

# Sensing, Synthesising, and Serving News in an Age of Automation

By Neil Thurman

Can journalism be automated, taking place with little or no direct human control? At the moment, no – not across all its modes and methods. The need to break tasks down into regular, repeatable routines – as authors of automation’s algorithms must do – and machine learning’s reliance on ‘training data’ from past exempla, set limitations on the scope for automation in the complex, creative, and above all contemporaneous task that is journalism. These limitations have not, however, prevented automation encroaching on some of the tasks that journalists perform, including the identification of story leads<sup>1</sup>, the verification of information<sup>2</sup>, the creation of news texts<sup>3</sup>, and decisions about which stories to publish to whom and with what priority<sup>4</sup>.

On the one hand, automation in journalism fulfils very real demands and provides opportunities for European enterprise. On the other, we need to consider the demands and decisions made by the automated systems that are emerging.

## Finding and Filtering Newsworthy Nuggets

Journalists have, for some time, voiced demand for tools that can help find and filter newsworthy nuggets from the ever-expanding universe of information and that can provide guidance on the credibility of content and contributors. In this area, many of the tools are American in origin<sup>5</sup>, and some – such as Dataminr<sup>6</sup> – have links with US security and intelligence<sup>7</sup>. As journalists

begin to rely more on such tools to augment their ‘nose for news’, questions arise about the dependence that exists on external and opaque

systems that act as gatekeepers – about the decisions those systems make about what comes down the wire and their appraisal of its trustworthiness.

The creation of news texts is also being automated, using data-driven natural language generation (NLG) and artificial intelligence. The short and relatively simple texts produced are, early research suggests<sup>8</sup>, barely distinguishable from human-made equivalents. Such advances in journalistic productivity have, some say, the

potential to buttress journalism’s shaky finances and even free up resources for investigative journalism. This ‘robot writing’ has also started to turn data of public interest into digestible local news stories at a scale impossible to achieve with human resources alone<sup>9</sup>. However, this technology also has the potential to cut traditional news outlets out of the picture, for example allowing data providers like sports federations to publish directly to fans. This is already starting to happen<sup>10</sup>, further unbundling the news product with consequences for the sustainability of the public affairs journalism traditionally cross-subsidised by more popular news products, like sport.

## Sorting the Signal from the Noise

Whilst robot writing’s ability to provide people with narratives based on hard-to-interpret local data may be useful, there are broader questions about the consequences of the increase in news items that will inevitably result.

With more and more information, who, or what, will sort the signal from the noise, and how? Automation may help consumers find the news that they want, although such news personalisation is more likely to be applied on their behalf than at their command<sup>11</sup>. News audiences have little time for, or interest in, actively managing the parameters of personalisation, rather allowing other entities to second-guess their preferences. In the absence of citizens’ active involvement in how the parameters of personalisation evolve, it is incumbent on politicians, publishers, and platforms to ensure users’ data are respected and that news that is personalised by algorithms balances relevance and diversity, providing not just what is of interest to individual members of the public but also what is in the public interest for all to know.

**PROF. DR NEIL THURMAN** (48) is a Professor of Communication at LMU Munich and a Volkswagen Foundation Freigeist Fellow. He was the first faculty member in electronic publishing at City, University of London and has directed master’s programmes in Electronic Publishing and Journalism and Globalisation. His main research focus is on digital journalism.

**“Algorithms and AI are developing a nose for story leads as well as competence in journalistic writing and editing. In the coming age of automation, we must ensure that journalism can continue to serve the public sustainably, transparently, and accountably.”**



## Neil Thurman

### Sensing, Synthesising, and Serving News in an Age of Automation

- 1** See for example Schifferes, Steve, et al. 2014. *Identifying and Verifying News through Social Media: Developing a User-centred Tool for Professional Journalists*. In *Digital Journalism* 2 (3): 406–418.
- 2** See for example Fletcher, Richard, Steve Schifferes and Neil Thurman. 2017. *Building the 'Truthmeter': Training Algorithms to Help Journalists Assess the Credibility of Social Media Sources*. In *Convergence: The International Journal of Research into New Media Technologies*, doi.org/10.1177/1354856517714955
- 3** See for example Thurman, Neil, Konstantin Dörr and Jessica Kunert. 2017. *When Reporters Get Hands-on with Robo-writing: Professionals Consider Automated Journalism's Capabilities and Consequences*. In *Digital Journalism* 5 (10): 1240–1259.
- 4** See for example Thurman, Neil. 2011. *Making 'The Daily Me': Technology, Economics and Habit in the Mainstream Assimilation of Personalized News*. In *Journalism: Theory, Practice & Criticism* 12 (4): 395–415.
- 5** Thurman, Neil, et al. 2016. *Giving Computers a Nose for News: Exploring the Limits of Story Detection and Verification*. In *Digital Journalism* 4 (7): 838–848.
- 6** Dataminr, [www.dataminr.com](http://www.dataminr.com)
- 7** Thurman, Neil. 2017. *Social Media, Surveillance, and News Work: On the Apps Promising Journalists a 'Crystal Ball'*. In *Digital Journalism* 6 (1): 76–97.
- 8** See for example Graefe, Andreas, et al. 2016. *Readers' Perception of Computer-generated News: Credibility, Expertise, and Readability*. In *Journalism: Theory, Practice & Criticism*, doi.org/10.1177/1464884916641269
- 9** Gregory, Julia. 2017. *Press Association Wins Google Grant to Run News Service Written by Computers*. The Guardian, 6 July 2016, [www.theguardian.com/technology/2017/jul/06/press-association-wins-google-grant-to-run-news-service-written-by-computers](http://www.theguardian.com/technology/2017/jul/06/press-association-wins-google-grant-to-run-news-service-written-by-computers)
- 10** Kerschbaumer, Ken. 2018. *Cricket Australia Taps WSC Sport for Automated Content Creation*. SVG News, 9 January 2018, [www.sportsvideo.org/2018/01/09/cricket-australia-taps-wsc-sport-for-automated-content-creation](http://www.sportsvideo.org/2018/01/09/cricket-australia-taps-wsc-sport-for-automated-content-creation)
- 11** See for example Thurman, Neil and Steve Schifferes. 2012. *The Future of Personalization at News Websites: Lessons from a Longitudinal Study*. In *Journalism Studies* 13 (5–6): 775–790.