

(work in progress)

# Climate Change and Innovation in The New York Times from 1980 to 2008

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## Contents

<b>1</b>	<b>INTRODUCTION.....</b>	<b>4</b>
<b>2</b>	<b>MATERIALS AND METHODS.....</b>	<b>7</b>
<b>2.1</b>	<b>Thematic categories .....</b>	<b>7</b>
<b>3</b>	<b>RESULTS .....</b>	<b>8</b>

# Climate Change and Innovation in The New York Times from 1980 to 2008

This article draft takes a preliminary look at how keywords “climate change” and “innovation” occur in the stories of *The New York Times* from 1980 to 2008. The research material has been gathered using *Factiva* news archive. The article includes preliminary findings of the research project *Ginjo, Global Challenges of Innovation Journalism* (2008–2010), which is funded by Tekes, the Finnish Funding Agency for Technology and Innovation.

Both keywords “climate change” and “innovation” have risen to the agenda in the Western media during the last three decades. The statistics indicate that the public discussion over environmental issues depends on the economy of the society; when times get hard, ecological thinking often has to give way to economical thinking.

Earlier research shows that innovation stories in fact use innovation discourse very rarely; Kauhanen and Noppari studied a group of 911 innovation-related stories published in Finnish newspapers and magazines, and only 6,9 percent of the stories included the word “innovation” or any of its derivatives<sup>1</sup>. That is a remarkably small number. Thereby it seems probable that using only the keyword “innovation” when searching for innovation-related stories, plenty of relevant stories are being dismissed. On the other hand, the results will show which pages in the newspaper are comfortable using the word, and correspondingly, which pages are not.

From 1980 to 2008 *The New York Times* published in total 247 stories that included the keywords “innovation” and either “climate change”, “global warming” or “greenhouse effect”. Based on how relevant a role the keywords had in the story the data was narrowed down to 112 stories. The largest part (36,6 percent) of the stories were located in the editorial pages. The second largest part (30,3 percent) of the stories were located in the financial pages. National pages included only 3,6 percent of the stories, and science pages even less: only 1,8 percent, that is only two stories in the research material.

20 out of the 41 stories located in the editorial pages were written by op-ed columnist Thomas L. Friedman. This demonstrates the power of an individual author in raising certain issues to the agenda.

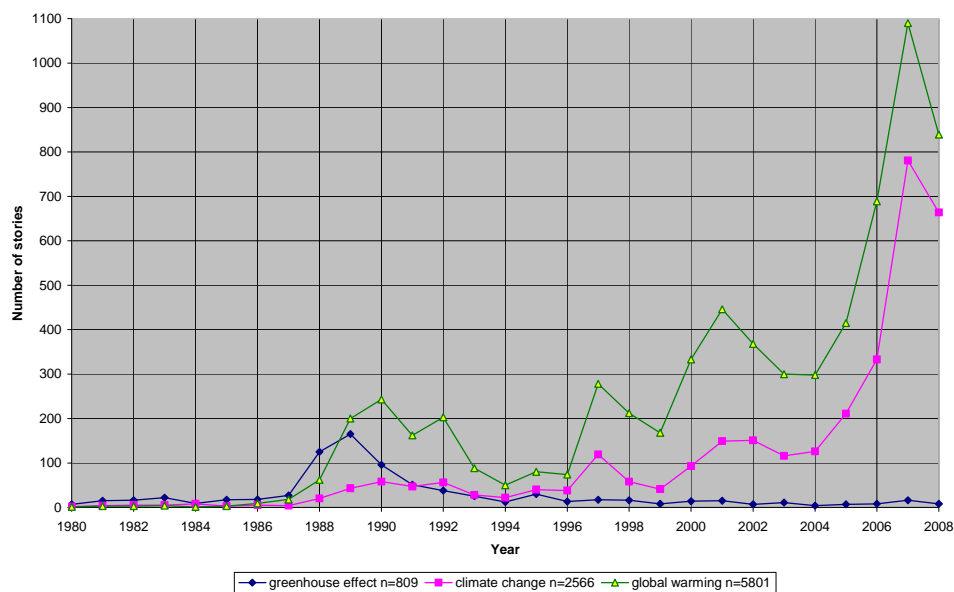
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<sup>1</sup> Kauhanen, E. & Noppari E. 2007. Innovation, Journalism and Future. Final report of the research project Innovation Journalism in Finland. Technology review 200/2007. Tekes: Helsinki.

# 1 Introduction

Environmental issues rose into the public agenda during the 1980's. Environmental problems had become a more and more severe threat to nature and human. Our awareness of the changes that were taking place in the environment had also increased. Those changes became a driving force for common threats and fears created by the media. And the economic growth allowed us to pay attention to the environment<sup>2</sup>.

Figure 1. The figure shows the frequency of the use of the terms “greenhouse effect”, “climate change” and “global warming” in *The New York Times* from 1980 to 2008.



The peak in 1997 can be partly explained by the Kyoto Protocol, which was adopted for use in December 1997<sup>3</sup>, and the remarkable rise in 2006 and 2007 was largely due to the documentary *An Inconvenient Truth* written by former vice president of the United States, Al Gore<sup>4</sup>.

The term “greenhouse effect” was often used in the turn of the 1990’s but soon it made way to “global warming” and a more general term “climate change”. The use

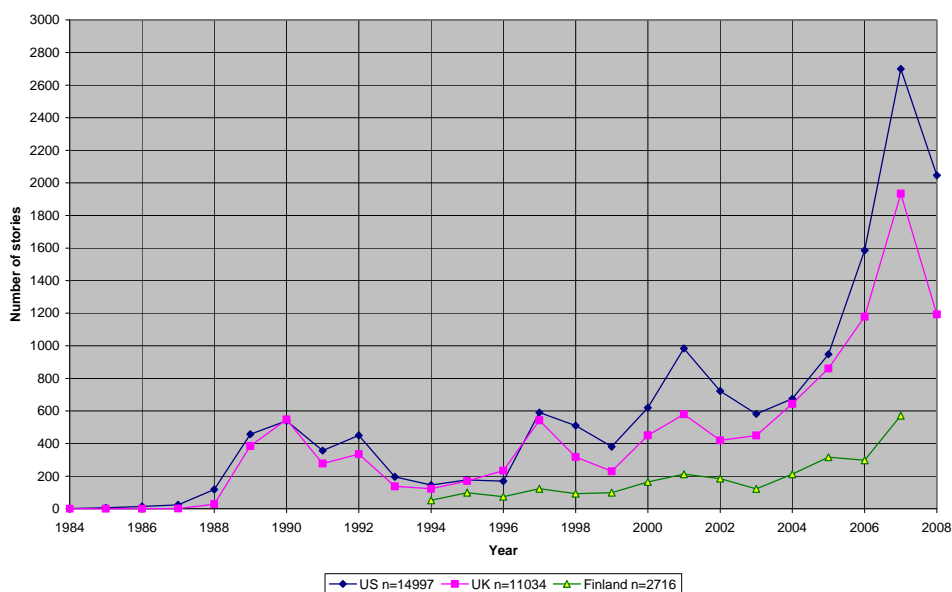
<sup>2</sup> Sundqvist, G. (1991) Vetenskapen och miljöproblem. Göteborgs universitet.

<sup>3</sup> 107 out of the 278 stories that included the keyword “global warming” also included the word “Kyoto” and 64 out of the 119 stories that included the keyword “climate change” also included the word “Kyoto”.

<sup>4</sup> In 2006, 316 out of the 689 stories that included the keyword ”global warming” also included either ”Al Gore” or ”inconvenient truth”. In 2007, 446 stories out of the 1090 stories that included the keyword “global warming” also included either “Al Gore” or “inconvenient truth”.

of all the three terms decreased in the beginning of the 1990's, which supports the above mentioned observation that environmental issues only become a relevant issue in the public discussion once a society has reached a certain level in its economic growth – and consequently, environmental issues move aside at the time of economic recession. The results are similar in the UK and Finland, as can be seen from the following figure<sup>5</sup>.

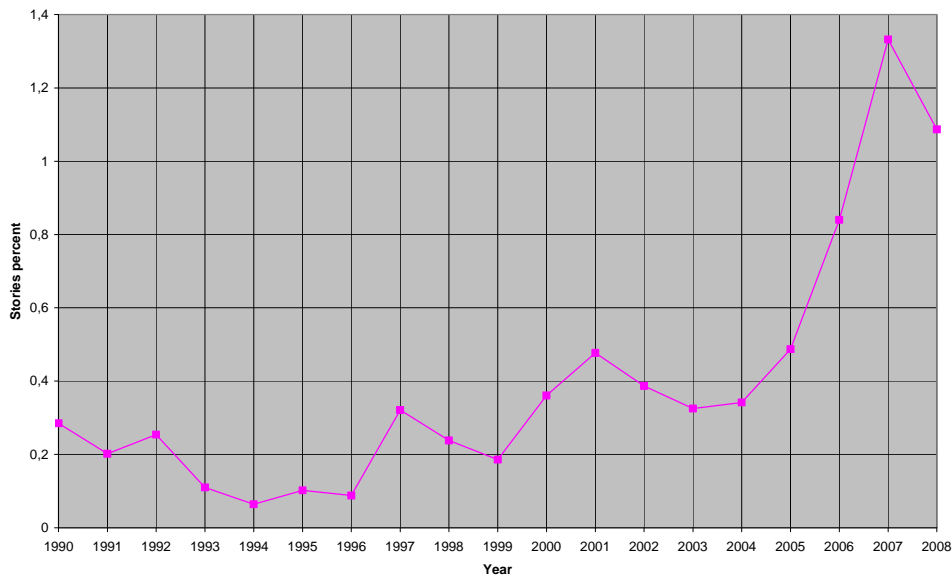
Figure 2. The figure shows the occurrence of the keyword “global warming” in the United States (*The New York Times*, *The Wall Street Journal* and *The Washington Post*), in the United Kingdom (*The Times*, *The Financial Times* and *The Observer*) and in Finland (*The Finnish News Agency*, *Helsingin Sanomat* and *Aamulehti*).



It is worth noticing that during times of economic recession newspapers cut their volumes altogether. Nevertheless, the trend is clear even when the occurrence of the keyword “global warming” is proportioned to the total amount of stories published in the newspaper that year.

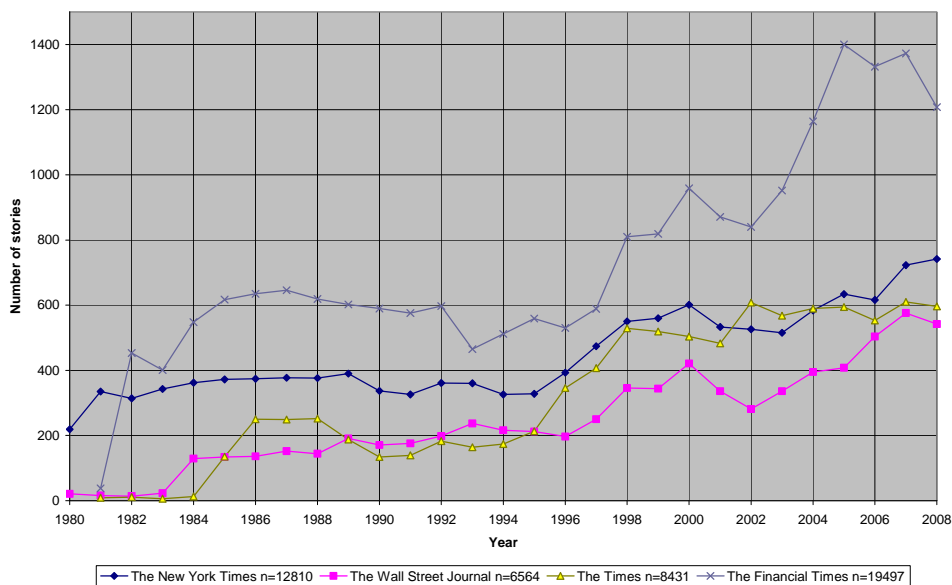
Figure 3. The figure shows the share of “global warming” stories in *The New York Times* from 1990 to 2008.

<sup>5</sup> Finnish statistics were only available from 1994 to 2007 at the time of writing the article.



To demonstrate the frequency of the use of the keyword “innovation” on a broader level I have searched several newspapers using only the keyword “innovation”. Unlike climate change, innovation does not have very clear synonyms. It is also considered important here, that the texts actually use “innovation discourse”, that is, their writers have identified the stories as conscious innovation journalism. The results can be seen in the following figure.

Figure 4. The figure shows the appearance of the keyword “innovation” in the stories of *The New York Times* and *The Wall Street Journal* in the U.S. as well as *The Times* and *The Financial Times* in the U.K.



The figure shows that the use of the term “innovation” has increased from the beginning of the 1980’s. The term has been used most evenly in *The New York Times*. *The Financial Times* on the other hand has the most dramatic changes in the use of the term. There can be seen a mild decline in the beginning of the 1990’s (the time of recession), and toward the Millenium the use of the term rose the most evenly in all the four newspapers.

## 2 Materials and methods

All the figures presented in this article are based on information gathered from the news archive *Factiva*. The use of this kind of “push button” content analysis brings along with it certain problems regarding the reliability of the results<sup>6</sup>. The search is always based on keywords, and the choice of the keywords is a crucial factor in the success of the search. For example, Kauhanen and Noppari discovered in their study that journalists tend to write eagerly about social innovations but may often deliberately avoid using the term “innovation” when popularizing things to a larger audience<sup>7</sup>. Thereby using only the keyword “innovation” may leave plenty of relevant stories out of the search result. On the other hand using only the keyword “innovation” shows us which desks of the newspaper have indeed taken the word into their vocabulary. As Kauhanen and Noppari state: “--although it is possible to write about innovation-related issues without using the word innovation or even seeing the issue in the context of the innovation discussion, any use of the word “innovation” positively signals a conscious connection to the innovation discourse”.

Another problem is that when using a digital text archive, all but plain text is lost in the process. Things such as the positioning of the text or the pictures implicate the importance of the story, but these implications cannot be seen when using digital database.

Furthermore, not all content is available through the digital database. On the other hand, should the story be in the database, the digital search will find it more surely than human eye in a manual search. Thus, digital archives have their pros and cons, but they are definitely useful when it comes to controlling large amounts of data and recognizing wider trends in newspaper journalism.

### 2.1 Thematic categories

The initial research material consisted of all the stories published in *the New York Times* during the years 1980 to 2008, which included the keywords “innovation”

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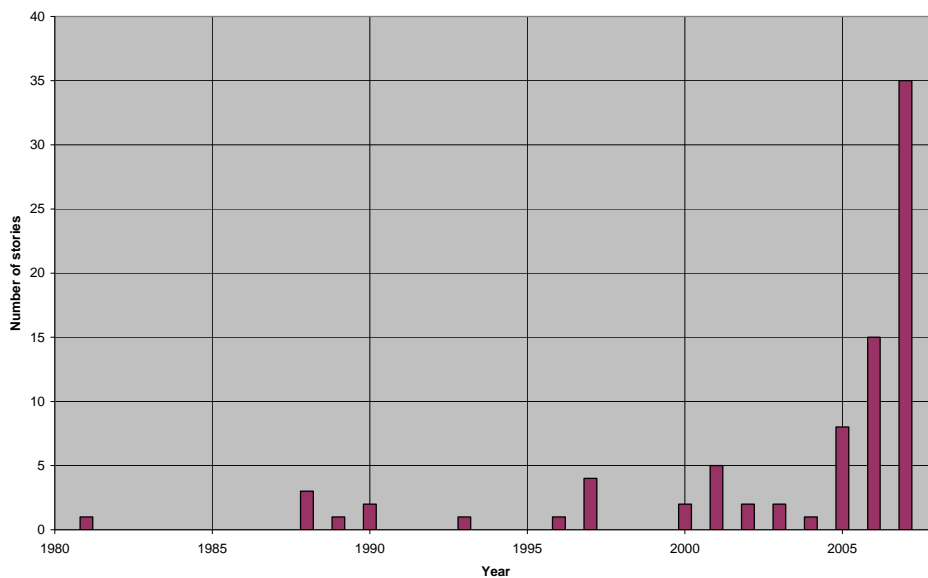
<sup>6</sup> Deacon, D. 2007. Yesterday’s Papers and Today’s Technology: Digital Newspaper Archives and ‘Push Button’ Content Analysis. *European Journal of Communication* 22(5): 5–25.

<sup>7</sup> Kauhanen, E. & Noppari E. 2007. Innovation, Journalism and Future. Final report of the research project Innovation Journalism in Finland. Technology review 200/2007. Tekes: Helsinki.

and either “climate change”, “greenhouse effect” or “global warming”. The result of the search was 247 stories.

The material was then sorted into three categories based on whether climate change was a (1) main theme, (2) a relevant theme or (3) only an irrelevant mention. The stories in the first two categories, in total 161 stories, were taken into further observation. They were sorted again into three different categories based on whether innovation was (1) the main theme, (2) a relevant theme or (3) only an irrelevant mention. The stories in the third category were left out, and the total amount of the stories became 112.

Figure 5. The figure shows when the 112 stories that include both the keywords “innovation” and “climate change” or “global warming” or “greenhouse effect” were published.



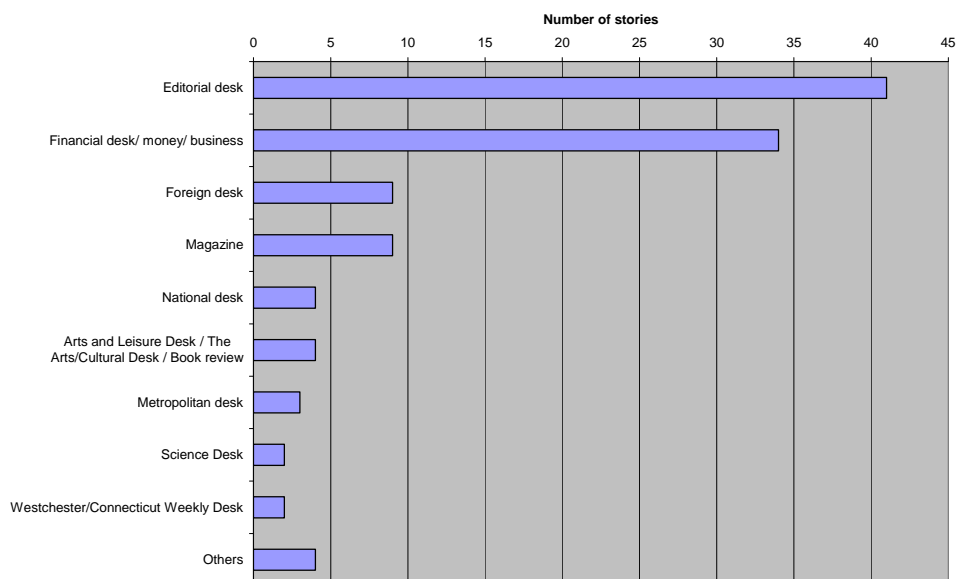
The figure indicates that it is only during the last few years that innovation and climactic change have truly found each other on the pages of *The New York Times*.

### 3 Results

The following figure shows how the 112 stories including both “climate change” and “innovation” were dealt between desks.

Figure 6. The 112 stories categorized by desk.





The largest number (41) of the stories was located in the editorial pages. It is worth noticing that only one story in the editorial desk was categorized into class 1 when it came to whether innovation was the main theme in the story. The rest 40 were all in the category 2, that is, innovation was in a secondary role in the story, most typically something abstract and self-evidently good that should be encouraged and supported. Six stories in this category were editorials. Five stories were letters to the editor. Thirty stories were op-ed columns, twenty of which were written by the same author, Thomas L. Friedman. Friedman’s stories thus form a remarkable portion of the research material; more than a sixth of the stories were written by him. His columns appear in the material from summer 2005 onward — and the rising numbers in the figure 5 can also be partly explained by Friedman’s enthusiasm over the subject.

In the financial desk innovations were mostly observed from a positive point of view. There were several stories in which the message was that ecological / environment-friendly innovations can be profitable. Correspondingly, there were also a couple of stories which emphasized the negative impact that environmentalism has on business and innovation, as for example a 2000 story “High Cost of Going Green Limits Promising Technology”. The majority of the stories discussed innovation on a rather abstract level. There were only a few stories that focused on innovations. The most common approach seems to have been innovation system.

There were only two stories in the science desk category, which is somewhat surprising. This suggests that the term innovation has not been exactly embraced among science journalists, even though science desk probably publishes plenty of stories that have to do with innovation. The first story was from 1988 and discussed advances that propel solar energy into market. The second story was from 2008 and compared two presidential candidates’ positions on several scientific issues.

Similarly, there were only four stories in the national desk category, which is surprising as well. These stories were from 1990, 1997, 2004 and 2007. They discussed innovations as a solution to global warming, a new hybrid car innovation, cutting the budget of a science foundation and San Fransisco banning plastic bags in stores.

In the following phase of the research the texts will be analyzed more closely, paying attention especially to what kinds of narrative structures are being used when discussing different types of innovation journalism.

## About the author:

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