

Is there a communication problem?

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Why this question (and work) ?

I do not know if there is a communication problem, but session of conferences devoted to “communication affairs” are almost always crowded

I personally enjoyed all the EMS sessions devoted to communication and communication problems. In Zurich (last EMS meeting) the proposed paradigm was that of a communication “short and sexy”

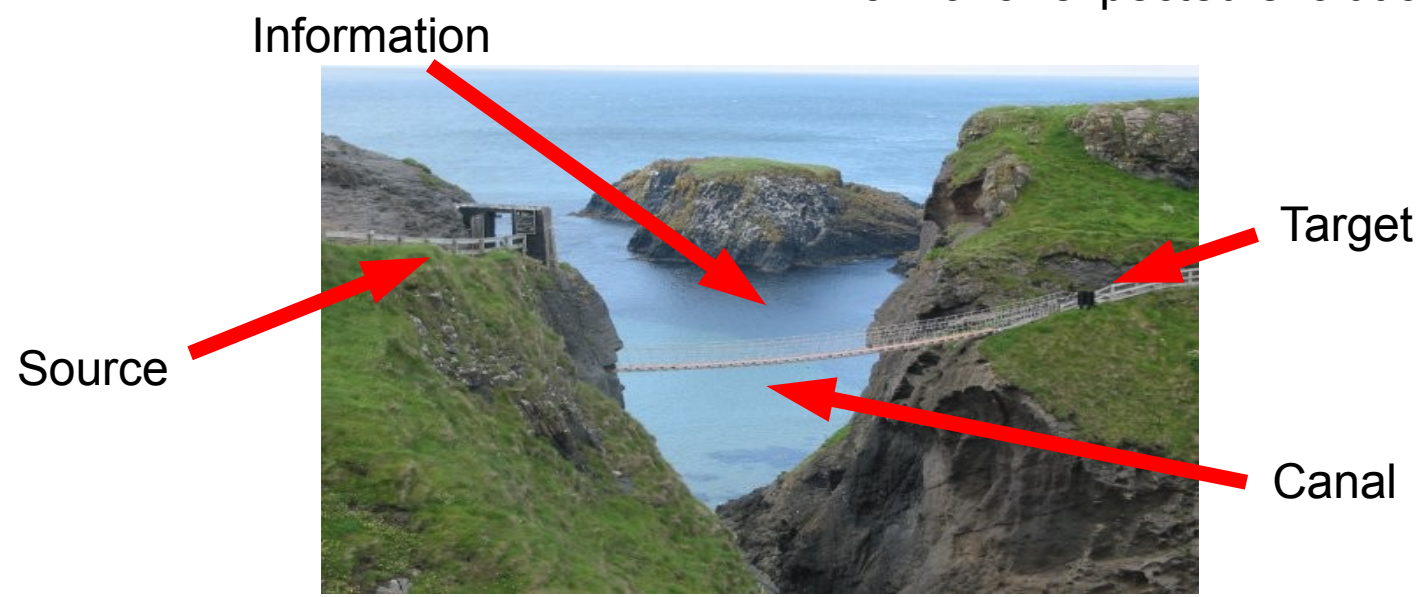
I tried to face the question of the “Communication problem” with a “physicist approach”

Split the question “is there a communication problem” in elemental constituents, trying to quantify (if possible) each element

Is there a **communication** **problem** ?

Communication: → exchange of **information** between a **source** and a **target**

Problem: → complication that creates a difficulty in the normal or expected evolution of events



How to quantify the “transmission pipe”?

Newspapers

World Wide Web

Look for **words** pertaining to different fields
(society, culture, technology, ...) trying to
evidence differences in frequency and trends

A newspaper with a **National** distribution was chosen

Two search engines (**Google** and **Altavista**) were chosen

CAVEAT

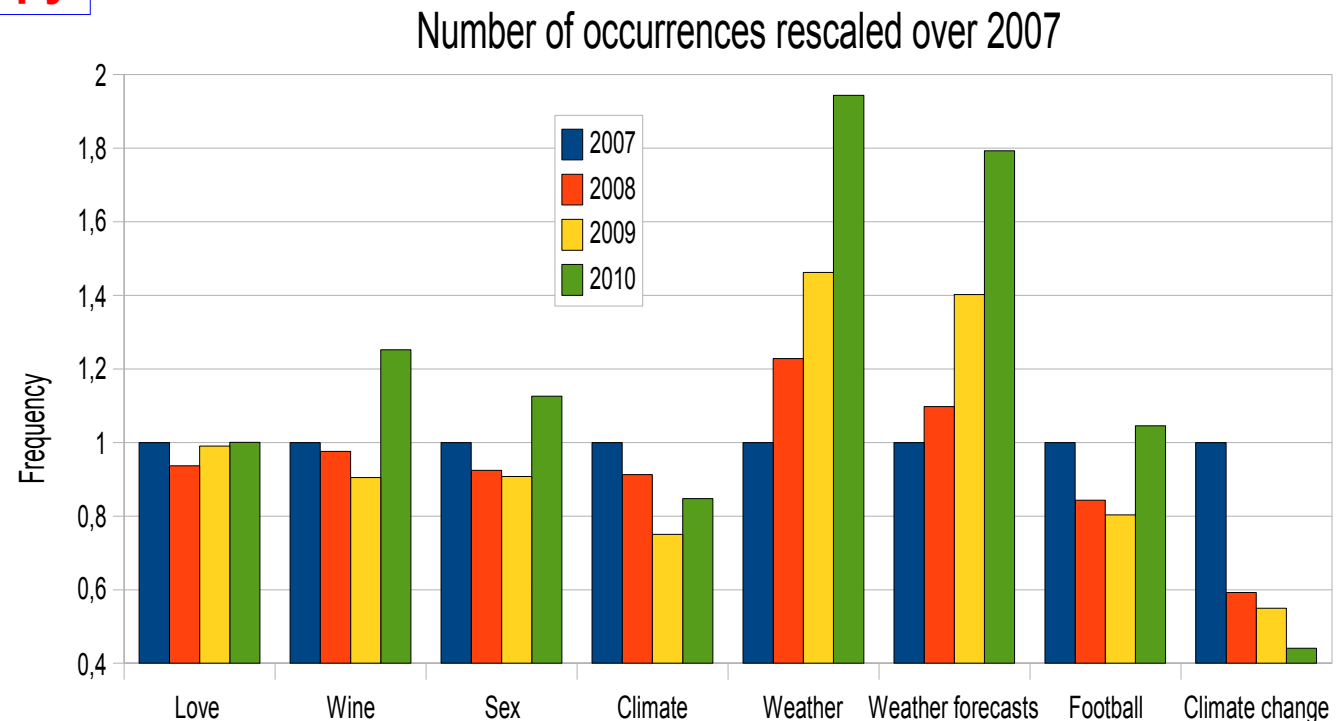


Quantification is **language dependent**: so far only
Italian and **English** languages have been used

How to quantify the “transmission pipe”?

Newspapers hardcopy

Average number of occurrences in the different years from 2007 to 2010 rescaled to year 2007

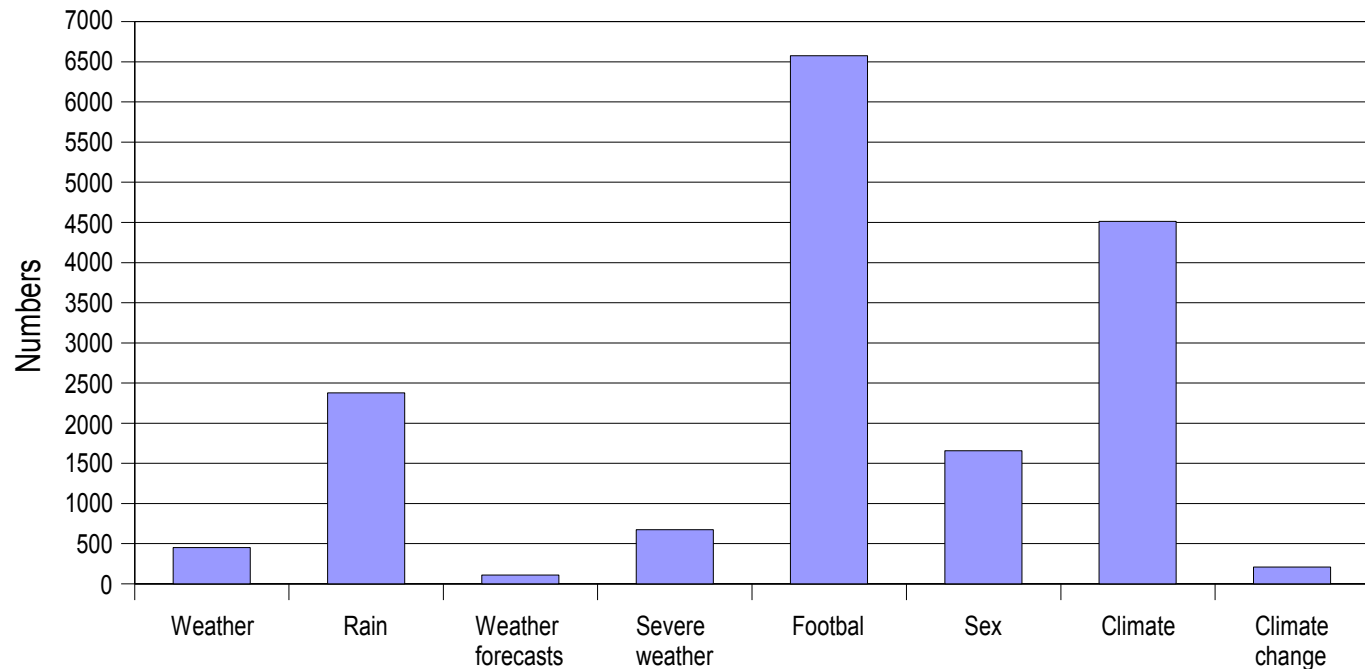


Research was done on “Italian” words here translated for “communication” problems

How to quantify the “transmission pipe”?

Newspapers web site

Average number of word occurrences



Average number of occurrences in the different years from 2007 to 2010

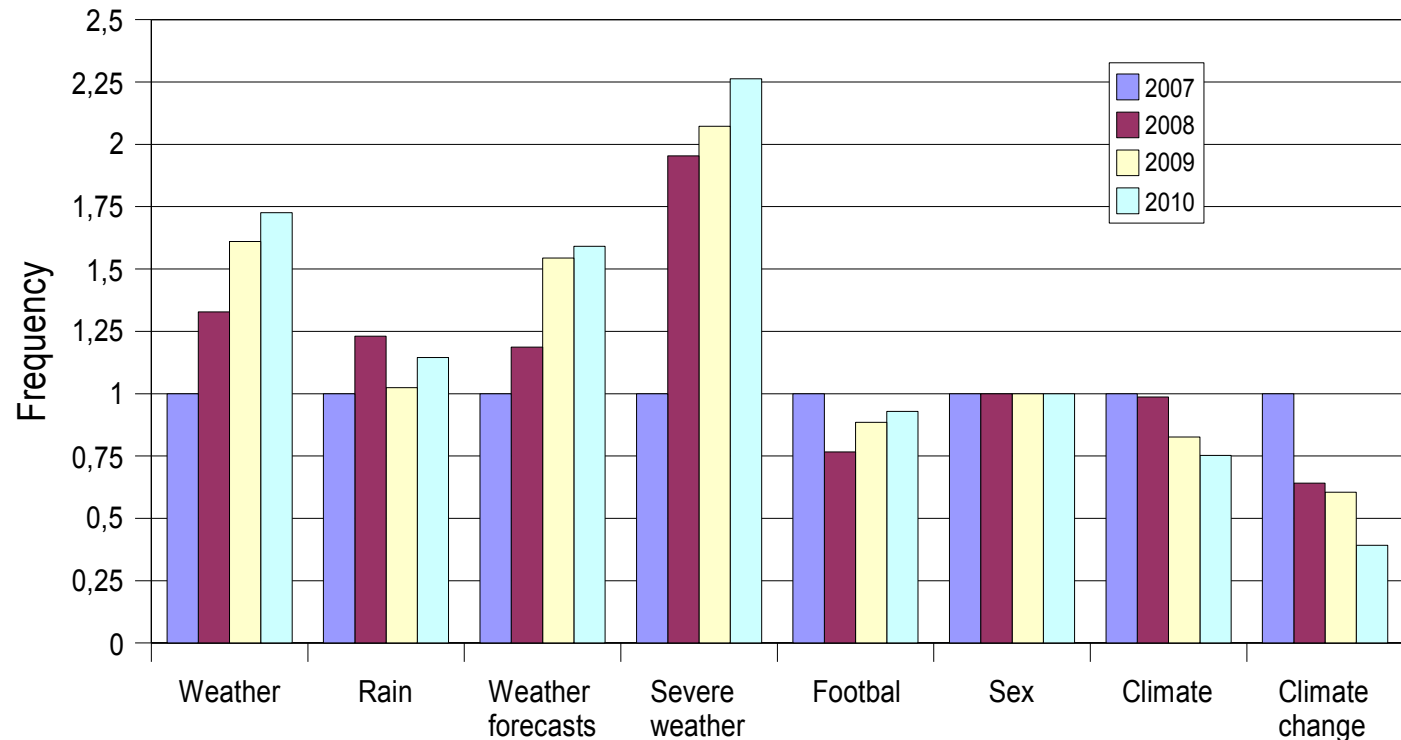
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Normalized relative frequency trend of different words

Trend in the number of occurrences normalized according to a “neutral” word (e.g., sex or love)



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How to quantify the “transmission pipe”?

Newspapers web site

How to interpret these findings

There is a general increase in the number of expressions related to the **weather**.
Is this a signal that **weather culture** is penetrating more and more into society?
If yes, then the transmission canal is solid and effective

There is a general decrease of expressions related to climate and **climate change**.
Is this a signal of the fading of climate climax after the burst of IPCC 2007 report?
If yes, then the transmission canal seems to be selective.

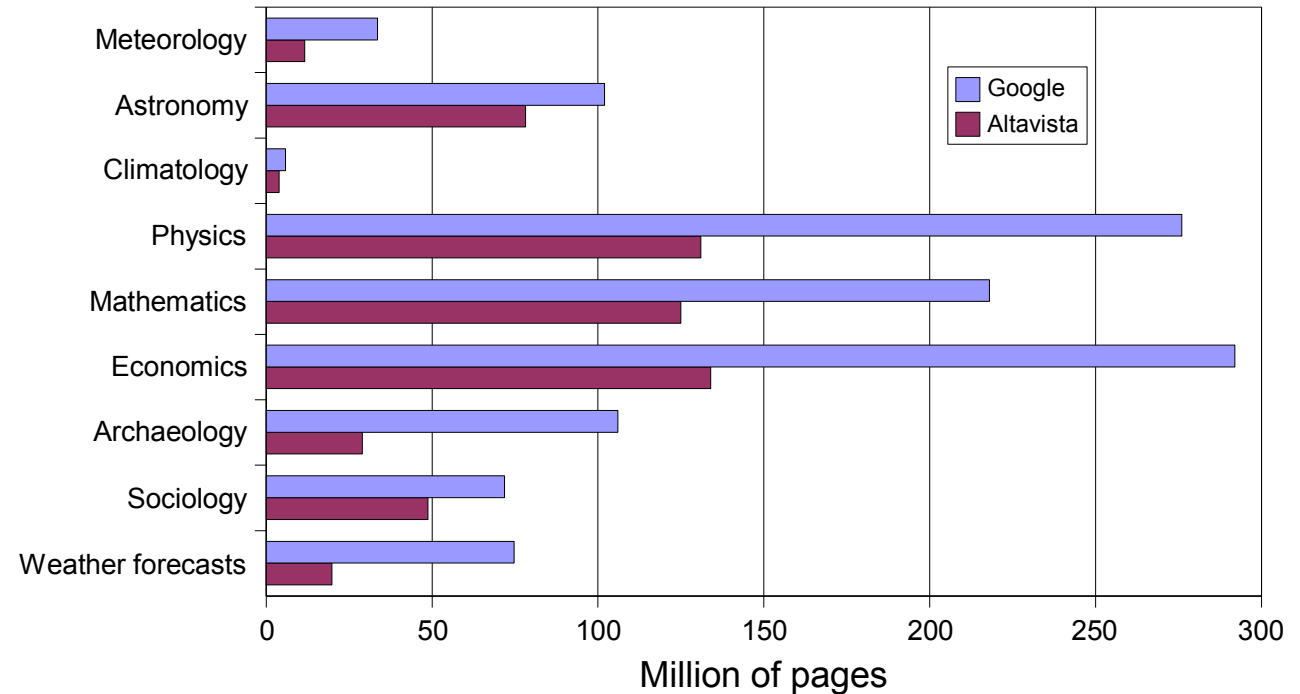
**We seem to be more effective in transmitting short term information
e.g., weather forecasts**

Research was done on “Italian” words here translated for “communication” problems

How to quantify the “transmission pipe”?

World Wide Web

Disciplines (Number of pages 31 Jul 2011)



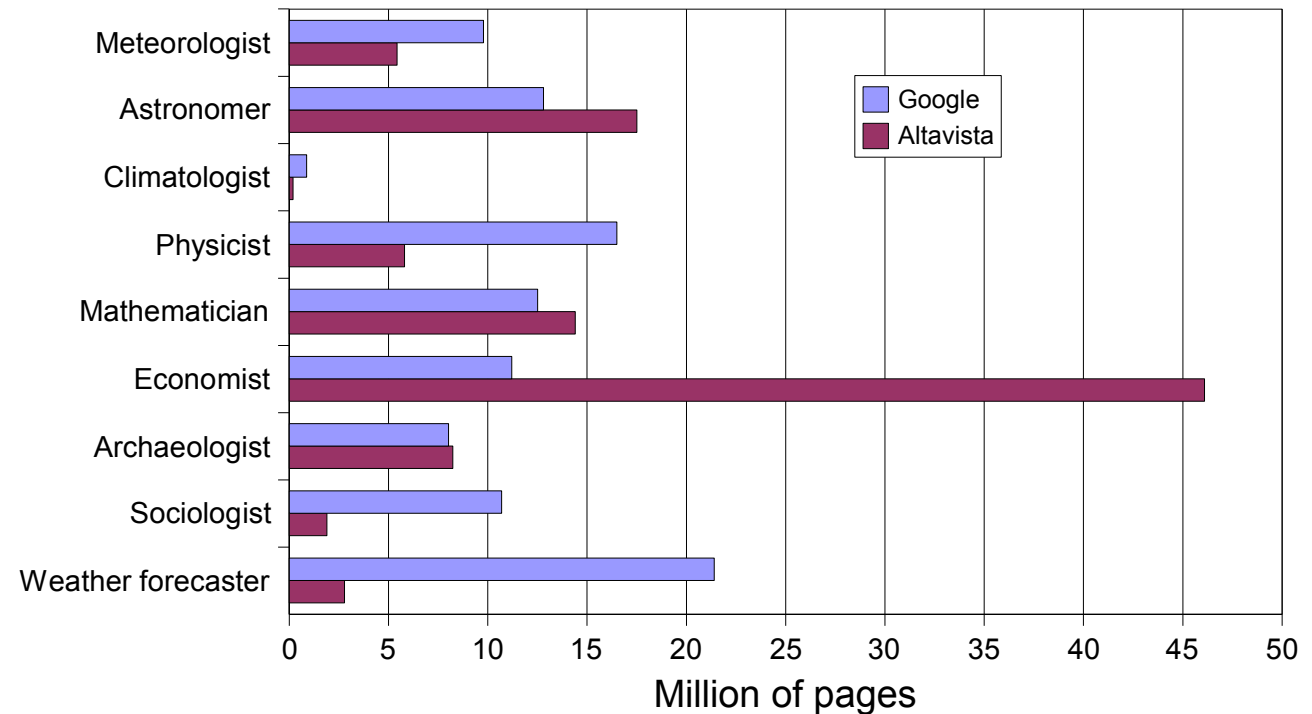
Meteorology and climatology are less present on the web than other disciplines and even than weather forecasts

Research was done on “English” words

How to quantify the “transmission pipe”?

Professionals (number of pages 31 Jul 2011)

World Wide Web



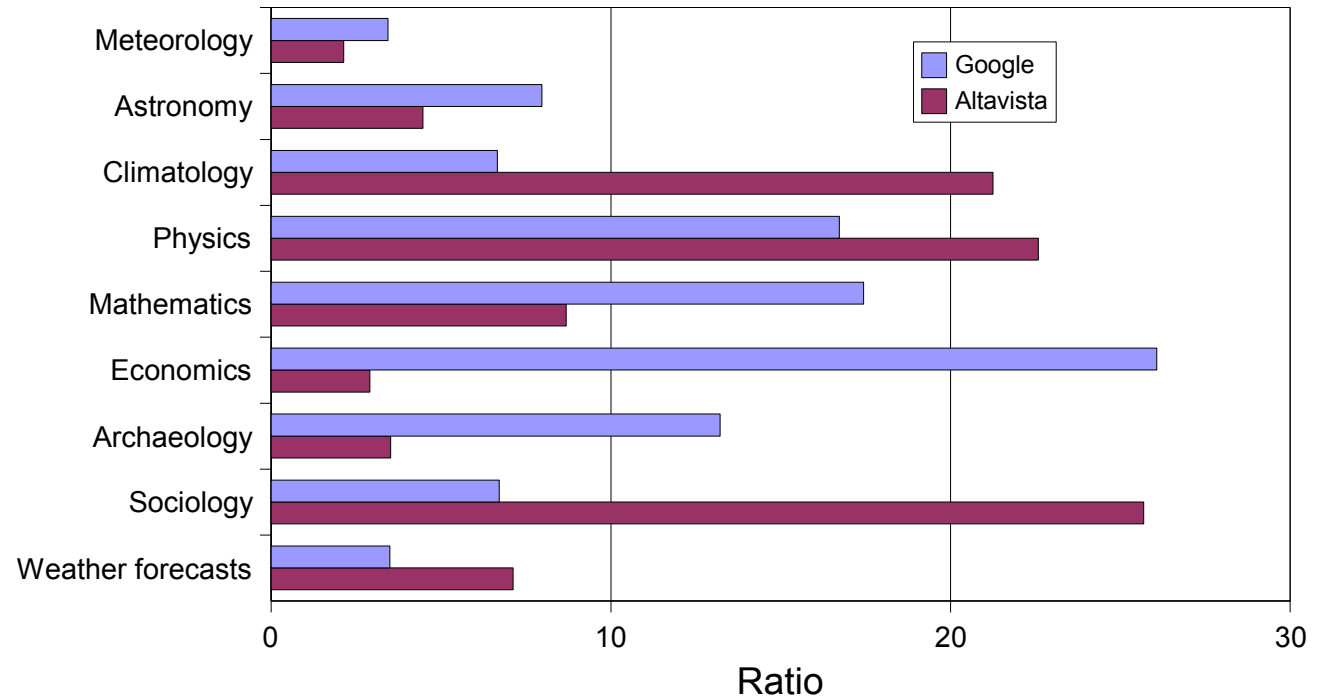
Professionals of Meteorology (Weather forecasters) are present like other scientific professionals. Climatologist are the “cinderellas” ...

Research was done on “English” words

How to quantify the “transmission pipe”?

Pages disciplines/Pages professionals

World Wide Web



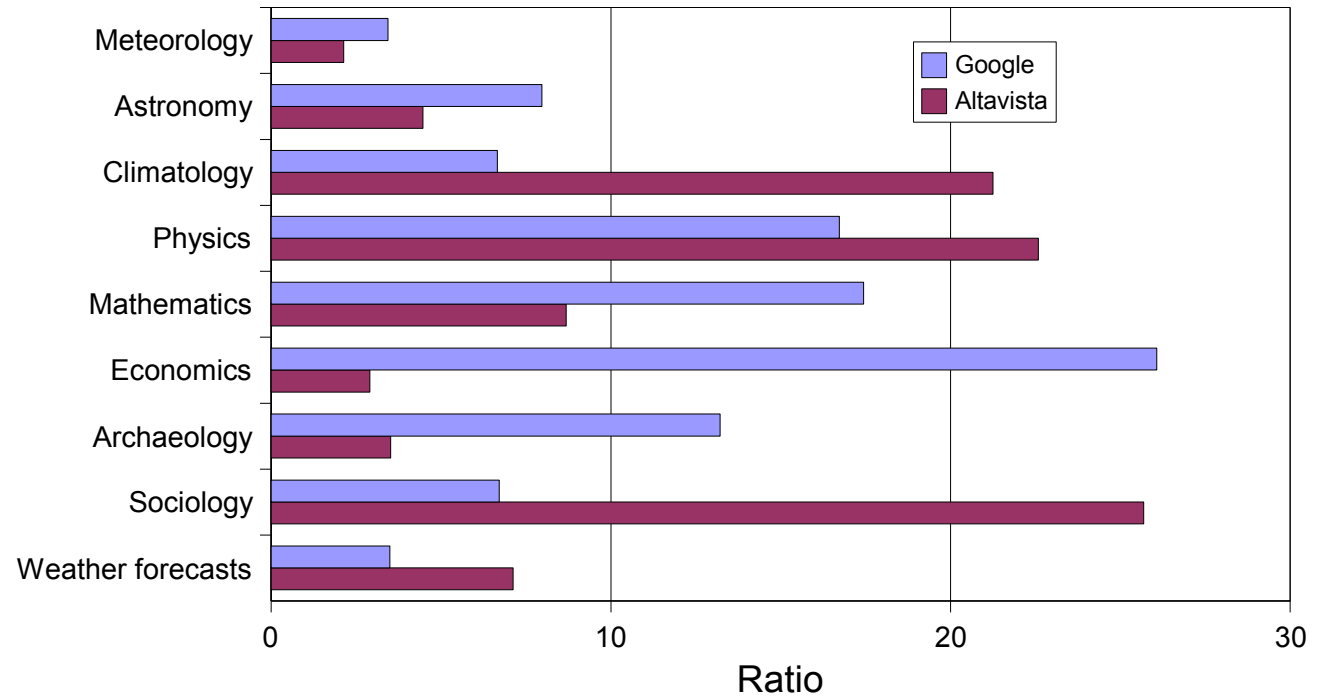
The ratio discipline vs professional is lower for meteorology and weather forecasts. Professionals are relatively more relevant than discipline for meteorology and weather forecasts

Research was done on “English” words

How to quantify the “transmission pipe”?

Pages disciplines/Pages professionals

World Wide Web



The ratio discipline vs professional is lower for meteorology and weather forecasts. Professionals are relatively more relevant than discipline for meteorology and weather forecasts

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How to quantify the “transmission pipe”?

World Wide Web

How to interpret these findings

Even on the web the transmission canal seems to be more effective and solid with the communication of the “**ready-to-be-spent information**” (weather instead climate)

Meteorology (in particular operational meteorology) seem to be more oriented toward “**free-lancers**” than toward **teams**. It is hard to transmit a message when many people speak together

Research was done on “English” words

How to quantify the “information” value?

Weather forecasts (ready-to-be-spent information) are almost always associated with **horoscopes** and, even worst, with stock exchange information (both on newspapers and television)

The risk is that extremely **valuable information** (weather forecasts) might be considered as poor information and just a sort of **entertainment**

Horoscope App



Weather Forecasts App

Is there a communication problem?

1) There are no problems in the transmission canal. We can effectively transfer information into society using currently available media.

1.1) These information, in general, seem to be mainly “ready-to-use”, then they might have only a reduced “educational” impact on Society

1.2) There might be a risk of “saturation”. Too much information often become noise and this might reduce the impact of communication itself

2) Communication seem to be more oriented toward “communicators” than toward the “information”.

3) “Short and sexy” is surely an effective approach but it is dangerous, because it might bring the system to dismiss the “short” to keep only the “sexy”

Is there a communication problem?

In some sense **yes**, even if differently from what might seem at the beginning

What to do

The “fast” and “thin” approach (Italo Calvino; American Lectures)

- 1) Reduce information to its essence, avoiding excesses
- 2) Supply information when Society is prone to receive it
- 3) Work in team, with a common target

Thank you for your attention

