

Innovation Journalism for Bridging the Gap Between Technology and Commercialization

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A commentary on Erkki Kauhanen (in this volume), “Innovation journalism as an essential element in the new endogenous theory of growth”

1 Introduction

Many regional innovation systems in the Europe Union have been found to excel in scientific research but fail – at least in part – to translate the new scientific knowledge thus created into economic success¹. From the perspective of innovation systems thinking -- the line of thought that science, industry, and the stage should work together to improve local science-based technology and local competitiveness -- this failure can be considered to be major. One explanation for this kind of failure is that science, industry, and the economy are different fields of society that exhibit distinctly different sets of institutional arrangements, cultural schemas, scripts, and mental models. Within this context, the emerging literature on “innovation journalism”² has emphasized that the media and journalism can here step in to have an important role in helping to bridge the gap that exists between the institutions that go with new science-based technologies and those that go with commercialization of these technologies. Nordfors (2003/2004) suggests that innovation journalists learn the established rules of the game in institutionalized fields such as those of science, technology, and business, and develop “critical mass”.³ In this view, in order for innovation journalism to have “a *niche* and an arena for a new professional community[,] become a new school of journalism[, and] contribute with dialogue and criticism that inspires companies and lawmakers towards sustainable growth”,⁴ journalists should subordinate themselves to the institutional logics of the system which they are to change:

“If reporters are to offer a well-founded opinion about whether or not a society or company is heading towards growth, they need a thorough understanding of both technology and business matters... [I]nnovation

¹ See, for example, Aho, 2006.

² See Nordfors, 2003/2004 for the seminal paper.

³ Nordfors, 2003/2004.

⁴ Nordfors, 2003/2004:3-4.

*journalists need to understand the markets and become well informed about the leading interests, their relations to each other, and their agenda.”*⁵

The innovation journalism literature has thus emphasized that before the media and journalism can ever truly have an important role, innovation journalists and innovation media must be as in a straitjacket or on a leash. However, the precise logic by which this “critical mass” in innovation journalism will come about has of yet neither been named nor specified in this innovation journalism research. Now, in stark contrast to such a view of unquestioned subordination of innovation journalism to the system that established fields jointly represent, Erkki Kauhanen (in this volume)⁶ calls for innovation journalists not to subordinate themselves to anything. He argues that innovation journalism be a form of “horizontal communication” that transgresses the boundaries of the conventionally distinct fields of society and their associated areas of specialization.

The idea of a rather uncontrolled and serendipitous approach to commercializing new technologies and attracting media attention to “accidental empires” in ways that are not fully controlled by the state or central actor is not new, of course. Indeed, it has always been, and will probably continue to be so that “new media tend to imitate the old media”.⁷ It has been shown that important changes in the U.S. radio broadcasting field, for example, first occurred as a result of innovations at the periphery of the field, which then migrated to the core after they had been shown to be effective.⁸ Also more generally, a niche in the periphery of a field has been shown to be a legitimate reason for not understanding the institutional logics of the field.⁹ In the specific context of the literature on innovation journalism, nonetheless, the idea of a rather uncontrolled approach to innovation journalism is a new approach. This commentary takes the aim of integrating the idea of “horizontal communication” into the research programme of innovation journalism.¹⁰

The first premise of this commentary to Kauhanen is that he blends selected insights from political science and evolutionary biology in a way that is very interesting. Clearly, he is a good scientist by training. On the other hand, it can be considered an unfortunate downside of his contribution on “horizontal communication” that he follows a discipline of “stylized facts”, rather than grounding new theory, testing a hypothesis, or otherwise combining the idea with

⁵ Nordfors (2003/2004:3-4, *emphasis added*; for similar ideas, see Sandred, 2004; Kauhanen (in this volume), Hautamäki, in this volume.

⁶ Note: This commentary refers to the original version of Kauhanen’s paper, presented at the Third conference on Innovation Journalism, April 6.

⁷ Cringely, 1992:63.

⁸ Leblebici and colleagues, 1991; see also Lounsbury and Ventresca, 2003.

⁹ Mohr, 2005.

¹⁰ Nordors, 2003/2004; Sandred, 2004; Uskali, 2005; Hautamäki, in this volume.

systematic observations of journalistic outputs, ways or work, patterns of discourse, or logics of practice. His focus remains to the end on “politizing” (this expression is from Hautamäki, in this volume), rather than on specifying what the mechanisms of increasing returns and horizontal communication that he identifies might mean in practice. Maybe this is because is not specialized on topics such as how to invent new technologies or how to channel them into use through business channels or the media, but a political scientist.

The second premise of the commentary is that Kauhanen’s idea of “horizontal communication” is so good it is worth development regardless of the person or research team doing that. The idea is original in the context of innovation journalism. The idea provides new spin to the emerging research literature. It may well be very productive. It points in interesting directions for future research on innovation journalism. A gap between new technologies and how they are commercialized exists in research literature also beyond research on media and journalism¹¹. Within research in innovation journalism, more specifically, the research idea of “horizontal communication” can thus be considered one rupture for a new kind of analysis of innovation journalism and a new journalistic discourse. It amounts to an opening for specification of cultures and cognition across the macro and micro levels of analysis of why and how would the proposed marriage of “increasing [economic] returns” of journalism and new technologies reflect on each other.¹²

Within this context, this short paper is an attempt to explore, even to some extent map, some of the contours of this rupture. In the pages that follow, we sketch in a very preliminary manner one view of how and why innovation journalism can make a difference in systems of innovation in Europe not only at the level of “stylized facts”. We make an attempt to blend the ideas of “horizontal communication” into extant research literature that has been carried out on innovation journalism, innovations, and institutions, the media and journalism, and so on. We argue that just as such genres and “beats” in the natural environment and business were journalistic projects of the 20th century innovation journalism appears to be one of the key journalistic projects of the 21st century. We present a first sketch of why and how to make *a research-based specification of some of the ways that innovation journalism can make a difference*. We specify a few directions for research mainly at the micro level of journalistic, science, engineering, and business practices, with implications also for research, commercialization, and other activities at other system levels of society and beyond.

The paper is structured as follows. A very brief summary of what economists mean by “increasing returns” follows this introduction. Starting to move on away from evolutionary economics, the paper continues with this treatise of evolutionary economies with a mapping of the role that innovation journalism may be able to

¹¹ See Hargadon and Douglas, 2001; Scott, 2005 for some examples.

¹² Kauhanen, in this volume.

play in bringing about these “increasing returns” in a given local or sectoral system of innovation. After this first part of the paper, we take a journalistic and historical turn in the second part of the paper to look at what kind of journalistic traditions have followed from earlier journalistic projects. We point out how each new journalistic project has, in the long term, developed into a distinct issue-based genre that has then been overcome by a new issue¹³. As an outcome of such evolution of issues, a specific kind of regularity and conservativeness has come to characterize at least the two earlier genres and “beats” (that is, the environmental journalism and business journalism, mentioned above). Thus, we argue that the journalistic field is spotted with traditions or rules of the game that are sediments of earlier projects of the journalistic profession. The paper acknowledges that innovation journalism in the immediate future is likely to be different than in the recent past of the “dot.com” bubble which we, in fact, hint might be a key formative moment in the crystallization of the new journalistic project of innovation journalism. The paper concludes with a notation of a few research directions that we can identify for the study of phenomena that we believe are key issues in and around research in innovation journalism.

2 The idea of increasing returns

What is known of increasing returns in literature, it seems credible the claim that journalism can – at least potentially – become a mediator or translator of how to make Europe – or any system of innovation for that matter – more competitive (as claimed by Nordfors, 2003/2004, and Hautamäki, in this volume, for example). The increasing returns argument in economics is essentially the idea that the more nodes there are in a network, the more valuable are both the network as a whole and each of the many node in this network, in contrast to a non-existing or small network with no or only a few nodes.¹⁴ In essence, increasing returns is the opposing argument to that of elitism, whereby holding resources that are scarce would make these resources more valuable.

“Increasing returns” come in more than one guise. For example, the *classic* example of increasing returns in literature is a telefax. One telefax could never be as valuable as long as there was only one such device. In any social, business, or other kind of a network, when there were two or more telefaxes, however, those using one could use it to send a message to another, and/or vice versa.

¹³ Downs, 1972.

¹⁴ Arthur, 1994.

Besides the above classic telefax kind of example, there are also more *modern* kinds of examples of increasing returns, such as the “mobile phone” (cell phone) or the “personal digital assistant” (PDA), for example. These modern devices can also connect to other devices than those of their specific or peculiar kind.¹⁵ A mobile phone can connect to a landline, for example. A PDA can connect to laptop, for example.

The fact that telefaxes are less pervasive in contemporary society than are mobile phones and PDAs can be explained from the perspective of increasing returns. The latter – what we call “modern” – kinds of devices express new technologies and exhibit increasing returns in terms of not only the spread of the devices, but also of the underlying technologies. Modern devices have few negative externalities, regardless of what technological or user perspective is taken to look at their spread. This win-win relationship between introduction of these modern devices and their ways of use derives from the fact that these devices do not appear to require *superordinate systems* or *subordinate systems* of infrastructure or users but also work as *horizontally* across incumbent configurations and systems¹⁶. As long as users will consider connecting with extant ways of use of a technology and with other people positive dimensions of their human and social existence, more connections will be better.¹⁷ (Of course, there is a built-in assumption here that such a device and technology can also be switched off, at will, by the user. If not, a commercialized technology can represent decreasing rather than increasing returns of economic and/or other benefits, even net cost, to the user).

3 Roles that innovation journalism can play in increasing returns

Most people are pretty “local”; they interact most people with whom are closest to them in terms of distance, measured in yards and miles; a few hour’s driving distance, at the most¹⁸. Within this view, the local world is a pretty nice place, and aside from a few complaints, these people are quite happy with the status quo. This goes for people in the western world, at least. There have been few revolutions in the core countries of the western world, at least as of lately.

¹⁵ See e.g. Ainamo and Korhonen, 2003 for the linkages of these technologies to other technologies and contemporary ways of use.

¹⁶ See Hargadon and Douglas, 2001.

¹⁷ I am grateful for Andy Hargadon for helping to develop this argument so that it now takes into account also analogous use of earlier technologies and dynamics, rather than only horizontal communication across technologies and people at given point in time.

¹⁸ Mansell and Steinmueller, 2000.

What, then, is the role that innovation journalism can play in this context? On the basis of drawing inspiration from a long-extant view in marketing literature,¹⁹ it would appear that innovation journalism can have a role in one or several of the following four roles:

- Raising awareness of innovative devices and technologies
- Raising interest in these innovations,
- Enabling citizens and users to make meaningful decisions about whether to adopt these innovations, and/or
- Facilitating the integration of these innovations and making them into actionable parts of networks (for example, the digital ecosystems and/or social networks in telephony, internet, and or the intranet), in which they are embedded

4 Standing on the shoulders of previous journalistic genres and “beats”

What makes innovation journalism different from traditional journalism? What, if anything, makes innovation journalism a genre or “beat” separate from earlier genres and “beats”, such as broadsheet journalism, environmental journalism, business journalism, legal journalism, etc.? What are a genre and a “beat”, to begin with? To answer these questions, we will first describe what we mean by genres of journalism – or what we call “watchdog journalism”, “lapdog journalism”, “mongrel journalism”, and “conservative journalism”. Then we present our view of how to position innovation journalism in the journalistic field vis-à-vis established genres and “beats”. Finally, we review the case for innovation journalism as an established “beat” and “profession”.

4.1 Watchdog journalism.

The call for watchdog journalism emerged in the late 19th century as a call – a successful call, by hindsight – for quality journalism. The history of journalism is that at first the media were very much an “advertiser” or common carrier of content by corporations.²⁰ As a countermovement to the advertiser or common-carrier role for corporate messages, the new journalistic project in society became a “partisan” one. In the sense of some of the best professional traditions of journalism in the modern day, the role of journalism became to be “watchdog of democracy”.

¹⁹ Strong, 1925.

²⁰ Starr, 2004.

4.2 Lapdog and mongrel journalism.

After the victorious run of watchdog journalism, however, corporate messages made a come-back in the latter half of the 20th century. The corporations made their presence re-established, at least in part, as determinants of media content.²¹ Antti Mikkonen (1998), the Finnish business journalist has written, at the worst, in the 1980s, Finnish business journalists were not watchdogs of democracy. Rather, business journalists were "lapdogs of corporations" and "mongrels of plutocracy". By this, Mikkonen meant that journalistic practice by and large fully lost their capacity for critical inquiry, on the one hand, and bred new kinds of peculiar logics whereby journalists were mongrel dogs in a heated chase for anything that appeared to be moving in business and the society at large, on the other hand..

4.3 Conservative journalism.

Kaarle Nordenstrang and Theodore Glasser (in this volume) strongly suggest that both traditional watchdog journalism for the broadsheet media and the lapdog journalism for the business press have both, ultimately, become conservative genres. Broadsheet journalism has become conservative because it is inherently local, explicitly oriented to representing the interests of people who are not cosmopolitan and innovative. Business journalism has become conservative because it represents the views of "business people" – a restricted elite of corporate managers, investors, and entrepreneurs – who have a private and hegemonic interest that the majority of people will hear only what they are used to hearing; that is, that the desires and wants of the majority of the people will be satisfied by virtue of products, services, and investment goods supplied to them by the business elite.

What, then, triggered the process whereby watchdog, and lapdog and mongrel genres of journalism all evolved into conservative kinds of genre? There are at least two kinds of explanations. On the one hand, a Marxist answer to the question would be that the media and journalists are pawns of the dominant groups in society.²² From this perspective, it appears almost obvious that in contemporary capitalist society, in particular, their role would be subordinated to financiers and capitalists whose discourse will dominate (capitalist) society.²³ Reporters of news will be under considerable pressure to deliver news to their readers, listeners, viewers, or browsers of a conservative genre because these have become accustomed to such news.

²¹ See, for example, Kjaer and Langer, 2005.

²² Nordenstrang and Glasser, in this volume.

²³ See also Ainamo, Tienari, and Vaara, 2005, for a review of ideologies underlying various conceptions of journalism.

Another answer to how conservativeness can arrive is by American professional management wisdom. This dominant ideology of the modern world society²⁴ will preach that business is about serving the customer and "the customer is always right". If citizens are innovative, they must delivered news about innovations. If they are conservative, they are to be delivered news of a conservative kind, if they do not ask for anything different. If a piece of news is conservative, this suggests that a majority of readers, listeners, viewers, and browsers are conservative, and also other news that are delivered to them must be of conservative kind. In other words, conservatism arrives as an outcome of isomorphic or institutional mechanisms among customers reading news or among the organizations supplying them with news, or both.²⁵

4.4 Innovation journalism: Beyond mongrel journalism into an established "beat"?

The word "beat" in journalistic discourse stems from the time that crime reporters literally followed police officers on their "beat". Separate "beats" later developed for political news, culture, business, etc., on the basis of the "beat" model. Thus, journalism as a series of "beats" is really a model of organizing. The word "beat" refers to the fact that specialized journalist will live in the "rhythm" and "pace" of the world on which they report.²⁶ Just as crime journalism has been about crimes and how they are solved or ought to be solved, how business journalism is about transactions and how news about them were released or should have been released, or how environmental journalism is about pollution and what to do about it, also innovation journalism has at least two sides. On the one hand, innovation journalism is about innovations. On the other hand, it is about how products of those technologies are commercialized.

It is in the nature of forms of human and social life that they tend to exhibit *evolution* toward extreme forms. Once blind variation leads to a dominant form that climaxes in a way whereby that form is no longer sustainable, a counter-development will immediately be provided a niche in which to take shape and evolve free of the constraint of the existence of an earlier form that is clearly superior. Within this context, Innovation journalism can be seen as a call for a new kind of a non-conservative journalism that takes a constructive stance to innovative and various kinds of entrepreneurial activities by research institutions, business, government, NGOs, and individuals. Innovation journalism can take shape by

²⁴ See Meyer, 2002.

²⁵ Meyer, 2002; see also Scott 2005; DiMaggio and Powell 1983.

²⁶ The author is grateful to discussions with Jyrki Alkio, Theodore Glasser, Stine Grodal, Andrew Hargadon, Stefan Jönsson, Erkki Kauhanen, Kaarle Nordenstrang, David Nordfors, Marjatta Seulamo, Turo Uskali, and Marc Ventresca for this definition of the concept of "beat" in journalistic practice. Remaining mistakes and/or contradictions with established journalistic discourse, standard literature, or the views of the above commentators remain the responsibility of the author.

natural evolution so that innovation news and the contours of producing them are shaped by the innovative activities and outcomes.

The contours of innovation journalism can also be shaped and accelerated by selective *breeding*. Here, “breeders” can be such bricoleurs as journalists, their possible employers, by other private or public organizations, and/or entrepreneurs.²⁷

5 New research directions: The future of innovation journalism?

This paper is obviously but a preliminary sketch of these issues but perhaps an interesting paper nonetheless. Even in this short paper, nonetheless, it is possible to point at a few not unimportant directions for future research in the context of innovation journalism:

5.1 Innovation as a news genre.

News specialized in innovation are, in large part, already a reality. Witness specialized ‘innovation news sections’ in global business-media outlets such as *Wall Street Journal* and *Business Week*. *Financial Times* has a tag called innovation. Also such a local outlet as the Finnish regional daily *Aamulehti* has a special section on innovation at least once in a month, even if this only a couple of pages. In addition to sections in established media outlets, there are also distinct ‘innovation media outlets’ that are fully dedicated to innovation journalism, such as *Red Herring*. Thus, in more ways than one, there is a) a *flow of innovation news*, b) a *pool of news that has accumulated over time*, and c) a *genre that characterizes such news across time*.

Within the context of innovations news as a specific genre, an interesting research direction would appear to be the tracking of the first appearance and developments in the new genre of innovation news. For example, what kind of news did journalists write at the time that Edison first commercialized the electric light?²⁸ Did the news that were written conform to established mental models about news production and readership? Did they open new ground? Was there conflict or tension between the mental models or schemas of readers that were well established and some kind of new scripts that arrived only with the news about the innovation of the electric light?

²⁷ See Scott, 2005, for review of bricolage.

²⁸ The author is grateful to Turo Uskali for suggesting agenda setting theory as an appropriate way to frame innovation journalism for the purposes of research and to support policy.

5.2 Innovation journalism as agenda setting.

To study innovation news, there is a well established research idea in communication theory that news media outlets are not always successful at telling people what to think, but they are quite successful at telling them what to think about.²⁹ Although different people may feel differently about the issue at hand, studies building on this idea have found that people with similar media exposure tend to place importance on the same issues.

Framing innovation journalism against the background of *agenda setting* theory³⁰ would appear to be an appropriate way to frame innovation journalism as a phenomenon worthy of both research and worthy of reification in practice. First, agenda setting as a research idea has explanatory power because it amounts to a theory that predicts that if people are exposed to the same media, they will feel the same issues are important. Thus, it promises to explain why most people can prioritize the same issues as important. Second, agenda setting is not a complex theory. Rather, it is a theory that is parsimonious and easy to understand. Finally, and equally importantly, the theory can be proven false. If people are not exposed to the same media, the theory predicts that they will not feel that the same issues are important.

Within the context of innovations journalism, an interesting research direction would appear to be the tracking of developments from this agenda-setting perspective. In the above case of Edison and the electric light, for example, did innovation journalists conform to established mental models or follow new kinds of scripts about news production and readership? More generally, was there conflict or tension between the mental models or schemas of journalistic genres that were well established and some kind of new schemas and scripts that arrived only with journalism related to the electric light?

5.3 Innovation as a journalistic “beat”.

There might be similarities between one genre of news and another in how they developed into a recognized genre and, moreover, an established “beat” for journalists. Environmental news in Finland is a genre that by hindsight first appeared as a set of small stories in the news media during 1950s and 1960s. The breakthrough into the front page of Helsingin Sanomat, the major newspaper in Finland, took decades and happened not until the 1980s.³¹ It was only at this point that environmental journalism became an established “beat” for a group of journalists.

²⁹ McCombs and Shaw, 1972.

³⁰ Ibid.

³¹ Suhonen, 1994.

In the case of innovation journalism as a “beat”, it can be proposed that it was the mongrel and lapdog kinds of technology and business journalism that contributed to the recent appearance, expansion, and burst of the dot.com bubble in the late 1990s and early 2000s. Arguably, the burst of the dot.com bubble opened up a niche for the systematic development and emergence of an alternative kind of a genre and “beat” in the form of innovation journalism.

When representations in the media have been suggested to be one explanation for Edison’s success with commercializing the electric light,³² why did not innovation become an established “beat” for journalists already then? What is happening now in terms of a “beat” being established, or not? What are the weak signals that appear already to exist in terms of the direction of future development?³³ These are questions that are pertinent in terms of research into innovation journalism regardless of the why and the how of organizing innovation journalism in the newsroom.

5.4 Innovation journalism as professional specialization

Sociological research of systems of professions suggest that when professional boundaries will develop in and around innovation journalism, that is when there will be increasing returns on the specialized “beat” of innovation journalism. According to this view, innovation journalism will not automatically prove to be a fad. Rather, in the first phase, there will be attempts to make institutionalized as an established “beat” somewhere at the boundaries of journalistic “beats” in business, technology, and cultural journalism. Sandred’s (2004) paper on innovation journalism in and around biotechnology in Sweden is one seminal piece of research on which to build other studies of professionalization in the case of innovation journalism. In the next phase, it can be expected that some elements of conservativeness will appear within the new “beat” of innovation journalism.³⁴ Finally, professional development will take on directions such as professional association, specialized education, theorization, scientization, accreditation, standardization and, finally, expansion of the profession. Consider the historical

³² Hargadon and Douglas 2001.

³³ Alkio, in this volume; Uskali, 2005.

³⁴ There clearly is more than one scenario. It may be that similar boundaries of a specialized subfield within the journalistic profession will never appear in the case of innovation journalism as in the cases of the earlier “beats” such as broadsheet journalism, environmental journalism, or business journalism. This would mean innovation journalism will be a temporary kind of a fad that will evaporate as a concept and be integrated into established “beats” of journalisms. On the one hand, Nordenstrang and Glasser (in this volume; confer Cringely, 1992:63) can be taken to argue that any “beat” will turn conservative. On the other hand, Nordfors (2003/2004) argues that innovation journalism will be the last kind of journalism to be conservative, even if otherwise there were evolutionary determinism.

accounts of environmental journalism in Finland³⁵ and business journalism in Finland,³⁶ for evidence of similar developments in other genres and beats. Just as innovation journalism is to report on the commercialization of science-based innovation, the expectation can be that innovation journalism will in the long term participate in the project of scientized advice of how to commercialize artifacts.

The elements of conservativeness in innovation journalism will differ in part or wholly from those of earlier “beats”. This is because the evolution of any genre of output and the establishment of a regular “beat” may represent a “performance program”³⁷ whereby success will trigger the creation of routines which, in turn, are a basis for path-dependency and conservativeness.

Innovation journalism appears still as a relatively new phenomenon but what elements of conservativeness will in the future unfold in innovation journalism, specific to this new “beat” and professional specialization? What, if any, signs of professionalization, routinization, and conservativeness already may exist?

6 Conclusion

Those with a political agenda in why and how innovation journalism is to make a difference (Aho, 2006: 21, 29; see also Nordfors, 2003/2004; Hautamäki, in this volume) are already working to turn scientific knowledge into business reality with the support of innovation journalism, in the expectation that the missing pieces of the puzzle are sure to appear in the near future. We have in this paper inquired into why and how to operationalize the idea of “horizontal communication” and the logic of “increasing returns” to support bridging of science-based innovations and their commercialization in systems of innovation. There already clearly exist several kinds of media outlets for delivery of innovation news. Innovation journalism is an increasingly a recognized “beat” of journalism. The identification of genres applicable to categorization of innovation journalism and the setting of agendas will further contribute to horizontal communication. There is more than one direction from which to approach research on science-based innovation and innovation journalism, for instance, or commercialization and innovation journalism, for example. Innovation journalism can have multiple roles. It need not only be a mediator between science, technology, and business, but can also be an active agent of change. The existence of this kind of journalism in society can be a foundation on which to build other elements of a highly innovative system.

³⁵ Suhonen, 1994; see also Downs, 1972.

³⁶ Mikkonen, 1998; Ainamo et al., 2006.

³⁷ March and Simon, 1958.

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