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HIGHLIGHTING MEDIA & JOURNALISM FUTURES 2030

Survey on weak signals and
emerging issues



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*There are many events in the womb of time
which will be delivered.*

*William Shakespeare
Othello act 1, sc 3*

ABSTRACT

Taylor, Amos – Heinonen, Sirkka – Ruotsalainen, Juho & Parkkinen, Marjukka (2015) *Highlighting Media & Journalism Futures 2030. Survey on Weak Signals and Emerging Issues*. FFRC eBook 3/2015, Finland Futures Research Centre, University of Turku, 46 pages.

Key words: media, journalism, futures studies, foresight, horizon scanning, weak signals, emerging issues, digital meanings society

The MEDEIA project was carried out at Finland Futures Research Centre (FFRC), University of Turku in 2013–2015, and funded by the Media Industry Research Foundation of Finland, the Building Information Foundation, e21 Solutions, Teknologiainfo Teknova, Ministry of Transport and Communications and Telia-Sonera. The MEDEIA research project anticipated new roles and functions for media in the emerging societal structure we call the Digital Meanings Society. According to our anticipatory hypothesis media could have a pivotal role in this kind of society. Media, however, has to be “reinvented” to fit the emerging situation.

The project probed, by applying foresight methods, new business models, products, services and societal functions for media in 2030. Emerging lifestyles, new production modes, technologies and power shifts were being highlighted. Particularly weak signals and emerging issues were being identified. For this purpose, an international survey was also conducted, inviting respondents mainly from the Millennium Project Nodes. The main focus was to address futures studies experts with insights on media and journalism. The results of the survey are presented in this report.

According to the results, in 2030 **Media** is undergoing a state of **change** becoming **more customized** toward individual, **massive data driven** and more intertwined within society. An emerging cross-cutting platform of diverse actors, with global access to media and information implies a much more complicated media culture. The meaning of **a certain line of new journalism is enhanced**. It is becoming more ethical, independent, collaborative, and networked, with better quality and better informed premises. Further, journalism riding in the same arena as gossip and automated information publication has to enhance its journalistic quality in order to **differentiate itself and underline its authenticity**. Individual authentic voice resonates while the journalistic ability is combined with editorial and production skills. Respondents' answers in the survey cover many categories foreseeing the roles and functions of media and journalism where a democratic distribution of media content and access leads to a customised individualised media, “from 'us', to 'I'”. Moreover, *new journalism* is foreseen to emerge amidst a complex global networked culture.

RÉSUMÉ

Taylor, Amos – Heinonen, Sirkka – Ruotsalainen, Juho & Parkkinen, Marjukka (2015) *Highlighting Media & Journalism Futures 2030. Survey on Weak Signals and Emerging Issues*. FFRC eBook 3/2015, Finland Futures Research Centre, University of Turku, 46 pages. [en anglais avec un résumé français]

Mots-clés: médias, journalisme, études prospectives, signaux faibles, phénomènes émergentes

Dans le projet MEDEIA (Nouveaux rôles pour les médias dans la société numérique des significations) des signaux faibles (les signes avant-coureurs) des médias et du journalisme ont été identifiés et analysés par des interviews d'experts, deux Cliniques Prospectives, une enquête internationale et une observation des médias.

Les résultats de notre enquête internationale qui était adressée surtout pour les représentantes du Projet Millennium ont été documentés dans ce rapport. L'analyse s'est faite aussi question-par-question que par répartitionnement en quatre catégories thématique.

1. INTRODUCTION

1.1 MEDEIA Project and the Turbulent Field

This report on weak signals and emerging issues indicating media and journalism futures 2030 was written within the research project MEDEIA (New roles for media in the digital meanings society), ongoing at the Finland Futures Research Centre (FFRC), University of Turku in the years 2013–2015.¹ The project consists of background analysis and horizon scanning, interviews, lectures, seminars and surveys, as well as of two Futures Cliniques (see Figure 1).

The first phase of the research was carried out as a background research and horizon scanning effort which outlines the basic principles of the new relations between media, economy and society. Some of the most interesting trends, weak signals and black swans concerning media and society were also covered. Insights and results thus gained were then worked out further in two Futures Cliniques.² In these specially structured futures workshops, media and corporate actors envisioned and probed the shared futures of media, society and businesses by 2030.

The first Futures Clinique (in spring 2014) was dedicated to identifying and exploring weak signals related to media and journalism. Parallely, an international survey was made where a compact questionnaire concerning identification of weak signals for media and journalism was sent to a group of invited respondents. The survey addressed mainly the Millennium Project Nodes,³ as well as some other futures experts with insights on media and journalism. The results of the survey form the core of this report.

The aim of the whole MEDEIA project was to anticipate new roles and functions for media in the emerging societal structure we call the Digital Meanings Society. The project explored – by applying foresight methods and processes – new business models, products, services and societal functions for media in 2030. Emerging lifestyles, new production modes, technologies and power shifts were being highlighted. The project was funded by the Media Industry Research Foundation of Finland, the Building Information Foundation, e21 Solutions, Teknologiatieto Teknova, Ministry of Transport and Communications and TeliaSonera.

The MEDEIA research group had project researcher Juho Ruotsalainen as the main researcher, with the assistance of two research trainees Mr. Amos Taylor (MA Programme in Futures Studies, Turku University) and Mr. Lauri Leponiemi (Helsinki University) in 2014, supervised by the director of the project, Prof. Sirkka Heinonen. The results of the project and especially of the international survey on weak signals were presented in several international events and platforms such as at the University of Science and Technology of China (USTC) in Hefei (Heinonen 2014),⁴ as well as in the Millennium Project Planning Committee meeting in Santo

¹ See the MEDEIA project website <http://www.utu.fi/en/units/ffrc/research/projects/Pages/medeia.aspx>

² On the method of Futures Cliniques please see Heinonen & Ruotsalainen 2013.

³ The Millennium Project is a global futures think tank operating through more than 50 nodes all over the world. <http://www.millennium-project.org/>. See Appendix 2 for the list of respondents.

⁴ Sirkka Heinonen is nominated as Guest Professor at USTC 2013-2016. Dr. Chu from USTC was among the

Domingo, Dominican Republic at Funglode Foundation (Heinonen 2014b), and at Yonsei University, Korean Millennium Project node (Heinonen 2014c). The project researchers were actively supported by discussions of the steering group of the project, as well as by views and comments of the three permanent experts invited to the project: Sonja Ängeslevä, Ilkka Tuomi (Meaningful Processing) and Teppo Turkki (Sitra). In finalising this report, the contribution of Ms. Marjukka Parkkinen (intern at FFRC Helsinki Office in 2015 and MA Programme in Futures Studies, Turku University) was valuable.

The starting point for our research was the paradox that although media has an increasingly prominent and penetrating role in society, commercial media is struggling for its existence. In the age of the ubiquitous internet, new prosumeristic lifestyles and deeply networked economy, society is increasingly dependent on digital-native media.⁵ Information and media contents are abundant, very inexpensive and often free. Accordingly, we might be living a golden age of media, at least from the consumer viewpoint. We should, however, beware of the old thinking gridlock (Leponiemi et al. 2014), and look for a new futures mindset as regards media and journalism as radically evolving domains. We assume that in the future, economy and society are built on open information ecosystems, principles of open source, high-quality niche contents, resource scarcity and power stemming from the grassroots. Search for meaningfulness is an increasingly important motivation behind individuals' actions. Media could have a pivotal role in this kind of society. However, media has to be "reinvented" to fit the emerging situation.

The research sought answers to the question of how media could benefit from this turbulent and uncertain state of affairs.⁶ The question of new power relations was also tackled. In a deeply networked society, individuals and their joint ventures have more power than ever. At the same time, however, new businesses, especially those of the Silicon Valley, spread their values and interests all around the globe (see e.g. Perry Piscione 2013). A new mode of production with related values could thus be arising. What could this new "Fordism" look like? Mayer-Schönberger & Cukier (2013, 130) emphasise that in an aging industry such as news media, an outside innovator could enter the field with success. They give an example of a startup company which aggregates and ranks content from across the Web on the basis of text analysis, user preferences, social-network-related popularity, and big-data analytics. What is noteworthy here is that the system does not make a distinction between a teenager's blog post, a company website, and an article in the Washington Post. Plain and simple – if the content is considered relevant and popular (based on how much it is viewed and shared), it appears at the top of the screen. This is connected to the ways younger generation increasingly interacts with media i.e. the source of information is losing its primal importance.

As Couldry (2000, 285) points out, media power rests not only on an institutional structure but also on an intricate web of various background assumptions about the media and to an increasing degree non-media

respondents of the survey.

⁵ A new research project, funded by Helsingin Sanomat Foundation, is launched as continuation of the MEDEIA project, specifically dwelling on digital-native journalism. This project will be carried out at Finland Futures Research Centre (FFRC) in 2015–2016.

⁶ If an organisation, company or business sector is antifragile, it may, not only survive but even benefit in a turmoil (Taleb 2014).

people’s relationship to them. He also stresses the encompassing power of media to speak “for us all”, thus defining the social reality that we all share (Ibid, 273). Watson (2012, 9) sees such power of media to be always present. He further stresses how “global connectivity demands instant authenticity and promotes radical transparency”. Not only is media always present, it is everyone. Owing to the Internet it is possible to aggregate opinions instantly, as proper for a democratic process. Watson (Ibid.) suggests that online aggregation should not be limited to local politics or to a single nation. Based on this newfound power of media the whole world could vote on important issues such as climate change.

New Roles and Functions for Media in the Digital Meanings Society

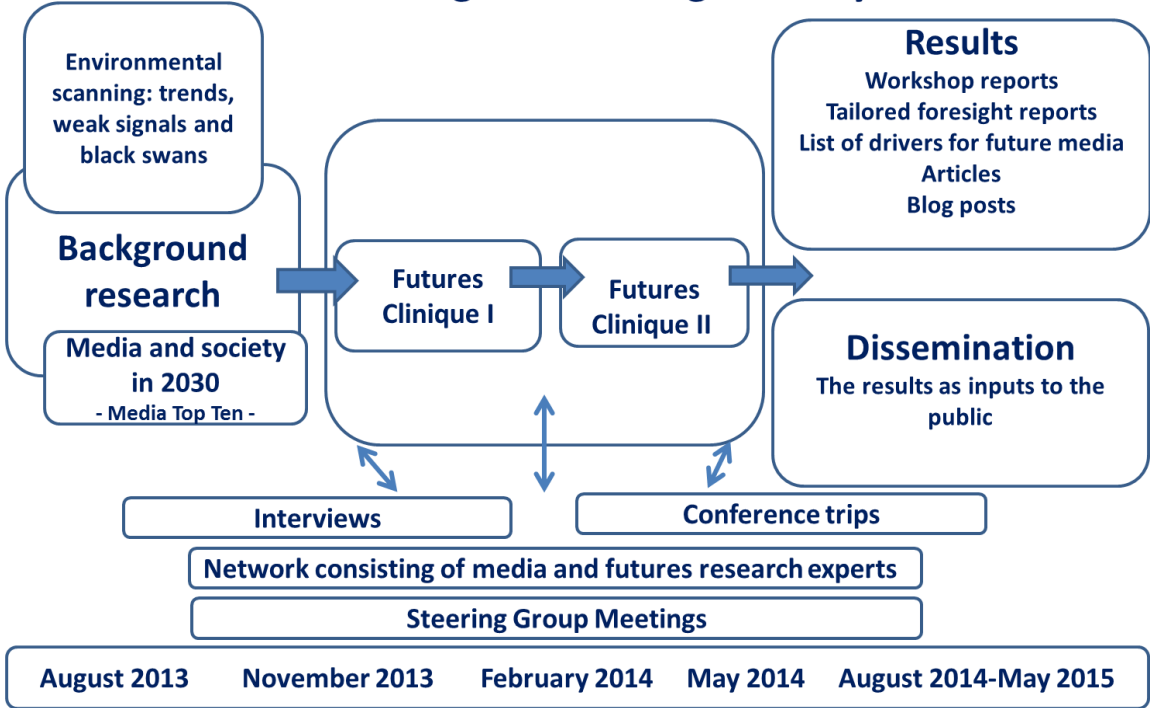


Figure 1. Flow Chart of the MEDEIA project with contents, steps, and timelines.

The question of weak signals and emerging issues was addressed in various parts of the project during its course: in background analysis, Media Top Ten seminar, international survey, in expert interviews, and in the Futures Clinique I. This weak signal report is one of the publications produced as results of the project, the other publications (in Finnish) comprise two Futures Clinique reports, articles, lectures and interviews on the results of the project (see Appendix 1).

1.2 Survey Report

A survey on weak signals and emerging issues of media and journalism with the time horizon of 2030 was made in June 2014 at the Finland Futures Research Centre (FFRC), University of Turku by the Research Group on Future of Media and Communications (FMC) within the above presented MEDEIA project. The survey was conducted by inviting all Millennium Project (MP) Nodes to participate by answering a questionnaire. In addition to that, the survey was also sent to some other media-knowledgeable futures experts. This report presents the results of the survey and discusses the replies received from the questionnaire. The report can be read as a culmination of responses that present the most promising concepts from the media and journalism, addressed in this 2030 questionnaire.

The future of journalism and media is an important topic to consider, as media is now especially going through a state of continued transformation and crisis. With this in mind a questionnaire was formulated to explore more deeply the important issues facing media and journalism and specifically to seek out weak signals and key ideas pointing towards future developments.

Key futurists, media and journalism professional experts were invited to respond on weak signals, emerging trends and ideas related to the futures of media and journalism in 2030. Fifteen respondents, mainly futurists linked with journalism and media gave extensive answers to the six main questions (see Appendix 2) posed in the questionnaire.

For the project, Mr. Amos Taylor, a student in the Master's Programme in Futures Studies at University of Turku was appointed as a research trainee – Millennium Project Intern – for the Helsinki Node in the Millennium Project, based at the Helsinki Office of Finland Futures Research Centre (FFRC), University of Turku. He was granted the task to draft and process the questionnaire, as well as to receive and analyse the results. The questions were formulated in accordance with the objectives of the MEDEIA project and sent out into the extended network of the Millennium Project members. The material was then collected by electronic mail and processed over the summer months of 2014 looking for key concepts and weak signals. The wide range of a variety of responses were then summarized and narrowed down to present the most promising concepts and intriguing issues. From the four main questions many patterns arose and the task of this research study aimed to seek out valid and new weak signals, as well as to map out the key issues of the media and journalism landscape for 2030 (see Appendix 3). The two further questions, more personalised, were also asked. They were focused on values and challenges. At the end, there was also space reserved for free comments etc in the questionnaire.

The report continues from here with a brief summary of key results. In chapter two the concept of weak signals is discussed. Chapter three presents the results and a light analysis of the questionnaire responses question-by-question. The results are then further clustered in four thematic groups in chapter four. The report is finished with conclusions about weak signals of media and journalism identified and analyzed in the research.

Results in a nutshell

To introduce the results here as simply as possible it suffices to say that the respondents depicted a highly evolved media and journalism landscape. In 2030 **Media** is undergoing a state of **change** becoming **more customized** toward individual, **massive data driven**, and more **intertwined within society**. A cross platform is emerged where global access to media and information sees a much more complicated media culture.

The meaning of **a certain line of new journalism is enhanced** becoming more ethical, independent, collaborative and networked, with better quality and being better informed. Journalism riding in the same arena as gossip and automated information publication has to enhance its journalistic quality in order to differentiate itself and underline its authenticity. Authentic individual voice resonates and journalistic ability is combined with editorial and production abilities.

Respondents' answers cover many categories foreseeing the roles and functions of media and journalism, where a democratic distribution of media content and access leads to a customised individualised media, "from 'us', to 'I'". Moreover, *new journalism* is foreseen to emerge amidst a complex global networked culture.



Figure 2. Media and journalism will become more customized, yet intertwined with society.

2. WHAT ARE WEAK SIGNALS?

Weak signals is a concept used in futures studies as a kind of early warning or “early indicating” mechanism. Weak signals are like flower buds, not yet open and visible to all. The motto of this report echoes William Shakespeare in saying that “There are many events in the womb of time which will be delivered”. Only time will show which of the weak signals grow open and strong. For the questionnaire by way of an explanation of the term, weak signals were generally described as: *weak signals are signs of currently weak but possibly strengthening phenomena.*

For the purpose of analysing the collected research material a much deeper and practical selection of definitions of weak signals can be addressed (compiled by Lesca & Lesca 2014). Ansoff (1984) proposes to companies... “*graduated response through amplification and response to weak signals, in contrast to conventional strategic planning that depends on strong signals*”. He sees weak signals as internal or external warning signs, events or developments within corporations, which are too weak for their impacts to be determined. Schoemaker et al (2013) define weak signals as “*seemingly random or disconnected pieces of information that at first appear to be background noise but which can be recognized as part of a larger pattern when viewed through a different frame or by connecting it with other pieces of information*”. According to Hiltunen (2010) weak signals directly “*mean today’s information that can foretell the changes in the future*”. Kuosa (2011) instead emphasizes weak signals as “*observations of the surrounding world which someone has subjectively reasoned to have some special foresight value*”.

Since identification of weak signals in futures studies is a qualitative method, its interpretations vary to a great degree. Hiltunen (2013) warns that a downside to a growing attraction to weak signals both in academia and business is that due to multiple meanings no one is in the end sure what these interesting weak signals actually are. Weak signals can often have different “*rival interpretations*” (Lesca & Lesca 2014, 17). They can seem unusual or out of place, unexpected, or unfamiliar. Hiltunen even characterizes them as “strange”. However, it must be borne in mind that not all strange things are weak signals. Hiltunen (2013) uses a “playful” test of five criteria to a possible weak signal: a weak signal 1) makes your colleague laugh, or 2) makes your colleague argue against it, or 3) raises some eyebrows, or 4) no one has ever heard about the issue, or 5) they do not want to discuss the issue (taboo). The more of these criteria are met, the better the weak signal.

Weak signals are not easy to define as demonstrated above, and besides that they are uncertain, or even unsettling. Weak signals can almost be overlooked because they are too weak or random or incomplete. (Lesca & Lesca, 2014, 20). Bearing in mind Kuosa’s reference to observations it is interesting to note that the outward appearance of a weak signal may vary. A weak signal can be detected in a text paragraph, in an image, a photo, or piece of art.⁷ There is a special category of manifestations of weak signals in a visual form. They can be in

⁷ There is even a method called “Futures Window” for showing visual weak signals (Heinonen & Hiltunen 2012).

any visual representation. The observation may take place in a physical sensation. Weak signals can be perceived through all five human senses: they can be seen, heard, smelled, felt, or even tasted. (Heinonen & Hiltunen 2012).

These above characterisations should be considered to help us to take notice of the features of weak signals in the textual responses. The respondents in the survey described many similar and contrasting viewpoints in which to discover signals and general emerging trends. Frequently, weak signals are equalled with the trend or emerging issue that they are pointing to. Therefore, it is the larger context of the weak signals and what they are referring to that is worth analysing.

Weak signals can be easily overlooked in our daily lives or within research:

“A weak signal is a piece of data that usually appears insignificant, or is swamped in a sea of raw data, which generated “noise”. It is difficult to perceive, [...] if it catches our attention it then assumes the status of information.” (Lesca & Lesca, 2014. 17)

If we consider that they can be “random disconnected pieces of information that [...] can be recognised as part of a larger pattern[...]” (Schoemaker et.al 2013) then special attention must be paid to look at the overall networked pattern of responses. The accumulative combinations here in this study - of respondent to respondent, question to question, and theme to theme - in this approach, offer very complicated and infinite patterns in which to find new information.⁸ This is a very common aspect where weak signals can be hidden and often overlooked but have great potential and use for future planning. Sandro Mendonça et al. (2012) describe this aptly:

“As a form of foresight raw material, ‘weak signals’ can be thought of as gross, unstructured, fragmented, incomplete and inadvertent environmental data that may be refined into valuable information regarding context and further be articulated into strategically actionable knowledge.”(Mendonça et al. 2012.)

In the original application of the weak signals method (attributed to Igor Ansoff 1974) there are two main components; the search for early warning signs and the action taken by the organization – through strategy, planning and implementation. The valuable information can form policy and readiness for change. This method allows early warning information of change and gives advantage to organisations in which to respond and put into place strategic plans and structures for the futures. It is the hope that gathering such information that gives clues to potential developments or changes in the future industry can help us better prepare for those kinds of outcomes. When thinking about the future of journalism and media 16 years into the future (from the time of the survey) i.e. into the year 2030, it would be wise to understand better the developing professional nature and consumer driven culture. Weak signals then offer us a challenging but rewarding guide to possible futures.

⁸ This could indeed be a topic for further study dwelling deeper into pattern recognition harvesting the material gathered in this weak signal survey.



Figure 3. Weak signals are like bobcat's fresh paw prints on snow where no earlier signs detected – barely visible, but delivering a message that there are bobcats in the neighbourhood.

Weak signals are like raw data. They will not become useful until they convey some information for the observer. Weak signals lie at the core of foresight and anticipation, but their ultimate value is formed after detection and interpretation for decision-making and action.

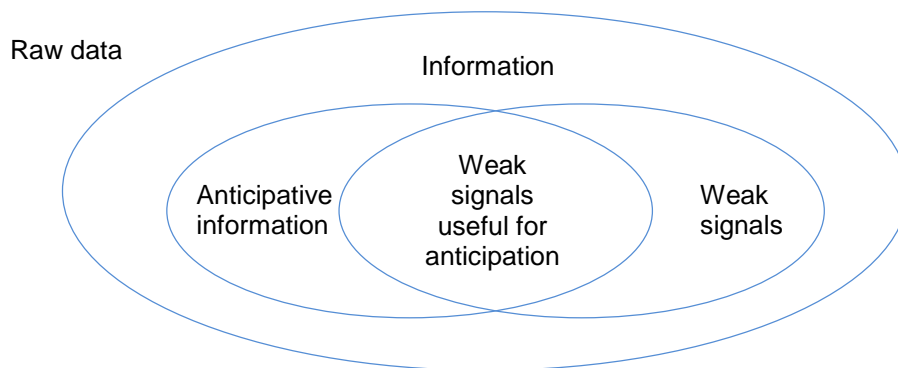


Figure 4. Weak signal become useful only after identification and interpretation (source: Lesca & Lesca 2014).

3. QUESTION BY QUESTION SUMMARY ANALYSIS

This chapter offers a “question-wise” complete but “reply-wise” compact (reduced) collection of the questionnaire responses, where answers are presented with a light analysis in order to reveal and highlight key issues for the future of media and journalism. This chapter reads systematically (question by question) the main results from the survey in a compact manner, forming a basis for the clustering done in chapter 4. Each anonymous respondent has the letter R for Respondent and a number (e.g. R1, R2) in order to reference ideas with the original text.⁹ Bolding of the text is used to highlight identified key issues for the topic of this study. The key issues are merely used in order to give structure for the presentation of the study material. Key topics are illustrated as a thematic mindmap in Appendix 3. A careful clustering reflected through all findings in MEDEIA project is done in the following chapter.

3.1 Emerging roles and functions for media and journalism in 2030

QUESTION 1: *What new roles and/or functions in society do you foresee emerging for media/journalism in 2030?*

Diversity of sources and contents: A large pool of information sources powered by the Internet and various networks offer a fairly wide coverage of news stories. The further breakthroughs in technologies, such as automated intelligent translation technologies would abolish language barriers (R8) and have a clear impact on the global media adding immensely to the wide pool of information:

“I see media being a fact source drawn upon by internet based communications communities (by location, by interest area, by profession and general news).” (R1)

Although the desired role for the media is seen to be that of offering fact-based quality content and informed opinions, the sensationalized news and its editorial spin can co-exist as the Internet provides diverse sources of information for diverse preferences and needs:

“[...] the best informed opinions and perspectives in the written press are going to be more important.[...]” (R12)

⁹ NB: The respondents were given the respective numbers (R1, R2 etc) in the chronological order of the reception of the replies, not according to the alphabetical order of their names. See Appendix 2 for respondents in alphabetical order.

“[...] all this will coexist with a more “gossip” like circuit of information flow / distribution mainly happening in social media and in newspapers websites that follow that trend and become less prestigious in terms of information quality.[...]”(R12)

Social value construction: As the media is embedded to the communities who are also creating it, the journalistic processes and media are seen to become more open and involved with the public and society as a whole:

“Involved in creation and construction of new social values” (R3)

“Media as part of human beings, part of social life – more media-dependence in future society.” (R6)

The embedded media can be seen to happen also technology-wise, as the omnipresent information flow is no more connected to certain platforms, but is rather defined by being mobile:

“Information will be free almost everywhere and open to all. The platforms of Media/Journalism will be based mainly in mobile technologies, as a result of an integration of all platforms (TV, Internet, mobile, etc.). Paper media will not exist anymore in 2030.” (R7)

Customization of content and individualism: However, as the more complex Internet dynamically caters for the individual with customized information, we are also separated in many new ways, and again connected “*through global activity orientated media*” in new “*horizontal global markets*” (R11). We become very unique in our media behavior, consumption and expression. Customized journalism is enabled through Internet of Things and behavioral data collecting technologies (R10):

“Common public sphere “balkanized” and increasingly becoming replaced by personal expression and identity construction (from “us” to “I”).” (R11)

Educational functions for media and journalism were emphasized in the answers. As the media can increase our learning potential and social capacity, media literacy takes on new meaning:

“Journalism: more responsible and with teaching information.” (R4)

“Society engage in Life long learning and open education resources.” (R11)

“Building social capacity for anticipated vision and foresight social, economic and political changes.” (R3)

The new breed of journalist was a common theme in the responses. Journalists are seen as more and more independent and trustworthy sources of information, and their validity of the viewpoint is their professional strength. Mastering the platforms and technologies is vital for a journalist:

“Indie journalists (trustworthy independent journalists like LongPlay)” (R9)

“Mash-up news journalist (cross media content, possibility to get more in depth information about certain news, background information...)” (R9)

The role of editorial work is seen to become more important, and one respondent estimates that “[...] journalists are going to be trained to act like full time editors and be capable at the same time to write a chronicle with added value. [...]” (R12). This can be seen to support the autonomous status of the journalists. The independence is also seen as a counterforce to established media institutions. Social media takes over the space once occupied purely for professional journalists and functions as a free forum where everyone has a chance to contribute to news and media, media democracy:

“One-person media outlets are emerging, large media companies TV stations disrupted. With the Internet of things, chips and sensors will make each individual journalists. People seek information from the collective intelligence portals and Social media outlets, rather than newspapers or TV news channels.” (R5)

Freedom vs. Control: The Internet as a publishing forum *par excellence* liberates small and independent style publishing and on the other hand there are the potential for a more controlled media that has censorship or a firewall.

“[...] liberateing (internet and small independent publishing), control (Chinese style filtering and controlling systems getting stronger – even in western democracies like UK), [...]” (R8)

“New schemes of cloud journalism collecting and distributing news through the electronic media. Society will have a critical role in news distribution but counter-forces will attempt to reduce the freedom of information” (R10)

These two contradictory directions were raised by several respondents, the massive information flow simultaneously everywhere about everything and then a containing of that flow for many reasons, some logical or legal and some power based:

“Two opposing functions which cannot be aligned:

1. Raising critical awareness among the population
2. Manipulation of public opinion in order to avoid critical awareness” (R14)

3.2 Most interesting weak signals of media and journalism

QUESTION 2: *In your opinion, what are the most interesting weak signals (weak signals are signs of currently weak but possibly strengthening phenomena) related to the future of media and/or journalism? Please mention at least two weak signals that you have noticed.*

Social value: Media and journalism are serving the social needs through information. *Technology and science will save us* is an ethos that has reemerged with the magnitude of challenges that confront society and the world today. Educational purposes are collectively seen as an important part of social aspect:

“Increased relations within scientific and technology information with social needs and possible evolution” (R3)

“Consensus over role of education and ethic in social activities” (R3)

The new breed of journalists: weak signals connected to the roles and positions of journalists indicate changes in the backgrounds of the reporters as well as in the paradigms considering the objectivity as a part their work:

“Objectivity is not going to be a value. Readers seek to read perspectives and well informed opinions.” (R12)

“Reduction of the distinction between journalism and personal opinion (almost everybody as a journalist trying to spread messages, such as as twitter, many disappear as "noise" in the "outer space")” (R14)

A global sphere of public journalism is rising and can be noticed today in the tweets, blogs and videos from the conflict in Gaza or Ukraine. It is not professional journalism that is making the impact in the news headlines, but the visceral personal messages coming from within these conflict areas, from voices scarcely heard before with instantaneous sharing of events.

“[...] today anyone can capture news and publish it globally. The question is: to what extent will public journalism replace professional journalism?” (R2)

Crowd-sourcing and networked journalism: Both journalists and citizens take part in producing the information available. Through networked journalism it is possible to add *“in-depth and local knowledge to global topics”* (R9). Interestingly collaboratively produced information is considered as a guarantee of being more neutral:

“Migration of readers and viewers to crowd sourced balanced sources of producers with an agenda to inform and not persuade.” (R1)

A growing collaborative internet for an honest presentation of events. (R1)

Power & control: Alongside with crowd sourcing, networked journalism and new democratizing technologies also power structures are bound to change:

“Political uprising (Arab spring, etc.), facilitated /generated by new media and communications channels” (R11)

Next to political uprising and societal power shifts, also individuals may change their position on status hierarchies:

“YouTube superstars (qualitatively new dynamics)” (R11)

Aspects of firewall and control are always an inherent part of the media. The flip side of a free democratic information society is the aspect of a more fire-walled and restricted information society. The opposite scenario from a more open free democratic information society is one where there is a more closed firewalled and restricted information society eroding the liberating nature of open information based media:

“There are attempts for more control over the social media and blogs that maybe will transform the role of internet. Maybe a less open and free internet will exist in 20 years. This maybe will reduce the role of social media as catalyst for social and political change.” (R10)

“Complete ban on specific social media or other apps, will be the case in the specific countries. New or traditional forms of journalism might rise again in those countries.” (R10)

Power strategies, political or economically oriented have always needed media. Ownership of new media outlets is seen to continue to be an issue:

“Ownership of different medias becoming more and more important and a battleground for soft powers.” (R8)

Power and control are enacted also through surveillance. The growing technological capabilities to add identification to images and video data some tagging individuals surveillance in virtual and public spaces can be automated so that everybody can be tracked by i.e. face recognition:

Automated systems to review still and video images (=surveillance, identification) (R2)

“Orwellian state surveillance and the increasing lack of trust on security and privacy on the net.” (R11)

A weak signal suggested to support the increasing surveillance and control of knowledge sharing is related to the idea, that spreading information on criminal actions might result in further replication of the actions. Free-flow information becomes dangerous when released:

“Concern over copycat crimes may ultimately result in constraint of material that can be published. For example Lone Wolf crimes that would be threatening to the public interest if emulated” (R2)

Platforms: Convergence is seen as a common trend, as platforms integrate (R7). The use of paper based media is anticipated to be reduced (R7), and instead of “traditional media” the information is retrieved from sources that are considered to better be “in the know”. The importance of design was emphasized (R12). The real-time nature of reporting also may influence the quality of journalism because of spelling errors and un-verified data. (R11).

“[...] we do not use any more the news at the TV to know the weather, or the radio to check the traffic. We use social nets where users upload information in a much timely and precise way.”

The return of traditional forms of journalism was also suggested to happen in countries banning social media or related apps (R10). Thus, opposing views on the death of paper media and complete digitalization were also presented:

“Newspapers and magazines are probably going to sell less in number but improve their income by other means and have a more attached readers base. In one extreme, they are going to offer perspectives about political debates and publish a more specialized information.[...]” (R12)

The changing face of media and journalism from established practices like advertising are becoming outdated and eventually obsolete. Reinventing these traditional forms, shifting them to new platforms may resurrect them:

“Large conglomerates disappearing, and also manufacturing firms disrupted due to 3D printers so that no advertisers to support financially the media or journalism. Advertisement will move to Google Glasses or chips and sensors where normal public use for daily lives.” (R5)

Reinvention is also needed in order to enhance the user experience in a profound way. “*More entertaining and interactive content to further engage audiences*” (R9) is suggested in order to keep the audience/ consumer/ prosumer interested.

Customization & fragmentation: Diverse content and specific media usage results in an even more fragmented media audience (R8) that may be vastly different from those sought by mass media broadcasting audiences. Gatekeeping, filtering and selected information sourcing are features of personal customization:

“intelligent speech search engines – difference languages will be translated in 2 seconds; media search and classification as personal customization.” (R6)

“media gatekeeper will be automatic by personal customization“ (R6)

3.3 The possible effects of the weak signals

QUESTION 3: *If these weak signals were to strengthen, what kind of effects could they have on media and/or journalism by 2030?*

Connecting the granulated: The automated technological solutions mentioned – such as automated data collection and language translation applications – will transform the gathering, analysis, range and the specificity of knowledge as well the formulation of the content in general:

“Artificial intelligence can provide new business models by changing the economics of both collection and analysis of information.[...]” (R15)

“Automated aggregation will make data available in unprecedented areas and, perversely, the scale of data provided at the aggregate level will allow for much greater granularization of analysis than has ever been possible“ (R15)

However the massive amount of very specific data available is not yet seen as a final product. Thus it is suggested that the sources acknowledging the interrelations and complexity of different phenomena will be seen as the most trustworthy sources of information:

“As sources, and types of sources, continue to proliferate the media organizations that are the best at understanding the interrelationships will tend to be the most trusted.“ (R15)

The balance between the endlessly diverse and specific and the common can also be seen in the discussion concerning the customization of knowledge:

“More targeted/niche approaches to various topics - instead of general everything-for-everyone type of newspapers and magazines, there will be more tailored content to certain niche audiences and a possibility to combine various topics according to ones' interests (collaborative filtering).” (R9)

As a response to niche markets, the rise of media companies “*for the basics*” is anticipated (R13). This could be a backlash for a filter bubble stemming from the customization of content:

“even more adaption of the traditional publishers to the preferences of the audience (they are provided only the information they want to hear)[...]” (R14)

Power shifts and democracy: Social media is seen as an extension of free media, resulting in a new version of democracy, Democracy 2.0. The countries with limited civil rights will continue with more controllable traditional forms of journalism. (R10) The public opinion and the participative approaches become an inherent part of media and journalism:

“More community and/or participatory approaches to media consumption” (R9)

The distrust towards traditional forms of media and journalism result in the growth of importance in the role of an individual as an information source. Thus also the meaning of personal networks will be emphasized, as the information disseminates through complex webs rather than through simple hierarchies:

“Anyone could be journalists, and anyone could become the news producing components. People will describe their own daily life on their own way, and media could not function as watch dogs for social and economic scenes.” (R5)

“People would be more interested in creating and fostering their own links through personal networks.”(R4)

Along with the shifts in the role of the journalist – as everyone can become one – the variety of viewpoints increases:

“Local brings depth to global (e.g. global warming, work related topics, industrial growth, learning... and similar general topics are to be looked from different local viewpoints” (R9)

Because media and journalism do not necessarily have to aim for objectivity, media can also have a *mission*, social or other. However entertaining purposes co-exist and advertisement may adapt characteristics from journalism in order to become more appealing:

“Less journalism in the traditional sense and more “journalism” combined with missions and entertainment (fox, Chinese media); mediamix with more intelligent and “journalism” like advertisement.” (R8)

One response to tackle the vast amount of information may be an introduction of meta-level to enable the adaptation and deeper understanding of knowledge as well as a discussion that supports the idea of democratic media:

“Journalism in 2030 will not to tell what is new, while to tell how to understand the news with interaction between editors and receivers.” (R6)

Next to changes in journalist roles other jobs may disappear or transform as well. One example mentioned was the occupation of translator, threatened by the automatic translation technologies (R6).

Privacy and surveillance: The increasing control may put people under unwanted focus and hinder the open access to information:

“[...]The proliferation of cameras means that it will be much more difficult to hide anything. The desire to eliminate copycat crimes means that it will become more difficult for the public to read certain kinds of news stories.” (R2)

As a response to control, surveillance and increasing distrust of privacy related questions the liberating role of social media as a distributor of knowledge is under a threat:

“Backlash effects (drop-out from Facebook, smaller net footprints, separation of advertising from content (no tracking), state-sponsored national media...)” (R11)

3.4 Tools and practices improving the quality of media and journalism

QUESTION 4: What new tools and practices could we bring into action to support and improve the quality of media and/or journalism by 2030?

Accessing and forming the pool of information was a common theme in common when describing the needed technological solutions needed in order to improve the quality of media and journalism. Concrete tools proposed ranged from free internet (R8) and speech tools (R1) to wearables, 3-D and neuroscientific tools (R6). The scope of information itself was suggested to get better with big data journalism and other tools:

“Big data journalism: Using of big data to produce news” (R10)

“Video Tools of human-computer interactions: more richness of media for information” (R6)

“Internet of Things, and IBM Watson supercomputers, and Google Global Brain, could provide the most updated information and scenes in the world and near by us.” (R5)

The need for pool of information to cater for an individual was not forgotten, as the tools for better filtering and customization of content were mentioned:

“Today some news media lean to the left or to the right; in the future there may be separate channels for various news items. For example a particular channel that covers everything about the missing Malaysian airliner, and another covering the American withdrawal from Afghanistan. Then one could tune into news that seems to be personally important[...]” (R2)

“I expect snack sized entertainment and collaborative filtering type of processes to become more general in the future. It is about answering to people's needs and requests better.” (R9)

The continuation of mass media was suggested as a counter reaction to customized content. The appearance of both viewpoints has been visible throughout the questionnaire:

“Traditional” national broadcasting companies have a critical role in Europe (and some countries where they exist)[...]” (R8)

The future media environment was acknowledged to be a complex one, and thus the importance of reflecting the processes was recognized, although concrete tools were harder to suggest:

“Instead of new tools, I would look at new processes. [...] How to focus on motivation, collaboration and entertainment when building up customer relationship and delivering competitive media content the various audiences.” (R9)

Transparency and credibility: Technological solutions enhancing the transparency and factuality were widely proposed. These values could be further supported with new services, professions or as a part of journalistic processes:

“What's needed is an index of truth that appears on each news story. We have seen a few efforts in this direction. This authentication can come from an independent party, maybe a new profession of "news auditors.” (R2)

“More analysis and critic of the current media landscape, case studies and research about what journalists and editors think about their own practice beyond the political economy of the media they work for.” (R12)

“Create some kind of “review” systems for information available in internet, just to make sure we use available knowledge to build up new knowledge instead of going backwards...” (R13)

“Use of expanding “big data” capabilities to provide an automated fact checking or a form of credence rating to reported “facts” provided by journalists“ (R15)

Also the consideration of ethical values in general were suggested to be ideal and an essential part of journalistic processes and future media:

“Awards for ethical behavior.” (R2)

“Capacity building on digital technologies, promoting digital entrepreneurship and ethical values in journalism.” (R7)

Although it may be included in the ethical considerations, the topic of information privacy was not present in suggested tools and processes widely considering the emphasis given on the issue in previous questions. However privacy was suggested to be supported with browser solutions, such as *“user-owned browsing history combined with TOR-style access”* (R11).

Media and futures literacy: Media education, media literature skills and participatory learning were seen as important skills as the media landscape becomes more diverse:

“[...]media literature skills for youngsters[...].” (R8)

“Media education at schools.” (R11)

“Motivating children and students to participate in teaching others.” (R4)

Following the theme of participation, media was also seen as an entity encouraging people to take action and change their environment:

“Inviting people to become actors to change situations.” (R4)

Similarly the journalists were suggested to improve their futures literacy skills. The reflection on future consequences could thus be a natural part of any content reporting on the present day actions:

“Used of futures studies methodologies in curricula of communication school and workshops.” (R3)

“Add as routine checklist, consideration about consequences on the long time of political, social and economic policies and strategic” (R3)

3.5 Suggestions on values

QUESTION 5: What do you personally think are the important values we need to bring forward into the future of media and journalism?

Truth, transparency and accountability were repeated in the answers as ideal values for media and journalism:

“Recommitment to assuring veracity in an environment in which that is increasingly difficult to accomplish.” (R15)

“Independence, telling the truth, integrity, privacy respect, public interest.” (R7)

“Transparency and accountability” (R13)

““All the News Without Fear or Favour”” (R8)

Content-wise these values could be fulfilled by offering holistic, deep and meaningful information:

“Professionalization/accuracy/well informed opinions/ability to make connections and link issues /broad the perspective and try to think locally form a global perspective and globally form a local perspective.” (R12)

“Media deep analysis more useful for the public’s understanding” (R6)

“More emphasis on providing meaningful interpretation, rather than simply filling time. The breadth of sources makes it increasingly easy to give glib reports.” (R15)

Skills needed from journalist were suggested to include the following:

“Individuality – Mobility – Flexibility – Speed (ability to react to discussions, topics, side topics...) and agility (constant iteration)” (R9)

“Deeper technological savvy” (R15)

Power shift and social oversight: Along with social media, open access to information and the changes in who is a journalist, public gains power. A connection was seen between freedom of speech and improving various aspects of life such as global civil rights and environmental conditions (R10). Accordingly the role of a watchdog seeking after the truth is given not only to media as such, but also to individuals:

“Watch dog and reporters instinct are the important values for the future of media. With the assistance of IBM supercomputer on our own tablets or smart phones, any individual could recognize the right or wrong positions of the fact.[...]” (R5)

“Oversight by the collaborative social networks of the consumers who increasingly do not trust current hierarchical sources.” (R1)

Solidarity and responsibility towards the present and future people was considered as an important value:

“Solidarity” (R3)

“Intercultural comprehension or understanding.” (R3)

“The Truth, Ethics, Respect, Tolerance, Compassion, Solidarity, Friendship, Companionship” (R4)

“Individual and social responsibility for new and future generations.” (R3)

Enabling values: Finally the notion of “*Media self-discipline*” (R6) can be added to the list of values as an umbrella category, and a suggestion that media should govern itself to fulfill all the values suggested in the answers. The meta level of values was raised by asking, if the bearing of the values is possible:

“[...] the question is not whether journalists need or have values, the question is whether the system is arranged in a way so that they can follow these values without losing their jobs.” (R14)

3.6 Challenges for the industry

QUESTION 6: What challenges do you personally foresee that you have to overcome for your industry in the next 16 years?

The validity and dissemination of knowledge were seen as challenges for organizations and moreover for the whole economy:

“I need to help organizations better understand the risks of using unvalidated sources.” (R15)

“To build up a new foundations for the economy so as knowledge circulates more fluidly and freely” (R13)

Educational challenges are seen relate to the challenges of adapting and processing information in general:

“Half of traditional universities may be absolute due to MOOCs, such as Coursera, edX, Udacity, Udemy, etc. IBM Watson supercomputers and Global brain will teach us or let us have the relevant information.” (R5)

“In education the challenges to be disintermediated are an entrenched administrative bureaucracy, a unionized and tenured work force who thinks they are entitled to more than consumers are any longer willing to pay them. People know they must learn more to survive economically and mange the tsunami of new knowledge rushing at them every day. The current education hierarchy is in the way of people learning.” (R1)

Content was proposed to develop towards more educative and positive direction. The expectations of the audiences as well as the mix between different types of contents were seen as challenging:

“Changing type of advertisements. They need to be more creative in order to be sending subliminal educative messages.” (R4)

“[...]There is a need of a new balance between image and text. For the time being, texts are getting shorter and images bigger. That is not the only possible way of displaying information. Also, I would like to know/research about what people expect nowadays from journalism.” (R12)

“Changing journalists focus to positive news.” (R4)

Technology & assessment: Both the technological change and the evaluation of it seem to pose challenges within the next 16 years:

“Technological change.” (R7)

“Media technology: a) intelligent languages, b) speech and video media, c) customization, InSoL-oMo.” (R6)

“To develop methods for control of new technology before to get the market.” (R3)

Media and control were considered as important topics in the future as well. Structural changes were suggested in ownership models in order to break down hierarchies:

“Fundamental structural change, new ownership models and combinations; media’s threat to become part of the soft power game by rich and powerful owners; losing traditional middle-class as a customers and media consumers (especially in the West).” (R8)

“Media power should be controlled in the future society: “Uncrowned King” with media surveillance.” (R6)

Constant adjustment to change is seen to be an overall challenge. Adjusting to it can be beneficial in phasing the smaller scale challenges:

[...]As a media professional I do not see any particular challenges except just adjusting to the constant change and fully understand the change digital, mobile and interactive will bring to journalism.” (R9)

3.7 Summarising reflections

The responses received to the questionnaire were a rich collection of trends, ideas, values and issues. Overall it can be stated that the future of media and journalism was analyzed in the answers considering various different factors influencing the phenomenon. Environmental and economic aspects were perhaps less considered than technological, social, political and cultural dimensions. Throughout the questionnaire respondents commented on what they noticed in the current direction of the general future of media and journalism toward 2030. The viewpoints were not very radical but the replies represented rather a critical perspective of the current unfolding discourse we are in. Linguistically respondents used words like *'more'* often in a way to indicate a direction in the future. The responses can be seen to be cohesive throughout the questionnaire, with similar topics occurring in all the questions, however varying from one question to another. The changes in platform (i.e. the destiny of traditional & print media), power structures, the role of journalists and the balance between the vast information flow and customization were among the common issues.

Suggestions for emerging roles and functions for the media and journalism in society (chapter 3.1) revolved around the topics relating to common social values, diversity of information followed by customization of the content, educational functions, the new roles of journalists and liberating vs. controlling processes of media. Respondents saw the emergence of diverse or even controversial roles. For example media was seen to create and construct new social values, but simultaneously the content is customized according to the wishes and needs of an individual. Although these two functions do not completely remove each other from

consideration, individualization and building common social values at the same time seem like controversial functions. However, individualization as such may be a shared social value. Identifying the most interesting weak signals in chapter 3.2 was concentrated around technological solutions, values, power hierarchies, control and the roles connected to media. Similarly to the situation in chapter 3.1 there were emerging issues identified, that were pointing into opposite or controversial directions. As such this notion can be seen as arguing the relevance of weak signals. Were they agreed fully by everyone, they would perhaps be not weak signals anymore. In chapter 3.3 the possible effects of the weak signals identified in the previous chapter were considered. Consistently the effects were aligned with the weak signals proposed, elaborating the possible meaning of these emerging issues and different possible futures. In question 4 (chapter 3.4) tools and practices needed to bring into action in order improve the quality of media and journalism were asked. The answers related to better access to knowledge, transparent processes and credibility and media and futures literacy. Both practical tools and processes considering knowledge gathering, dissemination, consumption and interpretation were proposed. Important values (chapter 3.5) suggested bringing forward into the future of media and journalism were mainly related to truth and transparency of information, power relations and solidarity. The answers were consistent with the ethos of the rest of the questionnaire as well as when comparing the responses within this question. Identifying challenges for respondents' own industries (chapter 3.6) was furthermore connected with the topics introduced in previous questions.

Although distinctive topics and themes could be identified from the material, interesting contrasts or opposite development directions can be pinpointed within the answers, some of them more explicit than others. Many respondents identified the contrary processes of control and censorship and liberating open information, which are both seen to influence media and journalism simultaneously. As mentioned, there is also a tension between the individualization and the customization of the content vs. the view on media being a constructor of common social values, a contrast that was less explicitly expressed in the answers. Similarly, another interesting topic is the question of who is a journalist. On one hand, there was a strong emphasis on the need of deeper knowledge and well informed opinions, on the other hand, crowdsourced media was supported alongside with the view that anyone can (and even should) be a journalist. Neither of the points mentioned are necessarily impossible combinations, but the existing tensions between the trends were left undiscussed. These contrasts can be interpreted to support the idea that the respondents were indeed discussing weak signals or development paths that are yet unsure in their existence. Accordingly, it can be said, that several possible futures for media and journalism are to be unfolded.

During the next few years the turbulence in the field of media and communications will find its new courses. In the growing infoglut the role of media and journalism as a gatekeeper of facts and curator of contents will be accentuated. The tasks for media and journalism will be numerous and there will be need for the field – but in entirely new formats and practices.

4. WEAK SIGNALS CATEGORIZED

In this chapter weak signals gathered from the questionnaire responses are classified into four categories: 1) New Journalism, 2) Niche Media and Personal Customization, 3) Privacy and New Power Dynamics, and 4) The Future of Print and Traditional Media. These categories are presented in more detail below. Each category begins with a summary and analysis, followed by quotes from the responses. Please note that the list of quotes is not exhaustive; the most “representative” responses have been selected.

4.1 New Journalism

The concept of '**New Journalism**' emerged through many of the answers on the future of media communications that embodies a new professionalism. Three themes defining “new journalism” arise from the responses.

Firstly, journalism will become more democratized and networked than before. In principle everyone can be a journalist as everyone has the means to produce and channels to distribute “journalism”. The proliferation of different viewpoints contribute to a “new objectivity” and more balanced reporting. On the other hand, as companies can also produce “journalism”, the line between journalism and advertising may become blurry.

“Journalism is becoming democratized. More people are providing what used to be called "news" via the Internet and social media. Still and video cameras are everywhere and the number of images is staggering.” (R2)¹⁰

“The rise of public journalism; today anyone can capture news and publish it globally. The question is: to what extent will public journalism replace professional journalism?” (R2)

“Anyone could be journalists, and anyone could become the news producing components.” (R5)

“The continuing growth of the collaborative internet perceived to be a more honest presentation of events.” (R1)

“Migration of readers and viewers to crowd sourced balanced sources of producers with an agenda to inform and not persuade.”(R1)

“Networked journalisms international journalists work in a network adding in-depth and local knowledge to global topics.” (R9)

“All the news without fear nor favor.” (R8)

“Journalism is combined with business commercialized content.” (R8)

The second line of thinking for “New Journalism” is the emphasis on well-informed opinion and interpretation. Journalists should develop broad perspectives and an expertise to connect seemingly separate

¹⁰ Replies to the questionnaire are kept anonymous. R1, R2 etc refer to the respondents, but they are not listed in alphabetical order but in the chronological order of the replies received from a respondent.

phenomena and issues together. Journalists are emerging as curators, compiling particularly interesting bits and pieces together. Editing skills are needed to synthesize the information chaos into coherent wholes. Journalism can evolve as a “change actor” promoting new social values. Journalism can even adopt a “futures view” in which journalism does not only try to describe the world as it is but to systemically anticipate different directions of development. In a similar vein, journalism could become a new learning or education source for diverse educational needs. When interpretations proliferate, professional journalists might specialize as fact-checkers. As a result of all of this, the demands of the profession of journalism might heighten. For instance, systems thinking could evolve as a new core skill for journalists.

“Objectivity is not going to be a value. Readers seek to read perspectives and well informed opinions.” (R12)

“Journalism in 2030 will not to tell what is new, while to tell how to understand the news with interaction between editors and receivers.” (R6)

“Reduction of the distinction between journalism and personal opinion.” (R14)

“More emphasis on providing meaningful interpretation, rather than simply filling time. The breadth of sources makes it increasingly easy to give glib reports.” (R15)

“Mash-up news journalist (cross media content, possibility to get more in depth information about certain news, background information...” (R9)

“[Q]uality, good and well informed opinions and the aim of having increasingly participative readers.” (R12)

“Involved in creation and construction of new social values.” (R3)

“Building social capacity for anticipated vision and foresight social, economic and political changes.” (R3)

“Inviting people to become actors to change situations. [...] Motivating children and students to participate in teaching others.” (R4)

“Media fosters 80% of positive news and programming for improving peoples learning. Journalism: more responsible and with teaching information.” (R4)

“Content creation for life-long learning and open educational resources.” (R11)

“Professionalization/accuracy/well informed opinions/ability to make connections and link issues /broad the perspective and try to think locally form a global perspective and globally form a local perspective.” (R12)

“The role of the editors is going to be highlighted and I think journalists are going to be trained to act like full time editors and be capable at the same time to write a chronicle with added value.” (R12)

“What's needed is an index of truth that appears on each news story. We have seen a few efforts in this direction. This authentication can come from an independent party, maybe a new profession of "news auditors.” (R2)

The third leading theme of “New Journalism” is the use of new technologies and exploiting their possibilities. Journalists are needed to synthesize and make sense of automated data feeds, proliferating due to the Internet of Things. Even fact-checking could be automated if the analysis methods of big data would become sophisticated enough. In principle big data promises a more detailed analysis. Big data and digital archives also offer better possibilities for contextualization and offering historical perspectives.¹¹ On the other hand, “real time journalism” provides timely information which is however largely unverified. Real-time translation would hinder language barriers obsolete. Interfaces based on spoken commands could be more convenient and intuitional than mouse-keyboard-touch interfaces.

“[J]ournalism as a synthesizer of proliferating automated data feeds.” (R15)

“Collecting behavior data through the internet of things, will create a new form of journalism.” (R10)

“Big data journalism, using big data to produce news” (R10)

“Automated aggregation will make data available in unprecedented areas and, perversely, the scale of data provided at the aggregate level will allow for much greater granularization of analysis than has ever been possible. [...] Use of expanding “big data” capabilities to provide an automated fact checking or a form of credence rating to reported “facts” provided by journalists” (R15)

“If one of the internet affordances is to enable an enormous archive of previous information, a good journalist / editor should be able to provide a historical and critical perspective on what they are writing about.” (R12)

“New schemes of cloud journalism collecting and distributing news through the electronic media.” (R10)

“Real time journalism combined with low quality, unverified data.” (R11)

“Half of traditional universities may be absolute due to MOOCs, such as Coursera, edX, Udacity, Udemy, etc. IBM Watson supercomputers and Global brain will teach us or let us have the relevant information.” (R5)

“Intelligent language translation abolishing language barriers, creating a global media”. (R8)

¹¹ Mayer-Schönberger & Cukier (2013, 84) paint a media picture of datafication, even datafication of everything. They remind us that ca 130 million books have been published since the printing press was invented. By 2012 Google had scanned more than 20 million titles, which is more than 15 per cent of the world's written heritage. This has initiated a new academic discipline called “Culturomics” – computational lexicology that aims at understanding human behavior and cultural trends through the quantitative analysis of texts.

“Intelligent speech search engines – different languages will be translated in 2 seconds; media search and classification as personal customization. (R6)

[R]eal-time machine translation.” (R11)

“Speech Tools of human-computer interactions: human beings’ most common interaction. Video Tools of human-computer interactions: more richness of media for information.” (R6)



Figure 5. New journalism embodies democratization, well-informed opinions, and new empowering technologies.

4.2 Niche media and personal customization

Networked journalism and the digitalization of media are leading to specialization of media – i.e. niche media instead of mass media – and to personalization of journalism consumption. “Gatekeeping” will be automatized and personalized. Media and journalism have an increasingly prominent role in identity building. Due to wearable media technologies and more “intimate” contents, media and journalism will increasingly enmesh with the consciousness of media users. As a result of niche media and personal customization of contents, the public sphere will “balkanize”, fragment into numerous peer-to-peer communities of interest. People form alliances through shared values and tastes, not so much through e.g. class position and nationality. This development may fragment and polarize cultures and thus deepen inequalities.

“Advances in wearable technology, 3-D, and neuroscience will further change and democratize the remnants of traditional journalism today.” (R1)

“Today some news media lean to the left or to the right; in the future there may be separate channels for various news items. For example a particular channel that covers everything about the missing Malaysian airliner, and another covering the American withdrawal from Afghanistan. Then one could tune into news that seems to be personally important. This would also avoid incessant repetition on channels like CNN.” (R2)

“More targeted/niche approaches to various topics - instead of general everything-for-everyone type of newspapers and magazines, there will be more tailored content to certain niche audiences and a possibility to combine various topics according to ones' interests (collaborative filtering).” (R9)

“We can expect media’s role in 2030: (1) Media as part of human beings, part of social life – more media-dependence in future society.” (R6)

“More targeted/niche approaches to various topics - instead of general everything-for-everyone type of newspapers and magazines, there will be more tailored content to certain niche audiences and a possibility to combine various topics according to ones' interests (collaborative filtering).” (R9)

“Media gatekeeper will be automatic by personal customization.” (R6)

“Fragmentation of the media and audiences continues. [...] Internet and small independent publishing [will liberate media].” (R8)

“Indie journalists (trustworthy independent journalists like LongPlay).” (R9)

“YouTube superstars (qualitatively new dynamics).” (R11)

“Common public sphere “balkanized” and increasingly becoming replaced by personal expression and identity construction (from “us” to “I”). Peer-to-peer media (community of interests). Emergence of value-based global public spheres (project- and resistance identities and religions/value systems as a basis for structuring; national media reconstructed from ethnic / nationalistic bases

instead of e.g. political interests, class structure, etc.). On-demand media focused on information search and problem solving.” (R11)

“One-person media outlets are emerging, large media companies TV stations disrupted. With the Internet of things, chips and sensors will make each individual journalists. People seek information from the collective intelligence portals and Social media outlets, rather than newspapers or TV news channels.” (R5)



Figure 6. Niche media means customization of contents.

4.3 Privacy and new power dynamics

Control of media and information will be an increasingly prominent power resource – especially in the context of “hybrid warfare” for which “soft power” is a central ingredient. On one hand information will be even more free than today, on the other freedom of information is to different extents being controlled because of privacy, crime, politics, exertion of power, media monopolies, protection of children etc. Fastening circulation of information may even have a role in new financial crises.

“Ownership of different media becoming more and more important and a battleground for soft powers.” (R8)

“State control of media (Russia, China, etc.). Financial crises (partly created by the new fast dynamics of electronic media). Political uprising (Arab spring, etc.), facilitated/generated by new media and communications channels. Orwellian state surveillance and the increasing lack of trust on security and privacy on the net.” (R11)

“Media power should be controlled in the future society: “Uncrowned King” with media surveillance.” (R6)

“Privacy respect [as a central value of future journalism]” (R7)

“Browser support for privacy (e.g., user-owned browsing history combined with TOR-style access).” (R11)

“Society will have a critical role in news distribution but counter-forces will attempt to reduce the freedom of information.” (R10)

“Laws to protect children more effectively from brutal media content and advertising.” (R14)

“Build up a new foundations for the economy so as knowledge circulates more fluidly and freely. [...] Transparency accountability [will be needed].” (R13)

“Two opposing functions which cannot be aligned: 1. raising critical awareness among the population, 2. manipulation of public opinion in order to avoid critical awareness.” (R14)

“Scientific and technology and technology information applied to social needs, and its evolution.” (R3)

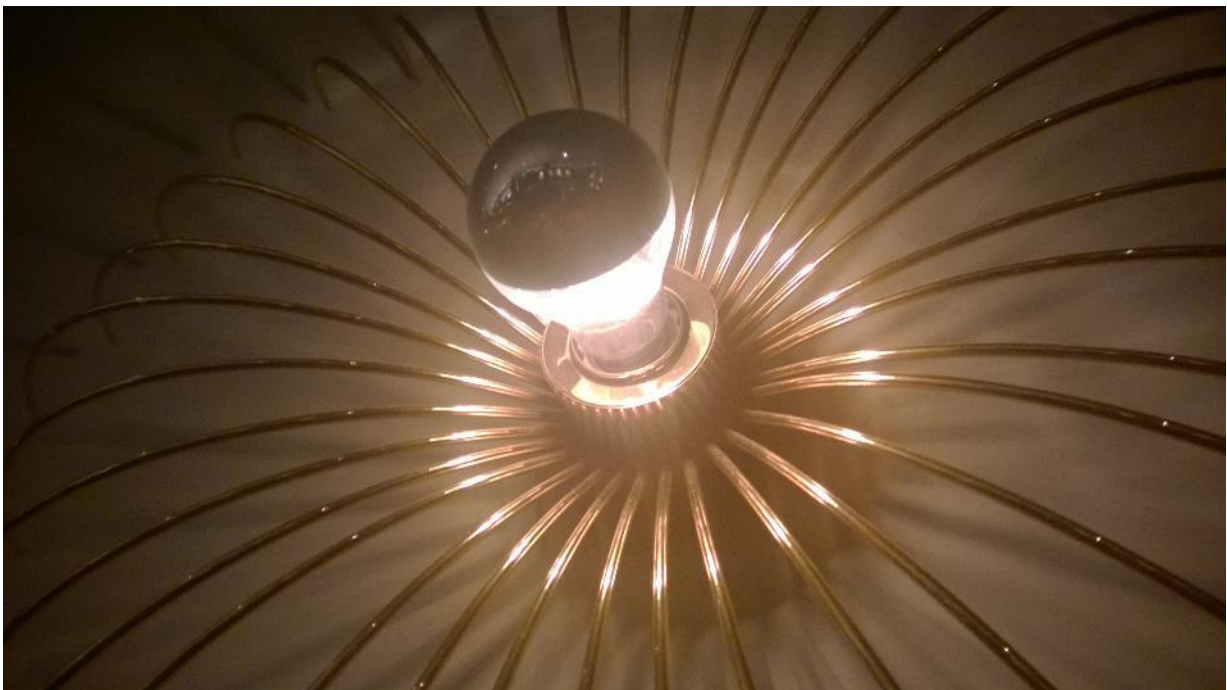


Figure 7. Control and privacy evolving in new power dynamics of media and journalism.

4.4 Future of print and traditional media

In the future, the role of today's "traditional" media could be that of the fact-provider – that would be their niche and area of specialization. Print may become a "luxury" product emphasizing design and quality. Print will in part live on nostalgia too.

"I see media being a fact source drawn upon by internet based communications communities (by location, by interest area, by profession and general news)." (R1)

"Media brands [will focus on] guaranteeing content quality." (R11)

"I am sorry to see the decline of print media. I still like to hold a newspaper or a book in my hand." (R2)

"The best informed opinions and perspectives in the written press are going to be more important." (R12)

"Design is increasingly important and a virtuous coexistence between paper and online newspapers is being build. [...] Design is going to be a key issue for displaying information in accordance to a new idea about what newspapers should be for the contemporary world." (R12)



Figure 8. Future print may represent luxury or nostalgia.

5. CONCLUSIONS

The weak signals were identified and analyzed in order to anticipate possible futures for media and journalism by 2030 in the MEDEIA project. Many of the weak signals and emerging issues or trends identified in the international survey were also distinguishable in the results of the futures Clinique conducted in Finland. This corroborates their relevance. Below the results of the Futures Clinique are summarized as one possible futures image for media and journalism. The results of this international survey on weak signals of future media and journalism are all embedded in this overall narrative.

In 2030 *rhizome* stands as a metaphor for media: media is thoroughly intertwined into society, businesses and people's everyday lives. **Businesses and different communities as well as collectives produce journalism and other media contents, thus helping the progress of journalism.** Journalists often work outside traditional media companies and as freelancers. The production and consumption of media contents is personalized, and mass media as it was used to be known has ceased to exist. Journalists brand themselves as experts in a chosen niche. However, general knowledge and holistic views have also gained in importance. **Professional journalists are gatherers, refiners and evaluators of contents more than producers of new information.** Most of the contents are produced by companies, collectivities/communities and amateur producers. As a result of all of this, **individualism is strengthened as a cultural force, and like-minded establish different kinds of collectives, communities and networks.** However, joint ventures are not exclusive and homogenic, but deeply networked to other communities etc. **Despite thriving grass-roots communities, inequality has worsened** – especially cultural inequality, as shared culture has crumbled and media as a “connective tissue” has been personalized and fragmented. **Surveillance, espionage and snooping are a norm in the digital world.** These are activities of different organizations and businesses as well as individual citizens and NGOs. Partly as result of the ubiquitous surveillance and partly due to the choices of citizens themselves, **the traditional notion of privacy has crumbled.** On the other hand, individuals are more careful than ever about their privacy. “Digital fasting” and “offline retreats” are common. **Open information** on one hand significantly aids journalists in their work, but on the other the ease of information gathering is used against journalists in trying to prevent the publication of sensitive material. **As “everyone” is producing contents, the reliability of information has decreased,** and people are critical and suspicious towards every piece of information. Trusted brands and other authenticators of information are held in high value. **Technology has merged everywhere and people have become cyborgs with big-data mindset.** Technology is integrated into bodies, and “media” and “the self” have often become inseparable. Algorithms handling information and producing contents are basic tools for information producers, but profile also as independent actors themselves.



Figure 9. New media and journalism open up many crosscutting avenues, connecting time dimensions of past, present and future, utilising physical, virtual and digital tools, based on human and artificial intelligence.

The results from the international survey emphasised an evolving media and journalism landscape. In 2030 Media is undergoing a state of change becoming more customized toward individual, massive data driven, and is more intertwined within society. It is a cross-cutting platform, where global access to media and information sees a much more complicated media culture.

The meaning of a certain line of new journalism is enhanced becoming more ethical, independent, collaborative and networked, with better quality and being more well informed. Journalism riding in the same arena as gossip and automated information publication has to enhance its journalistic quality in order to differentiate itself and underline its authenticity. Authentic individual voice resonates and journalistic ability is combined with editorial and production abilities.

Respondents' answers cover many categories foreseeing the roles and functions of media and journalism where a democratic distribution of media content and access leads to a customised individualised media, "from 'us', to 'I'". There new journalism emerges amidst a complex global networked culture.

This is related to the importance of studying the wide area of social interaction that lies between production and consumption of media and journalism. A future challenge is also posed by addressing the largely unexplored territory where media organisations and non-media people deal with each other (Couldry 2010). In futures studies, transdisciplinary, connecting fields that are not typically related, and involving multi-background stakeholders is a recommended procedure in search of innovations and renewal of businesses or strategies. The field of media and journalism would do well in developing peripheral vision (Day & Schoemaker 2006) and out-of-the box thinking. This requires looking widely at other developments in whole-of-society and at weak signals pointing to possibly strengthening phenomena. Identification of weak signals should lead to their interpretation and integration to concrete activities. Early bird always gets the worm.

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APPENDIX 1

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APPENDIX 2

Survey Questions on Weak Signals of Media and Journalism 2030

1. What new roles and/or functions in society do you foresee emerging for media/journalism in 2030?
2. .In your opinion, what are the most interesting weak signals (*weak signals* are signs of currently weak but possibly strengthening phenomena) related to the future of media and/or journalism?
Please mention at least two weak signals that you have noticed.
3. If these weak signals were to strengthen, what kind of effects could they have on media and/or journalism by 2030?
4. What new tools and practices could we bring into action to support and improve the quality of media and/or journalism by 2030?
5. What do you personally think are the important values we need to bring forward into the future of media and journalism?
6. What challenges do you personally foresee that you have to overcome for your industry in the next 16 years?
7. Free comments, ideas, and suggestions

Respondents to the Questionnaire

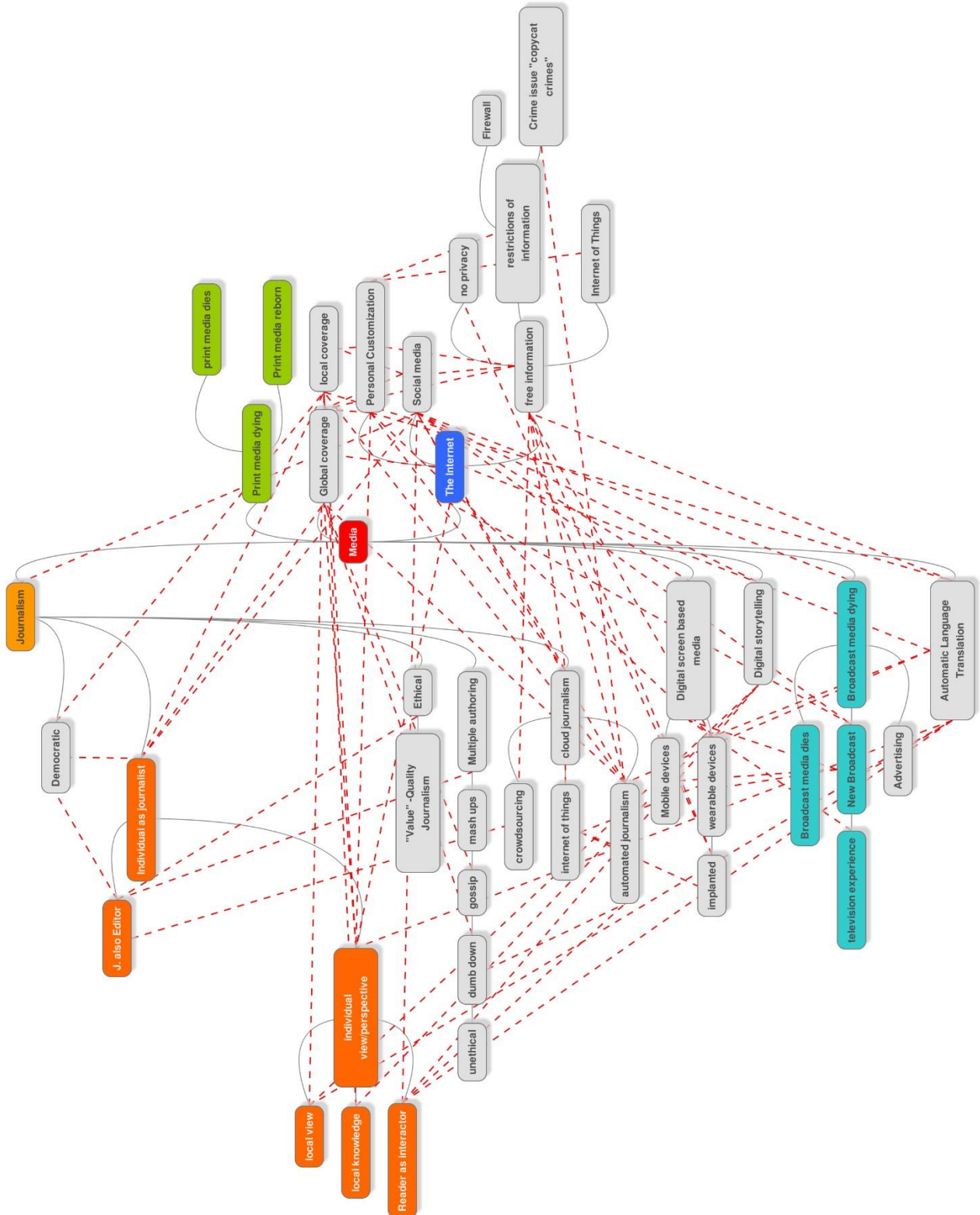
There were 15 respondents from four continents: Europe, North America, South America, Asia, presented below in alphabetical order (not in order of Respondent numbers):

Chu, Jianxun	University of Science and Technology of China (USTC)
Christofilopoulos, Epaminondas	Greek Node of the Millennium Project
Delich, Valentina	FLACSO, Argentina
Ferrante, Patricia	FLACSO, Argentina
Gordon, Theodore	Millennium Project, California
Gottsmann, Jack	Millennium Project, California
Gutierrez, Miguel	Argentinean Node of the Millennium Project
Olaverrieta, Concepción	Mexican Node of the Millennium Project
Park, Youngsook	Korean Node of the Millennium Project
Perrottet, Charles	Futures Strategy Group, Millennium Project
Tuomi, Ilkka	Meaning Processing Ltd
Turkki, Teppo	Sitra
Zugasti, Ibon	Spanish Node of the Millennium Project
Ängeslevä, Sonja	
N.N.	One European respondent as anonymous

APPENDIX 3

Thematic Mindmap

Some of the key themes dealing with the evolution of media and journalism.



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