What are Opinions? Integrating Theory and Methods for Automatically Analyzing Opinionated Communication (OPINION)

SCIENCE COMMUNICATION PLAN

COST ACTION CA21129 OPINION

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1 SUMMARY

OPINION will reach out to researchers and developers to enable the coordination of current research agendas to advance both academic and industry practices, as well as public literacy on how opinions are expressed and can be measured in digital media. Therefore, OPINION has a twofold objective. First, objectives of **knowledge exchange and creation**: to facilitate growth of new academic networks, to generate knowledge inside academic community and foster exchange of knowledge between academia and stakeholders in regulatory authorities, and industry. Second, **capacity-building** objectives: to provide training in computational methods and applied text-based opinion research for scholars and industry members, create a virtual hub for accessing key resources for teaching, learning, application and collaboration, to build a collaborative stakeholder (regulatory authorities and industry) relations network.

In line with objectives, OPINION's **primary target audience is the research community in Europe and beyond**, whose members will be reached using classic means of scientific discourse - conference presentations and paper, articles, chapters and books - alongside the virtual Computational Communication Lab, dedicated events, as well as OPINION's website and Twitter account, and established academic mailing lists. WG1 will lead OPINION's interventions into the conceptual and theoretical debate; WG2 spearheads OPINION's methodological contribution; WG3 takes leadership of setting up the Lab; and WG4 will head the training mission; all in close cooperation with other WGs. **The second major target audience are members of the media industries**, who will be engaged in stakeholder sessions, pointed to practice papers and opportunities to exchange data and tools through the Lab. The involvement of stakeholders will be managed by OPINION's Stakeholder Liaison Officer in collaboration with WG4. **The third audience are policy makers at the EU, national and local level**, whose involvement will be led by the Policy Liaison Officer, in collaboration with WG1 and WG4, using round table discussions and consultations; As a result of said consultations, OPINION will formulate targeted policy briefs that will be promoted on OPINION's website and social media account. Finally, **OPINION will address the general public**, using its website and social media accounts, by publishing educational and instructional videos, participating in popular science podcasts, making resources of the Lab usable by an average person, and through OPINION's direct engagement with civil society organizations. Communication with the public will be coordinated by the Science Communication Officer in collaboration with the WG Vice Chairs, according to the plan established and updated every six months by OPINION's Management Committee.

2 GENERAL AIMS AND TARGET AUDIENCES

With recent developments in digital media, the ways in which opinions are expressed online have become a prime subject of concern and debate among researchers, regulators, industry, and the public. While there are numerous efforts to develop computational tools for capturing various forms of expressed opinions, many suffer from a lack of shared conceptualizations, precise operationalizations and validated standards. OPINION aims to advance such a common understanding, advancing both academic and industry practices as well as public literacy on how opinions are expressed and can be measured in digital media. Therefore, the OPINION COST Action (hereafter OPINION) aims at:

1) integrating and consolidating existing theoretical approaches to conceptualizing opinions;
2) operationalizing an advanced, differentiated theoretical notion of opinions toward methodological implementation;
3) building capacity of researchers (in academia, politics and media industry) to apply theoretically and methodologically advanced approaches and computational tools in study of opinionated communication;
4) developing a transparent, open-science European toolkit to democratize the tools needed to monitor, track and understand opinion formation online;

To do so, OPINION will reach out to researchers and developers to enable coordination of current research agendas and reach following objectives.

Objectives of knowledge exchange and creation

OPINION will facilitate growth of new academic networks, generation of knowledge inside academic community and foster exchange of knowledge between academia and stakeholders in politics, regulatory authorities, and industry in several ways:

1) OPINION will reach out to researchers and practitioners in the key disciplines and fields to foster the exchange of knowledge on the interdisciplinary conceptualization of opinions and their expressions.
2) OPINION's working groups will collate and disseminate inventories of existing approaches, tools, and resources, and develop tutorials for researchers in academia, media industry, political and civil society sectors.
3) OPINION will build and disseminate an integrated terminology of opinion research and measurement to enable interdisciplinary approach to research on opinions in the digital networked age.
4) OPINION will establish a virtual Computational Communication Lab as an important reference point for researchers to enable the application of the integrated theoretical/methodological framework and make use of the data

collated by OPINION to foster further academic/industry research of opinionated communication.

5) The Lab will promote gold standards for data handling and validation, advancing transparent, user-friendly tools and easy to follow instructions that will make applied opinionated communication research accessible for all.

Capacity-building Objectives

1) To facilitate the transfer of knowledge between the OPINION network and interested members of the research and academic community, media industry, and civil society, OPINION will set up a dedicated Training Mission. OPINION will provide training in computational methods and applied text-based opinion research for scholars, with a specific emphasis on PhD students, early career researchers and researchers based in Inclusiveness Target Country (ITC), by organizing two training schools. Also, a Joint White Paper will give practice-based input for improving computational methods training.

2) To ensure that OPINION's resources are disseminated and exchanged between disciplines, institutions, and sectors, eight master classes will be designed and targeted to train OPINION members of different age, gender, institutions, countries, languages and disciplines; in addition, OPINION will offer at least eight workshops, of which six will be designed as advanced classes targeting OPINION members, and two will target journalist at appropriate venues such as the Perugia Journalism Festival (WG4).

3) OPINION will establish a virtual Computational Communication Lab as a hub for accessing key resources for teaching and learning, application and collaboration. The Lab will provide access to available key data sets and easy to follow instructions that offer guidance to members of the media industry, educational institutions, students (in various social and computational sciences and disciplines), civil society organizations, and the general public.

4) OPINION will build a collaborative stakeholder relations network with stakeholders in politics, regulatory authorities, and industry, by engaging stakeholders in OPINION meetings and workshops, organizing round table discussions within general OPINION meetings or Working group meetings. The Stakeholder Engagement Strategy developed under the leadership of WG4 and managed by the Stakeholder Liaison Officer.

5) OPINION aims to foster the emergence of an independent subfield and vibrant research community dedicated to study of textually expressed opinions beyond duration of OPINION in cooperation with existing initiatives, projects, and associations.

3   PLAN FOR THE COMMUNICATION OF ACTION RESULTS

In line with presented objectives, **OPINION's primary target audience is the research community in Europe and beyond**. The focus will be on researchers from different fields, including but not limited to: journalism and communication studies; digital sociology and political communication; computational linguistics and digital humanities; information science, computer science, and artificial intelligence. Beyond recruiting key members of the research community to become members of OPINION, outreach activities will target (1) researcher communities at the forefront of theoretical and methodological development; (2) researcher communities in disciplines and locations that can contribute key insights to widen the debate beyond WEIRD-dominated contexts; and (3) researcher communities that might specifically benefit from being included in the emerging scholarly debate. To identify key stakeholder groups among the research community, OPINION follows criteria attentive to both excellence and inclusiveness across disciplines, regions, countries, gender, and seniority.

Several communication channels will be used to inform the research community about the open events organized by OPINION, scientific publications, and possibilities to utilize resources of the Lab. Twitter will be used as a social media channel widely used by the academic community, to announce main outcomes of OPINION and to refer the audience to open access publications, repositories and other resources of the Lab. OPINION's website will be the main channel for providing access to all publications and resources (for example, inventories of tools, standards for data handling) produced by OPINION and its members. The website and social media activities will also serve to advertise grant opportunities relevant to the research community, such as STSMs and ITC Conference grants. The news section of the OPINION website, along with OPINION's Twitter feed, will serve to announce future events; while the contents of any past events, workshops, training schools, conferences will be rendered available via the website (e.g., minutes, materials). Potential participants of OPINION events will be reached through academic communication lists hosted by the major associations in each field, alongside internal lists and established networks of OPINION's members. Twitter account, website, and mailing lists will be operational from month three onwards, and be used along the lifespan of the network to release invitations to events (workshops, training schools) relevant outcomes (for example publications, Lab resources).

OPINION's second major target audience comprises members of the media industries (including SMEs), especially professionals in the fields of media and journalism, social media and technology, but also in business analytics, civil society organizations, and other industries concerned with the measurement and monitoring of expressed opinions. To identify key stakeholders in media industries and other relevant practitioners, OPINION follows a strategy that builds upon

members' existing networks, so as to ensure that all countries and diverse fields are duly considered. Key criteria include impact - the extent to which professionals hold the capacity to disseminate OPINION's outcomes further into their respective industries - and regional diversity, while paying attention also to gender inclusiveness. The involvement of stakeholders will be managed by OPINION's Stakeholder Liaison Officer. The Stakeholder Liaison Officer formulates a Stakeholder Analysis & Engagement Strategy in collaboration with WG4, updated every six months at WG/MC meetings. The purpose of the Strategy is to identify relevant stakeholders for input and dissemination. Relevant stakeholders will be identified on a continuous basis.

To reach out to relevant professionals, the Stakeholder Liaison Officer will organize dedicated stakeholder sessions (e.g., panels, keynotes, workshops or master classes, depending on appropriateness), to enable a structured dialogue and effective dissemination. Also OPINION's social media activities, the website and - once operational - the virtual Lab will contribute to reaching out to industry stakeholders and enabling collaboration (e.g., advertising stakeholder-targeted masterclasses and workshops, relevant resources); the specific needs of industry audiences will be kept in mind when designing the resources made available via the Lab (notably, practice papers, opportunities to exchange data and tools). This may involve translating academic outcomes into practical guidance and best practices, and similar outreach activities.

A third major stakeholder group includes policy makers at the EU, national and local level, including EU's DGs on Communication Networks, Content and Technology, and Education, Audiovisual and Culture Executive Agency; the Ministries of media and culture in COST countries and their regional media authorities; the European Broadcasting Union (EBU), European Regulators Group for Audiovisual Media Services (ERGA) and the European Platform of Regulatory Authorities (EPRA). Similarly to OPINION's strategy for identifying key stakeholders in industry, policy stakeholders will be identified primarily by leveraging existing networks of OPINION's members, many of whom are involved in policy processes. Key criteria for identifying relevant policy stakeholders again include impact, regional diversity and gender inclusiveness, but also timeliness in terms of ongoing regulatory or legislative agendas to whose formulation OPINION may offer valuable input.

OPINION will establish a dedicated Policy Liaison Officer to maintain close interactions with policy makers and invite them to represent their needs and interests to the OPINION network. The Policy Liaison will be monitoring ongoing legislative processes (in the various COST countries, and at the EU level) and identify opportunities to engage OPINION with regulatory authorities and interest groups, in some of the proposed ways – round tables, invited talks, policy briefs. Policy makers will be primarily addressed using direct communication (coordinated by the Policy Liaison Officer, but involving also OPINION's existing contacts), inviting these to take

part in round table discussions on OPINION events, or possibly organizing participation of key OPINION members in panels and events hosted by the stakeholder communities themselves. Relations with policy makers and regulators will be led primarily by WG1 and WG4, who will develop a program suitable for engaging with these in the context of joint network meetings and workshops during the third and fourth year. Policy-relevant outcomes of OPINION, such as policy briefs will additionally be disseminated using OPINION's social media activities and website.

Finally, OPINION will directly address the general public, using its website and social media accounts, but also via science podcasts (from month 12), and through OPINION's direct engagement with civil society organizations and events hosted by these (from month 24). Social media accounts and the website will be used to provide news about OPINION events and outcomes relevant for the public (e.g., explainers and accessible materials, release of learning resources (related to the Lab), or training events relevant for the general audience). Segments of the site will be dedicated to the aim of advancing public digital literacy in relation to opinionated communication. Most relevant findings about understanding opinionated communication, besides scientific publications, will be presented in an accessible manner for the wide audience. OPINION will publish videos of the Master Classes on its website for the general public. Master classes will be topical and address current social problems (e.g., polarization, misinformation). Instructional videos will be also used to facilitate use of the resources of the Computational Communication Lab.

The Computational Communication Lab will be the main communication channel for making outcomes of OPINION accessible to all. The Lab will employ user-friendly design, documentation, and open access instructional materials to make OPINION tools, data for testing and teaching material accessible to teachers, students, and general audience. Ideas, tools, data and standards generated within OPINION and within the Computational Communication Lab will be published on established open source sharing platforms (such as GitHub and OSF) and publicized through active social media communication that reaches out to users and researchers beyond the network.

OPINION members will aim at initiating thematic episodes with established podcasts, including but not limited to podcasts of OPINION network members and OPINION member institutions (e.g., CCS podcast), podcasts of related academic networks and associations, such as the ICA's podcast series to talk about opinionated communication research for a broad audience in popular language. WG4 will record testimonials from OPINION members and trainees at training schools towards the end of the action, and promote these on social media.

OPINION will aim to engage with the general audience by reaching out to civil society organizations, such as Civil Society Europe, WAN-IFRA, and their representatives to share perspectives on online opinion dissemination at General Assemblies or

Workshops in years three and four, or at events hosted by these organizations, as appropriate.

4   PLAN FOR THE DISSEMINATION OF ACTION RESULTS

For the main targeted audience – **researchers across Europe and beyond** – OPINION will disseminate results foremost through academic publications and conference presentations.

WG1 will work toward a glossary of key definitions and terms through literature review (D1.1, by Month 18), and on a book that synthesizes the theoretical state of the field (to be published open access). The book will be a joint publication on a comprehensive theoretical framework for the study of textually expressed opinions in different kinds of discursive contexts (D1.3, by Month 48). Furthermore, scholars will be working on articles to be published in various academic journals. For researchers that are interested in connecting their work with OPINION results, a joint manifesto on conceptual criteria and dimensions of textually expressed opinions and resulting research agenda (D1.2 by Month 36) will be published (in a suitable academic journal) and promoted on Action website, academic conferences and social media accounts. Various academic journals in several fields, data and code repositories will be used for dissemination of WG2 collaborative work with OPINION network members and affiliates for realizing a joint publication on strategies and recommendations for the automated extraction of textually expressed opinions (D2.2, by Month 36). All methodological guidance and standards developed by WG2 will also be included and presented in accessible terms in the context of the virtual Lab.

OPINION aims to publish main results for the academic community in scientific journals. In order to reach the widest possible community, OPINION will target leading journals of different scopes and disciplinary orientations, prioritizing reach, excellence, and the capacity to include relevant research communities. OPINION will favor open access peer reviewed publications if possible ("diamond" or "gold" open access), or journals that will allow OPINION articles to be deposited in open-access academic repositories ("green" open access). First drafts of journal articles will be presented and discussed (regular or specialized panels and sessions) at the main international conferences of established associations in all relevant disciplines, in which OPINION network members already participate.

OPINION has a dedicated **training mission aimed especially at young researchers and industry users**, with a specific emphasis on ITCs. Training Schools for early career scholars, young researchers and PhD students will be organized twice, during year 2 and year 3. For researchers and industry members, eight Master classes will be organized, two of which will be targeted to journalists through appropriate platforms like the Perugia Journalism Festival, while six of which will be organized

in conjunction with major OPINION meetings (joint network meetings, WG workshops). WG4 will develop an Inclusion Strategy White Paper, which will be published on OPINION's website; develop a program schedule of planned training events (D4.2, by Month 18); and design for training schools and master classes. Based on realized training activities, WG4 will issue specific recommendations for inclusion in computational methods training and collaborative textual research, which will be published on the website (D4.3, Month 48). All teaching materials used in training schools and master classes will be made available open source through the website. Best practice papers including methodological evaluation and recommendation of tools taught in eight Master classes will be used as a basis for making instructional material.

For the **industry, academic community, and educational institutions**, WG2 will develop an inventory of existing tools for the measurement of textually expressed opinions and their components (D2.1, by Month 18) and online teaching material and set of tutorials on the use of tools for extracting textually expressed opinions (D2.3, by Month 48), which will be available in several languages on the project website. WG3 will collate targeted resources suitable for designing, validating, and standardizing text-based opinion research across different types of applications (e.g., in different disciplines or industries) and different types of data. In this way, WG3 will build a repository capable of rendering the outcomes of OPINION's work widely and easily accessible, including an interface for the application of key tools for the extraction of textually expressed opinions (D3.1, by Month 18). Based on the validation of data and tools, joint gold standards and reference data sets for the extraction of textually expressed opinions in different discursive contexts (D3.2 by Month 36) will be published as part of the virtual Lab.

Key resources for users in industry, academic community, educational institutions and the general public will be rendered accessible via the virtual Computational Communication Lab as an open-access interactive online platform for the study of textually expressed opinions (D3.3, by Month 48). WG3 will design Computational Communication Lab as an online, interactive platform comprising any resources created by OPINION's WGs that are suitable for guiding and facilitating the practical application of text-based opinion research. The Lab will compile all relevant OPINION deliverables published on the website and open access software repositories (GitHub, CRAN, Pypi). Resources of the Lab will be promoted on social media, e.g. Twitter.

Policy makers will be addressed by Policy briefs (from month 24, 3 briefs in total, to be collated by the Core Group) addressing policy issues relevant to OPINION, focusing on the regulatory issues of pluralism and democracy, freedom of speech, trust and privacy in relation to digital communications. Policy makers will be also invited to participate in the WG1 meetings (in a format of roundtables and consultancies) in order to let them represent their needs and interests to the OPINION network.

5 PLAN FOR THE VALORIZATION OF ACTION RESULTS

OPINION will ensure scientific impact and exploitation of OPINION's results by researchers and academic community by providing open access to all publications preferentially by selecting open access journals and publication platforms or, where necessary, through paying open access fees to journals and book publishers and by providing open access to pre-print versions of publications by depositing it in academic repositories. Conference panels and workshops organized by/within OPINION will be opened to a broader audience by offering online participations whenever hybrid format is technically and organizationally possible.

OPINION will make technological impact by fostering exploitation of OPINION generated methods, tools and data by academia, industry and the public in general. This will be achieved by publishing all software as open source on existing general software repositories such as GitHub and language-specific repositories such as CRAN (for R) and Pypi (for Python). All tools will be documented and distributed in source form and in easily installable formats such as Docker. IPR will be managed by Open Oource standards stipulated by the MoU. To enhance exploitation, the virtual Computational Communication Lab will offer the most important tools as a web service to allow use without a large investment in hardware or IT skills. Making these services easy to install on cloud-computing platforms ensures scalability beyond the limits of the virtual lab and allows sensitive data to be stored locally while still using a cloud computing infrastructure. IPR will be managed by Open Source standards stipulated by the MoU.

The socio-economic impact of OPINION will be made by raising the capacity of researchers, industry members and interested citizens to apply computational methods in their research, line of work, and free time. For that purpose, OPINION will provide transfer of knowledge between OPINION members and industry members by organizing Master classes. To ensure transfer of knowledge beyond direct training participants OPINION will make training material open source through the project website, resulting in a set of tutorials and instructional videos to help people get started with computational methods. IPR will be managed by CC copyright standards. To provide impact beyond the network, OPINION will map the ability of members to provide methods training in languages other than English (i.e. to students at home). OPINION will achieve policy impact by issuing policy briefs for policy makers and regulatory bodies, particularly in the realm of media and communications.

Finally, **the widest societal impact** will be achieved by raising digital literacy of citizens through the Lab, which will offer easy to use, and easy to access codes and analytical tools that can be employed to analyze opinionated communication.