



Media coverage and public debate on the precautionary principle and the 'innovation principle'

During the first half-year of the RECIPES project we performed a media analysis for 3 newspapers in 3 different EU countries – the Süddeutsche Zeitung (SZ) in Germany, Le Monde in France and The Guardian in the UK.

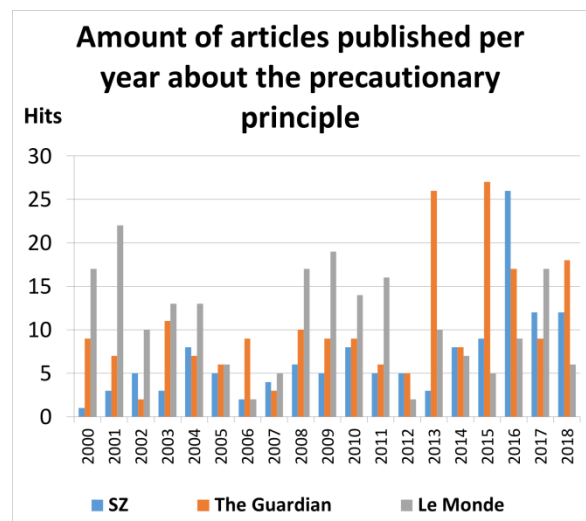
Initially, we searched for articles containing either the Precautionary Principle or the 'innovation principle' between 2000-2018. Interestingly, we found only 3 articles in Le Monde and 1 article in the SZ that referred to the IP, while no articles were found in the Guardian mentioning the IP. Therefore, this analysis primarily looks at the articles mentioning the PP in the three newspapers.

In the analysis we investigated how the PP was framed in these newspapers between 2000 and 2018. In that period, we analysed 130 articles which referred to the PP in the SZ and 198 in the Guardian and 210 articles for Le Monde.

The quantitative components consist of various metrics drawn from the meta-data of the articles, plotting the articles overtime to find hotspot periods, as well as what newspapers sections ran the articles, which

authors wrote the articles, and what type of article was used (news, opinion, feature).

We observed some similarities across the papers, with both the SZ and The Guardian showing the publication peaks in the past 4-5 years, while Le Monde showed several peaks spanning back to the early 2000s. As we also looked at a host of search terms to determine which topics were of particular relevance in the PP articles, we could explain the reason for the peaks. The peaks in The Guardian and SZ seem to be linked to the fact that the PP is mentioned in articles covering international trade politics (like TTIP, CETA and Brexit) in addition to articles covering debates over the cases endocrine disruptors, neonicotinoids (the Guardian) CRISPR, GMOs and glyphosate (SZ). In Le Monde, several peaks appeared. The first links the PP to mad cow disease, GMOs and the integration of the PP in the French Constitution. A second peak relates to Endocrine disruptors and a third one relates mainly to food and health safety issues.



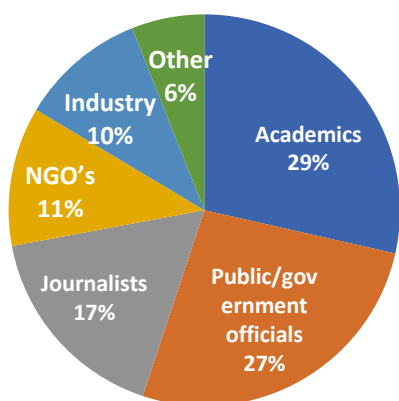
In all the newspapers, it became evident that the PP was mentioned in relation to a broad range of topics. We also identified that in all papers, a disproportionate number of articles could be explained by 2-3 key topics, which often included 1 or 2 or the RECIPES case study topics¹ as well as

¹ Link to the case studies in RECIPES OR the RECIPES Case studies are:
 1) New gene-editing techniques (CRISPR-Cas9)
 2) Genetically Modified Organisms (GMO's)

topics like trade and agriculture. The RECIPES case study topic most frequently referred to in all of the newspapers was GMOs.

Another similarity between the three newspapers was that articles often contained quotes from different categories of spokespersons, where academics were quoted the most frequently, followed by government officials, NGOs and industry representatives.

Spokespeople mentions averaged across newspapers



The qualitative analysis consisted of an in-depth, subjective content analysis of the articles. Each of the articles were read and coded according to a framework loosely inspired by qualitative discourse analysis procedures. We evaluated the article's overall stance towards the PP (positive, neutral or negative), and looked at which spokespersons were being drawn on to portray different messages in support of or against the PP. We also dissected the specific arguments put forth for and against the PP. In addition, we performed deep-dives into specific case study topics for each of the newspapers, identifying salient aspects of the overall way the media

communicates and influences the societal position on the PP.

The qualitative analysis for the three newspapers took some different directions, but when comparing them a few common lessons can be drawn:

- Comparing the overall framing in the newspapers, we found that the articles in the Guardian more often attempt to portray the PP "neutrally" than the other newspapers, by displaying a broad range of arguments allowing the reader to take sides. In contrast, the articles in SZ and Le Monde more often contained clearly positive or negative stances on the PP, probably with the intention to educate the readers more directly. Discussing this difference, we discovered that it may be linked to different journalist cultures in the different countries²
- The coding of the different arguments on the PP in the three newspapers show that the PP is understood in many different ways, by different spokespersons and related to different topics and cases. Attempting to consolidate these, the following themes seem to appear:
 - The PP is relevant in relation to nature / biodiversity conservation.
 - The PP is relevant in relation to health risks.
 - The PP as part of a controversy over what 'good/relevant science' and scientific uncertainty is/implies.
 - PP is one way of regulating industries.
 - The PP is controversial topic in international trade debates and on debates over efficient development.

3) Endocrine disruptors
4) Neonicotinoid insecticides
5) Nanotechnologies
6) Glyphosate
7) Financial risks and urban waste planning
8) AI in the medical care field

²See both: <https://phys.org/news/2019-04-uk-journalists-german-counterpartsnew.html> and <https://www.theguardian.com/media/organgrinder/2008/jan/08/newspaperjournalismhowdoth>

- The relation between precaution and innovation is only addressed in a few articles. The argument that the PP is hindering innovation is mentioned in some articles covering i.e. the development of medicine. However, the argument that precaution and innovation goes hand in hand is also mentioned, where precaution is seen as 'steering innovation' in a more sustainable direction.

Limitations and next steps

Much of the analysis is subjective e.g. how we assessed and decided which messages are being employed and how. Nonetheless, it is one valuable way to try to figure out how the print media is potentially shaping and driving public interest and knowledge in particular topics.

One obvious limitation of this study is it only is covering three newspapers. If more, or other kinds of newspapers would have been chosen, the results may have differed. Here it is relevant to mention that we did consider including the newspaper Politico, as a quick search displayed 240 hits for the search "innovation principle" between 2000-2018. We did not include it eventually both due to that the articles could not be downloaded through NexisLexis, and because the newspaper is not ideal for giving insights into 'public discourse'. However, for further analysis it would be interesting to compare newspapers with different kinds of audiences.

Furthermore, time and resources were a constraint. In fact, we collected and coded for much more granular level analysis across topics, spokesperson type and article sentiment. There are seemingly endless ways this data could be cross-analysed in order to reveal meaningful insights. Our goal was to provide an overall stock taking of how the respective media outlets have positioned the PP, and ensure cross-comparison between the newspapers.

This media analysis has provided plenty of areas for further investigation. Some of the

key areas worth further attention are performed more in depth analysis of how different stakeholder groups and even individual journalists have framed PP articles. As very informative example, in the Süddeutsche Zeitung, just 1 journalist, Alexander Hagelüken, published 11 articles on the PP since 2014, all on the more general topic of trade agreements. Thus, more than 15% of all articles on the PP were written by 1 person, about 1 topic (trade), and only since 2014. This example shows how deep dives into cross-cutting issues and data can reveal the mechanics of how opinions are generated via the media.

This calls attention to a further issue that came up through the media analysis, the importance of trade treaties themselves, specifically in the context of the Guardian and the ZS.

Further research would try to figure out how this special topic of articles is presented, framed, and what arguments are put forth. Thus, it appears to be an overall finding that key hot topics in the PP may have more to do with political and trade issues than specific case issues in the Guardian and the ZS. This hypothesis would have to be analysed for Le Monde as it does not appear so at first sight.

Given the aforementioned relative lack of 'innovation principle' focused articles in our analysis, this suggests that trade and larger economic focused articles represent one of the likely places we will find innovation discussions at the level of PP discussion.

Authors

Joe Rini, IASS Potsdam
 Laura Elisabet Drivdal, Bergen University
 Florencia Sanchez Acosta, Maastricht University
 Aske Palsberg, The Danish Board of Technology foundation

Date 21 October 2019

Contact information:
 Aske Palsberg - Aspa@tekno.dk