

Changes in the science media landscape: are changes in the media drivers for changes in science journalism?

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Abstract

Bringing science news is not always easy. Some topics are ‘sexier’ than others and most science (news) media do not offer space (or time) for too much elaboration. With recent changes in the media landscape, most notably the introduction of the Internet, and more specifically the Web 2.0 features, it is important to gain insight into what these developments mean for bringing science news. Do these changes make it easier or harder to bring this type of news? To answer this question qualitative interviews were held with science journalists from all different media types, as well as with science communication officers and a communication advisor on media formats. In general, changes in media landscape and in (science) journalism indicate a shift in the roles of science communication professionals. Most notable changes seem to be that certain science

issues become increasingly ‘sellable’ (e.g., when there is good visual material available). While the media landscape is changing and new media seems to be uprising, all different kind of media have their specific benefits and drawbacks, also the traditional ones. So each medium can be useful, as long as you choose the medium because of its specific characteristics. All-in-all, two main suggestions seem most important: be creative and speak the right language.

Bringing science news is not always easy. Some topics are ‘sexier’ than others and most science (news) media do not offer space (or time) for too much elaboration – this causes a gap between what scientists want, what journalists can offer, and what the public needs.

An example: Van der Ploeg (pers com, 2013) indicated that Voedingscentrum¹ is reliant on free publicity. One way they draw attention and sometimes even generate news, is by actually doing (small) research projects and sending out press releases presenting the results. One recent study was on the effects of energy drinks. The outcome was that young people experienced negative consequences by consuming these drinks, such as insomnia and feeling shaky. This press release was taken up by many public media. By publishing their own research, Voedingscentrum was able to communicate their take-home-message ‘drink only one energy drink a day’ to a much larger audience.

So it is possible for science to become news. But with recent changes in the media landscape (most notably the introduction of the Internet, and more specifically the Web 2.0 features), it is important to gain insight into what these developments mean for bringing science news. Do these changes increase or close this gap between scientists, journalists and the public?

In this paper, the authors will answer the question ‘Changes in the science media landscape: are changes in the media drivers for changes in science journalism?’ It is

¹ The main purpose of Voedingscentrum is to inform the Dutch public about healthy eating and health risks related to food. Voedingscentrum is receiving governance subsidies for this purpose. Essentially, what they do is translate science information in practical advice for people’s eating behaviors and they try to communicate that message using different media.

written from the perspective of science communication students² who may choose to become science communicators in the future and then will have to deal with these questions.

Method

Two qualitative in-depth interviews and one group discussion were performed with a purposefully selected sample of science journalists who work with different media types in the Netherlands (print: newspapers, audio: radio, and audio-visual media: television and internet) and (science) communication officers, and a communication advisor on media formats. Interviewees worked at the following institutes: De Volkskrant (national newspaper), KlapperCom Consultancy (consultancy company), NOS (national news agency), NTR (Labyrinth) (public broadcast organization, TV), NU.nl (online news), Voedingscentrum (public health advisory institution), VPRO (Noorderlicht) (public broadcast organization, online), and VU University. The interviews and group discussion aimed to gauge the reactions of professionals to the concept of changes in the media landscape and how these changes influence their decision making processes.

Participants were invited to take part in either individual interviews or the group interview session and introduced to the subject of interest (changes in the media landscape and how these influence professionals' work choices) through e-mail. In this mail the most prominent themes were also introduced: changes in the media landscape and its consequences for (science) journalism, the benefits and drawbacks of different media, the specific news criteria for science, the most common mistakes made in science journalism and recommendations for the future.

The interviews were between 1 – 1,5 hour and the group interview approximately 2 hours. All interviews were audio-taped and summaries of the interviews were used for purposes of this paper. The written summaries were examined by two researchers to identify emergent themes, these were agreed on by discussion, and the data categorized accordingly. The intention was to present viewpoints and personal preferences rather than achieve (statistical) generalizability, the data is presented according to the identified

² Parts of the research described in this paper has been used to write the chapter titled “...” which is to be published this august in a new handbook on Science Communication for Dutch science students who take part in science communication master tracks.

themes. Appearing trends and majority agreements are, however, indicated. The results were checked with the partaking professionals and modifications were made accordingly.

Results

Changes in the media landscape and in (science) journalism

Traditional media are disappearing, while new media are flourishing. The challenge is to know your way in this changing media landscape and to be aware of the possibilities these different media offer for science communication purposes. Key words today are social media and cross media.

New media are especially equipped to generate engagement (Vaneker, pers com, 2013) and this is in direct relation to the need for transparency today. These media allow scientists to directly interact with their publics and initiate actual dialogues if so desired. Social media, for example, allow scientists to be their own ambassador by regularly posting news about what you are doing as a researcher.

The changes in journalism are, at least to some extent, related to changes in the media landscape. For example, the increase of free online news media are important competitors of newspapers, necessitating newspapers to change. Also, the public is getting used to what new media have to offer, and so journalists need to adapt, and therefore scientists need to adapt as well.

Our interviewees mentioned the following changes in journalism as being most prominent: (1) speed: information spreads faster and wider; (2) personalization: the role of people and emotions become increasingly dominant in news stories; (3) hypes: although there are many different media that could tell many different stories, the truth is, most of these media tell the same stories repeatedly, even over longer periods of time, and even when there is little or no actual news in that story; e.g., twitter can make non-news trending; (4) interpretative news: journalists no longer just tell the news or bring the facts, but they increasingly provide the public with their interpretation of these things (experiential journalism, RMO, 2003); and (5) the increased interest in infotainment: the desire to make news more fun (DPC, 2013) – the entertainment function of news is given more attention at the cost of its information and watchdog function.

Our interviewees indicated that some subjects (e.g., those related to sex, health and “weird stuff, like neutrino’s, psychology and controversial issues,” Veerman, pers com, 2013) do well in science stories. Besides it helps when there is good visual material available. Science news stories should adhere to what the public know, recognize and find important, therefore health and psychology are good subjects to write about. And those types of stories do extra well when it involves a world famous super star, such as Angelina Jolie. She became world news when she wrote an open letter to the New York Times about her preventive breast surgery.

Benefits and drawbacks of different media types

Even in a changing media landscape all different media types have their value. According to the members of our group interview, traditional print media, specifically newspapers, have a couple of important benefits: (1) Some newspapers still have specialized science editorial offices, employ professional science journalists, and have the capacity to do some actual research on the science stories. In this sense, these type of print media have access to information that is inaccessible to other media and/or to the public. (2) In text there is generally more room for nuances than in visuals only (TV). And (3) Newspapers are still generally considered trustworthy.

However, there are also a couple of drawbacks to this medium: (1) A lot of people read very selectively. A newspaper, for example, is rarely read from beginning to end and if a newspaper has a science section than this is not always read. (2) Today, newspapers are a relatively slow medium. They experience competition from new media that bring information faster, more often, and (often) for free. One drawback that is specific for this era of new information technology developments: (3) In contrast to digital information, information in print media cannot easily be shared.

In the case of radio the most important benefits mentioned were: (1) It is a very direct medium. (2) There is little ‘noise’, because it allows scientists to tell their story – during interviews there is little or no selection performed by the journalist as is often the case in print media. (3) Live radio offers ample opportunity to create direct interactions with listeners.

The most important drawbacks are: (1) Not all subjects are suitable for radio. The quality of a subject is dependent on whether or not there is a good and gifted interviewee or other means to add sound to the story. (2) Listening to radio is often a secondary activity, listeners are doing other things at the same time, such as cooking, reading, driving. (3) The outreach is limited. Of course, this is dependent on the radio station, but in general radio is less of a mass medium than TV.

The most important benefits of TV are: (1) The greatest impact in the sense of both outreach and influence. (2) The combination of audio and visual materials is powerful in communication. (3) TV generally has bigger budgets than print media and/or radio – hence this medium has the potential to create better shows.

The most important drawbacks are: (1) It is difficult to sell a story when there is no good visual material and/or no good speaker to be interviewed. (2) Few TV stations have specialized science editorial offices. (3) Often there is little time for the science stories and therefore little room for nuances.

Of course, the participants in our group interview agreed, most traditional media are now supported by new media. Digital media, and those hosted on the Internet especially, offer important benefits: (1) The possibility to search the Internet for information. (2) The means to provide a direct link to other sources inside or outside the source text. (3) The Internet is never full, essentially there are no limits when it comes to text, visual or audio. (4) It is multimedia in the truest sense of the word; the medium has the potential to stimulate all senses (even touch), which enables it to explain complex science information in ways that less rich media could never do. (5) There are ample opportunities to create interactivity with the public/the audience.

However, there are also important drawbacks that are easily forgotten or overlooked according to our interviewees: (1) Precisely because it is never full, because there are no limits, senders often provide too much information (e.g., texts are too long on many websites). (2) There is so much, it is truly a fight for survival and attention, not only with other media, but also within the Internet itself. (3) The value of the information and the credibility or trustworthiness of the information is difficult to estimate for lay publics. (4) Many websites do not yet make optimal use of what the Internet has to offer (e.g., linking different websites and sources, adding audio or video).

Tips for operating in a changing media landscape

In this changing media landscape what can you do as a scientist to become public? Well, first of all you need a different mind-set. Scientists have the tendency to want to remain 'pure' while media want to 'excite'. Part of the explanation lies in the fact that for some scientists, popularizing science is similar, if not identical, to commercializing science. In this light, their story would no longer be as pure because it also serves other means. But science is not value-free, it never has been. And research at universities is already commercialized.

Scientists should be more aware that it need not only be about the content, but that it can also be about agenda-setting: draw the attention of the public first, then you can communicate with them. According to Vaneker (pers com, 2013), science communication professionals would do well to: (1) Be prepared to move away from serving the interested few (focus on getting the message through) and toward the masses (focus on drawing their attention and creating windows of opportunity to initiate interactions). (2) Do concessions: not everything can be communicated and not everybody can communicate. (3) Focus on image (visuals). (4) Keep in mind the (limited) attention span of your audience.

Scientists becoming involved in science communication should be aware that their audience generally speaks a different language and generally has a different attention span when it comes to science as a subject. Science communicators often ask too much for too long from their public. Especially when the medium TV is selected, for example, you should be aware that even among partaking publics this attention span is only about three minutes (pers. com. Vaneker, 2013). More generally speaking: newspapers, radio and TV prefer *soundbites* – small bits of information that can be told and shown within 10 seconds.

Conclusion, discussion and some final remarks

Although the (science) media landscape is changing and (science) journalism as well, there will always be opportunities for science to become news. From the perspective of a science communicator however it is good to be aware of these changes so you can successfully deal with them.

An important change is the increased necessity of a cross media approach to create increased levels of engagement and interactivity. Reynaert, Dijkerman and Fokkema (2009) emphasize the importance that each medium has specific characteristics that communication professionals need to be aware of: TV for example is best suitable for purposes when large outreach is important and one strives for primarily an emotional impact, the (mobile) internet for its possibility to generate a sense of connectivity and the need to access certain social networks, etc.

Secondly, science communicators should realize that some subjects in science are easier to 'sell' than others.

In general, we see a shift in the role of science communication professionals. Today, science communication professionals coach others and facilitate communication rather than that they are necessarily a communicator.

All-in-all, two main suggestions seem most important: Be creative and speak the right language – even when that means speaking one you don't like or prefer, be prepared to speak in one-liners. The language of journalists is different from that used by scientists and from that used by the public. For example, journalists tend to use the word *break through* more freely than scientists do. This is a semantic discussion science communicators need to be aware of and sensitive for. And for the creative part: Do! Just do it. Don't be afraid to do something new. Make use of the media available and the potential they have. Use both old and new media, but make sure to choose a medium because of its specific characteristics. Think visually. And think cross media. And be ready to popularize science.

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