



BU PhD STUDENTSHIPS 2019

PROJECT DESCRIPTION

PROJECT DETAILS
Project Title
Fake news, culture and heuristics
Project Summary
<p>Misinformation in the form of fake news has become a characteristic of the 21st century, driven by technologies such as social media platforms that enable information to spread quickly and to be targeted at individual beliefs, biases and emotions.</p> <p>One factor that may be of importance is culture. Cultures vary on several dimensions, including individualism vs collectivism, power distance (between those at the top of the social hierarchy and those at the bottom), masculinity vs femininity and uncertainty avoidance. It is reasonable to expect that different types of fake news would spread more easily in different cultures. For example, in a country that is highly collectivistic it is possible that a fake news story of a well-known person transgressing a social norm would spread more quickly than in an individualistic culture. If this is indeed then it raises the question of if the authors of fake news target specific cultures with specific types of fake news that they believe are optimal for that culture.</p> <p>Another possibly relevant factor is decision making heuristics. These refer to quick decisions that we make based on limited information. There are several different heuristics that have been identified, such as for example the secrecy heuristic, which results in us assuming information presented as being leaked or confidential in some way is more likely to be genuine. It is an under-researched area, but it is possible there is a relationship between culture and heuristics. For example, the example the secrecy heuristic may be more pronounced in cultures where there is a high power distance, as people are less accustomed to learning details of those at the top of the power hierarchy</p> <p>The PhD would consist of several stages. The first would be an analysis of fake news stories on social media. These will be identified in English, Chinese, Russian, German, Turkish, Arabic, Farsi, Spanish, and Portuguese, in order to ensure a full range of countries and cultures are included. Information about the fake news stories will be collected, such as how many times they have been re-posted or liked. Depending on the social media platform and the metadata available additional data (all in the public domain) will be collected, such as the age and gender of the social media users. Software will then be used to determine how different types of social media propagate through different cultures, and if this is associated with any particular user groups. The second stage will then use a combination of fake news stories identified in the first stage along several well-known fake news stories. The language and imagery used in these stories will be analysed in detail to determine if they differ between cultures, and if this is consistent with the characteristics of that culture and the associated heuristics.</p> <p>This proposed PhD will make an important and novel contribution to what is an increasingly important social issue. The limited academic research that has been conducted to date on this topic has focussed on the how and what of the spread of fake news – the proposed PhD will make a fundamental contribution by addressing the why.</p>
Academic Impact
<p>This PhD would bring together research into the areas of fake news, culture and heuristics. Previous work suggests that these areas may be related to each and some preliminary studies have provided some evidence for this, but there is a lack of research that directly connects them. If such relationships are found within the proposed study this will have several impacts. It will identify if there are cultural variations in the propagation of fake news. If this is the case, then it will help inform prevention and mitigation strategies on a global level.</p> <p>In addition, the proposed PhD will make methodological contributions to the literature. As noted in the proposal there have been several previous studies that have made use of social platforms and associated metadata.</p>

However, to the best of our knowledge, no previous studies have attempted to map fake news spread across several social media platforms and different languages. The techniques developed in this PhD would allow for the simulation and visualisation of the spread of fake news. There has also been no previous application of visual content analysis to the imagery used in fake news stories.

Impact would be achieved in several ways. A paper would be submitted to Psychological Science (IF 6.128). Presentations would also be made at the European Conference on Cyber Warfare and Security (proceedings of which are published in the Journal of Information Warfare) and the Social and Behavioural Science of Cybersecurity event (both organised by the proposed PhD supervisors). In addition, the British Psychological Society would be approached to see if they would wish to issue a briefing paper on fake news, based on the PhD research. Such briefing papers serve as the Society's advice to the academia, government and the public on a topic. Dr McAlaney has previously authored such a briefing paper at the invitation of the Society.

Societal Impact

Fake news has become a high-profile public issue, with allegations being made that it has been used to influence the outcome of elections and other social issues. As such this PhD has the potential for global impact. Fake news stories have impact of a personal and local level as well, such as for example anti-vaccination fake news stories that have been suggested to be linked to recent outbreaks of diseases such as measles. Whilst fake news stories would appear to employ several social psychological theories there is very little actual academic research on the topic. The proposed PhD would address this by making use of psychological research to explain the processes by which fake news propagates through different cultures. In doing so it would inform prevention and educational strategies that could be used to combat fake news items in the future.

Training Opportunities

The successful candidate will attend the Doctoral College's PGR seminar programme and receive training in research methods and quantitative and qualitative data analysis. The supervisory team will train the PGR in specific software, with the help of the researchers in the Bournemouth University Cybersecurity Research Group.

The student will be given the opportunity to attend doctoral colloquiums at relevant conferences (e.g. the European Conference of Cyberwarfare and Security) and network with other PhD students in similar fields of study at an international level through participation in online fora and conference presentations. The supervisory team will place a strong emphasis on the candidate publishing from the study and the student will be encouraged to take advantage of the various writing and 'how to publish' workshops that are available at BU.

SUPERVISORY TEAM

First Supervisor

Dr John McAlaney

Additional Supervisors

Dr Shelley Thompson

Recent publications by supervisors relevant to this project

Sample, C., McAlaney, J., Bakdash, J.Z., Thackray, H. (in press). A cultural exploration of the social media manipulators. Journal of Information Warfare.

Sample, C., Justice, C., and Darraj, E. (2018) A model for evaluating fake news. CyCon 2018. Tallinn, Estonia. Full paper available at: <https://www.hsdl.org/?view&did=818918>

M'Manga, A., Faily, S., McAlaney, J. and Williams, C., 2018. Rationalising Decision Making about Risk: A Normative Approach. In: 12th International Symposium on Human Aspects of Information Security & Assurance 29-31 August 2018 Dundee, UK. University of Plymouth.

M'Manga A., Faily, S., McAlaney, J., Williams, C., Kadobayashi, Y. and Miyamoto, D., 2018. Eliciting Persona Characteristics for Risk Based Decision Making. In: 32nd International BCS Human Computer Interaction Conference 2-6 July 2018 Belfast, UK.

McAlaney, J., Thackray, H. and Taylor, J., 2016. The social psychology of cybersecurity. *The Psychologist*, 29 (9), 686-689.

Ali, R., McAlaney, J., Faily, S., Phalp, K. and Katos, V., 2015. Mitigating circumstances in cybercrime: A position paper. 1972-1976.

INFORMAL ENQUIRIES

Please contact the lead supervisor, Dr John McAlaney on jmcalaney@bournemouth.ac.uk

ELIGIBILITY CRITERIA

The PhD Studentships are open to UK, EU and International students. Candidates for a PhD Studentship should demonstrate outstanding qualities and be motivated to complete a PhD in 4 years and must demonstrate:

- outstanding academic potential as measured by either a 1st class honours degree or a Master's degree with distinction or equivalent Grade Point Average (GPA)
- an IELTS (Academic) score of 6.5 minimum (with a minimum 6.0 in each component) for candidates for whom English is not their first language which must be evidence at application

In addition to satisfying minimum entry criteria, BU will look closely at the qualities, skills and background of each candidate and what they can bring to their chosen research project in order to ensure successful completion.

Applicants will be asked to submit an online application form and a proposal (c. 1500 words) outlining their understanding of the project for which they are applying, the approach they would envisage taking and what qualities they will bring to the research community.

Please note:

- Current BU Doctoral students are not eligible to apply for a Studentship
- Current MRes/MPhil students can apply, subject to satisfactory completion of their Research Degree prior to being able to take up the award
- PhD Studentships cannot be used to support BU staff to complete doctoral programmes

HOW TO APPLY

Please complete the online application form by the **31st October 2019**. Further information on the application process can be found at: www.bournemouth.ac.uk/studentships