Jessica Kunert
Neil Thurman

Perceptions of Automated News: A meta-analysis

Future of Journalism Conference,
14.09.-15.09.2017,
Cardiff
What are automated news?

Data-intensive beats, e.g. sports, finance, crime
What are automated news?

- **Data**
  - Changes with each event in data
- **Synonyms**

  ... also works for video!
What are automated news?

... And who uses this?

PA won €706,000 grant from Google to fund a local news automation service (July 2017)
What does the audience think?

- Quality, readability, credibility...
- Are computer-written news distinguishable from human-written articles?
META-STUDY OF SEVEN EMPIRICAL STUDIES

ENTER THE ROBOT JOURNALIST

Users’ perceptions of automated content

Christine Clewlow

The advent of new technologies has changed the way in which journalists—both professional and amateur—create and consume news. As a result, the role of the journalist has evolved, leading to the emergence of automated news generation. This research examines the perceptions of automated content among users, focusing on the credibility, expertise, and readability of computer-generated news. The study analyzed the impact of automated news on user trust and preferences, as well as the potential for automation to transform the news industry.

WHEN REPORTERS GET HANDS-ON WITH ROBO-WRITING

Professionals consider automated journalism’s capabilities and consequences

Nell Tatham, KonstantinDispatcher and Julia Kunert

The availability of tools and the demand for news on digital devices, and advances in technology are leading to a new form of journalism: automated journalism. This research examines the impact of automated journalism on the capabilities and consequences for professionals, including the nature of the work, the role of the journalist, and the relationship between the journalist and the audience. The study also discusses the ethical implications of automated journalism.

AUTOMATED NEWS

Better than expected?

Mario Haim and Andreas Graefe

We conducted two experiments to study people’s perceptions and actual performance of automated and human-written news. We found that, first, participants expected more accurate and relevant news from human-written sources. Second, participants evaluated the quality of the information in terms of credibility, expertise, and readability. Finally, we discovered that automated news was perceived as less credible, less expert, and less readable than human-written news. The results suggest that automated news is not a substitute for human-written news, but rather an additional source of information that can be used to complement traditional news sources.

Should news outlets let their readers know that they are reading automated content?

Andreas Graefe (Munich, Germany); Marc Klaes (Bielefeld, Germany); Nick Drescher (University of Maryland, USA)

In automated news, news outlets may choose to be transparent about the automated production of their content. However, such transparency may be seen as a threat to the credibility of the news outlet. This study examines the impact of transparency on user trust and preferences, as well as the potential for transparency to enhance the credibility of automated news.

Computers in Human Behavior

Handling and Evaluation of Computerized News

Jung Chi, Gangnam, South Korea; Venkata Kollu, Hyderabad, India; Saravanan Sridharan, India

The integration of software robots into journalism has led to the development of computerized news, which is created by algorithms and human journalists. This research examines the impact of computerized news on user trust and preferences, as well as the potential for computerized news to enhance the credibility of the news outlet.

Journalist versus news consumer: The perceived credibility of machine-written news

Kathrin von der Klaas

The role of the journalist is changing with the rise of computerized news. This research examines the impact of computerized news on user trust and preferences, as well as the potential for computerized news to enhance the credibility of the news outlet.
1. General perception of automated content
2. Differing perception of the general public and journalists
3. Manipulation of the article byline and transparency

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**Apple tops Street 1Q forecasts**

Apple posts 1Q profit, results beat Wall Street forecasts

AP, January 27, 2015 4:39 PM

CUPERTINO, Calif. (AP) - Apple Inc. (AAPL) on Tuesday reported fiscal first-quarter net income of $18.02 billion. The Cupertino, California-based company said it had profit of $3.06 per share. The results surpassed Wall Street expectations. The average estimate of analysts surveyed by Zacks Investment Research was for earnings of $2.60 per share. The maker of iPhones, iPads and other products posted revenue of $74.6 billion in the period, also exceeding Street forecasts. Analysts expected $67.38 billion, according to Zacks. For the current quarter ending in March, Apple said it expects revenue in the range of $52 billion to $55 billion. Analysts surveyed by Zacks had expected revenue of $53.65 billion. Apple shares have declined 1 percent since the beginning of the year, while the Standard & Poor's 500 index has declined slightly more than 1 percent. In the final minutes of trading on Tuesday, shares hit $109.14, an increase of 39 percent in the last 12 months.

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This story was generated by Automated Insights (http://automatedinsights.com/ap) using data from Zacks Investment Research. Access a Zacks stock report on AAPL at http://www.zacks.com/ap/AAPL.
- Clerwall (2014):

**Chargers Take Down Chiefs, 37-20**

Even with an unexceptional outing for Philip Rivers, the Chargers handled the Chiefs, 37-20, at Arrowhead Stadium.

Rivers found the end zone for two touchdowns against the Chiefs on 18 of 23 passing for 209 yards and one pick. Matt Cassel went 24 of 42 with 251 yards passing, two touchdowns and three picks for the C.

Jackie Battle carried the ball 15 times for 39 yards with a touchdown in addition to four receptions yards and another touchdown. Antonio Gates caught three passes for 59 yards.

The San Diego defensive unit led the way to a victory, allowing 119 yards rushing and 234 passing bringing back one interception for a touchdown. They brought down Cassel for two sacks.

Lastly, Nick Novak was perfect, hitting all three of the field goals he attempted.

Chiefs running back Jamaal Charles provided some spark with 92 yards rushing, 23 receiving and touchdowns. Wide receiver Dwayne Bowe also gave a strong effort with 108 receiving yards and a touchdown.

The Chargers travel to New Orleans next week to meet the Saints (0-3) while the Chiefs are at home on the Ravens (3-1).

**Los Angeles Times**

**YOU ARE HERE:** LAT Home → Collections → Pro_football

**SAM FARMER / ON THE NFL**

**Three quarterbacks are walking a tightrope**

*Matt Cassel, Russell Wilson and Mark Sanchez have struggled, and their starting jobs are in jeopardy.*

**October 05, 2012 | Sam Farmer**

Their passes might sail high, but three NFL quarterbacks have landed far short of expectations.

Kansas City's Matt Cassel, Seattle's Russell Wilson, and the New York Jets' Mark Sanchez aren't the only starting quarterbacks who are struggling — there are several — but they're the ones inching ever closer to the bench.

Through four games, the three have combined for 14 touchdowns and 15 interceptions, and each plays for a team in danger of falling behind early in their respective division races.

In the brightest spotlight is Sanchez, and not only because he plays in the country's biggest market. He has Tim Tebow looking over his shoulder, and it's only a matter of time until the Jets give Tebow a chance — a telegraphed pass if there ever was one.
Van der Kaa and Krahmer (2014):

**RKC Waalwijk speelt gelijk tegen PEC Zwolle**

RKC Waalwijk ging op bezoek bij PEC Zwolle en speelde gelijk. Het duel eindigde in 1–1. Twaalfduizend toeschouwers kwamen naar het IJsseldelta stadion.

De ploeg uit Zwolle nam na 44 minuten de leiding door een treffer van Saymak. Na achtenveertig minuten bracht Joachim van RKC Waalwijk de teams op gelijke hoogte.

De wedstrijd werd gefloten door scheidsrechter Kamphuis. Hij deelde geen rode kaarten uit. Tomas en De Boer van PEC Zwolle en Sno van RKC Waalwijk liepen tegen een gele kaart aan.

**Dit bericht is geschreven door een mens**
• **Haim and Graefe (2017):**
  • 618 German respondents from non-commercial national panel, 61% female, mean age of 35.9 years

• **Graefe, Haim and Diakopoulos (2017):**
  • N=31, mean age of 44 years, recruitment via Amazon Mechanical Turk
  • Special population: people had to have voted in the 2012 US elections
- **Descriptors** (mostly adapted from Sundar 1999):
  - Quality
  - Credibility
  - Readability
  - Expertise
  - Trustworthiness

- ... But: different variables in the studies! ➔ inhibits comparison!

- Graefe, Haim and Diakopoulos (2017): fewer variables
What about external effects?

- Media usage patterns? Interest in different topics?
  ➔ Graefe et al. (2016): no effect!

- Culture?
  ➔ Jung et al. (2016):
  journalists rated the quality of an article higher if the work was attributed to an algorithm – and not to a human!
Intervening variables

Source: Reuters Digital News Report 2017, p. 21
Recommendations for further studies

• **The stimulus material should...**
  • Come from the same journalistic genre
  • Be of the same length
  • Be in the native language of the respondents
  • Cover the same topics
  • be familiar to the respondents (topic choice)

• **The sample should...**
  • Be taken from a representative national panel
  • ... Or from a sub-population
  • Feature an even gender distribution
Recommendations for further studies

• The descriptors and variables should...
  • Be unambiguously defined (what’s „boring“?)
  • Not come in an overwhelming number to avoid survey fatigue

• Also, what about...
  • Intervening variables? (cultural context)
  • Theoretical explanations? (e.g. expectation-confirmation theory)
  • To which extent are „computer-written“ stories actually written by a computer?
Thank you!

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