

D.10 Periodically updated description of the DSI efforts to support and facilitate the coordination of academic research

M24

Project number:	SMART 2019/1087
Project Acronym:	EDMO
Project title:	European Digital Media Observatory
Start date of the project:	01/06/2020
Duration of the project:	30
Period covered by the interim report:	from 06/11/2021 to 05/05/2022
Date of submission of the periodic description:	
Project website address:	https://edmo.eu/
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1.0 Introduction

This is the fourth of five periodically updated descriptions of the DSI efforts to support and coordinate academic research in Europe (D.10) related to Task IV in EDMO. The deliverables are due every six months through the duration of the project period and provide an overview of current and recent efforts undertaken by DATALAB - Center for Digital Social Research at Aarhus University to support and coordinate academic research on European digital disinformation. Furthermore, the reports will provide a brief overview of trends in recent academic work as well as a quantitative and qualitative assessment of the scientific repository.

As part of Task IV, academic activities studying disinformation in the EU (IV.D.A) and relevant academic institutions and organizations (IV.MS.2) have been identified, listed, and reached out to. The aim is to expand the research network of EDMO. A repository of relevant academic research activities (IV.MS.1 & IV.D.C) is established, updated, and finalized. This report will 1) present the progress on these described tasks, 2) key topics in contemporary research on digital disinformation, 3) and evaluate the research repository. The report covers months 19-24 of the EDMO project.

2.0 Engagement with researchers

Engagement and support of researchers studying disinformation in the European Union is an ongoing activity in task IV that is divided into different subtasks and related activities. The first two steps in doing this were the establishing of the preliminary repository of academic literature studying disinformation at scale in the European Union and the integration of researchers in EDMO. Since these activities, a mapping of academic organizations and institutions studying European disinformation has been established, and the EDMO hub researchers have been contacted to provide local academic content to include in the scientific repository.

Over the past six months, numerous tasks have been carried out to increase the engagement with researchers within the EDMO network. A repository accumulating relevant academic content in the field of digital disinformation has been released (described in sub-point IV.D.A), and a survey has provided an overview of the academic organisations and institutions studying digital disinformation (described in sub-point IV.D.B). The insights from the survey and repository are gathered in an interactive digital map that will make collaborations easier for researchers and is accessible on the EDMO website. Furthermore, Anja Bechmann from DATALAB is part of the EDMO task force that is aiming to understand the disinformation trends that are occurring during the war in Ukraine. Lastly, a paper from researchers at DATALAB based on the work of the task is currently in review.

Through these tasks and actions, we have supported the possibilities for researchers, institutions and organisations to collaborate in the research field of digital disinformation.

IV.D.A.

IV.D.A is a task in which European academic activities and publications studying digital disinformation from multiple disciplines are mapped. Through this mapping, IV.D.A. contributes to the overall goal of task IV, namely to support and coordinate academic activities on disinformation in Europe. It is carried out by the research team at DATALAB - Centre for Digital Social Research, Aarhus University (Denmark).

To accomplish this mapping, we went through three steps: First, relevant researchers, research institutions and organisations were identified. Second, a mapping of relevant academic activities focused on the EU was conducted. Third, a publicly available repository of academic work on digital disinformation in the EU was created. The first, initial literature search resulted in 2,296 papers, proceedings, chapters, books, and reports which were subsequently filtered for relevance by the DATALAB researchers. After having removed duplicates and results that did not live

up to the inclusion criteria, 93 papers remained. The repository can be found on the EDMO website and it provides an important basis for all sub-tasks in Task IV.

IV.D.B & IV.D.B Supplementary

Task IV.D.B aims to provide researchers with an easy overview of the different relevant institutions and organisations studying disinformation, which in turn can foster interdisciplinary and international collaborations. To identify these organisations and institutions, we realized a two-step approach: First, we extracted information from the repository that we created through task IV.D.A. Second, a survey was conducted and sent out in January 2022 to collect input from the research community. This survey was made to engage with the research community and help us identify additional relevant academic institutions and appropriate independent organisations in the EU member states related to research on digital disinformation. We also asked the researchers EDMO related questions to use their input to potentially make EDMO better suited to support international and interdisciplinary research. From the total of 212 researchers invited directly to the survey, 44 participated. The survey covered different aspects of research on disinformation within Europe. From the 44 replies, we extracted a total of 251 organisations and institutions, where 177 of them are based in the EU. The results can be used as a starting point to address researchers' needs within EDMO, to identify common interests and methods, and to foster collaboration. Fostering and intensifying collaborations will most likely be beneficial for disinformation research as previous research has pointed out (Walter, Sørensen & Bechmann, 2020). Having an easy way to gain an overview of the different organisations and institutions will make interdisciplinary collaborations much more attainable.

In collaboration with ATC, the work of IV.D.B has been made into a digital map and table, which provide an easy and quick overview of the institutions and organisations studying disinformation in the EU.

The organisations and institutions identified in the two approaches, have been compiled into a list that consists of the identified institution, the country of the

institution, a URL to the institution's website, the source for the identification (survey versus repository or extracted from both), the discipline, the number of appearances within the survey/repository and the region (distinguished: EU, non-EU countries, countries related to the EU: EAA, EFTA and former EU countries).

This information is available through the digital map.

Task force on disinformation about the war in Ukraine

Anja Bechmann, professor and director at DATALAB, has joined the new EDMO task force on the Ukraine war, which is steering and collecting material to help understand disinformation trends on the war in Ukraine. The members of the taskforce will collaborate with both the national and regional EDMO hubs, and also with small-scale online media projects, and other relevant actors across Europe. The gathered materials from the task force can be used to inform policymakers, such as the European Commission, so that they can further understand the disinformation phenomenon surrounding the conflict. Additionally, the task force contributes to an evidence-based decision-making process on the war in Ukraine.

Paper in review

DATALAB researchers are also currently working on an academic paper based on the activities within the task. In order to ensure a fair review process and maintain anonymity, some information cannot be shared in this report. In general, the paper focuses on the current state of academic inquiry into false information across fields within Europe, and presents suggestions as to how the field of research on disinformation can be improved. The overview and future suggestions from this paper will help researchers e.g. find relevant channels for their future research.

3.0 Relevant academic research

The following description is not an exhaustive list of the findings within the field of disinformation, but rather a look into some relevant results as identified by the EDMO affiliated researchers at Aarhus University. The topics described in this version of the

D.10 are based on the input to the academic repository provided by the EDMO hubs.

For a more comprehensive description of the method, results, process and included input from the EDMO hubs, see the *IV.D.C Final repository of relevant scientific articles* (Walter et. al., 2022).

The input from the EDMO Hubs and community was manually coded and grouped within different overall topics based on the titles, and in this report, we will shortly present the foci within the two most prominent of these topics. Figure 1 shows the full overview of this coding:

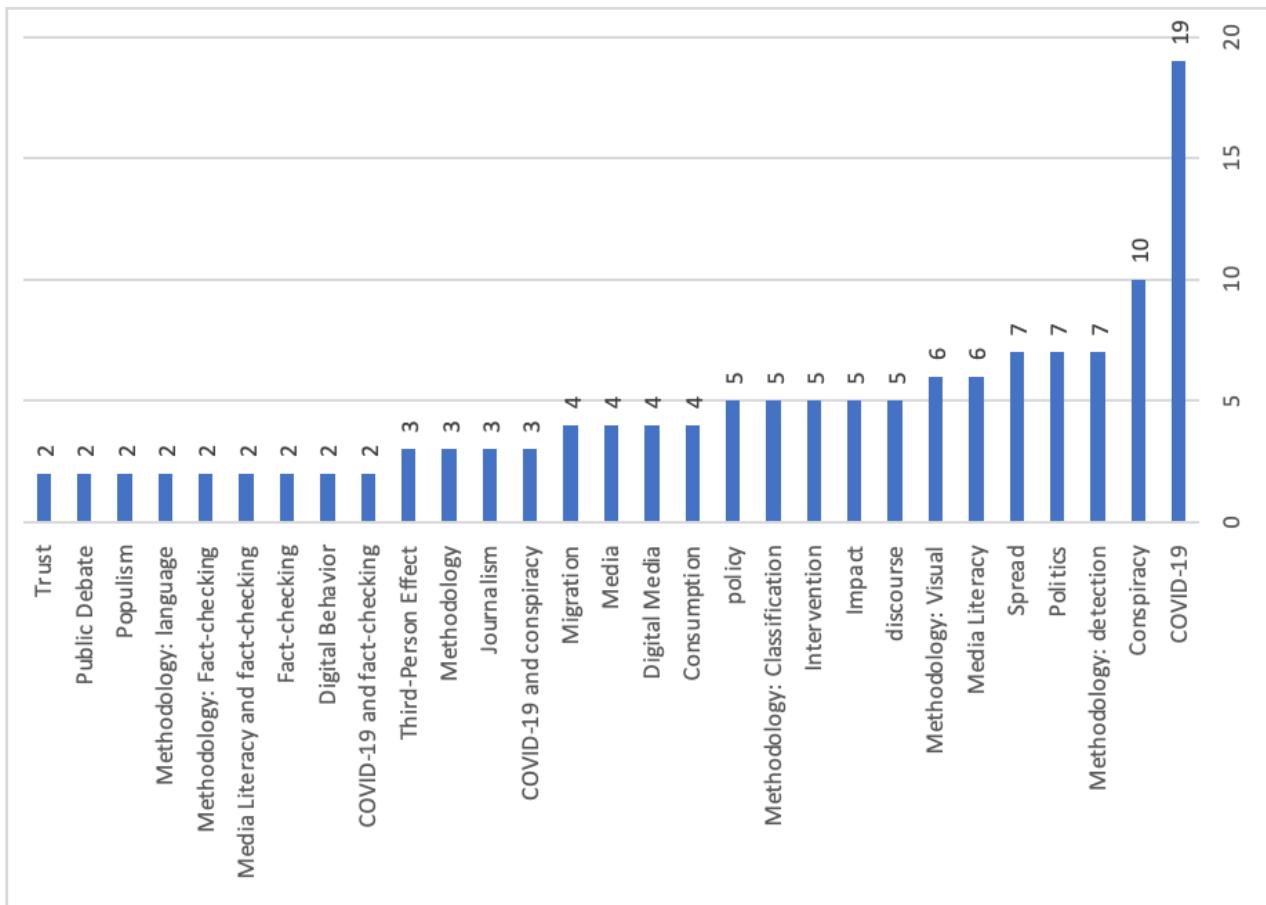


Figure 1. Coding of input provided in IV.D.C

It will soon be possible to find the full list of new entries via the [EDMO Scientific Repository](#).

COVID-19

As expected, COVID-19 has only gotten more prominent in academic publishing throughout the past two years and continues to be a prominent part of the updates to the EDMO scientific repository being a clear outlier in this update, occurring 9 times more often than any other topic.

This topic is not linked to specific methods or approaches, but rather contains a multitude of both. Some publications take a systemic perspective to the topic, focusing on what has been named the COVID-19 infodemic – or a disinfodemic by addressing different aspects such as dissecting responses to COVID-19 disinformation – (e.g. Bârgăoanu & Durach, 2020; Monnier, 2020; Lits, 2021), the link between social media and COVID-19 (e.g. Theocharis et. al., 2021; Krajčovič, 2021), the people who believe and spread misinformation (e.g. Buturoiu et. al., 2021), the impact of disinformation on e.g. vaccinations and guideline compliance (e.g. Loomba et. al., 2021; Knobel, Zhao & White, 2021; Hameleers, Van Der Meer, Brosius, 2020), along with other approaches to the topic.

Conspiracy

The second most frequently occurring topic is “conspiracy”. As was the case with the topic of COVID-19, “conspiracy” is a topic that includes a multitude of different approaches. From the profile of the people who believe in conspiracies (Buturoiu et. al., 2021), conspiracies’ effects on behavior (Buturoiu et. al., 2021), to approaches to limit the effects of conspiracies (Grodzicka & Harambam, 2021). The keyword, furthermore, frequently co-occurs with the keyword “COVID-19” pointing out that conspiracies are currently often studied in the context of the pandemic.

The prevalence of these topics is also visible looking at a network of co-occurrences of words used in the titles of the publications (see figure 2). The network was created with the Gephi tool using all nouns, verbs and adjectives of the titles of the identified publications (verbs were transferred to the infinitive, nouns to the singular). For the illustration, only words were included if they occur at least twice in different publications. The frequency of occurrence is illustrated by the size of the word - the larger, the more prominent – and the color of the dot – the darker the green, the more prominent. Indicators for words often co-occurring are the thickness and color of the lines between words – the thicker and the greener the more often the connected words co-occur.

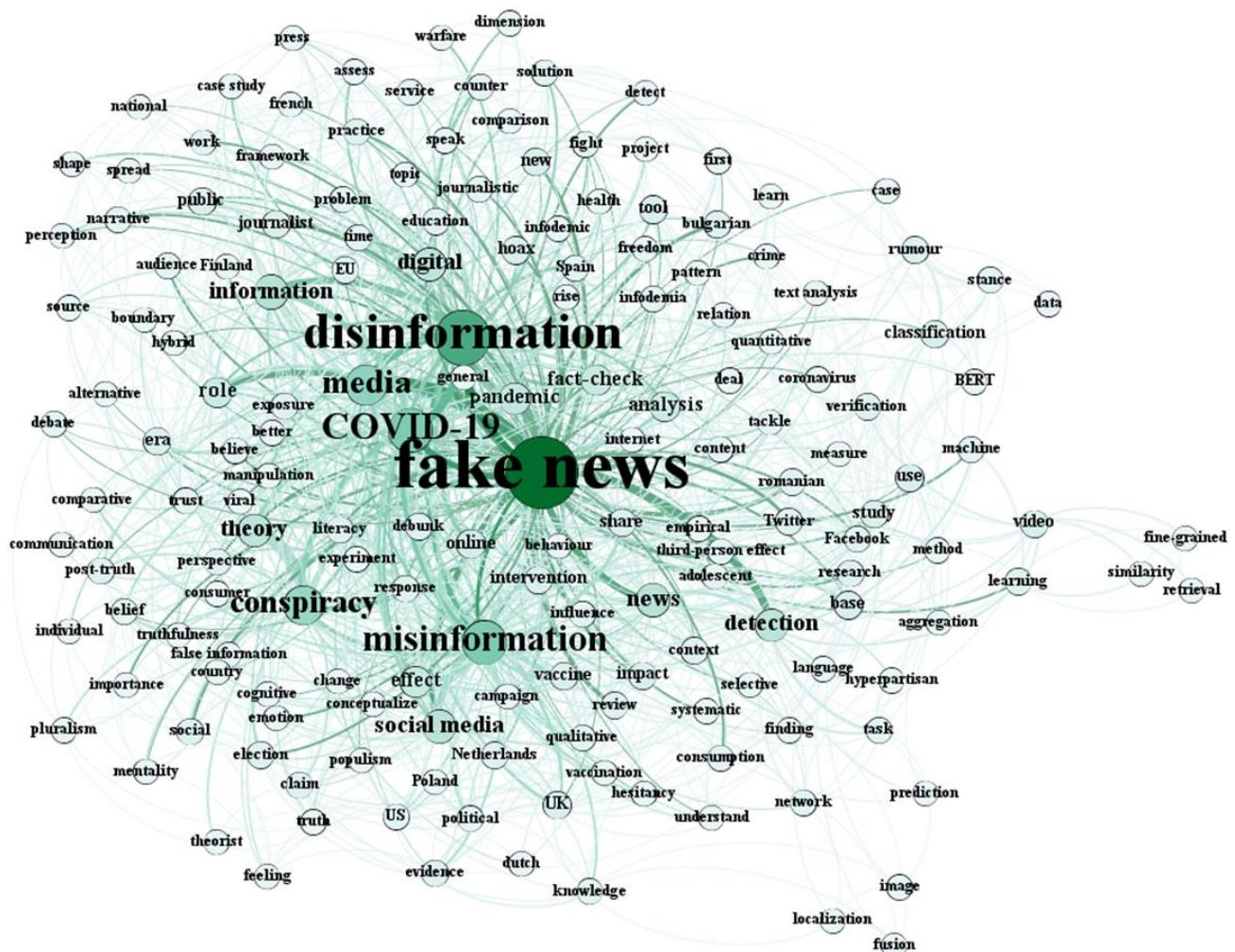


Figure 2. Co-occurrences of title keywords

Even though COVID-19 and conspiracy are often occurring in the title, further findings are that publications more often use the term “fake news” than disinformation and misinformation. Furthermore, publications address specific challenges associated with information disorders such as detection or classification and also mention specific implementations of methods such as BERT. Social media platforms that were studied and mentioned in the title are Twitter and Facebook. A considerable number of studies also focus on specific countries or regions - such as US, UK, Spain, Poland, Netherlands, EU or Finland or specific languages such as French, Romanian, Bulgarian or Dutch.

The broad range of used title words also illustrates how diverse research on disinformation is.

4.0 Assessment of the scientific repository

As part of the EDMO-project a repository of relevant scientific articles is established by Aarhus University in collaboration with ATC (IV.D.C). Our strategy was to use the literature search results gathered in IV.D.A. as the first input into the repository of scientific content and progressively update the repository using searches with carefully selected keywords and gather input from the EDMO hubs and research community on local academic material relevant to the repository.

The full description of the work of establishing, updating, and finalizing the scientific repository can be found in the deliverables *IV.D.A: Academic research on disinformation at scale in the EU* and *IV.D.C: Final repository of relevant scientific articles*.

4.1 Quantitative evaluation

The quantitative goal for the scientific repository was to have at least 200 entries of academic material. After the first literature search and subsequent manual coding, the repository was initially established with 117 results (Bak et. al., 2021), which was later narrowed down to 93 results following a more fine-meshed evaluation of the entries. As described in section 2.0, the final scientific repository was expanded on

with the help of the EDMO consortium, the EDMO Advisory Board and the EDMO research community, who were all contacted and asked to provide local entries to the repository. This “consultation of the EDMO research community resulted in 152 new entries that supplement the 93 entries identified by the literature search, resulting in a repository with 245 entries” (Walter et. al., 2022), thus meeting the quantitative goal of the scientific repository.

4.2 Qualitative evaluation

In terms of the qualitative evaluation of the scientific repository, several factors are taken into account. One key factor is how diverse the representation of research is in

terms of how many EU member states are being represented in the academic content. Following the latest update to the repository, 19 member states are represented, shown here followed by the number of entries in parenthesis: Italy (28), Netherlands (20), Romania (20), Spain (19), Belgium (17), Poland (15), Germany (14), Slovakia (10), France (9), Austria (7), Bulgaria (7), Greece (7), Denmark (5), Sweden (5), Portugal (4), Czech Republic (2), Ireland (2) Cyprus (1) and Estonia (1). The repository also included EU researchers' affiliates in UK (21), USA (11), Switzerland (10), Canada (5), Norway (3), Australia (2), Brazil (2), China (1), Israel (1), Japan (1), Qatar (1), Singapore (1), South Korea (1), Taiwan (1) and Wales (1). The consultation with the EDMO Hubs resulted in the representation of one additional European country – Estonia - and a better representation of others - especially the Netherlands, Romania, Belgium, Poland, Slovakia, and Bulgaria. Besides English 6 other languages are represented in the scientific repository, namely Slovak (6), Bulgarian (4), French (4), Dutch (2), Romanian (1), and Spanish (1).

Another key factor in the qualitative evaluation of the scientific repository is the representation of different research fields. With the inclusion of the input provided by the EDMO research community the following research categories were represented: Communication and Media Studies (90), Computer Science and Information Studies (80), Social Sciences (50), Health Care Studies (16), Neuroscience and Psychology

(13), Education Studies and didactics (5), Media Law and Economics (3), and Other (2), Food and Environmental Science (1). The categories of “Education Studies and Didactics” and “Food and Environmental science” are new additions to the list of research categories following the input of the EDMO research community.

For more accounts on how we secured the quality of the input provided by the EDMO research community, we refer to the full report on the method, process, and results, *IV.D.C: Final repository of relevant scientific articles* (Walter et. al., 2022). Related to future actions needed and the implementation of and limitations, the following was concluded in the report: “To be of use for researchers, the repository needs further updates in future to account for new publications as well. However, such a regular update also depends on financial and personnel resources” (*ibid.*).

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