

# Paying Attention to Weak Signals

- The Key Concept for Innovation Journalism

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# Paying Attention to Weak Signals

## - The Key Concept for Innovation Journalism

Business journalism often misses to predict major happenings and frequently plays a part in inflating economic bubbles. Journalism seems to lack good methods for handling “weak signals”, the first written signs or hints of a coming change - a key concept for future-oriented journalism. The author has shown in previous work on business news that weak signals are mainly detected at the end of the news stories and from reporters’ personal comments. Business news often allows no more than one scenario of the future per story, which is not sufficient for discussing weak signals. This tends to promote mainstreaming which can inflate bubbles. Innovation journalism is future-oriented and needs to discuss weak signals. The paper proposes some guidelines for innovation journalists on how to cover weak signals without repeating the mistakes of business journalism. Traditionally, scholars have looked for weak signals in news headlines. But news headlines mostly focus on strong signals. The paper proposes some future directions for weak signal research.

## 1 Introduction

### 1.1 Journalism is in Trouble

“Journalism is in trouble”<sup>1</sup>, says Philip Meyer in the very beginning of his book *The Vanishing Newspaper*. William A. Hachten states in *The Troubles of Journalism* that “as the new century began, deeper and more disturbing concerns about a perceived crisis in practice of journalism have surfaced”.<sup>2</sup>

Innovation journalism is an ambitious attempt to seek a better future for journalism. David Nordfors invented the concept of innovation journalism, defining it as, in short, “journalism covering innovation”.<sup>3</sup> Later on, Nordfors defined innovation journalism as covering technical, business, legal and political aspects of innovations and innovation systems”.<sup>4</sup> Innovation journalism has links also to science and to futures research.

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1 Meyer. 2004, 1.

2 Hachten. 2005, xi.

3 Nordfors. 2003. <http://www.innovationjournalism.org/archive/INJO-1-1.pdf>

4 Nordfors. 2004. <http://www.innovationjournalism.org/archive/INJO-1-3.pdf>

## 1.2 Weak Signals

“Weak signals” has become popular among scholars. Ilmola and Kotsalo-Mustonen say that “the weak signals approach is experiencing a renaissance in strategic planning”<sup>5</sup>. Mannermaa says in his new book that “weak signals - - is one of the most fascinating questions in future research”.<sup>6</sup>

There are many definitions of “weak signals”. Michelle Codet says that “a weak signal is a factor for change hardly perceptible at present, but which will constitute a strong trend in the future”, whereas Pierre Masse describes a weak signal as “a sign which is slight in present dimensions but huge in terms of its virtual consequences”.<sup>7</sup>

Igor Ansoff invented the concept and theory of weak signals in the mid-1970s in order to improve strategic planning methods. Ansoff argued that the strategic management practices of firms in changing business environments must be attentive to “weak-signals”.<sup>8</sup>

There are many signals of change in the environment, but they are often inexact and difficult to observe or understand. According to Ansoff, “when a threat/opportunity first appears on the horizon, we must be prepared for very vague information, which will progressively develop and improve with time”.<sup>9</sup>

According to Ansoff strong signals are “sufficiently visible” and “concrete”, while weak signals are “imprecise early indications about impending impactful events”. Weak signals may mature over time and become strong signals. He defines five stages: 1) the sense of threat/opportunity, 2) the source of threat/opportunity is known, 3) the shape of threat/opportunity is concrete, 4) the response strategies are understood and 5) the outcome of response is forecastable.<sup>10</sup>

Ansoff argues that corporations need weak signal “mentalities”. But he understands that it is not easy for managers to change their attitudes, because their experience is based on strong signals. He writes that “conversion to weak signals means that individuals responsible for identifying issues must begin to listen with their ears close to the ground for early warning of threats and opportunities”. Detection of weak signals requires both sensitivity and expertise.<sup>11</sup>

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5 Ilmola – Kotsalo – Mustonen. 2004.

6 Mannermaa. 2004, 113.

7 Gustafsson – Ahola – Ilmola – Kuusinen – Pesonen. 2003, 3.

8 Ansoff – McDonnell. 1990, 383; Nikander 2002, 23–24.

9 Ansoff – McDonnell. 1990, 384.

10 Ansoff – McDonnell. 1990, 20–21.

11 Ansoff – McDonnell. 1990, 386.

After all of this, Ansoff, in fact, presented no research results to support his theory.<sup>12</sup> All the same, Nikander, for example, asserts in his dissertation that business economics has taken the existence of weak signals/early warnings on some level for granted. There are also other terms such as “early indicators”, “symptoms” and “soft form of information” in use in business economics. The main problem of the weak signals is that they are uncertain and irrational, and easily missed.<sup>13</sup>

Apart from business strategy, there are many other disciplines interested in weak signals: futures research, communication research, research on international security and international politics and even military science.<sup>14</sup>

“Early warning” systems have been built since the 1960s by scholars in the field of international politics, intended as techniques for predicting political change, especially to crises. Their main source material for weak signals has been headlines from international wire services.<sup>15</sup> But in my opinion headlines are not weak signals, they are quite strong signals.

These early warning systems have failed to predict many crises in the world, such as the collapse of communism. Perhaps the scholars’ lack of understanding of how journalism works is one reason. Perhaps the coding systems of early warning were built on wrong assumptions and categorizations. The end of the cold war might have been a too great change of paradigm for these systems to handle.

Many studies of weak signals are often flavoured with the wisdom of hindsight. Indeed, it is easier to identify the signals of change after the change has happened.

So far, there have not been any attempts to observe the weak signals in journalism among researchers of journalism or media studies.

### **1.3 Business Journalism Rides Bubbles**

The concept of Innovation journalism is young. This adds a problem of gathering data, i.e. identifying and categorizing innovation journalism news stories, that weak signal analysis can be made on. But since innovation journalism is similar to business (or financial) journalism in that it is future-oriented<sup>16</sup>, monitoring weak signals in financial news is a good starting point for discussing the weak signal in innovation journalism.

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12 Ansoff – McDonnell 1990, xviii.

13 Nikander 2002, 23–24.

14 Nikander 2002, 28–31.

15 Schrod. 1993; Gerner – Schrod 1998; Gerner, Schrod, Abu-Jabr and Yilmaz 2002.

16 The most of the participants in the first Finnish innovation journalism research and educating course are working as business journalists.

Ansoff says that companies in turbulent environments need to scan the business environment to capture weak signals of early opportunities<sup>17</sup>, and the business journalists need to find “scoops” in order to satisfy their paying customers. Philip Meyer asserts that “analysts and investors make their money by spotting trends and taking investment positions in them before their competitors do”<sup>18</sup>. And the same goes for business journalism, which uses both analysts and investors as sources.<sup>19</sup>

The great boom in business journalism began in the early 1980s. It is mainly concentrated on the performance of public companies. Business journalism has helped inflate many bubbles in the economy, especially in stock markets (stock market crashes in 1929, 1987 and 2001). Business media was a part of the bubble each time. For example, *The Industry Standard* sold 7,558 advertising pages in 2000 – an industry record<sup>20</sup>.

Fred Barnes, executive editor at *the Weekly Standard*, wrote in *The International Economy* in 1998:

*Journalists are frequently surprised. They miss stories, big ones. The emergence of American companies as the world's most efficient? Missed. The incredible stock market surge? Missed. The economic revival in Europe? Missed. The arrival of a federal budget surplus? Missed. The point is simply this: as good as financial news coverage is, it frequently doesn't see the big picture.*<sup>21</sup>

This list of the missed big stories by business reporters continued, Enron being a prime example. As *Nieman Reports* wrote in 2002: “This was a company that not too long before its demise had been the business media’s poster child, praised for its ‘innovative’ practices and consistently listed among the top American corporations”<sup>22</sup>.

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17 Ilmola – Kotsalo – Mustonen. 2004, 2.

18 Meyer 2004, 46.

19 See more Lilja 2005.

20 Longman. 2002, 19.

21 Barnes. 1998, 17.

22 Nieman Reports. 2002, 4.

## 2 Weak Signals Case Study: Kauppalehti

### 2.1 How the Research Was Done

The starting point of the study is the theory of weak signals by Igor Ansoff. Ansoff says that “The validity of [weak signal analysis] will ultimately be tested through practice<sup>23</sup>”. Or through empirical studies, I would like to add.

The main research questions are: Are there any weak signals in journalistic texts? What kind of weak signals? Where? Weak signals are defined here as first written signs or hints of a coming change<sup>24</sup>.

The empirical material of the case study is based on small sample of financial journalistic texts (N=87) published in the leading Finnish business daily *Kauppalehti*<sup>25</sup>, on one random day, 12.02.2004.

Business journalism provides a good starting point for looking at weak signals. My hypothesis is that if there are weak signals in financial journalism, they should also exist in innovation journalism.

There is not yet any valid methodology to monitor journalistic texts in order to discover weak signals. It is necessary to develop new methodological tools.

In this case the main methodology was to thoroughly read through the data several times and mark the possible weak signals. The interpretation was based on authors' over ten years of experience in Finnish journalism.

### 2.2 Main Results: Four Categories of Weak Signals

The data consists of 87 different news stories. In total, 32 weak signals were detected in 28 different news stories. The signals were sorted into four categories: 1) feeling (or hunch) (in 3 stories), 2) uncertain signals (5), 3) almost certain signals (21) and 4) certain, solid or exact signals (3).

The categories can be described as follows:

- Feeling The reporter's own feeling that there is something happening out there. Almost impossible to articulate in words. No named sources

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23 Ansoff – McDonnell. 1990, xviii.

24 Of course weak signals could also be other than written signs, for instance pictures or other form of nonverbal communication like human gestures.

25 The audited circulation of Kauppalehti (founded 1898) sells nowadays over 80 000 copies a day with more than 300 000 Finnish business readers. Finland is the leading country in the European Union in terms of aggregate newspaper circulation relative to the population. Finland has about 5.2 million inhabitants and aggregate newspaper circulation in 2002 was 3.2 million items. The aggregate circulation of dailies per thousand inhabitants is 525 items. There are 54 daily newspapers and 150 non-dailies. <http://www.sanomalehdet.fi/en/tietoa/index.shtml>

telling/sharing the same feeling. Not enough facts for a news story, but fits well in a personal column and may lead to later monitoring. Very often not reported at all, but maybe mentioned to others behind the news desk.

- Uncertain signals A fact or two indicating a change in the news environment. It is possible to find the first but usually anonymous source about the matter. Information still very uncertain. Rumours. Could be used in a minor news story with question marks.
- Almost certain signals More certain than uncertain signals, but still many problems in measuring, calculating or defining the actual changes. When it is really happening and with what kind of consequences? Usually there is already more than one authorized source telling about the same subject and the sources are willing to present their names in public. Could lead to a big news story in front pages, but still with rather uncertain headlines.
- Exact signals Easy to write the news story, because all the facts are there. Exact dates and numbers. Big headlines, if the story is new. Very authoritative sources: high officials, politicians, managers etc.

Here below follows examples of the news texts (citations) of *Kauppalehti*. They were originally written in Finnish, and are translated here into English. The nuances of languages alter when translated, and in the case of weak signals the nuances of language are of key importance.

The headlines are presented in bold, and possible weak signals (sentences, phrases or words) in italics. There are also number codes, which indicates the page where the story where published, and the exact place of weak signals inside the story.

### 2.2.1 Feelings

**More clear profile**, page 2, last two sentences: "The deal clarifies the profile of Sampo as an insurance company and increases the reliability of If for the customers. *But there is something missing from this pattern.*"

Background and interpretations: The citation of the journalistic text is from the end of the editorial. It gives a hint to the reader that there are still some more changes maybe coming.

**One step further, two...**, page 5, third last sentence: "Sampo probably makes the If-package more attractive and then sells it further."

Background and interpretations: The subject of the journalists' column is the same as in the editorial. But here the reporter forecasts the future of the If-company more clearly. There is not a single source named in his column, nor strong arguments for selling the company. The assumption is totally based on the reporter's previous data about the history of insurance companies and his feelings. There were also three news stories about the insurance companies vs. banks in the newspaper.

**The painful year of Orion**, page 20, last sentence: - Money could, for instance, be spent to reinforce the portfolio of product development.

Interpretation: It is only reporter's own suggestion based on feelings more than knowledge.

### 2.2.2 Uncertain Signals

**The image of the electric companies is good**, page 10, sentence 5: "Compared to the study made in Sweden in the end of last year, the image of Finnish electrical companies is much better."

Interpretation: It is possible to consider that the image of Finnish electrical companies tends to follow the image in Sweden, but this is not necessarily the case of course. Still, it could be a hint of a coming change (for worse) in attitudes in Finland, because many electricity companies as well as many other industrial companies are nowadays owned by only a few big Scandinavian companies.

**Lehti, the head of the entrepreneurs associations, criticized communal politicians about energy**, page 10, sentence 8: " – So far electricity has not been a big problem for business."

Interpretation: The question of electricity has been unproblematic (cheap) in Finland, and now, maybe, the price of electricity is going to be more expensive, because the entrepreneurs are concerned about it. But we still need more data, facts.

**Labour notices were not seen in recruit exhibition**, page 16, sentence 2: "The head of PR for the exhibition, Tommi Uitti, argued *that the big success of the event acts as a forecast of the economic change.*"

Interpretation: This argument still needs some more data and sources.

**Commercial television stations are coming back as profit makers** , page 18, sentences 1-2: " A year ago, all the Finnish television channels were in the red. Now, there is some light at the end of the tunnel." Sentence 20-21: "Commercial television in Finland collects under 20 per cent of all the advertising money, *which is a little comparing the numbers internationally. The contract prices of the advertisements in television are among the cheapest in Europe.*

Interpretation: Is a change coming in the cost of television advertising in Finland, or is it possible that there are some differences in media markets between nations in Europe?

**Senior television**, page 19, the end of the text: "I would like to give a hint to media companies. In the next round of digital-tv-licenses, you should forget all those young, dynamic urban citizens, and concentrate instead on seniors."

Interpretation: At the end of the journalists' columns there are often very subjective and daring suggestions, but the question is, if somebody in a position of power is taking any notice. However, it is interesting that the role of business journalist, allows also some kind of verbal risk taking.

### 2.2.3 Almost Certain Signals

In this section, only eight examples of the 21 found for this most common category of weak signals are presented. The basic type of almost certain signal was mainly found from the so-called results stories, where the company presented the numbers and interpretations of its previous years' performance and also estimated cautiously the economical near-future of the company. This prediction was presented almost every time in the last sentence of the news story. The headlines, as well as the beginning of the story, were usually dedicated to the outcome of last years' results.

**Unprofitable SAS**, page 7, last sentence: "The aim of the SAS is that the aviation company will be profitable this year - -."

Interpretation: It is important for public companies to inform the public correctly, but also vaguely, about their economic prospects.

**Secretary of the Treasury Kalliomäki: *No instant tax cuts***, page 5

Interpretation: The weak signal is already in the headlines. When the secretary of the Treasury says something, it is almost always in the headlines. As is the case in the US with the Chairman of Federal Reserve Board, Alan Greenspan. Of course the politicians may change their views later and even lie, but the media usually trust their authoritative words.

**KCI Konecranes *will reduce production***, page 6

Interpretation: Again, the weak signal is seen in the headlines. In the story the countries which will be affected were also mentioned, but without reference to any exact numbers or dates.

**Service companies employ 74 000 this summer**, page 6, sentence 2: "Compared to last year, the number of summer jobs *will increase* by 10 000."

Interpretation: The number of summer jobs available for students usually indicates the changes in the national economy.

**Helsinki Energy makes strong gains**, page 10, the last sentence: "*The most significant* power station *investment* was the coal stock in Salmisaari - -".

Interpretation: "The most significant investment" is in itself a quite strong signal for the future. There are certainly some key words which could indicate the presence of different weak signals.

**The planning of a new hardware store chain discontinued**, page 12, sentence 2: "We are not planning chain of stores, even if there is room for competition in the hardware store business," says SOK's fieldmanager Kalle Lahdesmäki.

Interpretation: When changing plans, there are signals that something new has occurred. If a company will not to do something, it is also an interesting move, even an item of news perhaps.

**The gains in car sales have not yet seen in company car markets**, page 13, the first sentence:

“The strong sale of new cars *will continue* also in the beginning of this year”. Sentence 20: “He *predicts* that this year more new cars *will be registered* than last year, perhaps nearly 155 000”.

Interpretations: Of course all verbs with the future tense are potential sources of weak signals. If somebody or something will predict, foretell, forecast, prognosticate, tip, augur, be a sign of, forebode, herald or presage something, it is maybe a weak signal or not.

#### 2.2.4 Exact Signals

**Nokia Tyres has again troubles in Russia**, p. 26, subtitle *Own Factory Starts in Russia 2005*.

Interpretation: This is an exact signal, because the source and the exact year have been mentioned. However, the Russian market situation usually causes some surprises and delays for timetables. Of course, it is possible that an exact signal could also give wrong information about the future.

**Probably Sampo will sell its part of Skandia this year**, p. 5, sentence 3-4: “The CEO of the Sampo Björn Wahlroos argued Wednesday in a telephone conference: “Our investment in Skandia is of a financial nature. *It is unlikely that we will keep our Skandia shares until the end of year.*”

Interpretation: Already the headline of the news story is a weak signal. When the CEO of the Sampo bank argues something, it is usually a news item in Finland. (After two weeks of the story, the first of March, Sampo sold its shares in Skandia.)

**Investor is maybe planning to buy Volvo’s Scania shares**, p.7, the first sentences: “The investment company of the Wallenbergs, Investor, is believed to be planning to buy all or some part of the Volvo’s shares in Scania.” Sentence 4: “Volvo must sell its shares in Scania before 23<sup>rd</sup> April.”

Interpretation: The weak signal is, again, seen in the headlines. ‘Maybe’ is another potential key word when searching weak signals. Interestingly, there were no exact sources in the story, and seldom are timetables, especially in stock markets, as exact as they were in this case.

## 3 Weak Signals in Innovation Journalism

### 3.1 Business Journalism Conclusions

I began the previous chapter of the paper by asking three questions: Are there any weak signals in journalistic texts? What kind of weak signals are there? Where?

### 3.1.1 Many Weak Signals in Business Journalism

The most significant result is that there were many weak signals in news stories of the Finnish business daily *Kauppalehti*. Weak signals were identified in almost every third (3,2) story, which was far more than expected. It is noted that financial journalism is indeed strongly future-oriented.

### 3.1.2 Weaker Signals Found at End of Stories

Weak signals were divided into four categories: 1) feelings (or hunches), 2) uncertain signals, 3) almost certain signals and 4) exact signals based on the quality and exactness of the arguments, the sources of the data and focus on the future. It should be also noted that the weak signals, especially the feeling, uncertain and almost certain signals, were mainly found in the endings of the news stories, usually in the very last sentence, or in reporters' comments or columns. It was in the nature of exact signals that they were presented openly either in headlines or at least subtitles. In the light of my small study, I will argue that the previous scholars, who have concentrated only in news headlines in order to search the "early warning signals", have already been focused on quite strong signals.

### 3.1.3 Further Examination Needed

However, these conclusions are too simple to be accepted without qualifications. It is an open question whether these categories were named and defined well enough. For instance, exact signals could be named as strong signals, and, of course, each person interprets the texts in his or her own fashion. What certainly also requires more extended examination here is the amount of empirical data that was collected. It is likely that there are weak signals in every business newspaper, but this still needs more research, and especially more empirical material to analyze. It would also be interesting to compare different business newspapers in various countries in order to analyze their weak signals.

### 3.1.4 Journalists Careful About Expressing Weak Signals

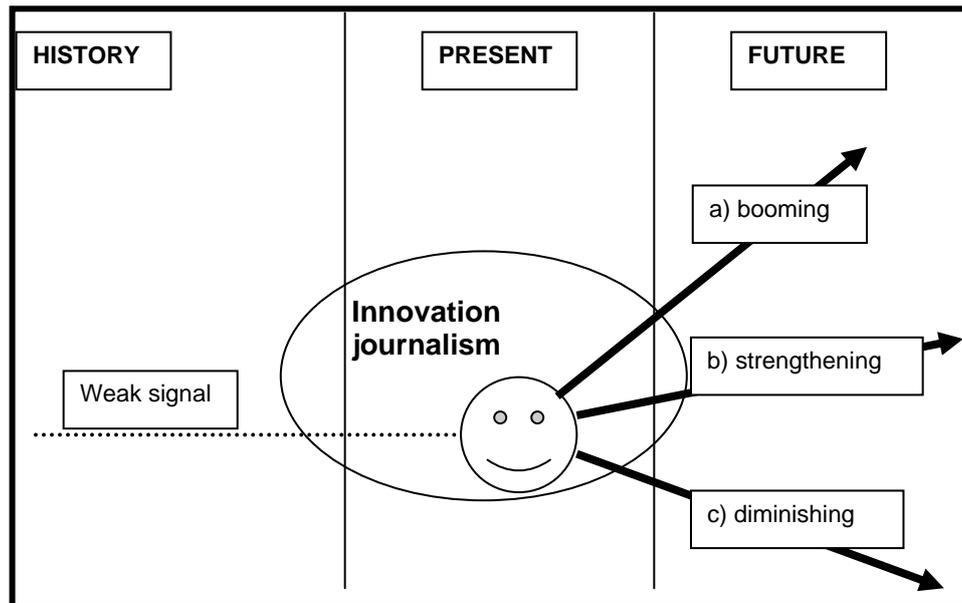
It looks as if journalists are able to sense many weak signals in their societies (if they are professionals and have "a good nose for the news"), but they do have problems when they want to write about the weak signals. They seldom have enough courage to put their knowledge of weak signals into the headlines. Instead, they write "between the lines". There are usually only strong signals or facts in headlines. Maybe only those professionals who are aware of nuances in journalism (other journalists or – politicians, managers etc.) are able to find the real news (that is weak signals), because it is hidden inside the stories. What a brilliant secret mechanism! It has been called earlier "Pravda journalism"<sup>26</sup>.

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26 The author of this paper defined four different methods of "writing between the lines" in his dissertation about the history of Finnish correspondents in Moscow 1957–1975. They were 1) the use of periphrasis (especially through making the sources less clear), 2) the use of citation marks, 3) telling what has not been mentioned and 4) the use of harmless headlines and hiding the news inside

## 3.2 Recommendations for Innovation Journalism

There is always more than only one possibility for interpreting the meaning of a weak signal for the future, as indicated in Figure 1. This is obvious in futures research, which usually operates with at least three scenarios<sup>27</sup>. But this is not the case in contemporary journalism. This is demonstrated in the Figure with a) booming, b) strengthening and c) diminishing scenarios.



**Figure 1.** Future oriented Innovation Journalism should detect and report on weak signals. It should compare several scenarios in order to be sober and cautious concerning inflating bubbles.

### 3.2.1 Present Several Scenarios

The limitations in space and time of normal news stories divides journalism from futures research. In an ordinary news story there is often room for only one scenario of the future, at least in the headline.

I suggest that innovation journalism should present several scenarios in news stories. In doing this, innovation journalism could prevent the well documented mistakes made by business journalists with “new economy bubbles”.

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the text. Also, by using Swedish instead of Finnish it was possible for a Finnish correspondent to say things more openly. (Uskali 2003.)

<sup>27</sup> Mannermaa. 2004, 175–181.

### 3.2.2 Be Critical and Get the Big Picture

There is always a danger that innovation journalists exaggerate, for example by hyping technological innovations and thereby helping to inflate “techno bubbles”. At this point we may return to the arguments about the similarities of business and innovation journalism, and emphasize that innovation journalism should try to be more critical, and obtain the big picture.

### 3.2.3 Be Self-Aware

The innovation journalist can be a catalyst or decelerator in his/her social environment. It is important that the journalist is self-aware. This was not always the case with business journalists. As Phillip J. Longman argued in 2002 after “the dotcom bubble”: “Many business reporters simply didn’t know what they didn’t know about business” and “there is little indication that the business press is ready to examine its own sins and failings”<sup>28</sup>. There is competition between journalists, but also, and this is a paradox, a need to join the consensus, which provides a kind of professional cover for their reputation. Maybe, this has been one reason for “bubbles”, and could be the case also in innovation journalism. Therefore, it is vital to educate innovation journalists, and their superiors, about weak signals and the need for more critical thinking.

### 3.2.4 Suggested Method for Reporting on Weak Signals

It is of key importance for innovation journalists to understand the mechanisms of weak signals in their work. In practice this would mean that an innovation journalist is constantly:

- Paying attention to weak signals. Finding, monitoring and observing them. Environmental scanning.
- Trying to define all the possible meanings of the weak signal for the future. Considering different scenarios.
- Emphasizing the most relevant and interesting weak signals. Writing about them in news stories, putting them in headlines and not only writing “between the lines”.
- Inventing new forms of journalistic story types suitable especially for feeling signal cases. Presenting also the less interesting weak signals, at least as curiosities, because it is usually not possible to predict precisely the meanings of the different weak signals in advance.

### 3.2.5 Summary: Three Main Lessons

What, then, are the three main lessons of weak signals for innovation journalism?

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<sup>28</sup> Longman. 2002, 18–19.

- The existence of weak signals
- Need for sensitivity to unpredicted shifts in the environment
- Enough expertise to be critical enough to prevent “bubbles”

### 3.3 The Future of Weak Signal Research

Media history has showed that news stories are the first drafts of history. What if journalism is also the first blueprint of the future?

Philip Meyer, author of *The Vanishing Newspapers*, says that

*“New information technology is forcing us to experiment with new ways of working, and that necessarily means experimenting with new ways of defining and organizing our occupational specialties”.*

*“The long drift towards more specialized media at the expense of mass media seems likely to continue”... “the Internet is just the latest in a long series of advances that contribute to the demassification of the media”<sup>29</sup>.*

William A. Hachten, author of *The Troubles of Journalism*:

*“The Internet and other communication innovations have already greatly impacted on journalism and will probably play a crucial role in redefining the future directions and format of news”.*

Scholars looking at weak signals in news stories must put more attention on the weaker signals, the “uncertain signals” and “feelings/hunches”. They need to meet the challenge of identifying and classifying them. The “feeling” signals might not be so common in quality journalism, but the ever accelerating competition between the traditional and new media, for example blogs<sup>30</sup>, might change some principles of journalism. Bloggers seem to often convey “feeling” signals. In journalism speed and trust have always been of the key importance, therefore, the competition between the “bloggers” and traditional journalists is just beginning.

#### 3.3.1 Future Research

Finally, here are some subjects for future research about weak signals in innovation journalism

- Writing the history of weak signals in innovation journalism (case studies)
- Defining the universal grammar of weak signals (especially key words)
- Developing effective monitoring/detecting practices for weak signals

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<sup>29</sup> Meyer. 2004, 244, 245, 2.

<sup>30</sup> See more: <http://en.wikipedia.org/wiki/Blog>.

## 4 Summary

“Weak signals” are defined in the paper as the first written signs or hints of a coming change. “Weak signals” has become a popular concept among scholars in recent times. So far, there have not been any attempts to observe the weak signals in journalism among researchers of journalism or media studies. The first empirical findings of weak signals in journalism are based on a small case study focused on the financial news (N=87) from the leading Finnish business daily *Kauppalehti*. Weak signals were identified in almost every third (3,2) journalistic story, which was far more than expected. The weak signals were classified into four categories: 1) feelings (or hunches), 2) uncertain signals, 3) almost certain signals and 4) exact signals. The weaker signals were mainly detected at the end of news stories and from reporters’ personal comments or columns. The case study on weak signals in business journalism indicates that when the scholars in near history have concentrated on news headlines in order to search for “weak signals”, they have already been focused on quite strong signals. It has been said that financial (or business) journalism is future-oriented, and in the paper it is argued that the same situation applies also to innovation journalism. The paper recommends that innovation journalism, focusing on innovation processes, should recognize and understand the key concept of “weak signals” better than journalism has before, and that it is important that innovation journalists pay greater attention to weak signals in their own work.

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