

Media, users and algorithms: towards a new balance

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door

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*Mevrouw de Rector Magnificus,
Mijnheer de decaan,
Geachte toehoorders,
Dear colleagues, friends and family,*

Today, the user is king. Or so it appears. There is hardly a broadcaster or newspaper that does not try to befriend us on Facebook or urge us to follow them on Twitter. We are encouraged to share our opinions, to blog and post, and sometimes what we write even gets published! Today it is also difficult to find a digital news outlet that does not try to read every wish from our eyes and offer us exactly the kind of news that we – personally – find interesting and relevant.

What were once simply the *Frankfurter Allgemeine Zeitung*, the Dutch newspaper *NRC*, or the broadcaster *RTL* are now: My FAZ, My NRC and My RTL. The *Frankfurter Allgemeine Zeitung*, for example, invites you to choose from 23 interest categories – ‘Yes, please’ to news about Germany and the World, and Nature & Science, but ‘No, thank you’ to news about Politics and Sport. In addition, you can choose who of the 363 journalists you want to follow. Similarly, the BBC mobile app and the *RTL* and *NRC* website invite you to tell them exactly what you are interested in.

And what if you are either too lazy or simply not interested in sharing your preferences? Then the media will find other ways to infer your interests: monitoring what you read, studying what you tweet and learning from what you bought at Amazon. All to be able to serve you with more personally relevant, interesting and customized content and advertisements.

An old dream about the mass media seems to be coming true. In 1889, the French author Jules Verne already had a very clear idea of how the perfect news media should look: ‘Instead of being printed, the Earth Chronicle is every morning spoken to subscribers, who, from interesting conversations with reporters, statesmen and scientists, learn the news of the day’.¹ Verne not only foresaw what would later become broadcasting. He also saw a customized news service, in which the media would report to individual users based on what these users wanted to know. Twenty years later, in 1911, the science fiction author Gernsback described newspapers that would invite

users to set up a personal interest profile.² With the help of the profile the newspaper would transmit only the news that the user was interested in. Newspapers would do so while users slept – so their sleeping time would be productive.³ Or one of my favourite visions of the future of the news media, Hackworth’s newspaper in N. Stephenson’s novel *Diamond Age*:

‘Hackworth picked up a large sheet of blank paper. “The usual,” he said, and then the paper was no longer blank; now it was the front page of the Times. Hackworth got all the news that was appropriate to his station in life, plus a few optional services ... A gentleman of higher rank and more far-reaching responsibilities would probably get different information written in a different way.’⁴

In other words, long before some of the mass media that we know today became mainstream or was even invented, the idea of an individualized relationship between users and the media had already inspired authors and visionaries.

These visions are, of course, not ‘science fiction’ any more. Jules Verne’s *Earth Chronicles* remind us of *The Post* – a Dutch online magazine in which users can subscribe to individual reporters.⁵ We recognize Gernsback’s personalized interest profile in the invitation from the *Frankfurter Allgemeine Zeitung* to choose interest categories and individual journalists. I am still waiting for the sleep learning bit. And it seems that even Stephenson, when writing *Diamond Age*, had a presentiment of how close Big Data and smart algorithms would bring us to a vision of a news medium that gives each of us exactly the kind of information we need.

For the mass media as we know them, this shift is fundamental. It is a shift from a public information intermediary to a personal information service. No longer simply broadcasting programmes into the air, hoping they find their audience – today, information services can be targeted at individual users. No educated guesses in the news room about what ‘the audience’ might or should be interested in – today the media know exactly who is interested in what, when and where.

Welcome to the future of the digital mass media. What kind of world will this be? And what are the implications for law and policy? This is a question that has fascinated me for many years and will do so in the years to come.

Part of a larger trend towards audience development

Customizing media services and adjusting them to personal preferences and likings is part of an ongoing trend to more interactivity and ‘audience development’. The digital mass media, such as broadcasting and newspapers, are moving away from the traditional one-to-many approach. Instead, they are developing individualised relationships with members of the audience.

Users as a bottleneck

The driving force behind this development is the abundance of digital information and services that are competing for the attention of users. Gernsback’s idea of a personal interest profile was born out of the realization that there is more information publicly available than users can possibly hope to process. And that was in 1911! Since then, the number of channels, news apps and news websites has literally exploded. We cannot watch and read everything. We need to make choices. This also means that today’s scarce resource is not transmission frequency, technology or even access to content – it is the attention of users – making users the new bottleneck in digital media markets. So the digital media are now fiercely competing for our attention. With them come a whole range of new players, such as search engines, social networks and app stores, who also want our attention – because it is worth money.

This competition for our attention has not left us unaffected. Long gone are the days when we were happy to stare in awe at possibly the only television screen in the village, or wait patiently every morning for the newspaper to arrive.⁶ We have no time to waste, and want to see interesting content now and exactly where we are – because we can. Less presumptuous media such as Google News, Facebook’s Timeline, Twitter, or the Huffington Post never tire to tell us that we are at the centre of their universe. And so, our attitude towards the established media is also changing. We no longer humbly accept what the media is willing to share. If it is not relevant enough, not entertaining enough or simply too hard to find – we go somewhere else.

These are the conditions in modern media markets, and these are the users the media need to serve. It is obvious that the situation calls for a serious reconsideration of the media’s relationship to the audience.

New strategies are needed

In its Innovation Report, *The New York Times* offered perhaps the most impressive testimony to the changing relationship between users and the media.⁷

Referred to by some as the ‘key document of this media age’,⁸ the report first describes *The New York Times*’ successful offline home-delivery and single sales system. It then continues: ‘But when the time came to put our journalism on the web, we adopted a much more passive approach. We published stories on our home page and assumed that most people would come to us.’⁹ Which they did less and less. And this is why *The New York Times* concluded that its future strategy would need to focus on ‘the art and science of getting our journalism to readers’ and to ‘pursue smart new strategies for growing our audience’.¹⁰ In this new strategy, the user is central, requiring the development of a two-way relationship with the audience. On the one hand, through social media and encouraging users to actively contribute as bloggers and commenters. On the other hand, the media need to discover smarter ways of presenting and promoting media content.¹¹

It is not only about the content; it is about the relationship with the user

The report is just another sign that in times of digital abundance it is simply no longer good enough to ‘print and see’.¹² Making media is no longer about the content only: It is also about bringing that content to the attention of the user and persuading them to read and watch. Media personalization is an important part of this strategy.

We can distinguish between **user** and **media-driven** personalization.¹³ With **user-driven personalization**, users tell the media what types of content they are interested in. Examples are Gernsback’s personal interest profile, or the opportunity to personalize Your FAZ. But user-driven personalisation is also the possibility to buy individual items of information instead of a whole package. An early example of a personalized media service was the first pay-TV service, with a coin box attached to a TV set. Since then, even more versatile models have evolved, offering users individualized choices: pay-per-view, watch on-demand, buy single articles or subscribe to a favourite journalist.

In contrast, in **media-driven personalization** it is the media who collect information about the user, for example, by placing cookies on your computer – little pieces of software that make it possible to see which websites you visit, which parts, for how long, from which location and with which device. Social networks such as Facebook or Twitter are another valuable source of information, as are search engines and e-commerce sites. Equipped with this information, smart algorithms can then define your profile and even predict what will interest you, today and tomorrow. This knowledge is used to personalize and customise recommendations, the selection of media content, or

even the way in which content is presented, for example, by customising headlines.

An important side effect of media personalization is that it is no longer the editor alone who decides which content you will see. This is why journalism scholar Neil Thurman has likened the modern editorial process to Cerberus, the three-headed hound of Hades: involving the editor, the reader and the algorithm.¹⁴ I find the **Hydra** is an even better comparison – a creature with many more heads, because in reality, many more parties are involved in making personalized news. These include the user, of course, as well as the producers of algorithms, analytics companies, social networks, search engines, data exchanges, data analysts and, of course, advertisers. The latter play a particularly central role. Media scholar Joseph Turow provides a commanding account of how advertisers are pressuring the media into ever more detailed monitoring of the preferences and practices of their users so that they can use the media as background for tailored commercial messages.¹⁵

Implications

We are only just beginning to understand how fundamental this shift from public information intermediary to personal information service really is, and how it will affect the media and users and the way they relate to each other. This is also true for the normative implications, some of which I will sketch today.

I will not speak today of the implications for the practical work of news editors and journalists. In a recent article, the Dutch newspaper *de Volkskrant* explained that many newsrooms use big boards that inform journalists about buzzwords and trending topics. Marketing lingo, algorithms and data analytics are no longer something for the ‘guys in the marketing department’. For journalists and editors, the ‘dictate of the user’ can raise fundamental professional and ethical questions about the mission and traditional agenda-setting function of the media.¹⁶

I will also not talk today about the implications for the future of competition in the market place of ideas.¹⁷ Many new players have entered the media market, bringing new dynamics and fundamental changes to the nature of competition. This is no longer a competition between ideas, but between formats, packages and the smartest way of capturing the user’s attention. In one of his novels, P.K. Dick developed the idea of a homotropic news-vending machine: the machine would seek out a potential newsreader and wave the newspaper in front of her face until she decides to buy one. Now imagine 100

virtual news-vending machines waving their news in your face. They pull you away from the others. They try to outsmart each other. Then you might have a glimpse of how the future competition for your attention could feel.¹⁸

Rather than these issues, I would like to explore a little more just how personalization affects the relationship between the media and their users. Understanding how economic and technological developments affect users and users' rights has been an important theme in my work over recent years.

In past research I have demonstrated, for example, how the move to more interactive business models, such as pay-TV, has transformed media users into information consumers, and I have called for more attention to be paid to consumer and contract law, also in media law and policy.¹⁹ A different strand of my research looked into the legal standing of users as amateur producers of media content.²⁰ Today, I will focus on the question of how the shift from public interest intermediary to personalized information service affects the user.

Media personalization can benefit users in many ways. The amount of information we are confronted with on a daily basis is simply mind-boggling. You probably all know this feeling when you read online news: One link leads to the other and yet another... the feeling of missing out on important information is very upsetting. So, if there is any way of helping us find the information we want and avoid missing out we say 'Absolutely!' I use four different personalized news services and they have never failed to provide me with interesting recommendations.

Of course, the future of our personal media is not all shiny and perfect. We do pay a price for more relevant, interesting services, even if we believe them to be 'free'. By now, probably, and hopefully, none of you still believe that any service on the internet is offered for free. As Mireille van Eechoud taught us in her inaugural speech: there is always a trade-off.²¹

Your newspaper – and many others – are watching you

One such trade-off is the willingness to accept increasingly alarming levels of public and commercial surveillance. Certain parts of the Dutch news website nu.nl place more than 43 different cookies! The FAZ uses fifteen. Not only adults, but also kids are being tracked and targeted. Geo-mini, a kids journal, uses eighteen cookies and Nickelodeon nine. Smart phones, Smart-TVs and game consoles have made the news and caught the attention of regulators because they also collect information and can even watch you sitting on your sofa.²² And with the Internet of Things, the media will be able to move into

even more personal areas. Such as targeting you in your bathroom mirror,²³ or pushing headlines to your smart coffee cup.

It is not only the media that is intent on learning more about the user, but also advertisers, social media, search engines and analytics companies.²⁴ Axel Arnbak and others have done important work demonstrating the data-hunger of intelligence agencies, and how little there is to stop them.²⁵ But also think of how interesting your reading habits could be to politicians, youth protection agencies, insurance companies, book shops.

From the perspective of the media user, the important question is not only what happens to our information. Equally important is the question of how the constant monitoring of our reading behaviour will affect the way we use media content. Will we start to self-censor the information we look for, or start avoiding controversial outlets? What would that mean for the diversity of information we consume? Or our intellectual development? After all: you are what you read.

What will monitoring mean for the exercise of our constitutional right to freedom of information? As Neil Richards reminds us, the ability to benefit from freedom of information also depends on our ‘intellectual privacy’: the possibility ‘to develop ideas and beliefs away from the unwanted gaze or interference of others.’²⁶

Knowledge is power – power about you in this case

The importance of intellectual privacy cannot be overstated for another reason: knowledge is power. Detailed knowledge about the user also potentially gives the media a new power to shape our thinking, influence our view of the world and lead us to take particular political or commercial decisions – for better or worse.

The more the media or advertisers know about us the better they can serve us. And the more effectively they can manipulate us because they know us so well. This is why scholars like Ryan Calo warn us that ‘[f]irms will increasingly be able to trigger irrationality or vulnerability in consumers.’²⁷ And as a recent Facebook experiment just taught us, not only our minds but also our emotions can be modelled.

Personalized or customised information can also be more persuasive in itself. Research suggests that under certain circumstances personalization and customization can make that message more persuasive. It can make it appear more relevant to us and affect our attitude to the message.²⁸

Could the media’s knowledge about us be used to manipulate us into reading and watching particular types of content over others? Or advertisements?

Is that possibly what *The New York Times* referred to when it talked about ‘the art and science of getting our journalism to readers’?

Your neighbour might become smarter than you

Personalized media use their knowledge about us to differentiate between users and respond to individual information needs and preferences.²⁹ In so doing, media personalization could be the long awaited response to decades of scholarly complaints about the ‘elitist patronizing behaviour’ of the media:³⁰ telling the audience what it should know, without minding the actual interests and preferences of the audience.

Let us think this through a little more. Take the example of Hackworth’s newspaper: ‘Hackworth got all the news that was appropriate to his station in life, plus a few optional services ... A gentleman of higher rank and more far-reaching responsibilities would probably get different information written in a different way.’³¹

At first glance, this makes a lot of sense: each of us is different, and has different information needs and preferences. After a second look, one starts to wonder. Today’s ideal of the citizen is the well-informed all-rounder who is able to deliberate on all matters of public interest.³² But Stephenson is talking about information ranks and hierarchies. Information depends on one’s station in life: rank, profession, social responsibilities, but possibly also gender, income, nationality and postal area. These criteria will then determine what information we receive – and from which information we are excluded. In other words, husbands could be targeted with different news to that of their wives; professors receive a different perspective on politics to students. And some parents at school could become smarter than others because they live in a different post code area.

Of course, even today different users use different information. And yet, it will matter if these different usage habits are the result of individual autonomous choices. Or if they are pre-determined and structurally coded into the digital DNA of smart media services.

Much is technically possible. The media and we, as a society, will need to ask ourselves in which situations and on which grounds we are willing to accept algorithmic inclusion or exclusion from information access. King or subject? Ruler or ruled? When I started this presentation it seemed that users ruled. On closer look, they are also being ruled. As my PhD supervisor Egbert Dommering so aptly remarked about the modern media user: ‘He is the most emancipated and the best controlled citizen who has ever existed in our universe.’³³ The trend to audience growing and personalized services has emanci-

pated users, insofar as their preferences and interests suddenly matter, and very much so. But personalization also invites unprecedented levels of surveillance and power to manipulate our minds. Maybe it is no longer users who rule, but their virtual interest profile. In any event, it has become clear that both the media and users are facing a fragile balance between controlling – and being controlled.

Implications for media law and policy

As a legal scholar, I am of course particularly interested in understanding what the changing relationship between the media and users means for the normative framework in which the media operate. Norms define boundaries, privileges and rights, and in so doing they create a level playing field – for the media and for users.

The trend to more direct interaction between the media and users has played a prominent role in the general media policy debate over recent years, albeit in a strangely one-dimensional way. In order to understand why, you need to understand that the law, to date, has treated different media differently: audiovisual services, for example, are subject to relatively stricter requirements of audiovisual law, whereas the press is largely subject to self-regulation. Interactive online media, including the websites of newspapers and broadcasters, as well as Google, YouTube, Twitter, fall under e-commerce law, which basically refers users to the general rules of consumer law.

One of the reasons why audiovisual media has been considered differently has been the alleged pervasiveness of the broadcasting medium and the lack of control that users can exercise over programmes. As the US Supreme Court once said: ‘To say that one may avoid further offense by turning off the radio when he hears indecent language is like saying that the remedy for an assault is to run away after the first blow’.³⁴

This is a powerful representation of the viewer as helplessly exposed to the airwaves. With this image of the viewer in mind, it is not surprising that audiovisual law regulates the output rigorously. This way, the law can make sure that once the programme hits the audience it is sufficiently diverse, safe and balanced. Interactive media, such as personalized media, in contrast, and I cite the European Audiovisual Media Service Directive: ‘[A]re different from television broadcasting *with regard to the choice and control the user can exercise* ... This justifies imposing lighter regulation...’³⁵

The disparate approach to media regulation has always puzzled scholars. ‘Clumsy’,³⁶ ‘a historical accident’,³⁷ or a ‘fundamental weaving flaw’³⁸ are just

some of the notions that experts used to complain. With its green-paper on a fully converged audiovisual world,³⁹ the European Commission had finally initiated a long-needed debate about a future regulatory framework for the media. In The Hague, the Dutch government also prepared its vision for the regulation of what it refers to as 'the internet value web'.⁴⁰ These are exciting times for media scholars.

A central aspect in this debate is whether we can move away from a more protectionist sector-specific approach towards the much more liberal e-commerce approach.⁴¹ If the user is able to determine the time and place of receiving the information – so goes the argument – she can take the protection of her interests into her own hands. For example through personalization. This is a new conceptualisation of the user: the idea of the empowered user. And it is a particularly popular idea among regulators these days.

You may already sense that the argument of the empowered user is flawed. One may already wonder how much control we have. How much control do twenty interest categories really give us over the accessibility of information, about the conditions under which it is offered to us and the price we pay for it? And how much control can we ever hope to have over the collection of information about us? Or the way algorithms process this information into personal profiles that then decide what we see?

The far more important question is not what the user controls but: Who controls the user? This brings me back to my earlier point about interactivity, and in particular personalization strategies, which involves entirely new dimensions of pervasiveness, persuasiveness and the ability to influence our choices through smarter ways of presenting and promoting content in the media.

These are new challenges to media law and policy that are not yet addressed by either audiovisual law, e-commerce law or the self-regulatory framework for the press. Today's media policy is about the content. It is not about the presentation or promotion of media content. It is thus also not about the fairness, ethics or societal acceptability of smart strategies to arrest the attention of the audience.

Future media law and policy need to pay greater attention to the way media content is presented, personalized and promoted. It is time to deliberate on the principles and values that should govern the relationship between users and the media. What we need are '**fair media practices**' that address new challenges to intellectual privacy, persuasive power and information ranks and discrimination. In so doing, we must look beyond the traditional boundaries of media law and e-commerce law, and expand our horizon to other

areas, such as data protection law and consumer law – and the other way round.

Media user privacy

A good example to illustrate my point are the Dutch cookie walls. In October 2012, a large proportion of Dutch websites forced their users to accept tracking software before being allowed to enter.⁴² No cookies, no access.

Users were not happy. But it was the cookie walls from the news media in particular, and above all from the public broadcaster, that caused a public outcry. ‘Public broadcaster blackmails the public with cookie walls’⁴³ or ‘Taken hostage by a cookie’,⁴⁴ were just some of the headlines.

It is worth noting that in the end it was the Dutch Data Protection Authority that condemned the use of cookie walls by the Dutch public broadcaster. Not the Media Authority, which is responsible for the media sector. The Dutch Data Protection Authority found that the publicly funded Dutch broadcaster would exploit its factual monopoly on public service content.⁴⁵ If a user wanted to see public service content, there was simply no way around being monitored. The Authority did a very important thing here: it interpreted the application of data protection law in the light of the conditions and practices of a specific target group: media users. And it acknowledged that the interests and vulnerabilities of media users can differ from, for example, users of e-commerce sites.⁴⁶

In contrast, the Dutch media authority remained silent. Partly because the rules about using cookies and processing personal data do not fall under their authority. And partly because there are no sector-specific provisions for the media on how to deal with the personal data of their users. A similar situation holds for the self-regulatory codes of the press: they deal with the privacy of those the media report about. They deal not with the privacy of those they report to. This state of affairs only demonstrates how seriously we need a debate about ways to protect the ‘intellectual privacy’ of media users.⁴⁷

From the perspective of media law and policy, the acceptability of cookie walls is not only a matter of informed consent or compliance with data protection law.⁴⁸ It is also a matter of information access. I already mentioned the importance of intellectual privacy and of a level playing field on which we can explore and form our opinions. Peggy Valcke reminds us about the importance of media pluralism, also in a convergent environment. And Wolfgang Schulz’s concept of ‘equal communication chances’ is also very relevant in the personalisation context.⁴⁹ The latter suggests that one of the tasks of media

policy is to prevent excessive exclusionary control of access to information. This is why my colleague Frederik Zuiderveen Borgesius was right in suggesting the banning of cookie walls for the public service media.⁵⁰ I want to argue that we should go even further. From the media policy point of view, making access to information a matter of the amount of data an individual is willing to share is even for the commercial news media problematic.⁵¹

True, it is part of the commercial media's freedom to determine the conditions and set the price of information access. Cookies, that's the price you pay. But, if we really decide to go with the 'paying with your data' analogy, it is only logical to apply consumer law principles and demand that the price is transparent and the conditions are fair. More fundamentally, and as the European Court of Justice told us in *Sky Austria*, media regulators must also strike a balance between economic freedom and users' freedom of expression⁵² – a balance that the Dutch regulator still needs to achieve.

Beyond privacy and data protection: protection of editorial independence

To take this debate one step further, when viewed from a media policy point of view, there are situations in which it is simply not desirable that users are tracked and traced when using the media, or that such information is shared with third parties.⁵³ To understand this point we need to look beyond matters of data protection and privacy. Data protection and privacy are still the primary and far-too-narrow framework in which we think about profiling and targeting.⁵⁴

A central political consideration for the media is, for example, how to protect the independence of editorial choices and the user's trust in that integrity. The question of who influences editorial choices also matters in the context of profiling, targeting and personalizing media content. As we observed earlier, media personalization involves many heads that can potentially influence the editorial process. I already mentioned advertisers, but also think, for example, of politicians. They also have a history of using the media for their own purposes, and they also have discovered the blessings of personalization, as could be observed during the last Obama campaign.

Finding the right balance between editorial choices and external influences has a long tradition in media law and policy.⁵⁵ This is why you see notices that tell you if media content informs you, or sells you ideologies or products.⁵⁶ But the law goes further. Because of the democratic and educational function of the media, some players are not allowed to use the media for their purposes.⁵⁷ Other groups, such as minors, are specifically protected against com-

mercial influences. And some types of content are considered to be so critical to the core function of the media, or so intimate, that they cannot be subjected to advertising at all.⁵⁸ This is true for news, current affairs and religious services.⁵⁹ The overall goal of these provisions is not only to protect users and the functioning of the media. Importantly, these rules must also minimize the temptation for businesses to exercise commercial influence.⁶⁰

In other words, there are valid public policy reasons to take a closer look at the driving forces behind personalization and how they affect editorial independence and user rights. More concretely, this could mean, for example, that we should examine the desirability of profiling and targeting children with personalized media content. Or that we declare it unacceptable that the media share information about the way we use news and current affairs with advertisers or politicians.

It is time to initiate a debate on the conditions under which we are willing to accept the profiling and targeting of media users and media uses. Core values of media regulation – such as the protection of editorial integrity, trust, equal opportunities and diversity – are also valid in a converging environment. They should inform the personalization debate, together with new values, such as intellectual privacy and user autonomy.

Fair media practices

The provisions to protect users' trust in editorial independence can be seen as part of a larger set of 'fair media practices'. The media have a special responsibility to behave fairly, or as Bart van der Sloot would argue, virtuously, in relation to their users.⁶¹ This is because of their unique democratic role as information medium and public watchdog, and because of the trust we, the users, invest in them, but also because of the potential pervasiveness and persuasiveness of personalized media communication. The goal of fair media practices must be to restore the balance and remove asymmetries between users as receivers of personalized information and the media as a user of personalization strategies.

An emerging body of scholarship about Big Data ethics and the ethics of persuasive technology should inform these principles.⁶² It emphasizes, for example, how important it is to properly inform the user, asking for permission and giving them a choice.

However, fair media practices should go further and also address matters such as unacceptable discrimination or the fine line between personalized presentation and misleading persuasion. Let me illustrate this with a concrete example. Various national self-regulatory codes demand that the headings of

articles should not mislead users about their content. Transposed to the context of media personalization this could mean that personalized recommendations should not propose content as personally relevant if it is not; or be untruthful about the parameters that have resulted in a particular recommendation. Or to be opaque about the actual intent: is this personalized recommendation meant to better inform the user, or simply increase circulation and the profitability of particular media items?

Opportunities

What is considered fair behaviour in relation to the user is, of course, also a matter of the task and public mission of the media. The shift from public information intermediary to personal information service opens up exciting new opportunities here. For the media to serve users. For users to receive information. And for public policy, to contribute to informed citizens, and diverse information choices. It is worth noting that the BBC Trust recommended that the BBC use personalization to offer users better value,⁶³ while the Dutch Raad voor Cultuur asserted that the public service media should assume a new guidance function for individual users.⁶⁴

But guidance to do what? Media personalization is still primarily discussed as a tool to serve individuals, providing them with more personally relevant content. Much like Gernsback's individual interest profiles. But personalization could do more. Imagine, for example, that some smart algorithm discovers that I am used to reading information about technology and law. The next elections are coming up. Instead of providing me with more law and tech issues, this algorithm could also gently nudge me by presenting items about pensions, finances or environment – items that are clearly missing from my media diet. Or because professors at the University of Amsterdam should be broadly informed.

This brings us back once more to Hackworth's newspaper: everybody has the information that they need, depending on their station in life. Hackworth's newspaper is not only about individual information. It is about education. *Diamond Age*, the novel in which Stephenson described Hackworth's newspaper, is essentially a book about the potential of the media to coach individual users through life. Could media personalization also be used to coach media users? For example, to make more varied information choices, or broaden their horizons?

Such a coaching role could for example be a logical extension of the mission of the public service media. They always had an additional educational role to play. To quote the Council of Europe: 'Public service media should

continue to play a central role in education ... and should actively contribute to the formation of a knowledge-based society ... taking full advantage of the new opportunities'.⁶⁵

But where should then the line between acceptable education and unacceptable manipulation be drawn? Again, this is a question that the Council of Europe, but also the BBC Trust and the Raad voor Cultuur leave open. A critical aspect is the objective of such an exercise. Education aims at personal development, producing an autonomous being. Manipulation seeks to exploit asymmetry and foster dependence.⁶⁶ In other words, if media personalization is used to broaden the horizon and help the information-overloaded user to find her way, this certainly can be a useful exercise. Whether it is also acceptable depends on the availability of structural safeguards related to fair media practices. And it depends on whether we will continue to be able to say both 'Yes, please' and 'No, thank you'.

Conclusion

To conclude: a major challenge that I see for the decade to come is for scholars, the media and policymakers to define **fair media practices**. These are the values and principles that should guide the relationship between the media and users, and the way media content is presented and marketed to users. To this end, media law, consumer law, data protection law, and unfair commercial practice law should be regarded as pieces of a larger puzzle. Not only are technologies converging, laws and norms are too.

Research into the use and users of information also requires the crossing of disciplines. Too often, laws and policies are made without a sound understanding of the technologies, economics and the behaviour of users. There is still much to learn and understand about the actual processes, actors and effects of personalized communication, and what this means for the legal design. This is why research like the work from the communications sciences is so very relevant also for the information law and policy debate, but also the insights from law & economics, economic scholarship, philosophy, digital humanities, media studies and the computer sciences. Understanding the world of the user and the media that we regulate is an important driver behind my research. And I learned and will continue to learn much from the many co-operations with other disciplines.

This brings me to my words of thanks. I would like to thank the College van Bestuur of the University of Amsterdam as well as our dean of the Faculty of Law, Edgar du Peron, for their trust in me and for my appointment as a

professor of Information Law. I would also like to thank the College for the opportunity to do more research in personalized communication and join forces with our colleagues from the Research Priority Area Communication. I am much looking forward to our cooperation!

I would like to thank my colleagues from the Institute for Information Law. Our exceptionally successful Information Influx Conference has once again shown that we can do great and important things together.⁶⁷ Influx has also shown that not only I, but scholars from the leading academic institutions around the world know exactly what a gem we – and the University of Amsterdam – have with the Institute for Information Law.

That the institute is what it is, is for a significant part due to its directors: Egbert Dommering, Bernt Hugenholtz and Nico van Eijk. Academics are not particularly good at telling other academics how good they are. Yet I will try: your passion, academic rigour, humour and fairness have deeply influenced my ideas of a true academic. Thank you, and I am honoured to work side by side with you.

I would like to thank my female colleagues and the many fruitful conversations on how to combine the greatest of worlds: academia and family. Combining an academic career with family has much in common with Formula 1: it is a top-level sport, and it is all about professionalism, speed, precision, flawless pit stops – and a top support team.

I have such a top team. I am the proud mother of three wonderful digital natives: Leonard, Marien and Vincent. We have great teachers and amazing carers. I have an admirable father: Christof, you inspired in us a deep love of research, curiosity and open-mindedness. Walking together in the cortege today is not only a very precious moment for me, it also shows how deeply your example has influenced and formed me. Dominik, dear brother – distance does not matter between us and our families. Very dear friends and family: thank you. I cherish your monitoring and targeting me with customized recommendations for what else to do in life, other than information law.

Finally, my husband Remko: our life does not resemble the Formula 1, it is the Paris Dakar rally! Together we have mastered wild and rugged terrain, mean obstacles, rough weathers but also good fortune and sunny roads – there is no challenge that I fear – as long as we are in it together.

Ik heb gezegd.

Notes

1. (Verne, 1889)
2. (Gernsback, 1911)
3. This very early concept of personalized news was later reflected e.g. in the idea of the personal interest profiles in Frederik Pohl's 'joymaker' (Pohl, 1971) or in P. Dicks' description of the homeopape (Dick, 1969)
4. (Stephenson, 2000)
5. <http://www.thepostonline.nl/> (last visited on 19 October 2015)
6. (Bardoel, 2010) (Deuze, 2008)
7. (New York Times, 2014). See also (Duke Reporters' Lab, 2014); (Underwood, 2011)
8. (Benton, 2014). Others called it a disaster, see e.g. (Warsh, 2014)
9. (New York Times, 2014, p. 24)
10. (New York Times, 2014)
11. (New York Times, 2014, pp. 6, 62 ff.). One of the suggestions made there is that the newsroom should more closely collaborate with the people from the Reader Experience department, including analytics, digital design, technology, product and research development.
12. See also (Reagan, 2000); (Pavlik, 2000); (Deuze, 2004)
13. (Thurman & Schifferes, The future of personalization at news websites: lessons from a longitudinal study, 2012, p. 13)
14. (Thurman, 2011)
15. (Turow, 2005)
16. (Deuze & Boczkowski, 2004) (Underwood, 2011, p. 101), criticizing that 'the definition of news has been recast so that it is defined as what is 'relevant' to the audience.'
17. For a critical discussion of this theory in general see (Napoli, 1999)
18. (Dick, 1963): 'At the door of the restaurant an automated news vending machine appeared, with a late edition of the Chronicle. It's Rushmore Effect bleated out 'Special coverage of the Luckman murder case.' The restaurant, with the exception of their party, was empty; the news vending machine, being homotropic, headed toward them, still bleating. ... It waved the newspaper in their faces. Getting out a coin, Sharp inserted it in the slot of the machine; it at once presented him with a copy of the paper and pulled back out of the restaurant, to hunt for more people.'
19. See e.g. (Helberger, 2005) (Helberger, 2011)
20. (Helberger, Guibault, Janssen, Angelopolous, & Van Hoboken, 2009) (Helberger, Leurdijk, & De Munck, 2010) (Helberger & Van Hoboken, 2010)
21. (Echoud, 2014)
22. (College Bescherming Persoonsgegevens, 2013)
23. As this example from the New York Times' R&D lab: <http://www.niemanlab.org/2011/08/mirror-mirror-the-new-york-times-wants-to-serve-you-info-as-youre-brushing-your-teeth/> (last visited on 19 October 2015)
24. (Richards, 2013)

25. (Arnbak & Goldberg, 2015)
26. (Richards N., Intellectual Privacy, 2008, p. 389)
27. (Calo, 2014, p. 1035)
28. (Kalyanaraman & Sundar, 2006) (Petty & Cacioppo, 1986) (Brighta & Daugherty, 2012), also, however, pointing towards possible problems with consumer acceptability of personalized communication. Differentiating also (Maslowska, Van der Putte, & Smith, 2011)
29. Or as Berthold Brecht warned: 'Wer vieles bringt, wird keinem etwas bringen'. (Brecht, 1932)
30. (Wentzel, 2002, p. 57ff)
31. (Stephenson, 2000, p. 36)
32. See e.g. (Gandy, 2001, p. 155): 'If full and equal participation in the public sphere is a fundamental requirement for the realization of the goals of the idealized democracy, then the use of segmentation and targeting by political consultants is a serious threat.'
33. (Dommering, 2008, p. 10)
34. United States Supreme Court, *FCC v Pacifica Foundation* 438 US 726 (1978)
35. Recital 58 of Directive 2010/13/EU of the European Parliament and of the Council of 10 March 2010 on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services (Audiovisual Media Services Directive – AVMSD), OJ L 95, 15.4.2010, p. 1-24.
36. (Barendt, 1993, p. 9)
37. (Sunstein, 2000, p. 512)
38. (Dommering, 2014, p. 26)
39. (European Commission, 2013)
40. (Kamp, 2014) (Ministerie Economische Zaken, 2014) (Kamp, 2013)
41. (Ministerie Economische Zaken, 2014, p. 25)
42. The Dutch cookie-walls were a response to, or rather: act of resistance against a new Dutch law that was originally meant to protect users privacy vis-à-vis the placing of cookies.
43. (Wisselink, 2012)
44. (Woude, 2013)
45. (College Bescherming Persoonsgegevens, 2013) (College Bescherming Persoonsgegevens, 2014) http://www.cbpreweb.nl/downloads_med/med_20130205-cookies-npo.pdf (last visited on 18 October 2015)
46. See also (Aufsichtsbehoerden fuer den Datenschutz im nichtoeffentlichen Bereich & Datenschutzbeauftragten der oeffentlich-rechtlichen Rundfunkanstalten, 2014)
47. In this sense also (de Cock Buning, 2006, pp. 25-26)
48. Tweede Kamer der Staten-Generaal, *Wijziging van de Telecommunicatiewet (wijziging artikel 11.7a)*, 33 902, No. 6, Vergaderjaar 2013-2014, p 2
49. (Schulz, 1998)
50. (Zuiderveen-Borgesius, 2015, p. 388)
51. To the extent that personal data collections are the basis of a financing model, there are good reasons to argue to offer media users at least the choice between paying with personal data and more anonymous forms of payment such as

- money, as suggested e.g. by Hoofnagle and Whittington (Hoofnagle & Whittington, 2014). See also (Council of Europe, 2010), para. 3.7.
52. (European Court of Justice, 22 January 2013), recital 59. But also see (Kox, Straathof, & Zwart, 2014), arguing that if consumers are heterogeneous in their concerns for privacy, a commercial strategy that gives them choice can be welfare enhancing and also make sense from an economic/competition perspective.
 53. In a similar direction (Richards & King, 2014, p. 396) arguing that ‘we, as a society, must ‘begin to think imaginatively about the kinds of data interferences and data decisions we will allow’.
 54. See e.g. (Council of Europe, 2010)
 55. Henning-Bodewig described already in 1986 the proper balancing between commercial and editorial programming as ‘eines der umstrittensten medienpolitischen Probleme der jüngsten Zeit’, (Henning-Bodewig, 1987, p. 539).
 56. For the online media: Art. 6 (a) of the E-Commerce Directive requires that the commercial communication shall be clearly identifiable as such; and (b) the natural or legal person on whose behalf the commercial communication is made shall be clearly identifiable; for the audiovisual media, Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (‘Directive on electronic commerce’), OJ L 178, 17.7.2000, p. 1-16. Similar provisions can be found in the Audiovisual Media Service Directive and the Unfair Commercial Practice Directive.
 57. Audiovisual media services or programmes shall not be sponsored by undertakings whose principal activity is the manufacture or sale of cigarettes and other tobacco products (Art. 10 (2) AVMSD), neither is it allowed to sponsor news and current affairs programmes (Art. 10 (4) AVMSD).
 58. In this sense also Art. 18 (3) of the European Convention on Transfrontier Television. As the Explanatory Memorandum to the Convention explains in para 291: ‘This paragraph reflects the special interest of the member States of the Council of Europe in the guarantee of the plurality of information sources and the independence of news and current affairs programmes.’
 59. Article 14 (5) of the European Convention on Transfrontier Television.
 60. (Schaar, 2008, p. 492)
 61. (Van der Sloot, 2014)
 62. (Spahn, 2012) (Verbeek, 2006) (Richards & King, 2014)
 63. (BBC Trust, 2013)
 64. (Raad voor Cultuur, 2014, p. 46)
 65. (Council of Europe, 2007)
 66. (Spahn, 2012)
 67. <http://www.ivir.nl/influx.html> (last visited on 19 October 2015)

References

- Arnbak, A., & Goldberg, S. (2015). Loopholes for Circumventing the Constitution: Unrestrained Bulk Surveillance on Americans by Collecting Network Traffic Abroad. *Michigan Telecommunications and Technology Law Review*, 21, 317-361.
- Article 29 Data Protection Working Party. (2010). *Opinion 2/2010 on online behavioural advertising*. Brussels: Article 29 Data Protection Working Party.
- Aufsichtsbehoerden fuer den Datenschutz im nichtoeffentlichen Bereich & Datenschutzbeauftragten der oeffentlich-rechtlichen Rundfunkanstalten. (2014). *Gemeinsame Position. Smartes Fernsehen nur mit smartem Datenschutz*. Aufsichtsbehoerden fuer den Datenschutz im nichtoeffentlichen Bereich. Retrieved from https://www.ldi.nrw.de/mainmenu_Service/submenu_Entschliessungsarchiv/Inhalt/Beschluesse_Duesseldorfer_Kreis/Inhalt/2014/Smartem_Fernsehen_nur_mit_smartem_Datenschutz/Beschluss_Smart_TV.pdf
- Baker, C. E. (1997). Giving the Audience What it Wants. *Ohio State Law Journal*, 311-418.
- Bardoel, J. (2010). Journalistiek moet zich durven te onderscheiden. Toekomst voor de professie in een multimediale omgeving. *Tijdschrift voor Communicatiewetenschap*, 232-241.
- Barendt, E. (1993). *Broadcasting Law. A comparative study*. Oxford: Clarendon.
- BBC Trust. (2013). *BBC Trust Service Review, BBC Online and BBC Red Button*. London: BBC Trust.
- Benton, J. (2014, May 15). *The leaked New York Times innovation report is one of the key documents of this media age*. Retrieved March 19, 2015, from niemanlab.org: <http://www.niemanlab.org/2014/05/the-leaked-new-york-times-innovation-report-is-one-of-the-key-documents-of-this-media-age/>
- Berdichevsky, D., & Neuschwander, E. (1999). Toward an Ethics of Persuasive Technology. *Communications of the ACM, May 1999*, 51-58.
- Brecht, B. (1932). Der Rundfunk als Kommunikationsapparat. Rede ueber die Funktion des Rundfunks. Retrieved from http://www.annamelano.com/wp-content/uploads/2013/03/Brecht_-_Der_Rundfunk_als_Kommunikationsapparat.pdf
- Bright, L., & Daugherty, T. (2012). Does customization impact advertising effectiveness? An exploratory study of consumer perceptions of advertising in customized online environments. *Journal of Marketing Communications*, 19-37.
- Calo, R. (2014). Digital Market Manipulation. *George Washington Law Review*, 995-1051.
- College Bescherming Persoonsgegevens. (2013). *Beantwoording Kamervragen i.v.m. cookiebeleid NPO*. Den Haag: College Bescherming Persoonsgegevens. Retrieved from https://cbpweb.nl/sites/default/files/atoms/files/med_20130205-cookies-npo.pdf
- College Bescherming Persoonsgegevens. (2014). *Onderzoek CBP naar de verwerking van persoonsgegevens met cookies door de publieke omroep NPO*. Den Haag: College Bescherming Persoonsgegevens.

- College Bescherming Persoonsgegevens. (2013). *Onderzoek naar de verwerking van persoonsgegevens met of door een Philips smart tv*. Den Haag: College Bescherming Persoonsgegevens. Retrieved from https://cbpweb.nl/sites/default/files/downloads/pb/pb_20130822-persoonsgegevens-smart-tv.pdf
- Council of Europe. (2007). *Recommendation CM/Rec(2007)3 of the Committee of Ministers to Member States on the remit of public service media in the information society*. Strasbourg: Council of Europe.
- Council of Europe. (2010). *Recommendation CM/Rec(2010)13 of the Committee of Ministers to Member States on the protection of individuals with regard to automatic processing of personal data in the context of profiling*. Strasbourg: Council of Europe.
- De Cock Buning, M. (2006). *De mediamachine als zevenkoppig monster*. Amsterdam: Otto Cramwinckel.
- Deuze, M. (2004). What is Multimedia Journalism? *Journalism Studies*, 139-152.
- Deuze, M. (2008). The changing context of news work: liquid journalism and monitory citizenship. *International Journal of Communication*, 848-865.
- Deuze, M., & Boczkowski, P. (2004). The Processes of Adopting Multimedia and Interactivity in Three Online Newsrooms. *Journal of Communication*, 197-213.
- Dick, P. (1963). *The Game Players of Titan*. New York: Vintage Books.
- Dick, P. (1969). *Ubik*. New York: Doubleday.
- Dommering, E. (2008). *Gevangen in de waarneming: Hoe de burger de communicatiemiddelen overnam en zelf ook de bewaking ging verzorgen*. Amsterdam: University of Amsterdam.
- Dommering, E. (2014). De mediawet moet op de schop. Pleidooi voor een platformwet. In B. 98, *Afstemmen op cultuur, Publieke omroep in een crossmediaal landschap* (pp. 23-29). Boekmannstichting.
- Duke Reporters' Lab. (2014). *The goat must be fed!* Sanford School of Public Policy. Durham: Duke Reporters' Lab. Retrieved from <http://www.goatmustbefed.com/>
- Edin, A. (2006). Times have changed. On the relationship between Swedish Public Service Television and the Viewing Public. *Nordicom Review*, 61-72.
- Echoud, M. v. (2014). *De lokroep van open data*. Amsterdam: University of Amsterdam.
- European Commission. (2013). *Preparing for a Fully Converged Audiovisual World: Growth, Creation and Value*. Brussels: European Commission.
- European Court of Justice. (22 January 2013). *Sky Österreich GmbH v Österreichischer Rundfunk Case C-283/11*.
- Gandy, O. (2001). Dividing Practices: Segmentation and Targeting in the Emerging Public Sphere. In W. L. Bennett, & R. M. Entmann, *Mediated Politics. Communication in the Future of Democracy* (p. 141). Cambridge: Cambridge University Press.
- Gernsback, H. (1911). *Ralph 124C41+: A Romance of the Year 2660*.
- Goodman, E. (2008). Public Media 2.0. SSRN. Retrieved 4 15, 2014, from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1299685
- Helberger, N. (2005). *Controlling access to content: Regulating Conditional Access in Digital Broadcasting*. Den Haag: Kluwer Law International.

- Helberger, N. (2011). The beginnings of audiovisual consumer law – conceptual growing pains when integrating the consumer of audiovisual services into media and consumer law. *Swedish European Law Journal*, 520-541.
- Helberger, N., & Van Hoboken, J. (2010). Little Brother is Tagging You – Legal and Policy Implications of Amateur Data Controllers. *Computer Law International*, 101-109.
- Helberger, N., Guibault, L., Janssen, E., Angelopolous, C., & Van Hoboken, J. (2009). *User-Created Content: Supporting a Participative Information Society*. Brussels: European Commission.
- Helberger, N., Leurdijk, A., & De Munck, S. (2010). User Generated Diversity: Some Reflections of How to Improve the Quality of Amateur Productions. *Communications & Strategies*, 55-77.
- Henning-Bodewig, F. (1987). Die Trennung von Werbung und Program im deutschen und europaischen Rundfunk und Wettbewerbsrecht. *GRURInt*, 538-549.
- Hoofnagle, C., & Whittington, J. (2014). Free: Accounting for the Costs of the Internet's Most Popular Price. *University of California Law Review*, 606-670.
- Kalyanaraman, S., & Sundar, S. (2006). Customised Web Portals. *Journal of Communication*, 110-132.
- Kamp. (2013). *Middellangetermijn visie op telecommunicatie, media en internet*. 2014: Ministerie Economische Zaken.
- Kamp, H. (2014). *Voortgangsrapportage uitwerking visie op telecommunicatie, media en Internet*. Den Haag: Ministerie Economische Zaken.
- Kox, H., Straathof, B., & Zwart, G. (2014). *Targeted advertising, platform competition and privacy*. Den Haag: Netherlands Bureau for Economic Policy Analysis. Retrieved from <https://ideas.repec.org/p/cpb/discus/280.html>
- Kraak, H. (2014, March 22). *En hier dan een kop met seks erin*. Retrieved March 19, 2015, from De Volkskrant: <http://www.volkskrant.nl/dossier-archief/en-hier-dan-een-kop-met-seks-erin~a3620569/>
- Lowrey, W., & Anderson, W. (2005). The journalist behind the curtain: participatory functions of the internet and their impact on perceptions of the work of journalism. *Journal of Computer-Mediated Communication*.
- Maslowska, E., Van der Putte, B., & Smith, E. (2011). The effectiveness of personalised email newsletters and the role of personal characteristics. *Cyberpsychology, Behaviour and Social Networking*, 765-770.
- Ministerie Economische Zaken. (2014). *Visie op Telecommunicatie, Media en Internet: Verdieping*. Den Haag: Dutch Ministry of Economic Affairs.
- Napoli, P. (1999). The marketplace of ideas metaphor in communications regulation. *Journal of Communication*, 151-169.
- New York Times. (2014). *Innovation*. New York: New York Times.
- Pavlik, J. V. (2000). The impact of technology on journalism. *Journalism Studies*, 229-237.
- Petty, R., & Cacioppo, J. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York: Springer Verlag.
- Pohl, F. (1971). *The Age of the Pussyfoot*. London: Corgi.
- Raad voor Cultuur. (2014). *De tijd staat open. Advies voor een toekomstbestendige publieke omroep*. Den Haag: Raad voor Cultuur.

- Reagan, T. (2000, December 15). *Technology is changing journalism. Just as it always has*. Retrieved March 19, 2015, from Niemanreports: <http://niemanreports.org/articles/technology-is-changing-journalism>
- Richards, N. (2008). Intellectual Privacy. *Texas Law Review*, 387-445.
- Richards, N. (2013). The Dangers of Surveillance. *Harvard Law Review*, 1934-1965.
- Richards, N., & King, J. (2014). Big Data Ethics. *Wake Forest Law Review*.
- Schaar, O. (2008). Article 10 TWFED. In O. Castendyk, E. Dommering, & A. Scheuer, *European Media Law* (pp. 489-512). Den Haag: Kluwer Law International.
- Schulz, W. (1998). *Gewährleistung kommunikativer Chancengleichheit als Freiheitsverwirklichung*. Baden-Baden: Nomos.
- Spahn, A. (2012). And Lead Us (Not) into Persuasion...? Persuasive Technology and the Ethics of Communication. *Sci Eng Ethics*, 633-650.
- Stephenson, N. (2000). *Diamond Age*. New York: Randomhouse.
- Sunstein, C. (2000). Television and the Public Interest. *California Law Review*, 499-564.
- Thurman, N. (2011). Making 'The Daily Me': Technology, economics and habit in the mainstream assimilation of personalised news. *Journalism: Theory, Practice & Criticism*, 395-415.
- Thurman, N. (2011). Making 'The Daily Me': Technology, economics and habit in the mainstream assimilation of personalized news. *Journalism: Theory, Practice & Criticism*, 395-415.
- Thurman, N., & Schifferes, S. (2012). The future of personalization at news websites: lessons from a longitudinal study. *Journalism Studies*, 1-16.
- Turow, J. (2005). Audience Construction and Culture Production: Marketing Surveillance in the Digital Age. *The ANNALS of the American Academy of Political and Social Science*, 103-121.
- Underwood, D. (2011). Reporting and the Push for Market-Oriented Journalism. In W. Bennet, & R. Entman, *Mediated Politics: Communication in the Future of Democracy* (pp. 99-116). Cambridge: Cambridge University Press.
- Van der Sloot, B. (2014). Privacy in the Post-NSA Era: Time for a Fundamental Revision? *JIPITEC*, 2-11.
- Verbeek, P.-P. (2006). Persuasive Technology and Moral Responsibility. Toward an ethical framework for persuasive technologies. *Persuasive*, 1-15.
- Verne, J. (1889). In the Year 2889. *Forum*, 262.
- Warsh, D. (2014, May 23). *The New York Times Innovation Report is a disaster*. Retrieved March 19, 2015, from www.politico.com/magazine/story/2014/05/the-new-york-times-innovation-report-is-a-disaster-107041.html#.VQreLqNgXcs
- Wentzel, D. (2002). *Medien im Systemvergleich. Eine ordnungsoekonomische Analyse des deutschen und amerikanischen Fernsehmarktes*. Stuttgart: Lucius&Lucius.
- Wietschge, L. (2013, April 8). *Getting personal: A Dutch online news platform wants you to subscribe to individual journalists*. Retrieved March 19, 2015, from www.niemanlab.org/2013/04/getting-personal-a-dutch-online-news-platform-wants-you-to-subscribe-to-individual-journalists/

- Wisselink, S. (2012, Oktober 15). *Publieke omroep chanteert burgers met cookiemuur*. Retrieved March 24, 2015, from Volkskrant: <http://www.volkskrant.nl/media/publieke-omroep-chanteert-burgers-met-cookiemuur~a3331966/>
- Woude, M. v. (2013, February 14). *Gegijzeld door een cookie*. Retrieved March 24, 2015, from Cloudtools: <http://www.cloudtools.nl/algemeen/gegijzeld-door-een-cookie/>
- Zuiderveen-Borgesius, F. (2015). *Improving Privacy Protection in the Area of Behavioural Targeting*. Den Haag: Kluwer Law International.