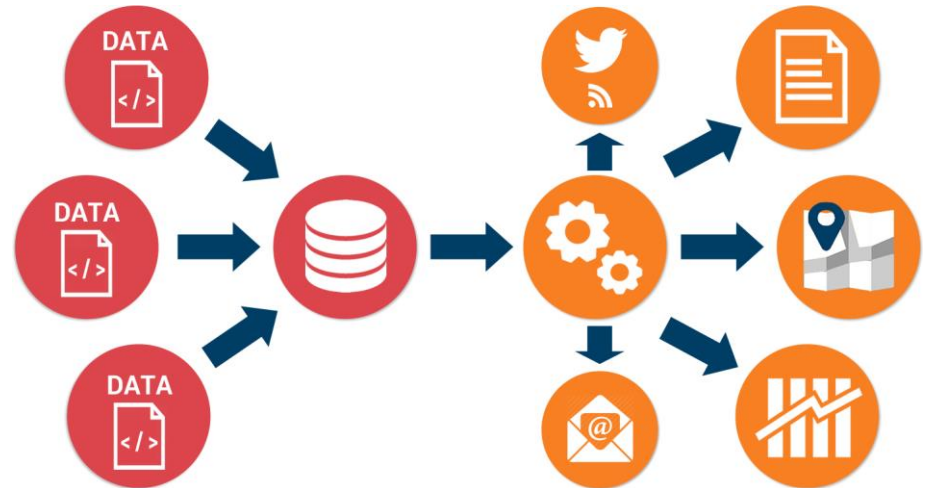


# Automated news production & impacts on journalists

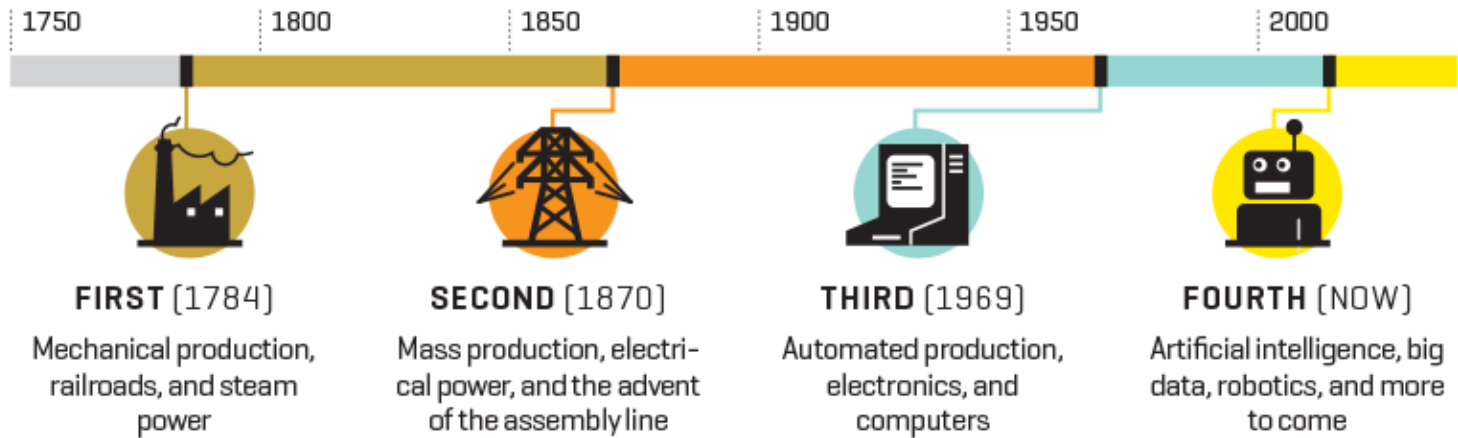
Laurence Dierickx



## Development context



- **Continuation** automation in newsrooms (started late '80 with the introduction of PCs in newsrooms) but for the first time, it concerns journalists
- **New avatar** of datajournalism (roots in the late '70 in US)



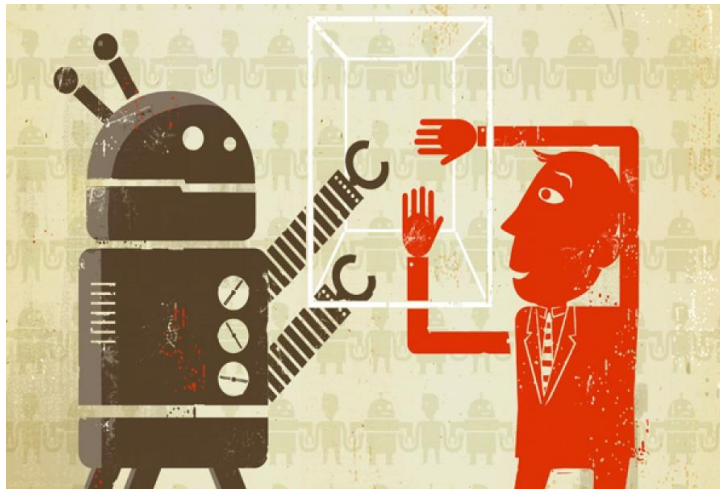
## 4th industrial revolution...

- Prospective studies: 50% human job concerned within the next 20 years (OECD 2018)
- **Journalists less concerned:** 8,25% (ING Belgium 2015), 32% (whole info/communication sector IWEPS 2017)
- Creative sector (artists, designers, media workers): 17% Germany (McKinsey 2017)



## ...but contradictory studies

- 7 jobs most threatened: truckers, construction workers, legal advisors, medical staff and doctors, accountants, sellers and... editors (International Data Corporation, 2016)
- More and more journalists will be replaced by software (Ericsson 2017)



## Facts

- Impossible to quantify
- No clues about negative impact on employment..
- ... but freelancers are the most fragile and we don't know about it (one case reported in my research - France)
- Highest impact: press agencies (literacy)

## All will depend on why automation is implemented! Among journalists...

- **Optimistic:** tool for daily routines
- **Pessimistic:** humans replaced by machines
- **Fatalist:** will destroy and create job (creative destruction, Schumpeter 1942) – in fact new jobs already created (engineers, linguists, PM...)



→ Cet article n'a pas été rédigé par un robot



100



CONNEXION

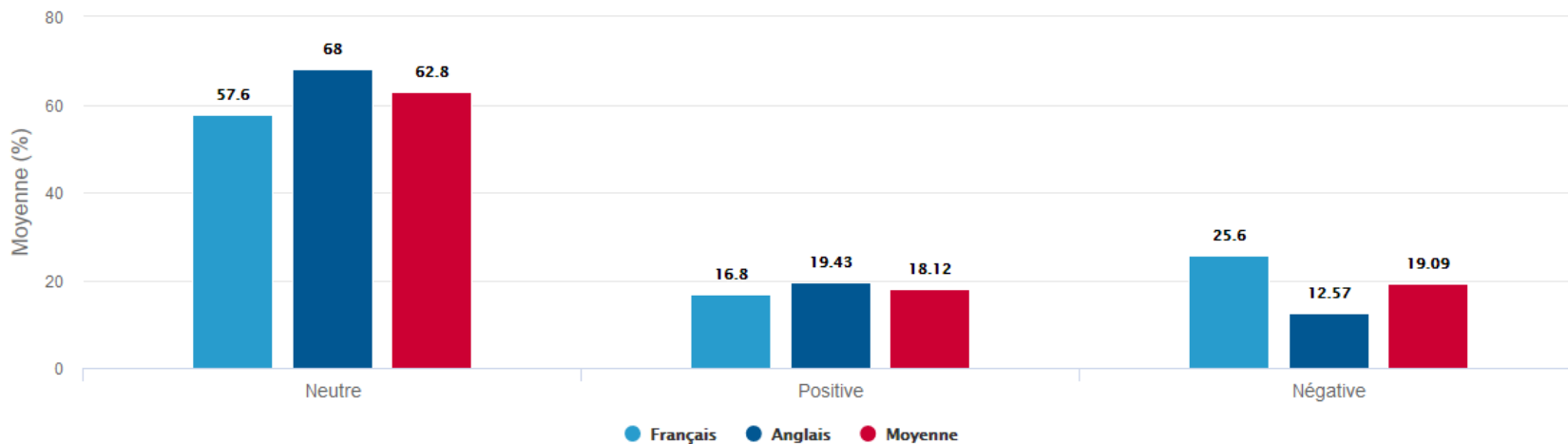
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## Cet article n'a pas été rédigé par un robot

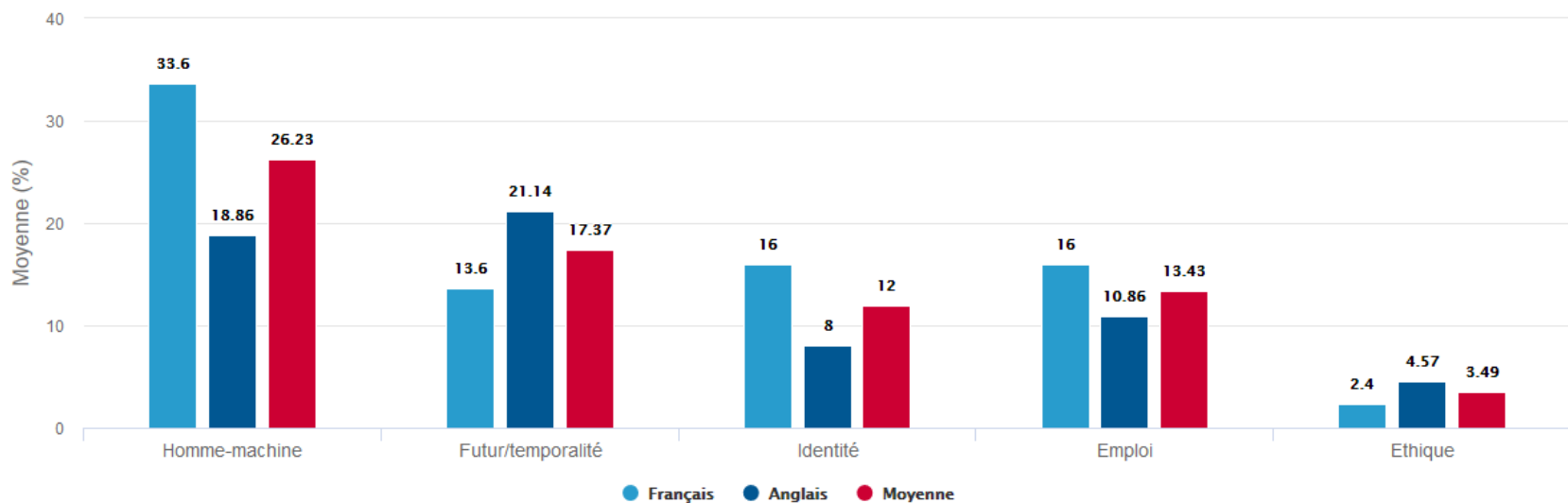
### Between fear and confidence

- How do journalists talk about it?
- Discourse analysis, 300 headlines
- Cultural differences: more confident (EN), fear of the end of the employment (FR)

### Connotation



### Enjeux abordés

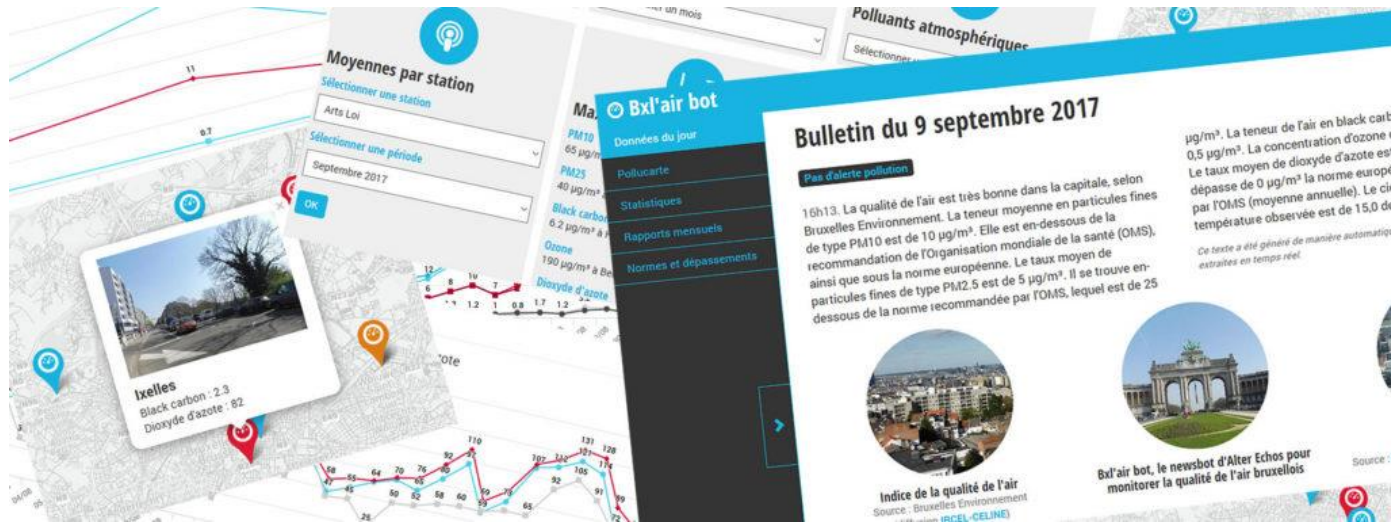




# Occupational activity & professional identity in questions

*"I understand well the utility of this  
but I am afraid to lose my job  
because of a bot"*

Case study, Bxl'air bot



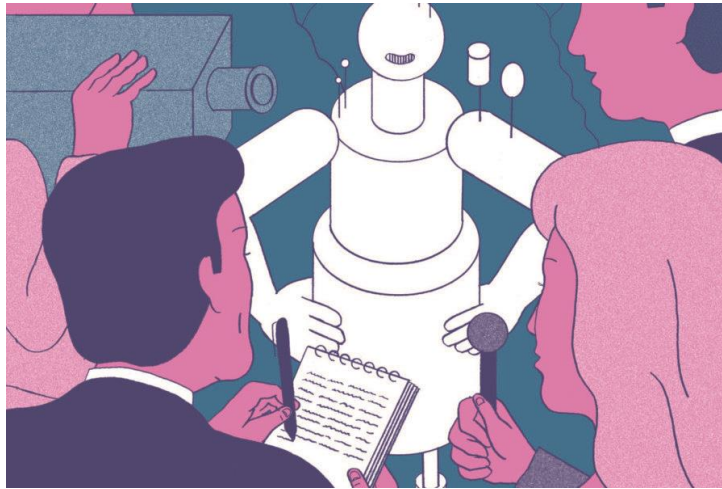
- Collect data and provides analyses about air quality in Brussels, support to investigative & journalists associated to the process
- Only used if they perceived the utility
- No need to develop particular skills (versus datajournalism with strong requirements)



"The robot's interest is that it can automate the calculations that reporters can make with CELINE's data but to be honest, they would never have the time to do it (and would not have enough patience too)."  
Céline Gautier

## Limits

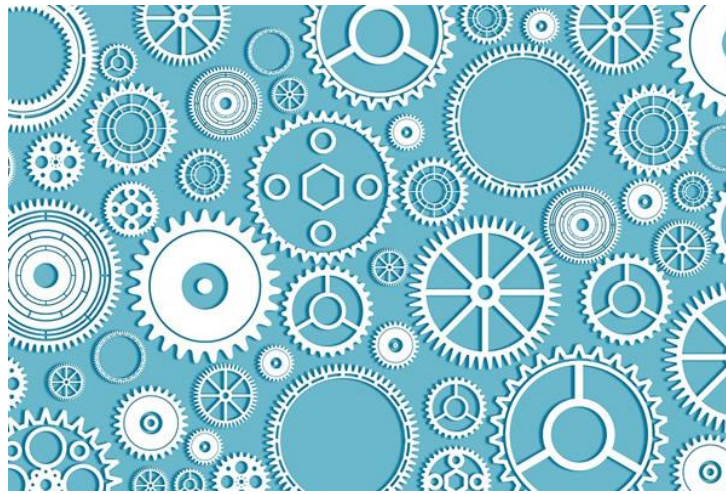
- Application domains limited (sport, economy, elections, environment)
- Development costs
- Standardisation vs creativity
- Always a human behind: data analysis is not free from subjectivity + process
- Sometimes need a human fact-checking (correctness, accuracy)



## What cannot be automated

- Information's meaning
- Defining newsworthiness
- The journalist's expertise
- Relationship to sources
- Context, analysis, opinions





## Unlimited possibilities of automation...

- Breaking news detection
- Fact-checking
- Information retrieval
- Personal assistant
- News producing (NLG, video, charts...)
- Chatbots (interactivity) ...



**AX Semantics** @AXsemantics · 15 févr.

We've just generated **1 million stories** in 90 minutes. That's **just** under 6 milliseconds per story. #nlg #ai #realtime #atml3

🌐 À l'origine en anglais



## Benefits for publishers

- High speed level production (1 million texts produced in one night, Le Monde, 2015)
- News personalization
- Multilingual systems
- Several versions of a same story
- Once detected, an error will not occur twice





## Benefits for journalists

- Free from repetitive, time consuming or boring task: back to the roots
- Extend the media coverage
- No need to learn new skills
- Can support daily routines as well as investigative

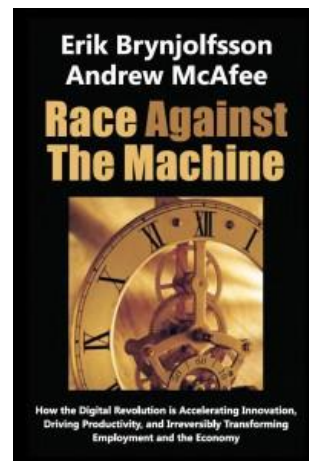


*"I do not need to take breaks. I can work for 24 hours. I will not complain about hard work. (...) Anything you can do I can do better. And faster and cheaper. But I will not take your job"*

Erica, news TV anchor in Japan (2018)

<https://www.cbsnews.com/news/robots-replacing-humans-cbsn-originals/>

"But we can learn to better *race* with machines, using them as *allies* rather than *adversaries*."



**There will always be people behind any technology, who will take decisions and design the process.**