroom roles and their World Wide Web search habits'. Paper presented to the Mass Communication and Society Division, Association for Education in Journalism and Mass Communication, August 2000, Phoenix.
- Garrison, B. (2000b). 'Journalists' perceptions of online information-gathering problems', *Journalism & Mass Communication Quarterly*, 77(3), 500-514.
- Hermans, Liesbeth, Vergeer, Maurice, & d'Haenens, Leen. (2009). "Internet in the Daily Life of Journalists: Explaining the use of the Internet by Work-Related Characteristics and Professional Opinions", *Journal of Computer-Mediated Communication* 15, pp. 138-157.
- Hui-Ming, P. (2001). 'The challenge to professional journalism: How Taiwan's reporters evaluate and utilize Internet information'. Paper presented at The Tenth International WorldWide Web Conference. From <http://www10.org/program/society/peng/www10.html>

Loosen, Wiebke. (2002). 'The Technicalization of Journalism: Impacts on its Structure and Function'. Paper presented to the Media and Production Analyses Working Group at the 23 Conference and General Assembly of the International Association for Media and Communication Research (IAMCR), Barcelona, 21-26 of July 2002.

Metcalfe, Jenni, & Gascoine, Toss. (2001). 'Survey on how Australian journalists use the Internet'. Presentation to third Asia-Pacific Symposium on Press and Scientific and Social Progress (APSP 2010), Beijing, China.

Niebauer, W. E., Abbott, E. A., Corbin, L., & Neibergall, J. (2000). 'Computer adoption levels of Iowa dailies and weeklies', *Newspaper Research Journal*, 21(2), 84–94.

Örnerbring, Henrik. (2010). 'Technology and journalism-as-labour: Historical perspectives', *Journalism*, 11(1) 57–74.

Pavlik, John. (2001). *Journalism and New Media*. New York: Columbia University Press.

Quandt, Thorsten et al. (2006). 'American and German Online Journalists at the Beginning of the 21st Century: A bi-national survey', *Journalism Studies*, Volume 7, Number 2, April, pp. 171-186.

Ward, Mike. (2002). *Journalism Online*. Oxford: Focal Press.