

The Role of Innovation Journalism in Science News Media

Marie Granmar

Reporter/Editor
Process Nordic, Stockholm, Sweden
E-mail: marie.g@mentoronline.se
Phone: +46 (0)8 670 41 44, +46 (0)70 659 83 23

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1 Introduction

The research landscape is constantly changing. During the past decade an important worldwide trend has been that more research is conducted in private companies or research departments with high ambitions of spin-offs.

One example is the search for future medications, which mainly are taking place in private biotech companies. Commercial actors are also dominating the development of future technologies that use manipulation on a nano scale.

This of course changes the road map for science media covering these areas. It also changes the daily work of the science journalist. The old tradition to mainly give perspectives on recently published peer reviewed articles is not sufficient any more.

By introducing more innovation journalism, the chances are higher that the key factors of the scientific development are actually analyzed. It is also better serves the reader who is usually a well educated professional in the fields of science, medicine, technology or business related to these areas.

How to achieve this is still being investigated by some science media, while others have already taken the step to fully use the ideas of innovation journalism. This report describes a few different science media and how they have chosen to approach the challenge of integrating innovation journalism. How can innovation journalism lead to a publishing success?

The report also gives an insight to the challenges that a modern science journalist will meet. There are new potential angles to stories and new subjects to take into consideration. Finally, the report gives some perspectives on the importance of the editorial organization and the work environment that will help or not help the innovation journalist in his or her work.

1.1 Some Definitions

As part of the above mentioned fellowship was a quest to evaluate the concept of “[Innovation Journalism](#)”¹, coined by David Nordfors in 2003, and described as journalism covering technical, legal and political aspects of innovation and innovation systems. In this paper I use the adjective “innovative” to describe journalistic tools and methods applicable in, and perhaps crucial for, conducting Innovation Journalism.

2 The Challenge of Innovation Journalism – Some Examples

2.1 Science Magazine

Since 1880 the weekly publication *Science* has provided the community of researchers, mainly in the US, with news and views concerning the academic world. The aim is to serve as a forum for the presentation and discussion of important issues related to the advancement of science. This includes among many things to keep the readers updated on the latest trends in important research fields. And to report about governmental decisions and changes in funding that could have an impact on the daily work of researchers in the field of natural sciences.

Through correspondents and freelancers, *Science* also gives a perspective on activities in Europe and Asia. Today the non-US coverage is approximately 30-40 percent. The magazine is printed in 130 000 ex. It also has a web-page that is licensed to many institutions. Altogether the printed magazine and the web have approximately 1 million readers.

In *Science* you often find articles inspired by recently published scientific results. You would never find an article simply about a surprisingly high investment or funding of a lab. The focus has always been, and still is, basic research. But lately the magazine has begun to reconsider its areas of coverage.

The number of subscribers is sinking and advertisement is unreliable. Due to the overall recession in the end of the nineties there was a severe dip in advertisement. The trend is now slowly pointing upwards again. Increasingly, advertisements are coming from companies involved in biological research.

¹ “The Concept of Innovation Journalism and a Programme for Developing it” by D. Nordfors, VINNOVA Information VI 2003:5, ISSN 1650-3120, Nov. 2003. The paper has been re-published by Innovation Journalism, Vol. 1 No. 1, May 2004. www.innovationjournalism.org/archive/INJO-1-1.pdf

When the landscape of research activities is changing, so must the media covering this landscape. To meet the needs, *Science* have shown an increasing interest in innovation journalism. The focus so far has mainly been on biotech companies, where basic research is forced to meet the needs of a market oriented organization. The angle of some of those stories has been on the course of action in the development of, for example, a new drug.

The focus on policy issues, patents and protection of intellectual property rights has always existed and still does. With the inspiration of the Swedish innovation journalism fellowship program, the spotlight has also been pointed at other areas, such as commercialization of nanotechnology, emission control technologies and data storage. Information about the market value, costs and benefits are added to the traditional story about scientific advancements.

2.2 Nature

Nature is the closest competitor of *Science* and has a similar area of coverage and readers in the same community. But the reporting style and the choice of subjects is different. A strong focus of the *Nature* news department during the past four years has been at issues concerning the labs as a workplace, and how this work could be of common interest. Effort is also put at being ahead of other news media.

Short stories about new funding to specific labs and important investments may appear from time to time. The *Nature* material also seems less US biased than the *Science* material. This may be because *Nature*'s editorial board is based in London.

For some readers *Nature*'s way of presenting news and views could appear a bit less analytical than coverage in *Science*. At the same time *Nature*'s reporting seems more flexible and sensible toward what is actually going on "out there".

Maybe as a consequence of this, *Nature* has decided to launch a new Business section that appears during the spring of 2005. "There has always been a gap between the science reporting and the business reporting and we want to fill that gap," says news editor Colin Macilwain who is now starting off a new career as a *Nature* Business editor.

2.3 The Swedish Science Radio

For about twenty years the Swedish national public radio has had a special science department. During the past seven years the department has produced daily science news. The focus of the material has varied slightly with the different persons in charge. But the basis has been and is to provide a common audience with exciting news from the world of science.

For a period the focus was turned more towards technology and innovation, while reporters were contracted on yearly basis to cover these areas. But it is uncertain whether these news could actually be called innovation journalism, since there were rarely any time for talking about the financial aspects of the technology development. The priority in the science news radio has always been the discovery itself. True innovation journalism stories are more likely to be found in the longer feature programs or in the economy news.

Today the focus on technology in the science news radio has diminished. But if a story is about technology, the focus is usually on biotechnology and efficiency of new drugs. The focus has also changed towards more political aspects of science issues and EU-related research actions.

The overall picture is that the Swedish science radio is moving away from the business aspect of innovation journalism. Recently the program covering IT, both as an innovation and from a consumer perspective, was transformed into a new technology program. The new program called "Tekno" has a stricter focus on consumer technologies and is presented with a strong "how does it work" approach. This is considered more relevant to a broad, common audience.

2.4 Process Nordic

In November 2004 the tabloid publication *Process Nordic* was launched in Sweden, Norway, Denmark and Finland. The magazine, that is distributed to 30, 000 readers in the Nordic countries, presents news and feature from a broad range of industrial sectors. Pharmaceuticals, pulp and paper, steel, energy and chemical production are among the areas of coverage.

The aim of the magazine is to cover topics that could be of interest for many different industrial sectors. The idea is to help the readers - who are working in or in close relation with the process industry - to get inspiration from each other. In that way the readers, who are of course already interested in innovation, can find new ideas of how to work and solve problems.

The percentage of innovation journalism in *Process Nordic* is high. Most articles are taking into account both technological and financial aspects. Large investments are considered as news stuff. The magazine also has a special section that covers industrially related research. The focus here is slightly more on the function than on the financial aspects of the discovery, mostly due to lack of space. But by answering the question "Why is it an important discovery?" the innovation aspect is usually at least partly covered, even if the discovery itself came out of basic research. I dare say that *Process Nordic* is one of the few publications in Sweden to day that comes really close to true innovation journalism.

3 Why Innovation Journalism in Science Media?

3.1 Science and Nature

With a steady decline in membership *Science* magazine needs to do something to attract new readers. Since 80 percent of the readers today are active in the life sciences (biology, medicine, ecology, biotech etc), it is important to cover what is going on in these areas. The reality is also that an increasing part of this research is conducted in companies. Innovation journalism will be necessary to meet the need and interest of readers active in the fields of biotechnology, pharmaceuticals, medicine, nanotechnology, computers and assisting technologies..

Even if the scientific discovery itself will always be the main focus in a science magazine, adding some business aspects could enhance the quality of the stories. By adding more market-oriented information to stories about research trends, the story broadens the perspective on the research. It becomes attractive not only to researchers interested in a specific field, but also to readers working with activities related to the research area. Innovation journalism could open doors to readers seeking inspiration from areas different from their own.

The situation for *Nature* is similar to that of *Science*. By offering a separate business supplement *Nature* sends out an important message to its readers: *Nature* is the magazine to choose if you are interested in something more than intellectual dispute over property of rights, governmental policies and research results.

The business supplement could also offer an opportunity to look deeper into the reality of research performed in companies. This research is becoming more and more important since the governmental research funding is steadily diminishing. To meet this new situation, the science news media will need innovation journalism. Putting a focus on commercial aspects of research seems like a good idea for a magazine that wants to survive in the new reality.

3.2 Process Nordic

The publication was started mainly to meet the needs of people working in the heavy industry. No other specialized magazine is covering such a broad range of heavy industrial areas in Sweden today. This makes the publication unique and is, of course, an interesting business idea.

Since the readers are so widely spread in different areas, we believe that the magazine can play a role in the knowledge transfer in the heavy industry. To achieve that, we try

to cover as many aspects as possible in the everyday life of the processing industry. This includes the development of new processes, the effects of environmental regulations on companies and stories about the process of putting new products on the market.

Even if every single article could not be described as innovation journalism, the magazine gives an overall picture of how research, technology, politics and economy interact in the industry.

4 Methods of Innovation Journalism

It is not possible today to say that there is one specific method to work with innovation journalism in the science media. The method varies like many other things with the publication. But there are some key methods that should be pursued.

4.1 Science Media

Scientific trends are always interesting to readers. By adding information about market value, cost and benefit the development of a scientific field could appeal also to a reader that does not have a detailed interest in the research itself.

It may also be valuable to take a closer look at the environment surrounding the research, such as politics with an impact on research policy and funding, governmental regulations and the work environment for researchers.

A scientific magazine seeking to expand its offering of innovation journalism could find it helpful to look at more outspoken innovation journalism publications, such as *MIT Technology Review* and *Business Week*.

Even if the science news media always will focus more on basic research than on technology or business there are journalistic methods that could be applied in a very similar way. Feature stories and trend analyzes, for example, could easily shift their focus towards more innovation-related questions. News stories about investment-related issues or difficulties connected with start-up processes should be encouraged. This is something that is already partly a reality in *Nature's* coverage.

By choosing to bridge the gap between science and business reporting with a separate supplement, *Nature* also shows that it cares about the reader who is active in a commercial research world. At the same time it may appeal to new advertisers, which is important for every commercial magazine.

My experience is that a supplement is usually a good way of promoting a new media focus. After a few years the area of coverage could be mature enough to be integrated

in the magazine. The future will tell if the *Nature* business section was the right way to go.

4.2 An Existing Method

In 1999 the Swedish weekly technology paper *Ny Teknik* started a new section called "Teknik i tillväxt" (Technology in growth). Every week in the special two-page section a new company developing an emerging technology is visited. The technology is described and a background is given to the commercial situation the company is facing.

To choose the relevant companies *Ny Teknik* has developed a method in which key values are analyzed. For example, such key values may include the maturity of the technique, the extent to which the technique is based on patents, and the financial situation in terms of accessible venture capital etc. The idea to work like this was imported from the Finnish sister publication *TEKNIKKA & TALOUS*.

Today "Teknik i tillväxt" still looks pretty much the same as it did six years ago, while the rest of the publication has undergone a drastic change. *Ny Teknik* has developed into a more news and business oriented paper, in which the feature story about frontline research has almost completely disappeared. A large portion of the articles integrate both technical and commercial aspects into the story. The focus towards IT has also been enhanced.

4.3 Process Nordic - a New Magazine

The strength of *Process Nordic* is that of a new publication free from old convention. The shaping of the magazine is still in progress and the first readership test is about to take place. This will tell how successful *Process Nordic* has been in meeting the needs of its readers.

What we know to date is that nearly every reaction from readers has been positive. The magazine has obviously managed to fill a gap and provide serious journalism about issues that concern a lot of people in their daily challenges.

Many Scandinavians are working with some kind of technology enhancement. Of course they are seeking inspiration and more knowledge that could guide them to better performances in their work. Since industrial development almost always includes science, technology and economy, innovation journalism becomes a necessary tool.

5 Organizing Innovation Journalism

Journalism has many similarities with other activities performed at a high speed with a large amount of choices to be made in a short time. A former colleague of mine has described the media organization as a military organization where everybody knows in each moment what he or she needs to do. This makes it possible to act quickly when a major media event comes up, such as the 9/11 attack or the Tsunami catastrophe. A clearly defined organization also makes it easier for new soldiers to get quickly into their job, since the organization itself is instructive.

A very important factor in this is that it must be easy for the soldier to navigate and find answers to his or her questions fast. It is also important that each decision is based on a strong foundation of standardized knowledge. This is important because this will lead to the same decision in every similar situation, which is necessary for the safety of the personnel and the quality of the action.

In journalism good organization is necessary to give some conformity of the media product. In the end this could have an impact on how well the publication manages to attract readers. A clear direction and support for the reporters also leads to higher quality stories.

Another important factor in a fast working media organization is the transfer of informal information. Organizational studies have shown that open environments save a lot of time and work, since everybody can communicate with each other in an informal way. Separate rooms could offer a less stressful work environment, but they can also have an isolating effect on reporters.

A common way of solving isolation is to have formal regular meetings with everybody in the department. Naturally the follow-ups on these meetings have to be handled in a fair way by responsible editors, not forgetting who was involved or interested. Having few editors and short distances between editors and working reporters have also turned out to be an efficient way of getting fast results.

An important factor to Sweden's success in many innovation areas is the habit of creating flat organizations. This has now been praxis for several decades and is getting more and more common also in academic organizations (labs etc).

6 The Innovation Reporter

The work situation for the innovation reporter is usually a bit lonely. Innovation journalism is still a new concept for many media and therefore innovation reporters are quite unknown. He or she is not really a science reporter, nor an economy reporter or a

common reporter. This of course puts pressure on the media organization wanting to integrate innovation journalism in their coverage.

Probably the best way of integrating the innovation reporter would be to let him or her work with the economy editor, but with a special assignment to stay in close relation with the science editor. An open-minded attitude to new ideas is of course also necessary, as in all creative work.

For the reporter it is important to keep updated with the latest discoveries in science, technology and business. To keep up with all this it is recommended that the reporter read both science magazines and business magazines. Other recommended sources might include *EurekAlert!* and e4engineering.com. As in all journalism it is important to search for personal sources. Keeping an eye on relevant conferences is usually a good idea. Conference programs are goldmines for the reporter searching for new names and interesting companies. Dig up the phone number and give the guys a ring! A fantastic story might be waiting on the other end of the line...

7 Future Challenges

There are still many challenges for science media in the area of innovation journalism. Traditionally business matters have not been of interest for science reporters, who prefer to focus on science itself. And of course it is the right of every reporter to focus his or her story in the direction he or she thinks is the most relevant for the reader.

But when the world turns steadily towards a more commercial environment, the business reality could be hard to keep out. And why should it be kept out when it is influencing so much of what is going on? Perhaps a science reporter owes this to his or her readers – to present more of the reality surrounding the research.

To the common audience many science media are still considered to be entertainment. It is possible that innovation journalism could offer a new way for science journalism to become something more than either entertainment or a narrow niche for a specialized community.

For a specialized science media a future challenge would be to cover even more of the research process taking place in areas of the private sector, such as drug companies. What substances are being patented and what relevance do the patents have? Is the research serious enough to be able to lead to new effective drugs, or is the company just looking for a business opportunity?

Naturally it is the responsibility of the investors to give money to relevant projects, but a science media that examines the actions of authorities should also be able to examine actions taken by private actors with power over research. Stories in this area will be important for *Science* and *Nature* in the coming years.

An example is the story that was recently published in Scientific American about the scarce presentation of drug tests in companies. Today most companies are only presenting results when they have succeeded. In the future they might have to present all tests and also assign them in advance to the medical publications.

Another suggestion comes from Anna Nilsson, an analyst at the Swedish Institute for Growth Policy Studies, Itps. She has studied the development of stem cell research in the US and how Swedish knowledge could help solve conflicts of interest in the area. Her suggestion is that journalists analyzing biotech companies should also look into how the human capital is transferred. Only studying the financial aspects of a biotech company does not give the whole picture of its success or failure. This suggestion opens a whole new field for journalists wanting to dig into the reality of an industry that might have a drastic impact on our lives in the future.

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Marie Granmar is a science and technology journalist working for the new publication Process Nordic in Stockholm. In 2004/5 she was awarded an Innovation Journalism Fellowship and was hosted four months at Science Magazine in Washington DC. She holds a Master's Degree in Mechanical Engineering from the Royal Institute of Technology in Stockholm and several diplomas in Journalism and languages. She has worked many years as a reporter for the publication Ny Teknik and as a reporter and producer at the Swedish Broadcasting Corporation – the science radio, the afternoon magazine "Studio Ett" and for the national TV-news Rapport.

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