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Trustworthy Public Communication

HOW PUBLIC COMMUNICATORS CAN STRENGTHEN OUR DEMOCRACIES

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TRUSTWORTHY PUBLIC COMMUNICATION:

HOW PUBLIC COMMUNICATORS CAN STRENGTHEN OUR DEMOCRACIES

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Abstract
This report provides evidence-based insights and recommendations on how public communicators can strengthen democracies by navigating (new) information ecosystems in ways that earn the trust of citizens. At a time when trust in government is increasingly important to democracy, the report aims to support public administrations in tackling the societal challenges in communication faced around the globe. The report combines state-of-the-art scientific knowledge and insights from experts, new empirical research on the moralisation of policies and values-targeted communication strategies, and input from citizens on this topic to provide practical guidance to policymakers and public administration communications professionals.

WHAT IS PUBLIC COMMUNICATION?

This report has been written for all the public communicators tasked with explaining the role and outputs of public administrations. These people illuminate and explain content that is often the product of technical, prolonged or sometimes hastily put together compromises between different worlds which would – without their work of translation, adaptation and integration – be difficult to understand. In this, they are often tasked with complex topics, roles and processes on behalf of their institution, that can be challenging to navigate with limited resources in an ever–noisier information ecosystem.

Public Communication in practice means...

Press Releases: Information shared with media outlets,

Websites: Official governmental websites, Official Journals,

Social Media Content: Platforms like Twitter, Facebook, Instagram, LinkedIn,

Public Speeches: Delivered by government officials,

Email Newsletters: Regular updates sent via email,

Public Consultations: Inviting public input on proposed policies, such as in town halls, public forums, and community meetings,

Public Advertisements: Messages broadcasted on TV, radio, print or online,

Text Alerts: SMS notifications for emergencies or updates,

Publications: Reports, booklets, guides produced by the government,

Op–Eds & Articles: Published in newspapers or online platforms,

Ceremonies & Public Events: Official ceremonies, parades, public events, Public Art & Installations: Messages conveyed through public art, Educational Programs: Initiatives to educate the public on specific issues.

But also...

Hotlines & Help Desks: Providing direct assistance or information,

Mobile Apps: Governmental apps providing services or information,

Direct Mail Exchanges: Information sent via traditional mail,

Legal Notices: Required communications about legal proceedings or changes in law,

Fines and tickets: Penalty notifications to citizens,

Forms and applications: Citizens need to fill out paperwork to receive funding or information,

Surveys & Polls: Collecting public opinions ...

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10 Recommendations for "Trustworthy Public Communication"

Recommendation 1: Building and retaining public trust in their public administration, through being trustworthy at all times, should be a public communicator's primary goal

People are influenced by those they trust the most and judge the quality of information depending on the extent to which they trust the source. Building and retaining trust as a source of information will therefore help achieve the mission of the public administration. Greater trust in public administrations will also help reduce the demand for and impact of mis- and disinformation.

Trustworthiness is essential to the development and retention of trust. The more people perceive information and the source as trustworthy, the more likely it is that they will consider it. In the impending avalanche of A.I. generated content, where information sources will regularly be brought into question, trusted public communicators have a key advantage.

Recommendation 2: Public communicators should invest more in effective ways of listening to citizens to increase trust in their public administration and democracy

Citizens increasingly do not want to be broadcast at, but to be engaged with. Pluralistic, democratic societies, in which beliefs and values are diverse, have potential for polarisation and conflict. They also have potential for generating a wealth of innovative ideas that are not represented by partisan voices on social media. This means actively listening to better understand the values and behaviours of citizens, which allows policies and communications to be tailored or explained in a meaningful way when this cannot be done. When managed transparently, such engagement supports democracy by complementing elections as the only way for citizens to contribute to the democratic process.

Recommendation 3: Public communication goals – ranging from informing to behavioural change – should be decided up front and communicated transparently

The objectives of the public communicator can legitimately differ considerably from trying to support each individual to make an informed and autonomous decision, to aiming to change their behaviour in line with the goal of a policy or the institution overall. This means that the end goal of all communications needs to be declared up-front and matched with the appropriate mode of communication.

Recommendation 4: If behaviour change is the communication goal, behavioural sciences should guide the selection of the most appropriate tools

Behavioural science provides a range of tools to change behaviour, many of which involve communication. The effectiveness of each of these tools often depends on the specific context and citizens' existing abilities, knowledge and attitudes. The commonly used approach of 'nudges' has been criticised for being manipulative or overly focused only on automatic behavioural change without building capacity to make good decisions. Therefore, it may be advisable to use 'nudges plus' or 'boosts', which aim to build

citizens' competencies and empower them to make better decisions themselves. The behaviour change goals of any public communication should always be explicit and transparent.

Recommendation 5: Public Communication should not be "one size fits all", instead be formal, layered and acknowledge emotions and uncertainty

Public Communication should be user-centric, meaning that there should be something for everyone in Public Communication (summaries, quotes, FAQs, in-depth analysis, chatbots…), while public administrations should not hide behind simplistic messages, omit uncertainties or obfuscate through complexity. The balance can be achieved by multi-layered or progressive disclosure. Statements that do not acknowledge uncertainty that are later contradicted by events undermine trust in public administrations. Similarly, there is a false perception of a dichotomy between emotional and factual messaging, as effective communication needs both. Additionally, formality is an important heuristic for legitimacy that affects trust. Regardless of audience segment, citizens expect a more formal tone from public communicators as a means of demonstrating respect and enabling agency.

Recommendation 6: Public communicators should tailor audience research techniques to different public communication goals

Effective public communication requires understanding the audience to create messages that resonate but there are different ways to understand citizens, each appropriate to different goals. Audience research can take many different forms that should be employed depending on the complexity and behavioural or belief component being targeted. Deliberative exercises are essential to capture lived experience, adding a grounded reality and thereby unpacking the "why" of statistics and surveys. It is important to understand the right method of citizen opinion, attitude and behaviour elicitation.

Recommendation 7: Individual profiles should not be used to target Public Communication; one alternative is values segmentation, providing messages that resonate with all parts of society

Targeted personalisation in Public Communication can harm democracy through a reduction of accountability due to a decrease in commonly shared knowledge and a potential for increased polarisation. However, given the amount of noise in the information ecosystem, it is legitimate and useful for public communicators to use some targeting techniques to ensure their messages are received by intended audiences. For example, rather than targeting messages using individual profiles, grouping segments of the population e.g. by values preferences is a tested, accepted and trustworthy approach to reach diverse audience segments. All versions of targeted communications should be publicly available to be transparent and accountable.

Recommendation 8: Public communicators should acknowledge public concerns pre-emptively, before policy solutions have been developed, this includes strategies to combat mis- and disinformation

Authentic communication means listening more and addressing specific issues raised, honestly. When concerns are known, public communicators can engage in powerful pre-emptive communications. Providing information on legitimate concerns, values trade-offs, and uncertainties will help establish the public communicator as a trustworthy information source. Consequently, anticipating misunderstandings, information gaps, pre-emptively debunking mis- and disinformation will be more impactful when there is a track-record in place.

Recommendation 9: Public communicators should invest in evaluation to increase the impact of their communications

Investing in analytical capacity for the evaluation of communication impact should take precedence over short-term communication demands. If the public

administration does not have a strategic method for evaluation and learning, it will fail repeatedly, often at the expense of the taxpayer and in accountability measures that affect overall trust. Pre-testing messages and sharing successes and failures transparently to support the profession of Public Communication will help increase trust in the overall system.

Recommendation 10: New challenges require new skills, competences and centres of expertise to support public communication professionals

With the rapid development of AI, in an online 'click-bait' media environment, the public communicator will be under pressure. Adopting new techniques in support of a healthy information ecosystem will require professional and ethical trade-offs. Mastering the imminent challenges will require new job profiles, skills, and competences. In support of the profession, the creation of centres of excellence in e.g. understanding the online world, risk communications, science communication, etc. need to be championed. The role of public communicators should be recognised and resourced accordingly. Through citizen listening initiatives, public communicators will have unparalleled insights into grassroots' concerns. Recognising their potential as key knowledge brokers to evidence-informed policymaking will benefit all.

INTRODUCTION

> **" Mastering the imminent challenges will require new job profiles, skills, and competences.**

This report is part of the European Commission's Joint Research Centre (JRC) research programme "Enlightenment 2.0". Previous work has examined the drivers of political decision-making, the relationship between online technologies and political behaviour and the role of values and identities in the political process. This fourth report studies trustworthy Public Communication, providing evidence-based insights and recommendations on how public communicators can strengthen democracies by navigating information ecosystems in ways that earn the trust of citizens at a time when trust in public administrations is increasingly important to democracy and tackling the many societal challenges governments face.

Combining state-of-the-art scientific knowledge with new empirical research on values-targeted communication strategies and moralisation, the JRC team has also listened to citizens' perspectives on this topic to provide the best practical guidance to policymakers and Public Communication professionals in today's complex information ecosystem.

The information environment is the space in which humans and, increasingly, machines, process and produce information to make sense of the world. This space consists on the one hand of the infrastructure for the processing and distribution of information, enabling communications, including radio, television, social media, artificial intelligence, and gaming platforms. On the other hand, it consists of the content itself – information in all its forms, from the spoken and written word to images and videos. Importantly, just as distribution of information has not been automatic in the past, it is not in our new digital infrastructure via programmes, apps, algorithms which are human engineered, with the goal of maximizing the profit of the companies behind them, rather than the goal of information exchange optimisation. The information environment is therefore a complex and changing domain whose integrity is vital to the functioning and legitimacy of democracies as citizens and decision-makers are influenced by their surroundings.[1]

One justification of democracy as a system of governance derives from the idea that it can deliver "better" decisions and outcomes than e.g. autocracy because the "wisdom of crowds" is known to outperform any one individual. A fundamental pre-requisite of democracy is that people have agency. This agency can be compromised in various ways. This is the case if people are pervasively disinformed when information exchange

platforms are optimised for moral grandstanding rather than information exchange.[2]

Mis- and disinformation are inextricably linked to distrust and can be both cause and symptom within a complex web of variables. People who mistrust public administrations more readily believe misinformation about its actions and intentions. Belief in misinformation can cause people to take anti-democratic actions or further lose trust.[3] Consequently, this report focuses on the fundamentals of establishing trust in public administrations, primarily through demonstrating trustworthy behaviour. Strategies for combatting mis- and disinformation are addressed in context but are not central to this work.

At the root of many of our current societal opportunities and challenges are deep questions about how humans receive, produce and process information. Many of these questions, although using new words and referring to new contexts, share foundations with longstanding fundamental questions that have motivated research for many decades. Questions such as, *"Which claims should we believe?" "Who can we trust?"*. The answers to these questions are critical to the wellbeing of every citizen. How individuals, groups and public administrations filter the information that they use from the information that they decide to ignore or reject, impacts their daily decisions and democratic societies over the medium and long-term.

Consequently, trustworthy public communicators have never been more important as they deliver on the promise of liberal democracy. Importantly however, this report does not cover political communications

> " *Consequently, trustworthy public communicators have never been more important as they deliver on the promise of liberal democracy.*

i.e. not party political or election-related communications but thematically policy-specific communications, undertaken on behalf of public administrations. For the purposes of this report, the OECD definition of public communication is used which recognises this as *"a government function to deliver information, listen and respond to citizens in the service of the common good. It is distinct from political communication, which is linked to partisan debate, elections, or individual political figures and parties."*[4] While this distinction is often not clear-cut in practice due to *"the specificity of politics relative to other human activities, which lies in the importance of the normative nature of the decisions taken"*, it necessarily affects the nature of Public Communication.[5] Furthermore, in light of the importance of evidence-informed policies underpinning democracies, communicating scientific knowledge to policymakers is included under this umbrella.[6]

In order to communicate and inform citizens in ways that are consistent with upholding democratic values, a public communicator needs an information environment that is conducive to do so. Policies are needed to encourage the creation of environments designed explicitly in support of these values. This report seeks both to support public communicators and inspire policymakers.

To do this, the report is practical in nature. It draws from science, philosophy and practical experience, ensuring that the recommendations are evidence-informed, ethical and easily implementable. To facilitate user-friendliness, the report is structured around 10 recommendations. The science and ethical reasoning are combined in each recommendation. Central to the recommendations is the concept of different

modes of communication and how these can be matched with public communication goals.

Finally, a brief word on methodology. While the previous "Enlightenment 2.0" reports were predominantly based upon state-of-the-art scientific reviews, this report required a different approach to generate practical recommendations that could be immediately implementable across public administrations. Here, a state-of-the-art scientific review provided the fundamental basis, but this was insufficient as

the read-across from US values-related research is increasingly irrelevant in the European context. It was therefore necessary to engage in new primary research and to set-up a citizen engagement exercise across different Member States to listen to and understand citizens' expectations of Public Communication. This engagement exercise made use of the knowledge accrued during the previous phases of the project. An overview is provided below in Table 1, while the details of the different research phases are provided in Annex 1.

Table 1 Research methodology overview

	Type of research	Number of participants	Countries
Values-based messaging & ethics research	Quantitative online survey	1,548 participants (representative sample)	CZ, EL, FR, SE
Political moralisation of policy issues	Quantitative online survey	2,324 participants (representative sample)	DE, DK, FR, PL, PT, RO, US
COCOMI	Quantitative online survey	5,228 participants (representative sample)	DE, EL, IRL, PL
Citizen engagement	Qualitative in-person focus groups	98 participants	BE, DE, EL, IT, LT, MT, PL, RO, SK
Multidisciplinary state-of-the-art scientific reviews	Expert elicitation	40 experts (see Acknowledgements)	Worldwide

NORMATIVE STATEMENT

Where normative judgements were required, the authors used the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities, as laid down in Article 2 of the Treaty on European Union, to guide all recommendations.

Rather than following the traditional structure of a scientific publication by the European Commission's Joint Research Centre, this report is structured

around 10 key recommendations to allow public communication practitioners easy access to the latest science, in an accessible way. The recommendations are formulated in "should" form to encourage their uptake by readers. While the authors' recognise that the scientific evidence cannot lead to normative recommendations in their own right, they consider the additional combination of expert elicitation, citizen perspectives and practical communications experience as legitimate reasons to substantiate this approach.

RECOMMENDATIONS TO COMMUNICATORS ON "TRUSTWORTHY PUBLIC COMMUNICATION"

Based upon state-of-the-art scientific knowledge, insights from experts, new empirical research on the moralisation of policies and values-targeted communication strategies as well as input from citizens, this is what we know...

RECOMMENDATION 1:

BUILDING AND RETAINING PUBLIC TRUST IN THEIR PUBLIC ADMINISTRATION, THROUGH BEING TRUSTWORTHY AT ALL TIMES, SHOULD BE A PUBLIC COMMUNICATOR'S PRIMARY GOAL

> " Greater trust in public administrations will also help reduce the demand for and impact of mis- and disinformation.

People are influenced by those they trust the most and judge the quality of information depending on the extent to which they trust the source. Building and retaining trust as a source of information will therefore help achieve the mission of the public administration. Greater trust in public administrations will also help reduce the demand for and impact of mis- and disinformation.

Trustworthiness is essential to the development and retention of trust. The more people perceive information and the source as trustworthy, the more likely it is that they will consider it. In the impending avalanche of A.I. generated content, where information sources will regularly be brought into question, trusted public communicators have a key advantage.

Trust: Why is it important?

There are signs indicating that some Western societies could be on the brink of a tipping point when a majority of people no longer trust governments or official communications by default.[7] This may be legitimate as governments have not always provided trustworthy communications, coupled with the fact that the information environment is increasingly flooded with untrustworthy information from nefarious and naïve actors, making it difficult for citizens to discern trusted information.[2, 8] Trust is not always the solution but distrust is a problem. Democracy does not depend entirely on trust, but too much distrust undermines democracy.[9] In an age of complex problems that require coordinated responses on a global scale, trust facilitates the emergence of cooperation and collective intelligence, thanks to which arguments can be built stronger, attentiveness to reasoning errors can be greater, collection of evidence can be

more rigorous and outcomes are more robust.[2, 10–12] In short, in democracies where people trust an organisation or person, they are more likely to align their behaviour or beliefs to what that organisation or person advises.

Losing trust can make public administrations less capable of collective action, like motivating people to get vaccinated in the public interest or follow emergency rules. As a consequence of lack of trust, people turn towards alternative sources. For example, a report by the Council of Canadian Academies estimated that science and health misinformation cost the Canadian healthcare system at least $300 million during the COVID-19 pandemic.[13] If large groups of people are affected, being less trusting of institutions also makes people more vulnerable individually.[14, 15] For example, research on Turkey and Italy addressing populism highlighted possible links between trust and attitudes that are incompatible with democratic values such as the Rule of Law. Using representative population samples, research findings suggest that when trust in national public administrations is higher, populist attitudes such as "the people" and anti-elitism discourses are lower. Trust in national public administrations may help avoid dividing society into antagonistic groups and contribute to a positive assessment of those in power. Consequently, trust in the political system correlates with lower citizens' attachment to populist attitudes.[16–18] Further research has demonstrated that trust in public administrations is linked to an individual's lower likelihood of voting for a political far-right party.[19]

A recent meta-analysis of 61 studies on political trust reported 329 coefficients derived from over three and a half million observations globally. The results suggest that there is a correlation between trust and what people want from their political systems and how they interact with it.[20]

Trust, however, needs to be earned and this cannot be taken lightly. Just as trust in sources of disinformation is harmful, so is trust in governments that are not responsive to its citizens. Figure 1 shows the relationship between governance quality measured by the World Bank (WBI) and trust in government.[21] This illustrates the principle "trust but verify", where citizens should be trusting a government only in the case it performs up to the standards and expectations of citizens. The figure is separated into four quadrants:

1. **"sceptical trust"** where citizens trust their governments mostly but the system is also responsive to citizens' needs as measured by the WBI,

2. **"cynical mistrust"** where citizens do not trust their government (any longer) despite it still being relatively responsive to their demands,

3. **"sceptical mistrust"** where citizens don't trust their government but where they are probably right to do so and finally,

4. **"credulous trust"**, where citizens seem to trust their government while the government seems to relatively ignore what its citizens want, thus it seems that the trust may be potentially misplaced.

The figure shows that in most countries (democracies in green) in which governance is better, citizens usually tend to trust their governments more. However, there is also the well-known paradox that some authoritarian regimes – not known for listening to citizen concerns – are also highly trusted, thus for authoritarian regimes (red dots), there is no relationship between governance quality and trust in the government. For the results in these authoritarian countries, the reader should note that surveys can be less reliable through self-censorship.[22]

The nature of trust

Building trust is a slow and progressive process, which can be more quickly compromised and destroyed by negative events and actions than it can be built upon positive events. This is the 'Asymmetry principle' meaning that trust is much easier to destroy than to

Figure 1 Governance quality (WBI) and trust in governance relationships in selected countries
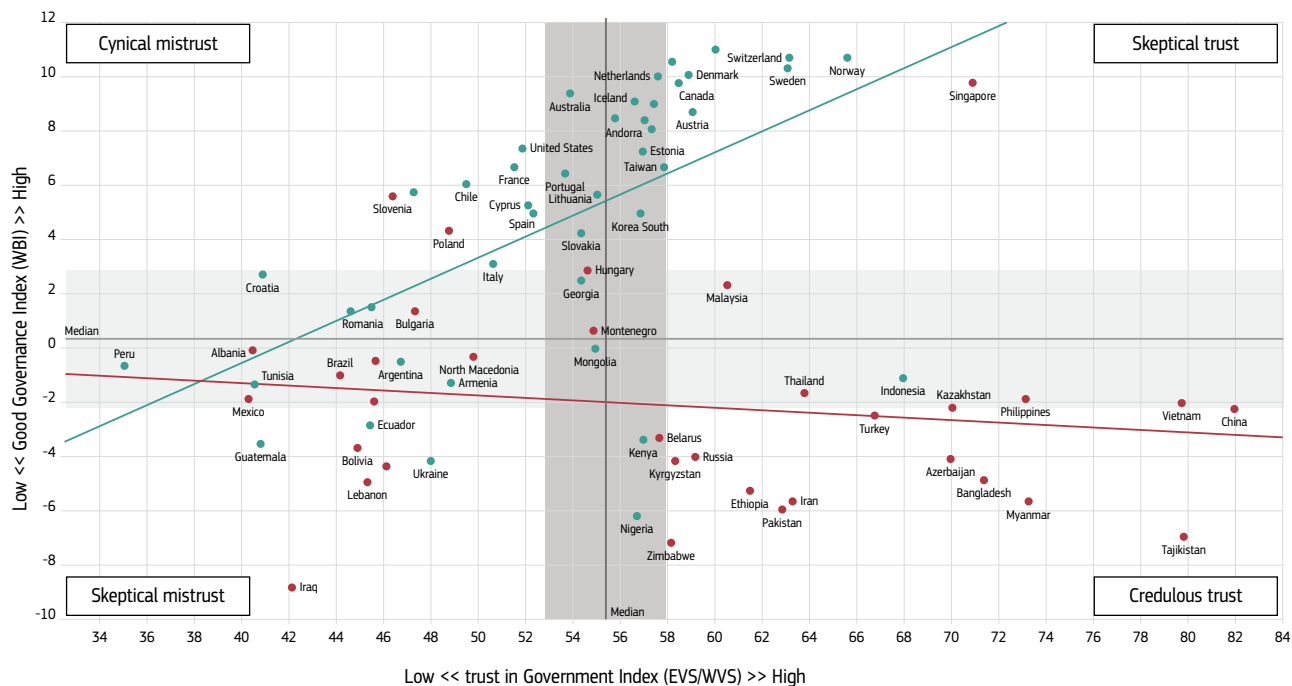
Source: Norris (2022): green dots represent democracies, red dots autocracies.[21]

be earned because only one instance of untrustworthiness is needed to illustrate that a person or public administration 'cannot always be trusted'.[23, 24]

Trust can be understood as a marker of predictability and reliability of outcomes or of good will and benevolence in relation to character or intent.[25] It applies to individual relationships as well as to groups and public administrations. It contributes to the stability of these relationships and underpins effective cooperation in society. Conversely, the absence or decline of trust can lead to adverse consequences such as less support for law compliance.[26]

Establishing and maintaining trust needs to incorporate ethical considerations. Trust can be falsely built or maintained through deceptive practices and propaganda, showing that trusting is not always indicative of trustworthiness. Conversely, lack of trust does not necessarily indicate unethical conduct. Trust can vary due to various factors unrelated to ethics or the way a public administration communicates, such as familiarity, competence or propaganda campaigns.[27, 28]

Trust among citizens for public administrations has a moral component. It implies a belief that the trusted party has aligned values, or at least transparently communicates to the citizens and is motivated to act in a way that is worthy of trust.[29] This is an asymmetrical relationship because citizens – as the trusting party – who are encouraged to place trust in a public administration, rely on its honesty and good will, making them vulnerable in this respect. Consequently, granting trust to public administrations entails the assumption that they act according to their stated values and perform their duties reliably with competence, integrity and accountability. This means that all people in public office are responsible for behaving in a trustworthy manner and hence upholding trust, not just the communicators.

Trust predominantly declines when governmental and public administrations fail to perform their tasks properly or engage with actions beyond their expected limits.[30] It is fundamental to understand the importance of this as trust is a primary determinant of citizens supporting governments and the implementation of

their policies.[31] For example, higher trust causally influences compliance with tax obligations and therefore reduces enforcement costs.[32]

Confidence in government means a belief that the political system relied upon is qualified, possesses expertise, is competent and capable of doing certain things to the satisfaction of the voting public. However, citizens could believe that policymakers and government officials are competent but fail to trust them because they believe they are dishonest, corrupt, self-serving, or in the pockets of interest groups. Communication with citizens, therefore, needs to provide the type of evidence that justifies belief in public administrations. Such evidence is not just about competence and expertise, or information on the policy itself, but evidence of policy objectives and how policies are designed to achieve them. This allows the audience to assess whether or not they feel the policymaker has motivations that they can share or at least accept.

Trust and mis- & disinformation

According to the World Economic Forum's (WEF) Global Risks Report 2024, mis- and disinformation – the persistent presence of false information (deliberate or otherwise) – is identified as the biggest short-term risk facing the world today. The WEF suggests mis- and disinformation may radically disrupt electoral processes in several economies over the next two years. This is attributed to a growing distrust of information, as well as media and governments as sources that are likely to deepen polarised views. The report also highlights the possible risk of repression and erosion of rights as some authorities may seek to crack down on the proliferation of false information.[33]

By contrast, in academia there are different perspectives on mis- and disinformation and the extent to which it is a concern. In terms of its impact on democracy, there are some arguments that interventions could undermine democratic principles including freedom of expression as people generally do not believe just anything.[34–37] However, there is a substantial body of work around misinformation and disinformation that demonstrates that belief formation is not always a rational process, and that individuals can be susceptible to accepting false information when it aligns with their existing knowledge or core beliefs, or when there is information overload and people rely on fast, heuristic processing.[38] For example, both true and false claims are believed more, the more often they are repeated because they feel more familiar and thus truer.[39] Importantly, measurable misinformation impacts have been noted not only on beliefs but also on behaviours, as was the case during the COVID-19 pandemic where mask wearing, social distancing and vaccination uptake were negatively affected.[40–42] When addressing mis- and disinformation, it is important for the public communicator to know that research shows corrections and fact-checks are only partially effective.[38] So given the evidence that mis- and disinformation can effect behavioural change, it is important that mis- and disinformation is addressed by the public communicator but this should not be seen as an alternative to establishing long-term trust-building strategies. Details of how to specifically address mis- and disinformation are outlined under Recommendation 8.

Trustworthiness

Credulous trust, as mentioned above, is not desirable, as it can result in citizens being deceived and public administrations not being rightfully held to account[21]. Trust should therefore be calibrated, and mistrust in public administrations that do not fulfil their mandate is entirely legitimate[43]. This has led some experts to argue that the best for society would be for everyone – to some degree – be untrusting by default to force those who are genuinely trustworthy to demonstrate their trustworthiness in a way that cannot easily be emulated by the untrustworthy.

Trustworthy behaviour and communication is therefore key to the legitimate establishment of long-term trust.

The more people perceive information as trustworthy, the more likely it is that they will take it into account.[27] For public communicators, this can be translated into a quest for 'intelligent openness' where information is intelligible, usable and assessable – that is, that others can assess its quality, reliability and honesty for themselves is as important as access to the information itself.[44]

There are institutions that help citizens make informed inferences on the trustworthiness of political actors, such as public prosecution offices, ombudspersons, and courts of auditors, as well as many civil society organisations. New research suggests that making the existence of the institutions with the mandate for accountability more salient increases trust, yet these institutions are often unknown to citizens.[45]

CITIZENS TOLD US…

Points on trustworthiness from 98 citizens in 17 focus groups from 9 EU Member States

(Methodological details in Annex)

Most participants had not previously considered what public communication means prior to the focus groups. Participants did not have distinct or established ideas about what Public Communication should entail. Citizens have difficulties distinguishing between communications from political figures and those of the public administration in which the politicians hold office.

- Transparency is high on the list, but expectations are far beyond simply "telling the truth"; and the concept extends to the idea that public administrations should ensure that information is clear and understandable, even on the most complex of topics – the "truth well told".

- The concept of transparency is linked to the idea of providing citizens with complete information, and offering them the opportunity to find out more about a given topic if they wish to do so.

- The desire for transparency was also reflected in attitudes towards the tone of Public Communication expressed by numerous participants,

namely that such communications should tell citizens the truth in a matter-of-fact manner, not making light of serious situations but also resisting the urge to catastrophize and frighten.

- Public administrations should not seek to "hide" information, present it selectively or spin its presentation to distort citizens' perceptions.

- Some citizens suggested that governments needed to "get down from their pedestal" and communicate with people in everyday language.

- The clear signature on communication materials from the public administration was considered an essential marker for participants to understand that the source of the message was a public administration.

- Across focus groups, a common idea was that while public administration communications should uphold a level of formality, these communications should still be creative.

Many of the findings in the academic literature were also volunteered by citizens in the focus groups conducted for this report. Participants were asked to outline what they want from public administrations and what public communicators can do to help ensure their work is perceived as trustworthy.

Trusted sources in a new communication environment

Given the importance of trust in the communicator for believing their messages, it is important to understand which factors influence that trust. Generally, people tend to trust sources that are perceived to share their values and worldviews.[46, 47] Closely related to this is the fact that people believe in-group members more than out-group members.[47,48] How to dive deeper into values and identities is explained further in Recommendation 6.

In contrast, generalised distrust in mainstream media, experts, and political elites is increasing and can be of substantial concern because it makes public communication significantly harder.[49] In today's world, such "epistemic mistrust" has been proposed as a major driver of belief in misinformation and conspiracy theories; epistemic mistrust "manifests as the rejection of authoritative information" and creates an "epistemic vacuum" that makes people vulnerable to misinformation and biased cognition.[50] Accordingly, greater trust in scientists and health professionals, as well as lower trust in digital media, have been found to be associated with lower levels of false COVID-19 beliefs.[51, 52] On the flipside, given that many citizens still trust scientific experts and political elites, if these trusted figures make false claims, the impacts can be

> *" Generally, people tend to trust sources that are perceived to share their values and worldviews.*
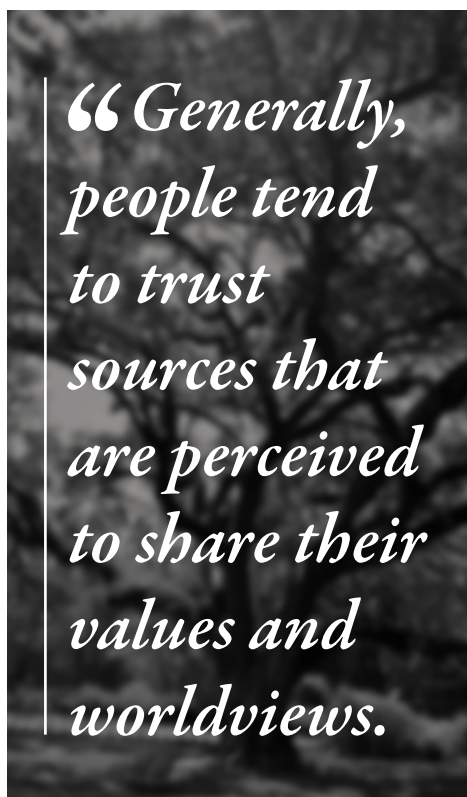
particularly detrimental, decreasing future trust and negatively affecting policy impact.[53, 54]

Despite the importance of source trust, it should also be kept in mind that people sometimes ignore source information. For example, the plausibility of a headline can be more important than its media source (and the source's credibility) for people's belief formation.[55] People also often forget or misremember sources; as such, people may inadvertently trust misinformation from sources that have provided quality information in the past.[56] This is another reason – beyond distrust in "elite" sources – why credible sources can find themselves in competition with low-credibility sources.

Consequently, people often continue to rely on misinformation in their reasoning even if the information has been retracted.[38] Indeed, it has been shown that inferences persist in part because people do not believe corrections.[57] However, receiving a correction from a source high in trustworthiness reduces the use of erroneous information and therefore maintaining trustworthiness of public communicators is particularly important to fight mis- and disinformation.[58, 59]

Trustworthiness is also vital as in the wake of the exponential growth of Artificial Intelligence (AI) technologies, fears of negative societal and individual impacts due to disinformation generation are a very real concern.[60, 61] A 2023 report from the European law enforcement group Europol, estimated that *"as much as 90 percent of online content may be synthetically generated by 2026"*.[62] Deepfake technology is of particular concern and the report recognised that it is difficult for online users to remain vigilant. Thus, it

cannot be entirely the responsibility of individuals to sort through information to distinguish fake from real.

In the focus group discussions, citizens voiced strong opinions when the topic of online influencers was raised in the context of Public Communication and trustworthy sources. Most participants were familiar with the term "Influencers" but did not associate it with communications by public administrations. Many participants suggested that influencers are not perceived as being authoritative figures or having expert knowledge. The concerns raised about influencers included legitimacy to speak on behalf of public administrations, (in)coherence between the topics on which influencers post routinely and what they would be communicating about on behalf of public administrations. There were also concerns that citizens who do not follow influencers could miss out on important information, and the legitimacy of using public funds to work with influencers.

In line with citizens' reservations, a 2024 European Commission report [1] found that four out of five influencers on social media fail to disclose commercial content they post as advertising as required under EU law. The screening of 576 influencers showed that nearly all (97%) of them posted commercial content, but only 20% systematically indicated that it was advertising.

Assuming trustworthy sources can continue to be identified accurately — in an ever-changing online environment - the source will become more important than ever, meaning that the influence of the trusted public communicator will only grow.

Given the importance of trustworthiness, public communicators need a way to check their messages for all dimensions of trustworthiness. The TARES test described below identifies several dimensions that can contribute to building trust in the long-run through communication:

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[1] https://ec.europa.eu/commission/presscorner/detail/en/ip_24_708

Putting science into practice: The TARES Test – Five Principles for Communication

The 2020 European Communication Monitor surveyed 2,324 professional communicators in 44 countries across Europe and found that almost every second professional communication practitioner in Europe (46.5%) had experienced several ethical challenges in their day-to-day work during the 12 months prior to the survey. However, 40% cent of the respondents had never participated in ethics training. Many of the ethical challenges were related to the use of digital technologies: using social bots, big data analytics, sponsored content, and social media influencers.[63]

Communication in general, independent of the goal, should follow ethical principles.

Given the lack of training on dealing with these difficult ethical issues, a check-list based upon work by researchers is set out below.[64] The five-part test establishes ethical boundaries that can guide communication design, in particular when the intent is to persuade an audience. The checklist was supplemented by questions from work by other researchers.[65–72] Originally developed for for-profit communicators, discussions with academics suggest that the checklist can be legitimately adapted and used as a tool for reflection for public communicators.

The TARES Test consists of five principles: **T**ruthfulness (of the message), **A**uthenticity (of the persuader), **R**espect (for the persuadee), **E**quity (of the persuasive appeal) and **S**ocial Responsibility (for the common good). Adapted self-reflection questions are provided to guide the practitioner in applying the TARES Test principles.

Truthfulness of the Message

Public communicators are encouraged to ask themselves the following questions when crafting messages in relation to truthfulness:

1. Has the message de-emphasized information that audiences might consider important?
2. Does the message represent the whole, complete truth?
    a. Was information or uncertainty left out in order to make it more persuasive, or even manipulate the audience?
3. Would I feel the information was complete if given to me in the provided context?
    a. Would people with strong negative opinions on the topic think important information had been left out?
    b. Would I want more information?
4. Is any withheld information important in allowing the audience to make an informed decision?
5. Does the message deceive people either explicitly or implicitly?

Authenticity of the Communicator

The TARES test focuses on the responsibility a public communicator carries in developing messaging. As such, the authenticity of the persuader can legitimately be called into question, therefore exploring the following questions has merit.

To explore your own authenticity on a matter, ask yourself the following questions:

1. Do I think the goal of this communication is what the audience would expect and want it to be?
2. Do I personally believe the audience will benefit?
3. In participating in this action is my integrity being called into question?
4. Am I happy to take responsibility for this message?

A public communicator may not be able to respond to all the questions above, as knowledge of the subject may be insufficient. However, it is important that the ethics of a communicator require them to be informed on the most important elements of a policy as reflected by the questions above. Additionally, a discussion with the policymaker on the questions above is highly encouraged.

Respect for the Audience

Respecting the audience means that the public communicator does not see the audience simply as a means to an end for the benefit of their public administration, but rather that the communicator considers the ramifications of any messaging on different subgroups of the audience. The wellbeing and autonomy of the audience should be respected and considered in any form of messaging so that well-informed decisions can be made. This goes back to the idea that the results of the action are as important as the action itself. The following questions should assist with these reflections:

1. Does this message allow the audience to act autonomously and with consent?
2. Does this message pander to or exploit its audience?
3. Have I taken the rights and wellbeing of others into account with the creation of this message?
4. Will the audience benefit if they engage in the action the message conveys?
    a. What might the downsides be?
    b. Is that trade-off explicit?
    c. How might different people consider that trade-off?
5. Does the information give the audience all the information they might consider important when making this decision?
6. Is the message unfair or to the detriment of any subgroup of the audience in any way?

Equity of the Persuasive Appeal

Equity refers to the balance of treating each member of the potential audience with the adequately enabling respect and concern, meaning that more support is provided to vulnerable groups. The TARES test specifically tasks communicators to examine their messaging, not only from their own perspective, but also to consider the intended audience to determine if the message is equitable. The following questions should assist with these reflections:

1. Will all potential audience members understand that they are being persuaded and not informed, and the degree to which they are being persuaded?
2. Have I targeted a specific subgroup of the audience or vulnerable population?
   a. Why have I chosen them?
   b. How would I justify this if asked by that audience?
   c. Could additional support be given to this particular group?
3. Would I feel this message was equitable if presented to me or someone I love?
4. Does the message take into account the special needs or interests of the target population?
5. How can I make this message more equitable?
6. Am I using an appeal to emotions responsibly?

Social Responsibility and Ethical Decision Making

As fundamental to upholding democratic values, the public communicator should consider the responsibility they have when creating messages. Researchers argue that public communicators have a privileged voice in society and thus share a responsibility to improve the overall information environment. Communicators should consider social responsibility on both the macro and micro levels looking at effects on individuals and groups. The following questions should assist with these reflections:

1. Does this message help or hinder public trust?
2. Am I a trustworthy source to be communicating this message?
3. Does this message allow for consideration of legitimate opposing views?
4. Does this message create the opportunity for public engagement and dialogue?
5. Will having or not having this information harm individuals or groups?
6. Have the potential negative impacts of the message been taken into account?
7. Does this message unfairly depict groups, individuals, ideas or behaviours?

8. Am I communicating this message for the benefit of the audience, to be useful to them, or for my own benefit – to be useful to me or to my public administration?

These questions are intended to serve as a reflection tool for public communicators, but can also be used as a checklist. To cross-check the potential sensitivity of the topic, the JRC has developed a number of useful tools that that can assist with a heightening understanding, these are available online at: https://op.europa.eu/webpub/jrc/jrc-values-identities/tools.html

RECOMMENDATION 2:
PUBLIC COMMUNICATORS SHOULD INVEST MORE IN EFFECTIVE WAYS OF LISTENING TO CITIZENS TO INCREASE TRUST IN THEIR PUBLIC ADMINISTRATION AND DEMOCRACY

> " In all societies, beliefs and values are diverse, which means people due to their different life experiences, see and value the world in different ways.

Citizens increasingly do not want to be broadcast at, but to be engaged with. Pluralistic, democratic societies, in which beliefs and values are diverse, have potential for polarisation and conflict. They also have potential for generating a wealth of innovative ideas that are not represented by partisan voices on social media. This means actively listening to better understand the values and behaviours of citizens, which allows policies and communications to be matched or explained in a meaningful way when this is not the case. When managed transparently, such engagement supports democracy by complementing elections as the only way for citizens to contribute to the democratic process.

Public reasoning and deliberation

In all societies, beliefs and values are diverse, which means people due to their different life experiences, see and value the world in different ways.[73] The strength of pluralistic societies is that they try to offer individual freedom to allow this diversity to be expressed, offering the potential to generate novel and innovative ideas that would not otherwise be present.[74] This diversity can also lead to policies being more contested in the public space, which may raise concerns or lead to dissatisfaction among some groups. Nevertheless, argument does not mean outright conflict but can be exchange and debate, a collective, inclusive, collaborative enterprise distinct from debating contests which have a winner.[75]

This form of collective reasoning is a societal strength rather than weakness. Recent advances in psychology emphasise that individual reasoning is not primarily intended to solve issues or to find the best solutions, instead reasoning serves to get what we, as individuals want.[76] Importantly, collective reasoning and deliberation can overcome limited individual reasoning. It serves many purposes including, but not limited

to, individual and collective sense-making, improving communications with each other, predicting possible future outcomes, and imagining and evaluating ideas. For democracies, reasoning is also a means to improve knowledge and take better decisions[43].

Research has shown that policymakers can believe that citizens do not know enough about policies to ask them their opinion. This is in line with the concept of "rational inattention" meaning that citizens can perceive the costs of being better informed are too high compared to the benefit of having a voice on political matters.[77, 78] It is therefore "rational" for citizens not be informed and devolve responsibility to representative democracy.[79, 80] However, rational inattention also includes the idea that if people are given the incentive, means and time to be informed, they have the potential to provide better input to the political process than a policymaker lacking in personal experience of the issues under consideration.[81, 82] This is particularly true when involving individual citizens directly affected by policies, and where policymakers are providing opportunities for citizens' voices to be listened to. For initiatives such as the Irish referenda on abortion and same sex marriage, the incentive to citizens to be involved helps tip the balance of costs and benefits, making engagement the rational option.[83]

To better understand individual preferences and public deliberation, researchers have conducted experiments and reviews to examine the effects of deliberation on citizens' preferences.[84, 85] The results found that deliberation led to more informed and more cohesive preferences. Deliberation also had a positive effect on participants' understanding of the issue being discussed and their ability to articulate their positions. Additionally, experts argue that such reflective deliberation processes encourage citizens to think critically about issues, rather than partisan attachments. This, in turn, promotes more informed decision-making and better outcomes for the public at large. These findings suggest important implications for the functioning of democratic systems, the need for increasing citizen engagement and the role that public communicators can play in

these processes. It also highlights the need for ongoing citizen listening initiatives to understand and contextualise the outcomes from deliberative processes, to better inform policymakers in their decision-making.

Today, many public arena debates take place on social media platforms[2] which have not been designed for collective sense-making, but rather attention capture to maximise profit.[3] As part of this attention capture, content that increases moral outrage and out-group stereotyping is promoted[86], rather than moderated.[86, 87] Additionally, social media seems to facilitate information sorting, leading to increased polarisation over time, for example around the topic of vaccines.[88] In fact, the increase in mobile internet enabled this type of platform interaction and with it the spread of more in-group orientation and out-group hate.[89] A recent study suggests that people would even be willing to pay money, if they had the ability to turn off social media such as Tiktok or Instagram for everyone, including themselves. However, because they cannot do this, they are reluctant to make the personal switch as they might miss out on important individual interactions.[90] Consequently, there is a need to consciously design the environment in which public policy debates take place, with measures to ensure effective, open, and transparent deliberation.

Crucially, with such infrastructure in place, public communicators will have the means to listen to what citizens are prepared to endure/support to make things better and provide these insights to policymakers.[91, 92] Such insights will also enable subsequent communications to be framed ethically in terms of values. This approach can increase message resonance, in a way that is both meaningful and ethical as outlined in Recommendation 7.

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2   As of January 2024, Northern and Western Europe were the regions with the highest social network penetration rates globally, reaching 81.7 and 80.2 percent, respectively. Southern Europe ranked third with a penetration rate of 74.8 percent, while Eastern Europe ranked sixth with 70.4% penetration rate, just behind Northern America.

Putting science into practice: A primer on principles for implementing citizen engagement to inform policies

The following principles are based on the recent Recommendation to Member States, corporate guidance of the European Commission and the OECD good practice principles on how to incorporate citizen engagement in the context of policymaking and public communication:[3]

- **Accountable:** There should be an assumption that inputs from citizens are an added value to the policy-making process through citizens' situated knowledge, values, and framings. In other words, citizen engagement should not be viewed as a "rubber stamp."

- **Upstream:** A good engagement process requires anticipating the time needed to conduct it. Engagement of citizens should come at design, implementation, and evaluation phase of policies.

- **Clarity of mandate and of scope:** The topic of deliberation, the framing of the issue, the commissioning public authority, and the process of citizen engagement should be clearly defined from the outset and the ambition and scope should be in line with the context, time, and resources available.

- **Inclusiveness and representativeness:** In most cases, citizens should be recruited randomly in a manner that is representative of diversity. Citizen engagement helps "ordinary" citizens that do not have means to channel their matters of concern into the policymaking process voice their view.

- **Expectations:** Citizens must know up front why they were selected for the process, and how their input will be used, as well as the envisaged follow-up

process on the outcomes and the next steps beyond the specific 'event' in which they have participated. Not everything coming out of an engagement needs to be acted upon, but it needs to be transparent how follow-up action are about to be taken.

- **Integrity:** The whole process needs to be carried out professionally to ensure quality of the planning, implementation and evaluation phases. Experts of co-design and deliberative processes and experienced facilitators should be involved to get the most out of the initiative.

- **Respectful Dialogue:** Participants should be able to safely engage in respectful conversations, while examining where they dissent and where they find common. Professional facilitation needs to ensure that every participant has opportunity to speak, and that co-creation and deliberation are ensured.

- **Multilingualism (where applicable):** Especially in multilingual contexts, all participants should be able to speak and be listened to in their own language. Technological progress allows today to simultaneously have citizens express themselves in their own language and ensure open debate.

- **Transparency:** Information on the process and results need to be made available online and regular communication with the participants need to take place in their native language.

- **Evaluation:** Evaluation is a key element in citizen engagement; assessing the quality and the effectiveness of the chosen approach helps with accountability and public administrations learning.

- **Follow-up:** Engagement of citizens needs to be accompanied from the outset with mechanisms to listen, make sense and channel the engagements' outputs into the policymaking activities to preclude frustration. It is better not to carry out any process of citizen engagement than a bad citizen engagement process.

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3 https://data.consilium.europa.eu/doc/document/ST-7260-2024-INIT/en/pdf&ved=2ahUKEwjZ8Ym_hKuFAxWB7rsIHTwFAKsQFnoECBoQAQ&usg=AOvVaw2J4WucI2jydFdS4O8vC0i6 and https://www.oecd-ilibrary.org/governance/innovative-citizen-participation-and-new-democratic-institutions_339306da-en
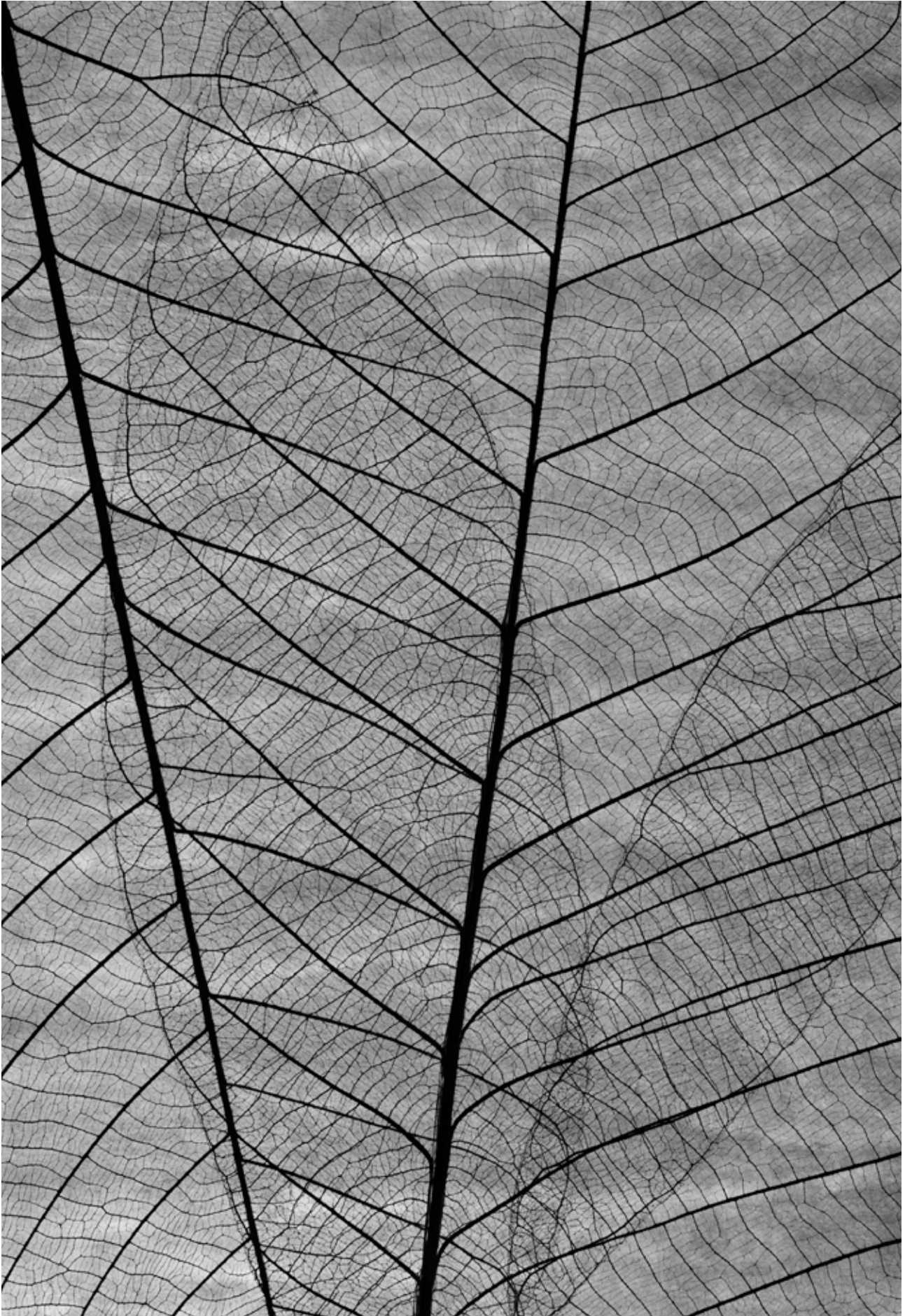
RECOMMENDATION 3:
PUBLIC COMMUNICATION GOALS – RANGING FROM INFORMING TO BEHAVIOURAL CHANGE – SHOULD BE DECIDED UP FRONT AND COMMUNICATED TRANSPARENTLY

> " Public communication can for example help update beliefs, build trust or influence behaviour directly.

The objectives of the public communicator fall along a spectrum from trying to support each individual citizen to make an autonomous decision, to aiming to change citizens' behaviour. This means that the end goal of all communications needs to be declared up-front together with the appropriate mode of communicating.

Understanding influence

The previous section has shown that citizens, with the right mode of engagement, can be trusted to not only make well-reasoned decisions on public policies, but also to give valuable inputs into policymaking. In general however, behavioural and cognitive sciences show that while well-reasoned beliefs can precede citizens' actions, behaviour changes tend to change beliefs. For example when someone decides – based on some important beliefs – to vote for a certain political party, subsequently they will often support the position of that party in other areas on which they previously had not had an opinion.[93, 94]

Communication can broadcast what a government or public institution decides as policy, it can also listen and feed back into the policymaking process what citizens think and say, but it can even itself be a policy lever to achieve the goals of a policymaker. Public communication can for example help update beliefs, build trust or influence behaviour directly. However, when the communication itself is serving to provide the intended policy change rather than providing public accountability, the ethical requirements for it should increase. Thus, public communicators thinking about communicating information need to recognise that the goal the communicator pursues will then influence the methods that can legitimately and effectively be employed to achieve that goal and

should, in as far as possible, mirror the type of policy being communicated.[95] The more demanding the need for change, the greater the potential need for persuasiveness via different modes of communication.

The aims of trustworthy communicators can then be divided into distinct categories:

- Supporting individuals to make an informed autonomous decision based on available evidence and their own preferences and values;
- Changing the current beliefs or attitudes of citizens; or
- Aiming to guide as many individuals to the same decision as possible by changing behaviour

Each of these aims can be a legitimate communication goals and should be aligned with policy goals as much as possible ex-ante. Figure 2 shows how these different goals then translate into the modes of communication, with the following sections addressing each one in turn.

Having the different communication goals in mind, moving from left to right on the figure, the different "modes" of communication increase in their likely effectiveness but also impact on personal autonomy and therefore ethical implications. While Evidence Communication is most likely to be effective in support of autonomous decision-making, argumentation and persuasion are more suitable to change beliefs and

Figure 2 Four modes of communication
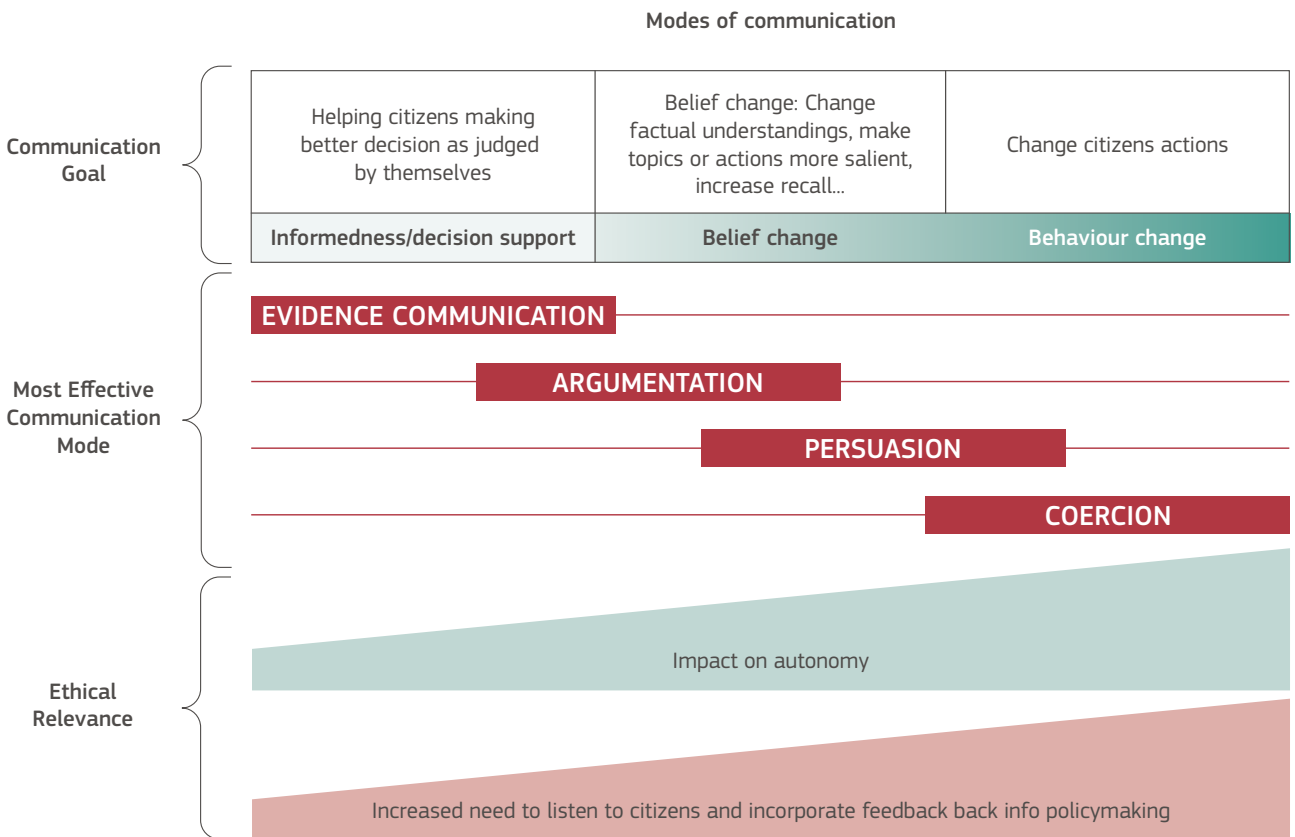
In general, for the goal of **informedness, evidence communication** is the most effective method, with also low ethical implications.

In contrast, for **behavioural change, coercion** is likely the most effective method, but was the most ethical issues and therefore should carefully considered. **Evidence communication** can also achieve **behavioural change**, with less ethical implications but likely also with less overall effectiveness.

attitudes. As law-making bodies, public administrations need to acknowledge that they also have coercive power, a fact that cannot be overlooked by the trustworthy public communicator as in such cases there is an asymmetry of power towards target audiences.

The possibility that Evidence Communication will also change behaviour exists, but the communication is more appropriate for targeting informed decision-making and is less likely to be successful in changing behaviour in the intended direction compared to persuasion. Importantly, the success of the communication should not be measured by the degree of behavioural change, rather it is much more important to determine whether citizens are satisfied with their choice when the goal is informedness. A better measure here would be satisfaction and confidence in the choice, and trust in the institution offering the services.

Public communicators will likely not consider their communication as coercive. However communication that accompanies coercive policy measures will increase the psychological pressure on citizens to follow a specified behaviour, or avoid them, and thus could be considered as "volitional" coercion, i.e. citizen would feel compelled to act in a certain way by being made aware of the measure. To illustrate, the communication about vaccine passports during the COVID pandemic intentionally increased the pressure on citizens to act in a specific way.

Following this line of argument, when moving from left to right on this table, the ethical consequences are more significant and autonomous decision-making by citizens is more affected. Therefore, for trustworthy public communicators whose aims are belief or behaviour change to be perceived as legitimate, the following should be considered:

- Ensure alignment between the goals of the communicator, the policy and the goals of the audience (possibly even overtly through public debate);
- Consider carefully the moral justification for the communication (e.g., greater harm averted);
- Transparency on the part of the communicator about the goal and the moral justification;
- Ensure there is strong (democratic) legitimacy of the communicator;
- Increase learning about audience reactions and feedback.

> " When moving from left to right, the ethical consequences are more significant and autonomous decision-making by citizens is more affected.

Communication goal selection

Figure 2 serves as the basis to identify, in collaboration with policymakers, the communication goal. Policymakers receive the democratic mandate to implement change in society according to current needs. In that, they need to choose the level of intervention, matching the ambition of change desired. Public communication in this context can be seen as a companion to flank and inform on interventions such as taxation, subsidies, or regulation. It can also be used in its own right as a tool to achieve behavioural change.[4] Consequently, the goal should be set in advance based on its effectiveness in achieving the desired change.

If policymakers are considering the need for behavioural change through communication, they should check the public support for this goal and the ethics of such an approach, as changing behaviour can clash with citizens' autonomy.[96, 97] See also TARES in the previous section.

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4   https://www.nuffieldbioethics.org/publications/public-health/guide-to-the-report/policy-process-and-practice

One important additional consideration is whether the responsibility for behavioural change lies with the individual or the system. Research suggests that behaviour is often not driven by individual capacities to think through a situation and to choose what is best, but rather by what the decision environment allows.[98, 99] For example, in the case of food choices, there is a whole system of demand and supply factors that shape what is on offer, largely determining the options individuals can choose.[100] Focusing on the issue of obesity, most of the differences in obesity rates between countries are explained by systemic factors, rather than by differences in e.g. "self-control" where people choose healthier food options.[101]

Therefore, thinking only about how to achieve individual change by telling people to behave more in line with certain ideal practices may well overlook the more systemic factors that could achieve behavioural change more easily, effectively and without angering citizens.[102] Finally, behavioural change interventions that place onus of responsibility on individuals have also been criticised for their limited effectiveness.[103–106] Still, some interventions are more effective than others and a combination of policy changes and individual behavioural approaches may increase the overall outcome.[107, 108] In that sense, individual-level interventions such as communication inciting behavioural change may even support system-level changes. To illustrate, studies have shown that increasing individual level sustainable behaviours (recycling) can lead to increased support for the aligned system level intervention (political activism for sustainability).[109, 110]

Choosing the public communication goals in advance is important, as the choice of how to communicate

> *If the original statement was made with some acknowledgement of uncertainty, confidence and trust were not undermined.*

has consequences for trust in the public administration.[111] Goal alignment is usually seen as very important when it comes to interventions and is generally easy to achieve on topics such as reducing obesity, stopping smoking, reducing waste, higher uptake of funding programmes etc.[112, 113] However, some goals where policymakers may want to influence behaviour may face more backlash, such as decreasing time showering, using the car less, reduced pesticide use, etc.[114–116] Therefore, in the following sections, this report details different categories of communication that can be employed to support different goals that should be established up front.

EVIDENCE COMMUNICATION

Scientists have empirically tested whether or not the clear and transparent communication of risks, benefits, and uncertainties increase or undermine public trust in the information that people use to guide their decision-making. Experimental participants with a positive prior view on each topic (COVID-19 vaccination or nuclear power) rated persuasive and balanced messages as equally high in trustworthiness. Those who had a negative prior view found messages designed to persuade (i.e., unbalanced messages in favour of the topic), which contained less information about uncertainties and quality of evidence, to be significantly less trustworthy.[117]

When communicating uncertainty, research generally suggests that the communication of numerical uncertainty does not affect the perceived trustworthiness of the communicator or the information.[118] Importantly, some research has shown that such communica-

COMMUNICATING EVIDENCE TO POLICYMAKERS

A public communicator may need to communicate on the evidence underpinning a policy or a preferred policy option. Unlike an individuals' decisions, policy decisions often affect many people, other species, impact different groups in different ways, and cause multi-generational outcomes. Because weighing up options for an informed policy decision is especially difficult, it is particularly important to assist policymakers with concise, clear, and comprehensive descriptions of the potential outcomes of policy options, best achieved through listening initiatives. There can be profound costs when communications fail to inform decision-making.[123]

Providing such summaries requires:
1. Learning what impacts to consider and identifying the most important effects;
2. Gathering the evidence; and
3. Communicating that evidence so that it is understood.

This is difficult. Compared with communicating evidence for an individual decision, where the message can be tailored to an individual's personal circumstances, evidence for a policymaker has a much broader scope and will often be published in the public domain as a means of demonstrating how final decisions were made. This may in turn influence a broader public.

In practice, many policymakers and communicators tend to persuade the audience that they made the right choice. However, the scientific literature on persuasion shows that this is not always easy to achieve, such that other goals as informing and building trust may be more achievable and beneficial over the medium to long-term.

tions increase message confidence.[119, 120] Furthermore, researchers testing communications from a fictional government showed that confidence and trust were significantly undermined if statements were made with no uncertainty but were later contradicted by a change of events.[121] If the original statement was made with some acknowledgement of uncertainty, confidence and trust were not undermined.

These results suggest that the perceived balance or lack of persuasive intent is potentially an important factor in an audience's judgement of trustworthiness when communicating about evidence. It is the most likely "honest signal" of trustworthiness a communicator can convey. It is imperative therefore, for the public communicator to be questioning of potential "false balance" when an issue is presented as being more balanced between opposing viewpoints than the

evidence supports. This fits with qualitative research that suggests that the perceived motivations of a communicator are a key trustworthiness indicator for an audience.[117, 122]

Putting science into practice: Demonstrating trustworthiness through Evidence Communication

Good ways of building trust and enabling public communicators to demonstrate trustworthiness when communicating evidence are as follows:[124]

1. Setting out to inform, rather than persuade;
2. Giving the pros and cons in an honestly balanced way (not giving false balance);
3. Being open about uncertainties and unknowns, as well as disagreements;
4. Giving an idea of the quality of the underlying evidence; and
5. Pre-empting misunderstandings as well as mis- and disinformation.

To implement these recommendations in practice, Blastland et al. recommend the following:

- Address all the questions and concerns of the target audience.
- Anticipate misunderstandings; pre-emptively debunk or explain them.
- Don't selectively choose the evidence that fits your argument (cherry-picking).
- Present potential benefits and possible harms in the same way so that they can be compared fairly.
- Avoid the biases inherent in any presentation format e.g. optimal Evidence Communication through visuals in Recommendation 5.
- Demonstrate 'unapologetic uncertainty': be open about a range of possible outcomes.
- When you don't know, say so; say what you are going to do to find out, and by when.
- Highlight the quality and relevance of the underlying evidence (for example, describe the data set).
- Use a carefully designed layout in a clear order and include sources.

Table 2 Three levels of argumentation

	Aim	Characteristics	Types of associated communications
Level One	Giving reasons or premises to support a claim or position.	Anyone can give reasons for just about anything, particularly if it involves convincing oneself of something that one already wants to be believe.[132]	• Informing • One-way communications • One-to-many • Messages not tailored
Level Two	Explaining to oneself and others why these reasons are the best ones.	This involves seeking counter-considerations, presenting potential counterarguments, and requiring stronger justifications and more sophisticated evaluations.[133, 134]	• Consulting • Limited two-way communications • Message tailoring for key stakeholders
Level Three	Making those reasons accessible, meaningful and persuasive to other people.	This is about sharing reasons and reasoning. Watch-point if one's reasons are not meaningful to others, then presenting them as sufficient is simply a form of assertion.[74]	• Engaging • Dynamic community communications • Listening, explaining, adapting

ARGUMENTATION

The word "argument" often carries a negative connotation in everyday life. However, the focus on argumentation here is on what is called "critical discussion" which is all about rational debate.[125, 126] Consequently, argumentation in the context of shared information and sense-making is central to public reasoning. This can lead to a reasonable outcome of mutual disagreement: while people may not always accept each other's reasons, they can develop an "argument" about what is meaningful for them, what they care about, or what they consider to be just, agreeing to disagree while rationally and peacefully coexisting.[127, 128]

In line with Recommendation 2, deliberation can help align citizens' policy perceptions closer with their underlying preferences without unduly pressuring or persuading them. For example, a review of the effects of deliberation and the factors increasing

> " Providing balanced arguments is important for public deliberation even when it comes to changing minds.

their effectiveness has shown that quality deliberations do not move people's values positions, but rather align participants' more concrete policy attitudes with each other.[129]

In the same way, providing balanced arguments is important for public deliberation even when it comes to changing minds. Research has long shown that providing one-sided arguments only convinces those who: i) are not exposed to the other side of the argument (N.B. increasingly unlikely in online environments); ii) are generally uninformed about the subject; or iii) tend to trust the source. By contrast, using arguments from multiple perspectives persuades more broadly, should persuasion techniques be an appropriate mode of communication.[130] Critically, the effect still depends on how the message is crafted, e.g. the strength of arguments, how many counter-arguments are provided, etc., highlighting the need for professional communicator skills.[131]

Figure 3 The Elaboration likelihood model framework
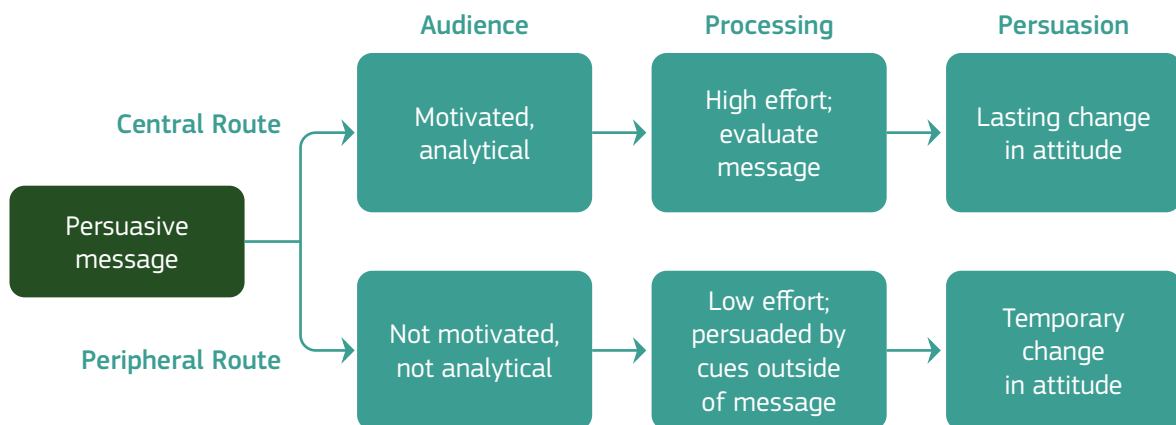
Source: Petty & Cacioppo 1986.[135]

In practice, this means that two-sided communications can be a powerful tool. Sharing the counter-argument to explain the thought process and the rationale for the decision can be perceived as respectful by the audience. This can be translated into three levels of 'giving and taking' that are actionable for public argumentation and deliberation; these reflect different levels of argumentation, see Table 2.

It is in engagement at all three levels that public deliberation becomes most effective, where citizens and public communicators collectively and collaboratively engage in careful, deliberate, considerate and rational thinking. This does not mean that consensus is always the ultimate goal, nor that a plurality of views is a bad outcome, as outlined in Recommendation 2. This is the heart of a thriving democracy and here public communicators have a critical role to play. It means that skills, priorities, and budgets should be realigned in support of the most meaningful societal impact. It also means that public communicators should not be considered as a means to sell a media story, but rather as sources of valuable insights, in touch with citizens and reality on the ground.

Social psychological research on persuasion has largely focused on how variables related to the communicator, the message, the recipient, and the context impact a person's receptivity to a message.

This model is a theory of persuasion which suggests that there are two different ways individuals can be persuaded of something depending on how invested they are in a topic. When they are strongly motivated and have time to think about a decision, persuasion occurs through the central cognitive processing route. In this case, the pros and cons of a decision are carefully weighed and reflected upon. In comparison, when they are rushed, inattentive or the decision is less important to them, they tend to be more easily persuaded by the peripheral processing route, and are more easily influenced by tangential aspects of the decision at hand.

The peripheral route considers how people might agree with a message because the communicator appears trustworthy and how recipients might be influenced by simple affective cues that are present in the message, such as the use of an appealing image. Factors such as the length of the message and the number of its arguments, repetition, can determine message acceptance via this peripheral process, e.g. people tend to agree more with longer messages that contain more arguments[136]. It should be noted that some academics have challenged the inclusion of source credibility information as pertaining to the peripheral route.[137–140]

PERSUASION

Social psychological research on persuasion has largely focused on how variables related to the communicator, the message, the recipient, and the context impact a person's receptivity to a message. The most influential model of persuasion is the Elaboration Likelihood Model, see Figure 3.[135]

In the central route, by comparison, persuasion occurs through its impact on a recipient's cognitive responses to the message (i.e. their thoughts about the message content). Here, strong arguments should elicit favourable cognitive responses, whereas weak arguments in the message should elicit unfavourable cognitive responses to the message. These cognitive responses help shape subsequent attitudes. Research has demonstrated that attitude change via the central

route is more long-lasting than attitude change via the peripheral route. Other factors that increase the likelihood of using the central route include: relevance of the message, nature of the source (trusted/expert or not), nature of the message (attractive or not), number of communicators (one or multiple), and motivation (high or low enjoyment associated with thinking.[136, 141, 142]

This means that attitude change can occur at any level of motivation on a topic:

"Central route" persuasion may occur on the basis of the following cues:

- Careful scrutiny of a persuasive message;
- The generation of positive or negative cognitive responses to the message; and
- The basis of the positive or negative cognitive responses.

"Peripheral route" persuasion may occur on the basis of the following cues:

- No careful scrutiny of persuasive messages;
- Minimal generation of cognitive responses;
- Looking for "cues" in the persuasion context that enable simple, low-effort inferences or associations:
  - something about the source of the message – trustworthy/expert
  - something about the message itself – user-friendly, number of previous exposure to similar messages
  - something in the context – level of formality

This means that when trying to persuade an unconvinced majority, a small number of strong arguments should be used. By comparison, when seeking to align with majority opinion, as many arguments as possible should be used, including weaker ones.

Significantly stronger than persuasion, manipulation is often considered a type of social influence that is intended to induce a mistake in the beliefs, desires, or emotions of the target audience.[143] Manipulative techniques bypass or subvert peoples' rational capacities and lead to beliefs, desires, or actions that are insufficiently connected to reason.[144, 145] Such manipulations are typically intended to be effective in reaching the goal of the influencer but not designed to educate or reveal reasons to the target audience. Such messaging may be effective in the short-term but it is clearly detrimental to the long-term strategy of building trust in public administrations, thus inappropriate for Public Communication.

COERCION

Coercion is getting someone to perform an action by using some form of force. There is an important caveat for trustworthy public communicators working in government or regulatory agencies. Through the nature of the legally binding work performed by the public administrations, they can be perceived as a coercive power. Examples are vaccine mandates, which had significant polarising consequences[146, 147] but worked to increase vaccination uptake during the global COVID 19 pandemic.[148] Therefore, public communicators need to communicate on coercive policy measures, making them in themselves coercive. However, this does not mean that coercive tactics are an appropriate mode of communication.

> ❝ When trying to persuade an unconvinced majority, a small number of strong arguments should be used.

RECOMMENDATION 4:
IF BEHAVIOUR CHANGE IS THE COMMUNICATION GOAL, BEHAVIOURAL SCIENCES SHOULD GUIDE THE SELECTION OF THE MOST APPROPRIATE TOOLS

"

Behavioural science provides a range of tools to change behaviour, many of which involve communication.

Behavioural science provides a range of tools to change behaviour, many of which involve communication. The effectiveness of each of these tools often depends on the specific context and citizens' existing abilities, knowledge and attitudes. The commonly used approach of 'nudges' has been criticised for being manipulative or overly focused only on automatic behavioural change without building capacity to make good decisions. Therefore, it may be advisable to use 'nudgesplus' or 'boosts', which aim to build citizens' competencies and empower them to make better decisions themselves. The behaviour change goals of any public communication should always be explicit and transparent.

Behavioural science provides a range of tools to change behaviour, many of which involve communication. If behavioural change has been set as the goal for communication, interventions can be oriented to create the communication itself or accompany other policy interventions. However, the effectiveness of each of these tools often depends on the specific context and citizens' existing abilities, knowledge and attitudes. The commonly used approach of 'nudges' has been criticised for being manipulative or overly focused on automatic behavioural change without building civic capacity, that is, the capacity to make good decisions.[149, 150] Therefore, it may be advisable to use 'nudges plus' or 'boosts', which aim to build citizens' competencies and empower them to make better decisions themselves. The behaviour change goals of the communication should always be explicit and transparent.

How to achieve Behavioural Change – Nudge, Nudge Plus and Boost (vs. Sludge)

If behavioural change is identified as the main objective of communication, behavioural science has developed a broad array of tools to achieve this change, many of which relate directly or indirectly to communication. Even if behavioural change is not the main goal, the underlying principles are still relevant for communicators.

There are by now many books and guides available for designing behavioural interventions, many of which are particularly focused on communication between public administrations and citizens.[151–154] There are also guides for checking explicitly the ethics of the interventions themselves beyond the above mentioned TARES approach.[155, 156]

One of the most widely cited approaches is the behavioural change wheel.[157] Other approaches are available, such as EAST, BASIC, or the JRC's own approach, MINDSPACE.[153, 158, 159]

The behavioural change wheel is an interesting starting point, as it combines behaviours, interventions and policy options into one approach, see Figure 4. It relies on three fundamental avenues for influence: i) **C**apabilities: The individual's physical and psychological capabilities to engage in an action. ii) **M**otivation: The individual's interest in engaging in the behaviour and iii) **O**pportunity: The factors that lie outside the individual that make the behaviour possible/prompt it, together often shortened into COM-B model.

Each of the three fundamental dimensions can be related to a type of intervention. Several of the interventions are not in themselves communications, but

Figure 4 Behavioural Change Wheel
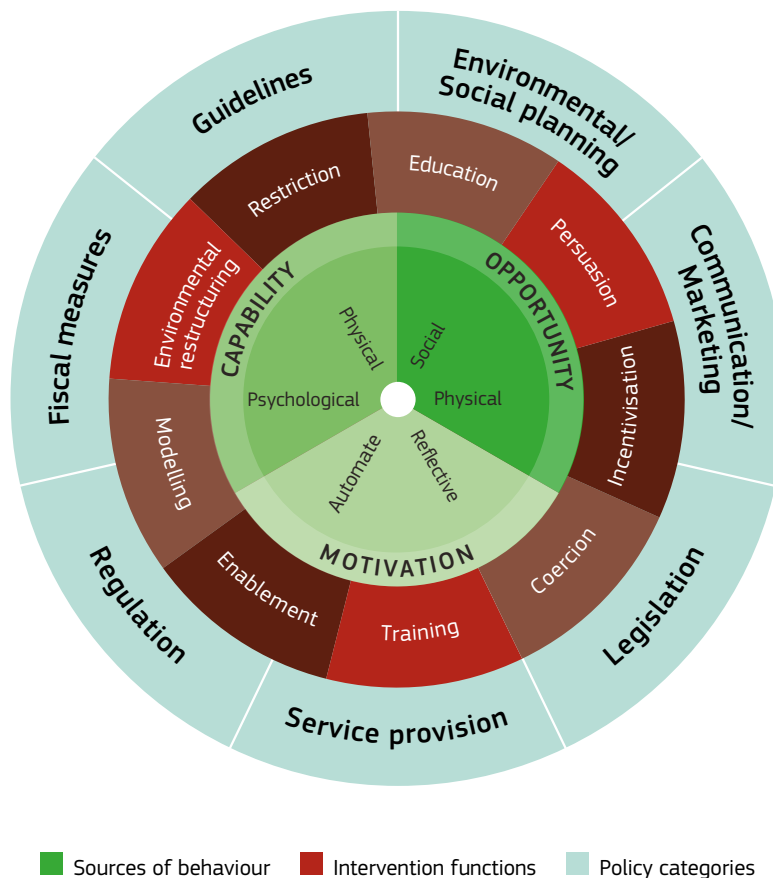
Source: Michie et al., 2011[157]

need to be supported by communication. Each of the interventions has its own benefits and limitations with respect to the main dimension, for example persuasion can increase the motivation of people to engage in some behaviour, but it is not addressing the physical capability to do so.

Communication approaches can then relate to each of the general intervention ideas as outlined in the COM-B model:

- **Education:** Providing information that is potentially lacking in the population that might induce them to change behaviour. For example, public health campaigns that spell out the benefits of certain behaviours.

- **Training:** More extensive than just providing educating information by providing instruction and practice to develop skills and abilities to support behaviour change independent of the specific situation (e.g. media literacy, digital literacy, financial literacy etc.).

- **Enabling:** Providing resources or reducing barriers to facilitate behaviour change. For example, establishing hotlines or helplines by trained professionals to provide support, information, and guidance related to behaviour change for smoking cessation or mental health.

- **Modelling:** Providing an example for people to aspire to or imitate. Examples are endorsements by prominent figures in society, climate ambassadors on local levels or testimonials from individuals who successfully engage in the desired behaviour to inspire others to do the same (sometimes also called social norms).

- **Incentivisation:** Monetary or other rewards can be communicated to create increased effectiveness. Examples are subsidies to renovate houses for more energy efficiency. Communication in this case needs to inform about the opportunity and help

to achieve the steps to receive the support if the renovation is carried out, which is often forgotten in public communication[160].

- **Environmental restructuring:** Changing the physical, digital or social environment to support behaviour change. This is particularly important for the way digital information and choices are designed, as digital interventions can be more effective than physical ones.[161] For example, all the ways websites are structured and information and choices on these websites are displayed.

- **Persuasion:** Using communication to induce positive or negative feelings to encourage behaviour change. Persuasion in this context is seen as narrower than in our general modes of communication presented before. Examples would be the shocking images mandated on cigarette boxes.

- **Restriction:** Communicate rules or regulations to limit or control behaviour. For example, communicating the ban on advertising for unhealthy foods to restrict their consumption. As mentioned before, the communication itself may not be restricting, but it helps get the point of the restriction across.

- **Coercion:** Creating expectations for punishment or any other kind of cost that people might incur if behaviour is not changed or forbidden behaviour engaged in. Examples would be the communication of expected fines for fare evasion, or the above mentioned example of vaccine mandates where the communication adds to volitional coercion.

The interventions above are ordered in line with the idea of the different modes of communication. For example, education is mostly in line with the idea of providing more information to achieve behaviour change, while communicating coercion is flanking the enforcement. Thus, each communication mode can still be used for behaviour change, but modes like Evidence Communication will be more effective if the lack of information is the reason for a certain

behaviour or lack thereof. Too often communicators fall into the trap of the deficit model, believing that people act in a certain way only because they lack information. In contrast, if people have (their own) good reason for a certain behaviour, education or even stronger interventions will not work and may result in a pushback by citizens against the attempt by a public administration to change behaviour.[162] Additionally, combinations of several of the elements are also possible, e.g. to have communication and monetary incentives flanking each other, which seem to have an add-on effect.[163] Behavioural interventions that are particularly focused on not changing the options people have available, but making it easier for them to make the "right" choice by: visually highlighting them; making them the default; adding statements on supporting norms ("the majority of people do this") have been dubbed "nudges". The nudging approach has been criticised because these interventions may not be transparent and educational interventions can be seen as manipulative.[164–166] Targeting the automatic route of change mentioned in the persuasion model above, rather than the conscious route limits any cost-benefit analysis.[167] Receivers of nudges generally dislike them when they go against their interests or values, although there is general support for nudges from citizens, if they trust the implementing government.[113, 168]

Against this criticism, "boosts" have been suggested as an alternative, with the proximal goal of increasing citizens' competencies.[169–171] A boost could provide training for people to make better decisions for themselves. Examples are easy to remember heuristics that work, but still let citizens decide, such as "hands, face, space" as a shorthand to remember COVID measures at the beginning of the pandemic (see also the "Infobox" on the concepts in this chapter). The ultimate goal of a boost is to empower people to make better decisions themselves, e.g. helping to better detect disinformation or develop statistical literacy or increase self-regulation.[172–174] A middle ground between nudges and boosts are so-called "nudges plus", which attempt to accompany nudges

INFOBOX

Common behavioural intervention concepts:

Nudge: A tool to steer people towards welfare-promoting outcomes without limiting their freedom of choice, usually by changing the context of those choices, or their "choice architecture".[152]

Boost: Provision of additional resources, incentives, or support to encourage the adoption of desired behaviours with the aim to enhance individuals' capability, motivation, or opportunity to engage in the target behaviour.[175]

Nudge Plus: Intervention combining the principles of nudging with additional support, incentives, or education to further promote behaviour change. The strategy is more comprehensive to address various aspects of behaviour change, such as capability, opportunity, and motivation.[175]

Sludge: In contrast to nudges and boosts, sludge refers to barriers, obstacles, or complexities intentionally or unintentionally introduced into decision-making processes, which hinder or delay individuals from engaging in desired behaviours. Sludge audits may identify these to get rid of unwanted barriers.[176, 177]

with transparency on the purpose and educational components.[175]

Recent research has shown that nudges are no less effective if their goal is made transparent.[178, 179] Additionally, the authors of this report surveyed people in four European countries asking them about the acceptability of various kinds of interventions, see Figure 5. Unsurprisingly, people find it highly acceptable that governments should inform their citizens, while persuasion is not as acceptable. Importantly, most nudges are seen as equivalent to persuasion, while providing shocking images on packs of cigarettes seems to be regarded more as informing. Therefore, it seems advisable to always go one step further when thinking about behavioural interventions and to try to build citizens' competences on top of changing behaviour, thus adopting nudges plus or boosts, rather than only nudges.

Putting science into practice: Some tips for implementing behavioural communication interventions

- Check thoroughly if a behavioural intervention is the right policy intervention. If the need for change is systematic, communication approaches for behavioural change may be best thought of as accompanying rather than the core of the intervention.
- Use behavioural science as a lens to structure the decision problem to identify the best communications strategies. Several valuable approaches are available, such as COM-B, EAST, MINDSPACE, etc.
- There is no downside to using transparency in identified interventions if the interventions are in the public interest, so be transparent.
- Using Boosts, or Nudge Plus approaches (or fighting sludge through sludge audits) may serve citizens better in the long-run than narrow nudges.

Figure 5 Acceptability of common nudges compared to informing and persuading citizens
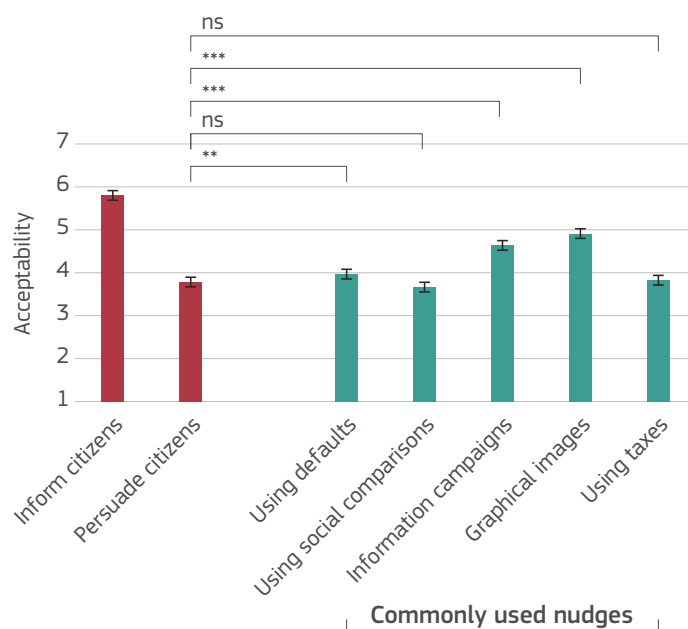
*Notes: Random sample (N=2309) from Czechia, Greece, France and Sweden. Responses to the question: "How acceptable would you find it **generally** if a governing institution tried to **inform/persuade** citizens on a certain topic?", and "Below you find a list of examples how this can be done in the area of environmental protection. Please rate for each example how acceptable you find it." The response scale was recoded into three categories: unacceptable (response options 1 and 2, where option 1 was labelled "not at all [acceptable]"), indifferent (response options 3-5, all unlabelled), acceptable (response options 6 and 7, where option 7 was labelled "very much [acceptable]"). ** significant at p < .01 level; *** significant at p < .001 level. Comparisons of acceptability ratings between nudges and informing and persuading citizens on a certain, unspecified topic in terms. All differences between "inform citizens" and nudges significant at p < .001. Significant differences are indicated by the 95% confidence intervals and the brackets showing significance levels.*

RECOMMENDATION 5:
PUBLIC COMMUNICATION SHOULD NOT BE "ONE SIZE FITS ALL", INSTEAD BE FORMAL, LAYERED AND ACKNOWLEDGE EMOTIONS AND UNCERTAINTY

" Complexity can be reduced without over-simplifying, by presenting evidence that is accessible and relatable to the audience in different levels of detail.

Public Communication should be user-centric, meaning that there should be something for everyone in Public Communication (summaries, quotes, FAQs, in-depth analysis, chatbots…), while public administrations should not hide behind simplistic messages, omit uncertainties or obfuscate through complexity. The balance can be achieved by multi-layered or progressive disclosure. Statements that do not acknowledge uncertainty that are later contradicted by events undermine trust in public administrations. Similarly, there is a false perception of a dichotomy between emotional and factual messaging, as effective communication needs both. Additionally, formality is an important heuristic for legitimacy that affects trust. Regardless of audience segment, citizens expect a more formal tone from public communicators as a means of demonstrating respect and enabling agency.

No "one size fits all" communication

A common struggle of public communicators is that they are required to communicate to multiple audiences on complex policy issues. They need to communicate the subject accurately while being easily understandable and interesting to everyone, something that often seems impossible. Communicating information in different formats allows the public communicator to share key messages without the need to create micro-targeted or tailored campaigns that may be seen as unethical and non-transparent. Different formats, such as brief summaries, Q&As, videos, more in-depth reports etc. allow each recipient to find their own preferred level of information.

Today, very few people find their information by navigating through public websites or information brochures, as the information ecosystem is more and more accessed through algorithmic curation, be it search engines or newsfeeds. Public communicators can nevertheless marry the

need to adapt and curate content while still remaining transparent, by providing all information in different formats and levels of detail to all audiences.

Complexity can be reduced without over-simplifying, by presenting evidence that is accessible and relatable to the audience in different levels of detail, so that all content is available depending on the level of need and interest. This can be done by breaking down information into digestible parts and contextualising it with familiar reference points. Another promising approach is to move beyond the one-directional communication model to develop interactive communication models, possibly supported by AI-technologies. For example, researchers have shown that chatbots programmed to answer questions that citizens have on vaccines or genetically modified food have been more persuasive and trusted than information sheets and can thus provide both more targeted and transparent information.[180] Furthermore, a 2024 study found that by using AI dialogue to tailor evidence and arguments to a specific conspiracy theory as articulated by participants, belief change was possible. Participants reduced their conspiracy belief by more than 20 percentage points.[181]

Citizen engagement can be used to explore how citizens' experience or frame issues of concern, providing greater understanding of complex issues. Such engagement usually produces many detailed questions, e.g. over 200 in the EU's citizens panels on the topic of virtual worlds.[5] It is likely that many citizens who did not participate, have similar questions, so a substantive societal benefit from these exercises would be to disseminate questions and answers in an attractive way, e.g. through an FAQ or chatbot, so everybody can benefit from such a public information exercise.

To further assist with this task, this chapter addresses broader concepts that will likely be useful to the public communicator and are illustrated through case studies. Some more specific methods for providing

messaging that can range from informing to behavioural change revolve around how the information is expressed, foremost among them framing, narratives, visualisation and especially the use of emotions in messaging. The following sections dive deeper into those issues to give guidance on how to use them most effectively and trustworthily.

Framing, narratives & metaphors

Framing is the central organising idea that gives meaning to something, but requires understanding of the context. Frames generally define problems, explain causes and effects, and evaluate issues from a moral standpoint. They can be generic, applied across different contexts, or be issue-specific, relevant only for particular topics.

By comparison, narratives are structured stories that convey information situated in specific contexts, drawing cognitive and emotional evaluations from the target audience. They are used for comprehension, securing personal and collective coherence, creating a cultural sense of belonging and legitimising collective beliefs, emotions and actions. Importantly, knowledge within narratives is more easily recalled and resistant to change.

Narratives are entwined with the institutional, cultural, moral, and material make up of society. In this sense, narratives are consequential societal order. Through narratives broader imaginations about how the world is and ought to be are expressed and stabilised.[182] In light of their potentially strong persuasive power, there are a number of key characteristics that the public communicator should consider before deploying narrative techniques:

- Narratives have a unique capacity to capture and convey human experience — what it feels like to be this particular person living through these particular events.[183, 184] Narratives and storytelling can therefore make human experiences relatable and create empathy.

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[5] https://digital-strategy.ec.europa.eu/en/news/citizens-panel-proposes-23-recommendations-fair-and-human-centric-virtual-worlds-eu

- Using storytelling to challenge dominant societal narratives can instigate alternative ways of making sense of complex social phenomena, creating opportunities for critical thinking. However, narratives can also oversimplify or misrepresent complex social issues.[185]
- Narratives have the potential to empower or oppress individuals and communities. This can stem from the narrative form complicating the distinction between factual and fictional rhetoric, potentially leading to misunderstandings or misinterpretations.[186]
- There is a risk of narratives being used for instrumental purposes, where they may be manipulated to convey specific messages or agendas.[187]

While narratives and storytelling have the potential to create understanding and empathy, they also have limitations and risks that need to be critically examined and addressed by the trustworthy public communicator.

Reinforcing these techniques, **metaphors** conceptualise the ways in which ideas are articulated in specific contexts. Consequently, cultural diversity impacts how communications are framed and narratives are constructed, often leading to different interpretations across cultures. Despite some universal aspects of person-to-person communication, cultural assumptions play a significant role in shaping narratives.

Putting science into practice: Top framing & narrative tips

1. Understand the role of cultural context: Communicators must be aware of the cultural assumptions and perceptions that underlie the framing of messages. Recognising the impact of culture on communication can help in crafting narratives that resonate with diverse audiences without reinforcing negative stereotypes or biases.

2. Use clear and accessible explanatory narratives: To combat belief perseverance, communicators should provide alternative narratives that are simple, coherent, and easy to understand. These should offer a straightforward understanding with minimal assumptions.

3. Balance content in framing: When framing issues, it is essential to avoid presenting imbalanced content that might unintentionally persuade audiences. Providing a balanced view, without creating "false balance", helps to maintain objectivity and allows the audience to make informed decisions.

4. Facilitate narrative reconstruction: Since changing long-held beliefs is challenging, communicators can facilitate the process by using techniques that encourage critical thinking and provide new information in a format that is easily accessible.

5. Address inquiry aversion: To reach dogmatic individuals or those averse to seeking new information, communicators should design messages that lower the barriers to inquiry. This involves presenting information in a way that feels less challenging to existing beliefs while still providing new perspectives.

6. Emphasise universal communication dynamics: While acknowledging cultural differences, communicators should also leverage the universal aspects of communication, such as turn-taking and the use of icons, to establish common ground with the audience.

7. Monitor the framing effect: Communicators should be mindful of the framing effect, where even small changes in how information is presented can significantly impact audience perceptions. Test different frames to understand their effect on audience understanding and belief systems.

8. Promote engagement with alternative views: To prevent narratives from reinforcing existing biases, communicators should promote engagement with alternative viewpoints. This can involve presenting information from multiple perspectives or encouraging dialogue among diverse groups.

By incorporating these recommendations, communicators can effectively use framing and narratives to convey messages in a way that is ethical, culturally sensitive, and conducive to informed public discourse.

The role of emotions in messaging

Emotions function as a guide in decision-making processes, helping identify and prioritise goals and objectives. Most importantly, people's emotions influence how they evaluate the information source, the credibility of that source, and the likelihood of accepting the information.

When it comes to communication, especially on topics that are intuitively more emotional e.g. migration, many institutions want to have more objective, depolarising debates while recognising that they may have to adopt a more emotional tonality in their communications to "reach people". For example, the Fundamental Rights Agency (FRA) of the EU suggests to use "real-life examples to trigger emotions" since "triggering emotions can have a lasting impact".[188]

However despite the importance of the use of emotions, rarely is advice on communications precise in which emotions should be used and how they can be triggered. A recent review article on the use of emotion on migration communication offers general guidance on the mapping of emotions in communication with regards to the intended behavioural outcomes.[189] As with concepts like trust, emotions can be intuitively understood but are often hard to define.[190] For the purpose of this report they can be simply understood as feelings that can both be positive and negative (so-called sentiment). Emotions are relevant for citizens' views towards policies and politics, because

> "Despite the importance of the use of emotions, rarely is advice on communications precise in which emotions should be used and how they can be triggered.

attitudes – people's evaluations of something as good or bad – are argued to have three components:[191]

1. a cognitive component (such as beliefs);

2. an affective component (feelings or emotions); and

3. a behavioural component (intentions to act).

Thus, emotions are an essential component in our evaluation of policies and may even dominate views towards some policy issues.[192, 193] This holds true for all of us to some degree, underscoring the importance of not relegating emotions as being less important than cognitive decision-making. In fact, researchers highlight that contrasting emotional and cognitive appeals as binary is a "false trade-off" as both usually go together to some extent.[194]

The specific emotions that are most likely to influence persuasion, vary depending on the issue, situation, or source of the information. For example, fear has been found to be a powerful emotion to influence attitudes in situations where there is high risk.[195] Likewise, enthusiasm is often a successful emotion for persuasion in situations where people are trying to get others excited about a product or idea. Similarly, there is robust research on the connection of persuasion and affective states. For instance, if someone is happy, they will be persuaded equally by strong and weak arguments, whereas if the same person is in a negative state, they will be persuaded more by strong rather than by weak arguments.[47, 141]

Persuasion research has long dealt with the distinction between cognitive and affective appeals to attitudes.

Most research has found that cognitive appeals are more effective in changing attitudes that are based on cognitive information (e.g. public health campaign based upon latest epidemiological statistics), whereas emotional appeals are more effective in changing attitudes that are based on affective information (e.g. personal testimonial of how someone's life was changed by ill health). One explanation for these effects is that individuals devote greater attention to information that matches the basis of their attitude.[196]

Rather than looking at persuasion as a quick way to get citizens to follow a certain direction, used responsibly, it could be a technique to get people to open their minds and think critically about their beliefs. A recent field experiment during an election in the Philippines showed that in an election running against a populist campaign, information provision about policies was more effective in winning votes than using emotional content, through increased knowledge retention.[197] Additionally, there is evidence to suggest that emotional frames, especially on disgust and anger, are those that lead to polarised public opinion.[198, 199] It is also important to note that the emotions anger, surprise, and awe can influence a person's level of information processing and persuasion. To illustrate, when someone focuses on the unpleasantness (as opposed to pleasantness) that accompanies anger, relatively higher levels of information processing occur. By comparison, when someone focuses on the confidence (opposed to doubt) associated with anger, they process information to a lesser degree.[200]

Another study found that emotions can either facilitate compromise or increase polarisation across the political spectrum depending on which emotion

> *"Enthusiasm is often a successful emotion for persuasion in situations where people are trying to get others excited about a product or idea.*

is triggered by the text. In their study, the scholars used combinations of news articles talking about the impact of climate change and actions taken against it.[201] While the evocation of fear and hope increase support of climate change mitigation policies on both sides of the political spectrum in the US, anger seemed to polarise liberals and conservatives more, thus showing the need for nuanced consideration about which emotions to evoke and how. A recent paper provides the following practical guidance:[189]

- Emotions can be used to make a message resonate more with the intended audience, impacting attitudes and behaviours;
- Narratives, frames and stories can evoke emotions more strongly;
- Emotions can be combined to create an "emotional flow", e.g. raise fear about climate change and then resolve it with hopeful messaging that leads to actions;
- Avoid thinking too much in false contrasts between emotional and non-emotional communication;
- Select the emotions to evoke with the intended effect, see below;
- Test your communications, as emotions in many areas are still not well understood.

Visual communications

Compared to words or audio, images provide people with smaller, more compact, and easier to comprehend units of information. Yet, little research has been devoted to understand the persuasive power of visual images compared to that of text. Images also offer vantage points to access emotions and values, which makes them more impactful and memorable than

> " Compared to words or audio, images provide people with smaller, more compact, and easier to comprehend units of information.

textual information.[202] This is because of the multi-layered nature of visuals that can more easily activate people's prior knowledge, beliefs and attitudes, making them an important component of framing.

Given that Evidence Communication is central to this report, it is important to note that the science of visual data communication emphasises the importance of designing effective visualisations that leverage the human visual system's ability to rapidly process patterns in data. Intuitive visualisations that facilitate precise and unbiased data extraction should be the aim, avoiding known illusions and distortions.

Visualisations should also effectively convey uncertainty and risk, helping viewers grasp probabilities and variability in data. Using visual representations based on frequency and the probability or chance of an event happening, can help reduce biases and assist people with low levels of numeracy.

This requires careful design choices to accommodate varying levels of domain knowledge, numeracy, and cognitive capacity among audiences.

Specific relations between emotions and reactions evoked:

Emotion	Reaction
Joy	Connect (e.g. join, contact, meet, converse)
Sadness	Withdraw (e.g. turn inwards, avoid, be passive)
Fear	Feel small (e.g. retreat, submit, plead)
Anger	Feel big (e.g. confront, assert, impose, dismiss)
Anticipation	Examine (e.g. observe, consider, compare)
Surprise	Jump back (e.g. hurry, defend, react)
Disgust	Reject (e.g. remove, distance, separate)

Putting science into practice: Check-list for optimal Evidence Communication through visuals

(derived from Franconeri et al., 2021)[203]

- Prioritise position and length (e.g. in bar charts) to depict data, as they are perceived more accurately than colour intensity, area, or volume.

- Avoid misleading axis scales and ensure y-axes start at a relevant value (which may or may not be zero) to prevent exaggeration of effect sizes and use the same range if there are multiple, comparable graphs.

- Use colour and shape fittingly to distinguish between data groups, considering colour-vision impairments.

- Capitalise on the visual system's ability to rapidly compute statistics from a visualization, such as averages and extremes.

- Minimise the need for comparisons by incorporating design elements like highlighting or annotating key data points.

- Organise data to guide viewers to make the most relevant comparisons, using visual grouping cues like proximity and connectivity.

- Use direct labels instead of legends to reduce working memory load and facilitate faster data interpretation.

- Consider animation carefully, as it can overload working memory and lead to misinterpretation; provide user control for animations when possible.

- Create visualisations that respect familiar conventions, such as mapping higher values to higher positions and darker colours to larger values on light backgrounds.

" Use colour and shape fittingly to distinguish between data groups, considering colour-vision impairments.
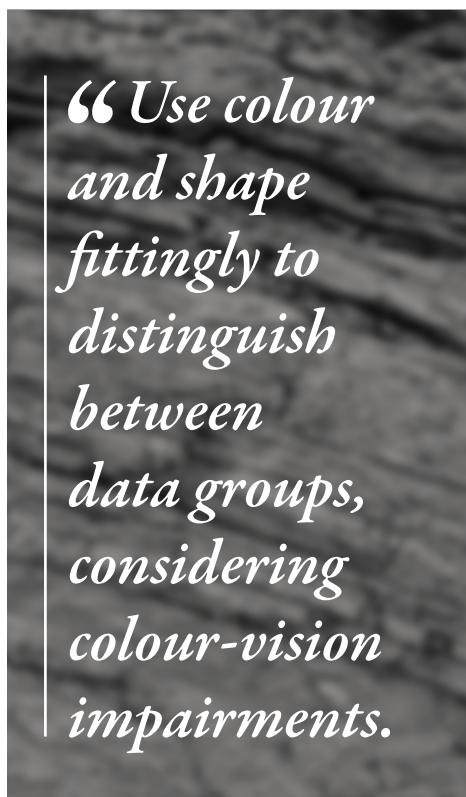
- Communicate uncertainty intuitively, using visual tools like samples from distributions or icon arrays to represent probabilistic information.

- Utilise histograms and scatterplots to give a quick, accurate overview of the principal patterns in the data before delving into detailed analysis.

- Choose graph formats that respect common associations, like using vertical position to represent increase and intensity to represent quantity, as these align with viewers' expectations.

- When presenting uncertainty, opt for frequency-based visualisations, which translate probabilities into more intuitive, countable formats such as density or violin plots.

- Communicate risks using absolute numbers (actual probability of occurrence) instead of relative terms (comparison between exposed and unexposed) to provide a clearer and less biased understanding of potential impacts.

- Design visual aids, such as icon arrays, with systematic arrangements to help viewers easily compare ratios and assess part-to-whole relationships.

- Be mindful of the curse of knowledge; do not assume viewers see what you see. Use language and gestures to guide them through the visualisation.

- Consider the audience's level of domain knowledge and numeracy when designing visualisations, ensuring that the complexity of the display matches their ability to understand it.

- Test visualisations with your target audience to assess their effectiveness and make iterative improvements based on feedback and comprehension levels.

CASE STUDY

Communication strategies during the COVID-19 pandemic

The COVID-19 pandemic was a global outbreak of coronavirus – an infectious disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Cases were first detected in China in December 2019, with the virus spreading rapidly to other countries across the world. This led the World Health Organization (WHO) to declare a Public Health Emergency of International Concern on 30 January 2020 and to characterise the outbreak as a pandemic on 11 March 2020.

Even though many governments hurried to address the situation, experts estimate that globally there were an additional 15 million deaths during 2020-2021 due to COVID-19. Particularly alarming is that the number of deaths due to COVID-19 was higher in 2021 than in 2020.[204] Many lives could have been saved, for instance, by mask-wearing mandates, which significantly reduced death rates if introduced early in the pandemic.[205]

Consequently, the COVID-19 pandemic presented not only an unprecedented challenge to global health systems, but governments were faced with managing the communication of information to the public. This case study examines the various strategies and approaches used during the pandemic to convey crucial health messages, manage misinformation, and encourage public compliance with health guidelines.

The role of evidence-based communication during the pandemic:

Governments sought advice from experts in various fields to inform their communication strategies.

> " During a crisis like COVID-19 the integration of various data sources and acknowledgment of the public's consent for data sharing were vital for building trust.

Including social and behavioural scientists in advisory groups proved beneficial, as seen in Ireland, Scotland, and Australia. These experts helped bridge the gap between academic knowledge and public health communication. Transparency was crucial, with advisory group contributions regularly published, enhancing public trust. However, the quality of evidence used was debated due to the time-sensitive nature of the pandemic, highlighting the need for honesty about the level of uncertainty. A recent review found that the behavioural science policy recommendations made early in the pandemic were largely correct. Of the 747 studies reviewed (with an average sample size over 16,000) that have been published since 2020, found that evidence supported 16 of the 19 claims.[206]

Effective communication during a crisis like COVID-19 relies heavily on timely and accurate data. Governments developed digital tools for data collection to control the virus. However, the integration of various data sources and acknowledgment of the public's consent for data sharing were vital for building trust. Portugal's success in managing the pandemic was attributed to its decision-making process, which incorporated both scientific evidence and experiences from other countries.

Countering Misinformation:

Misinformation spread quickly alongside the pandemic, leading the WHO to declare an infodemic.[207] Studies showed that misinformation impacted beliefs and behavioural intentions, such as vaccine hesitancy, as well as relevant behaviours, such as social distancing.[40–42, 208] Governments employed various strategies, including disseminating accurate information, engaging community leaders, and partnering

> " Effective crisis communication is vital to ensure the public receives accurate, timely, and reliable information, which is necessary for managing the situation, reducing harm, maintaining public trust, and facilitating recovery.

WHAT IS CRISIS COMMUNICATION?

Crisis communication in the public sector is a critical aspect of managing and mitigating large-scale societal crises. Public administrations are entrusted with the responsibility of preparing for, communicating during, and managing crises. Effective crisis communication is vital to ensure the public receives accurate, timely, and reliable information, which is necessary for managing the situation, reducing harm, maintaining public trust, and facilitating recovery. Public administrations must balance operational and strategic communication with a focus on both reputation and resilience. The use of social media and other modern technologies in crisis communication is becoming increasingly important in fostering participatory cultures and collective intelligence, which are essential for community resilience.

Top ten tips for public communicators to communicate responsibly during a crisis:

1. **Prepare in advance:** Have a crisis communication plan in place before a crisis occurs, detailing communication strategies and protocols.
2. **Respond quickly:** Time is critical in a crisis, and prompt communication can help control the narrative and reduce misinformation spread.
3. **Ensure accuracy:** Double-check facts before disseminating information to prevent the spread of false information.
4. **Maintain transparency:** Be open about what is known and unknown, and communicate the steps being taken to address the crisis.
5. **Demonstrate empathy:** Show genuine concern for those affected by the crisis, which can help in maintaining public trust.
6. **Use clear and concise:** Communicate in a way that is easily understandable to avoid confusion and panic.
7. **Coordinate with public administrations:** Work with other public administrations and agencies to provide consistent and unified messages.
8. **Leverage social media:** Utilise social media platforms effectively to reach a wider audience and engage in real-time communication.
9. **Monitor and address mis- and disinformation:** Keep an eye on what is being said about the crisis and correct any misinformation swiftly or, if possible, pre-emptively.
10. **Evaluate and adapt:** Continuously assess the effectiveness of the communication efforts and be ready to adapt strategies as the situation evolves.

with social media platforms to down rank or remove misinformation. Ensuring the credibility of sources and promoting media and information literacy were also emphasised.

Language Choices and Metaphors in Communication:

Language use during the pandemic involved new lexical choices and consistent messaging. Messaging around COVID-19 included self-efficacy, fear appeals, and moralising messages. The effectiveness of these messages varied based on external factors and audiences. Metaphors played a significant role, with war metaphors initially common but later criticized for potential negative impacts. Alternative metaphors, such as those related to fire, were suggested to convey shared responsibility without the same taxing effects.

The Vaccine Narrative:

Communication around vaccines was crucial to address suspicions and concerns. Metaphors were used to explain how vaccines work and to reconcile the contradictions of vaccine safety and rapid development. The seatbelt metaphor, for instance, was effective in communicating the importance of vaccines despite not being 100% effective and the need for continued caution.

Lessons learned – the dos & don'ts from a communications perspective:

<div style="text-align:center">**What worked**</div>

- Clear and concise messages/communication
- Engaging with academic experts (where this occurred and advice was taken into account)
- Relying on trusted sources to convey messages
- Listening to people's concerns and needs in order to tailor communications
- Predictably regular communications
- Communicating scientific consensus
- Use of empathy in communications
- Communications signalling mutual trust and shared responsibility ("We're all in this together")
- Making relevant data available regularly/reliably and in a useable format
- Acting against misinformation on online platforms
- Transparent communication of evidence behind decisions and recommendations
- Use of interpersonal language which could help in creating alignment with group/speaker
- Relying on metaphorical language
- Metaphors that conveyed seriousness and urgency in the early stages of the pandemic
- Metaphors that conveyed shared responsibility and vigilance in later stages of the pandemic
- Carefully selecting frames that resonate with background knowledge and beliefs of different target audiences, and/or that help provide a structure that reconciles seemingly contradictory measures (vaccines, lockdown, etc.)
- Pre-testing communication strategies

<div style="text-align:center">**What didn't work**</div>

- Complicated messages/rules
- Tentative communications and lack of transparency due to fear of causing panic
- Mixed messages, e.g. "stay home if sick" vs. "stay home unless going out is essential"
- Poor communication of vaccine risks and benefits, and other important aspects such as the airborne

nature of the pathogen, the low utility of surgical masks

- Misleading narratives; these include the minimization of risks ("new normal", "living with COVID", etc.); premature narrative of the Omicron variant as "mild"; continuous emphasis on outdated recommendations (such as hand sanitisation)
- Too little inoculation against to-be-expected misinformation (e.g., anti-vaxx rhetoric)
- Not communicating social norms and public opinions clearly, such that vocal minorities received too much airtime, leading to pluralistic ignorance
- Focus in communication on the non-compliant minority (those who did not follow the suggestions, disobeyed regulations or refused to vaccinate), making false impression as if it was behaviour of the majority
- Use of inappropriate metaphors (virus as a foreign threat, etc.)
- Using "personal responsibility" rhetoric despite public health by definition being a common good
- Not considering the emotional cost triggered by the sustained use of metaphorical frames that stress risk and urgency (e.g., militaristic) and invoking such frames to specific audiences that are not able to process the implications and/or may especially suffer from its negative valence (children, elderly, disabled, etc.)
- Use of moralising messages which could justify polarized positions
- Not considering the possible emotional effect on the audience of certain lexical choices (e.g., social distancing vs. physical distancing)
- Framing communication in terms of binary choices between public safety and a strong (future) economy

Conclusion:

The COVID-19 pandemic highlighted the importance of clear, transparent, and evidence-based communication. Involving experts across disciplines, countering misinformation proactively, and making careful linguistic choices were key strategies. Communication specialists can draw from these experiences to develop more resilient and effective communication approaches for future public health crises. Tailoring messages to diverse audiences and ensuring the credibility of sources will remain essential components of successful public health campaigns.

> " Involving experts across disciplines, countering misinformation proactively, and making careful linguistic choices were key strategies.
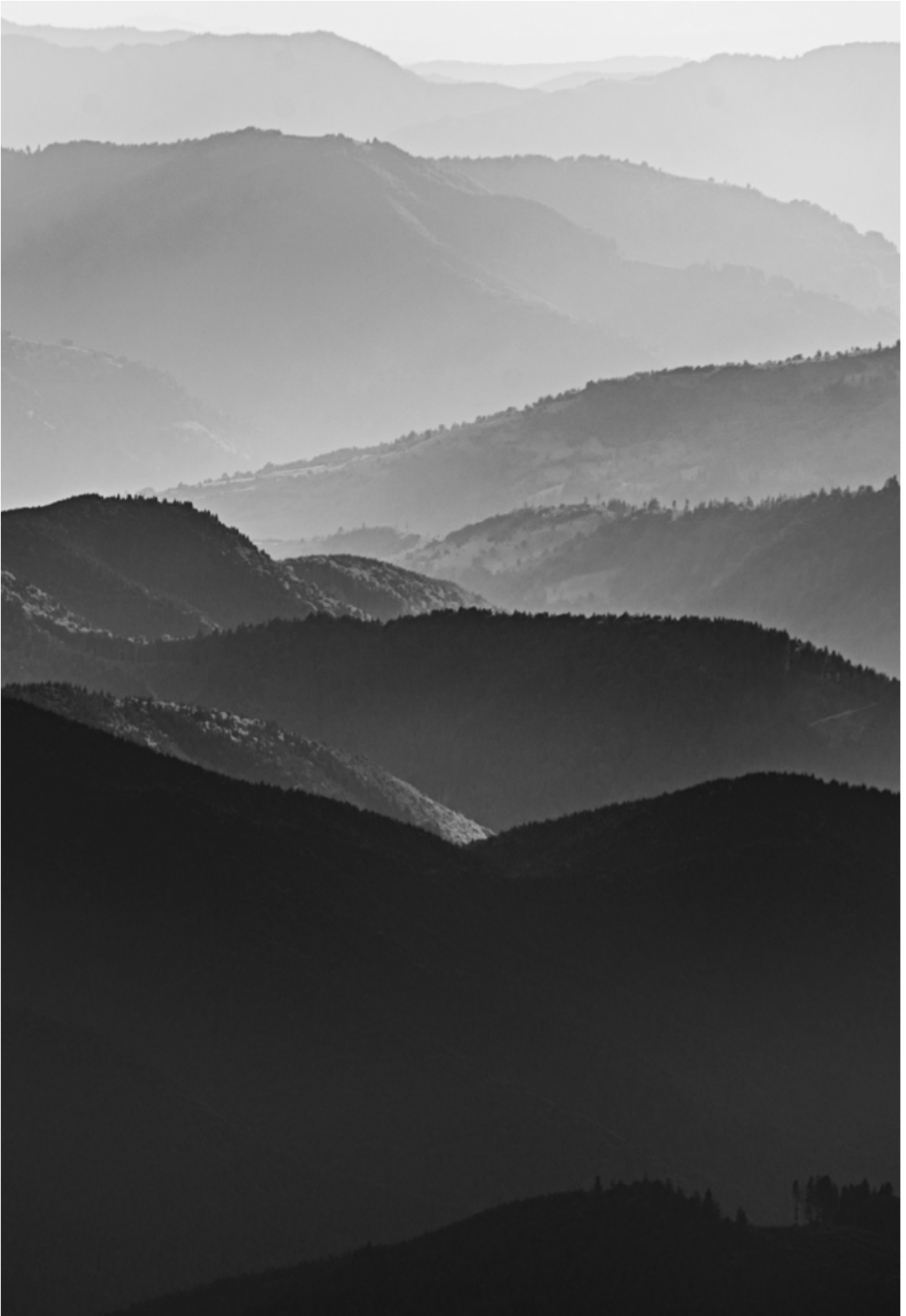
RECOMMENDATION 6:
PUBLIC COMMUNICATORS SHOULD TAILOR AUDIENCE RESEARCH TECHNIQUES TO DIFFERENT PUBLIC COMMUNICATION GOALS

> " For a public communicator who wants to serve their audiences' information needs, understanding their audiences' concerns and what information would be helpful to them is crucial.

Effective public communication requires understanding the audience to create messages that resonate but there are different ways to understand citizens, each appropriate to different goals. Audience research can take many different forms that should be employed depending on the complexity and behavioural or belief component being targeted. Deliberative exercises are essential to capture lived experience, adding a grounded reality and thereby unpacking the "why" of statistics and surveys. It is important to understand the right method of citizen opinion, attitude and behaviour elicitation.

Understanding your audience

For a public communicator who wants to serve their audiences' information needs, understanding their audiences' concerns and what information would be helpful to them is crucial. This understanding is on the one hand important to feed back into the policy process, while on the other, this information can be used directly for designing and improving public communication. Determining concerns that need to be addressed, the appropriateness of tonality, and message testing are critical insights for the public communicator. This is especially needed as expectation of citizens from public administrations change over time and vary between groups, so monitoring should not be a one-off.[209–211]

Understanding citizens is however not a one-dimensional issue. Numerous methods are available to understand standpoints, attitudes, behaviours etc. This section provides a useful guide on how these different techniques can be used. However, as undertaking such research could be considered persuasive in and of itself, citizens were asked what they thought about such techniques.

CITIZENS TOLD US…

Points on trustworthiness from 98 citizens in 17 focus groups from 9 EU Member States

(Methodological details in Annex)

- Taking an inclusive approach to communicating was an important theme that emerged in terms of how participants view the duty of public administrations to communicate.

- Vulnerable or marginal groups should not miss out on important information – both in terms of potential language barriers and in terms of accessibility to groups which may be physically or cognitively impaired.

Vulnerable individuals and groups

There are many definitions of vulnerability and consequently vulnerable groups, as these are context-specific.[212, 213]

Importantly, vulnerability is not a characteristic of a person, as it may change from situation to situation. For example, some people may be vulnerable in a context of financial decision-making, as they lack deep understanding of the issue, while others may be vulnerable when it comes to visual communication, for example if they are visually impaired. Of particular importance to establishing trust with vulnerable groups is long-term transparency and a culture of accountability.[214] Public communicators therefore need to be honest about their failings and engage in continuous, transparent dialogue to foster trust and understanding. In such a context, the role of public communicators as cultural intermediaries who facilitate understanding across diverse groups is important.[215]

When communicating with vulnerable groups, specialised, targeted tools that consider the socio-cultural context, language, and literacy levels of the audience are appropriate as the groups may not benefit from conventional communication channels.[216] Regarding messaging, the use of metaphorical language can help articulate complex and sensitive experiences, being a powerful tool in bridging gaps in understanding, aid in healing processes, and challenge ideological positions.[217, 218] Transparency is of paramount importance, as persuasive communication techniques could compound vulnerability.

Techniques to understand audiences

As a starting point for understanding audiences for the design of Public Communication, it is important to realise that beliefs, attitudes, intentions, opinions and behaviours are quite different in nature. Often people may want to do something, but ultimately do not because many factors influence behaviours at any given time, which is why attitudes, intentions, opinions and behaviours correlate only weakly in many situations.[219]

For example, when the goal is to understand the reality on the ground before deciding on the goal, a communicator could start with an analysis of general attitudes towards the issue ("survey"), listen in on the currently hotly discussed related topics ("social listening"), then analyse what the specific decision-making process

is for behaviours ("behaviourally informed"), then gather data on how prevalent these issues/behaviours are ("behavioural data"), investigate already tested communication interventions and if needed, design new pre-tested ones ("behaviourally tested") for the specific context and then roll out the most appropriate communications, depending on the communication goal. The following elicitation methods have pros and cons that need to be considered carefully in relation to the overall goal.

Citizen opinion, attitude and behaviour elicitation methods

Surveys: Either ad-hoc or established longitudinal surveys of populations, such as the Eurobarometer, World Value Survey and others offer the ability not only to obtain descriptive evidence of large population opinions and beliefs, but also to compare those over time.[220]

Social Listening: The process of identifying and analysing what is being said about an issue, a public administration, individual, or any other given subject, without intervening to guide the conversation. Together with topic analysis, newer approaches such as sentiment analysis, values and persuasion technique detection[6] can lead to political intelligence. Such insights, can assist with gaining citizen trust by understanding and then addressing their concerns more directly and effectively. Such tools can be used for the emergence of new salient topics, opinions, events or figures, or can be used to track misinformation and hate speech. In comparison to social media platforms that can be
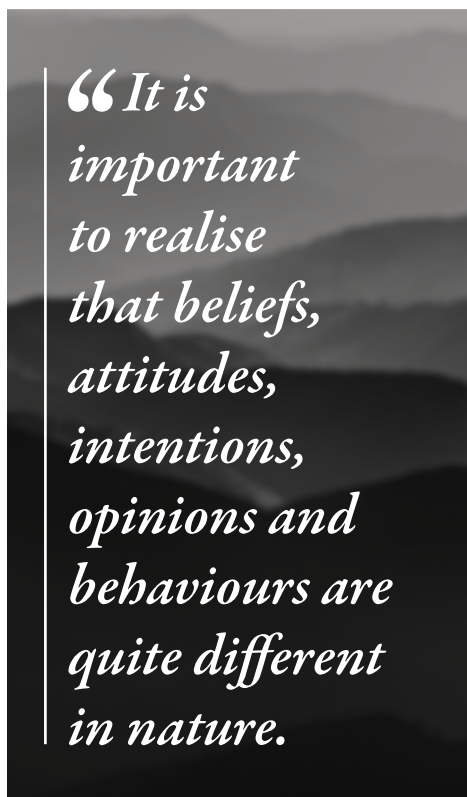
" It is important to realise that beliefs, attitudes, intentions, opinions and behaviours are quite different in nature.

highly biased due to non-human comments and the fact that they provide non-representative samples of the whole population, Large Language Models seem to be a particularly promising way to understand content more quickly and deeply.[221]

Literature reviews: Reviewing the academic literature on a subject is always recommended as a first step to not replicate mistakes of the past. However, it is usually quite time consuming and requires a certain level of expertise to be able to sift through and synthesise vast amounts of specialist literature, especially with the recent exponential growth of publications. Potentially with the arrival of AI, literature reviews have become easier and faster to do, although it remains to be seen whether AI-driven summaries are sufficiently trustworthy. However, in comparison to online searches, this can offer a valid alternative.[222]

Administrative data: When wanting to know the proportion of people who actually change their behaviour, it is wise not to rely exclusively on self-reported behaviours in surveys, but to gather data that has been collected measuring actual behaviour. This may come from public sources, such as Eurostat or private databases.

Behaviourally tested: When it comes to wanting to understand what drives behaviour, just having behavioural data from secondary sources – that is data not specifically measured for the current purpose – is rarely enough, as people's recollection of their behaviour in surveys is often unreliable. Conducting experiments that measure the targeted behaviour precisely and in an incentivised way in the lab or the field through randomized control trials (RCTs), where

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6 https://knowledge4policy.ec.europa.eu/projects-activities/valuesml-unravelling-expressed-values-media-informed-policy-making_en

participants randomly receive either the intended communication or a control, is indispensable.[223, 224] If the target outcomes are not behaviour change but ensuring people are informed, then surveys and RCTs that probe the relevant information directly are the only way to measure success.

Citizen engagement: Using a more qualitative approach, citizen engagement comes in various forms from one-on-one interviews, simple focus groups, to panels and citizen assemblies. Engaging citizens allows to overcome the fact that many people in surveys respond to questions without reflecting on them on a deeper level. This is a particular problem for many policies that have not yet been extensively discussed in the public domain, such that being informed is low. Engagement in a structured way, as explained in the previous chapters, allows deeper reflections and more truthful elicitations of what citizens would want if they knew the details.

How to choose among the methods

Policy issues typically vary around several important dimensions, two of which seem particularly relevant for choosing the right elicitation method. First, the communication goal should again be clearly defined as either i) the core information support – which requires the elicitation of beliefs and attitudes, or ii) behaviour change – which requires measurement of behaviour and its main drivers. For these kinds of goals, behavioural data and tested interventions are best suited, as they provide an accurate picture of the situation and allow causal interpretations of what works. Literature reviews can also work, if there is already something addressing the specific problem at hand. In contrast, using social listening or surveys may not work for behavioural goals, as people's recall may be poor or

they intentionally misreport or exaggerate their behaviour.[225] However, when focusing on issues where it is more relevant to learn citizens' attitudes or factual beliefs, e.g. in situations where it is more relevant to ask about their approval of some regulation that only indirectly affects them, then surveys, engagement or social listening can be the preferable choice.

The second dimension that is relevant is the complexity of the issue being reviewed. Many issues that policymakers and public communicators spend a lot of time on are still relatively unknown to citizens, such that surveys are unlikely to yield useful results. In these cases, citizen engagement practices are well designed to allow citizens to get up to speed with even very complex issues.[226] They also allow citizens to ask questions of experts so they can fill their knowledge gaps and provide a richer picture of attitudes based on their additional local and personal knowledge. This is only really needed when the issue is complex, which can also be the case when the issue is relatively new to the audience.

Surveys are useful in getting a representative picture of what people think. However, very often the language used in policymaking is adapted to the circumstances and therefore very difficult for laypeople to understand. Often people's understanding of the same words is influenced by their experiences.[227, 228] It is therefore understandable that more complex issues, such as approval of democracy, rule of law, or climate change, need to be put into perspective. Here, qualitative research, open-ended questions in surveys, and engagement with the audience to try and align people's understandings before questioning them are crucial.

To illustrate, the following two examples span the continuum: citizens' attitudes towards migrants in a

> **❝** When focusing on issues where it is more relevant to learn citizens' attitudes or factual beliefs, surveys, engagement or social listening can be the preferable choice.

country and attitudes towards new genomic technique regulation. Citizens may not know the exact number of migrants, but they typically know what migration means for them personally, and therefore attitudes can be explored in simple surveys.[229–231] On the other hand, what a policymaker should do around new genomic techniques for plant and animal alterations is fairly complicated, as it involves understanding the differences between new, old and traditional breeding techniques, as well as unknown or incomplete knowledge of consequences, which cannot be taken for granted for all citizens. In such situations, doing a survey is unlikely to yield useful information that truly represents citizens' attitudes, even if the survey questions ask about very specific techniques such as CRISPR.[232]

Using these two dimensions, which are usually easy to differentiate for a policymaker, ideally in collaboration with public communicators, allows answering the question of which method is most appropriate when wanting to elicit attitudes and behaviours of citizens to develop successful communication (see Figure 6). Additionally, many initiatives benefit from using multiple methods in "method triangulation".[233]

Putting science into practice: "At a glance" summary

Putting these considerations together, Table 3 presents an overview of various elicitation methods with examples and the corresponding advantages and disadvantages, which can be used to guide public communicators. These methods are stereotypical classifications of the different categories presented above. Each category has multiple sub-classes, or hybrid versions that can be used. Organisational support may be needed for several of them, such that departments planning their communication strategies should integrate them and the corresponding budgeting and trainings in advance.

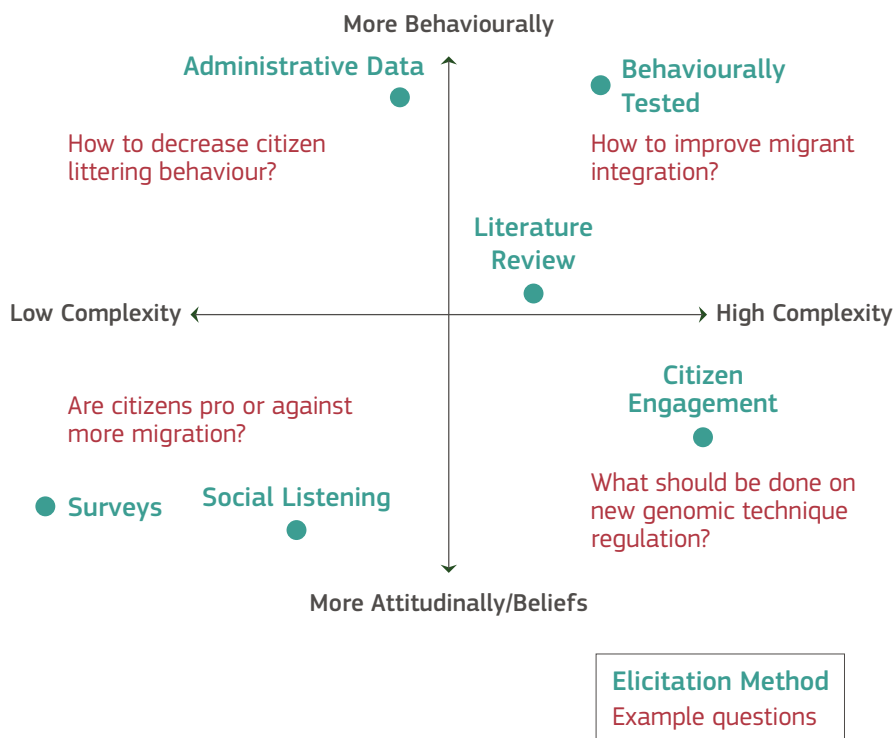**Figure 6 Guidance on which type of citizen elicitation is best used**

Table 3 Overview of citizen opinion, attitude and behaviour elicitation methods and advantages and disadvantages

Method	Surveys	Social listening and political intelligence	Literature reviews ("Behaviourally informed")
Key advantage	Representative including diverse perspectives, analysis over time possible, cheap and quick	Cost-effective, real-time insights, not subject to question bias unlike surveys, large datasets enabling measurement of influence, specific	Cheap, can include causal relations, broad overview
Disadvantages	No deep reflection, social desirability bias (especially for policy desired behaviour, such as green and honest behaviour), framing sensitive, no/limited causal identification	Not representative, can be hijacked by extremes, bots, AI, requires technical knowledge/tools, behavioural and aspirational research questions can be difficult to answer	External validity issues, requires scientific literacy, time consuming, may have gaps on new issues
Costs	Low-Medium	Low-Medium	Low
Examples	Eurobarometer, WVS, EVS, opinion polling, Have your say	Political Intelligence Package[7], sentiment analysis, stance detection	Literature reviews from empirical studies, meta-studies
Ideal Policy stage(s)	Problem definition, policy formulation, agenda setting, monitoring	Agenda setting, problem definition, monitoring	Problem definition, policy formulation

Hybrid methods

While Table 3 represents several categorical distinctions in how to understand citizens, there are also hybrid techniques that try to combine the advantages of several methods, the following are illustrative examples:

• **Survey experiments**, such as vignette studies, or information provision experiments: Survey experiments can be used to randomise groups into receiving certain information and any difference found in response to this information is likely due

to the information itself, i.e. it allows causal testing of the effects of communication designs and content. These survey experiments can measure the impact on trust, attitudes, feelings of being informed etc., but generally not on behaviour, only on stated intentions to behave in a certain way or on behavioural proxy measures (e.g. experimental auction or donation measures).

• **Open-ended survey questions:** A major disadvantage of surveys is that they cannot provide nuance or reasoning why someone chooses a certain answer. This can be partially remedied by adding open-ended questions. Traditionally, these were avoided as it was very time consuming to

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7   https://knowledge4policy.ec.europa.eu/text-mining_en

Administrative data	Behaviourally tested	Citizen engagement
Cheap, broad overview possible, provides high fidelity behavioural data	Causal, tailored measurements	Deeper reflection through moderated conversation, ability to make sense or judge complex information, added legitimacy to policymaking
Limited availability, work required to interpret, may oversimplify an issue, privacy issues	External validity issues, expensive, time-consuming, potential researcher bias	Not always representative, social desirability bias of group deliberations
Medium	High	High-Medium (online)
Eurostat data, consumer data	Various RCTs	Deliberative methods: Citizen assemblies, citizens' juries Co-creation approaches: co-design workshops, scenario workshops and other future oriented methods Exploratory approaches: focus groups and in-depth groups
Problem definition, policy formulation, monitoring	Policy formulation, implementation	Problem definition, policy formulation, policy implementation, monitoring

analyse them. However, advances in natural language processing allow a fast way to process large amounts of text in a meaningful way. This can help develop messages, or prepare for potential backlash that might occur.

- **Online Citizen Engagement Platforms:** These platforms, such as the EU's new Citizens' Platform under 'Have Your Say', can combine elements of surveys, social listening, and citizen engagement. They allow citizens to share their concerns and ideas, while also enabling policymakers to gather data on public sentiment and explore potential clustering and coalitions of opinions.

- **Ethnographic Surveys:** These mix elements of surveys with more qualitative methods like interviews or direct observation. They often involve open-ended survey questions and follow-up interviews to gather more in-depth data. This data allow a much more in-depth analysis of the issues at hand, potentially different interpretations and alternative motivations for behaviour and attitudes, and therefore for testing and co-designing communications.

RECOMMENDATION 7:

INDIVIDUAL PROFILES SHOULD NOT BE USED TO TARGET PUBLIC COMMUNICATION; ONE ALTERNATIVE IS VALUES SEGMENTATION PROVIDING MESSAGES THAT RESONATE WITH ALL PARTS OF SOCIETY

> ❝ An excessive focus on the "moveable middle" may impoverish democracy.

Targeted personalisation in Public Communication can harm democracy through a reduction of accountability due to a decrease in commonly shared knowledge and a potential for increased polarisation. However, given the amount of noise in the information ecosystem, it is legitimate and useful for public communicators to use some targeting techniques to ensure their messages are received by intended audiences. For example, rather than targeting messages using individual profiles, grouping segments of the population e.g. by values preferences is a tested, accepted and trustworthy approach to reach diverse audience segments. All versions of targeted communications should be publicly available to be transparent and accountable.

Targeted messaging and personalisation

Linked to the mode of communication is the extent to which messages are targeted, as such techniques offer some opportunities to public communicators. For more specific definitions, see below. However, using targeting or personalisation carelessly carries risk of violating ethical standards, runs counter to public attitudes of acceptability and decreases trust in the source.[234] Additionally, in light of the EU legislation on the Transparency of Political Advertising, public administrations will need to adhere to stringent new rules that will ensure targeting and ampli-fication techniques will only be possible for online political advertising based on personal data collected from the subject once their explicit and separate consent has been granted. Special categories of personal data (e.g. ethnicity, religion, sexual orientation) or minors' data cannot be used. Thus, for public communicators it is important to understand

the specifics of making messages more appealing to specific groups or individuals.

In order to have impactful messaging, communicators can try to target audience(s) in various ways. The specific terminology varies a lot, but one can broadly differentiate between the following categories:[235, 236]

Targeting: Communication identifying and communicating with specific groups within a larger population, by segmenting the audience based on various categories, such as socio-demographics or attitudes;

Tailoring: Crafting messages to fit the characteristics of an individual or group;

Personalising: Crafting messages to fit only individual characteristics; and

Matching: Aligning communication strategies with the characteristics of the target audience, channel or topic of communication.

Using these different types of targeting has been shown to be effective, particularly in persuasion.[236] Research has shown that matched messages in particular seem to be thought through more systematically by the receiver, thus potentially increasing the uptake and understanding of their content.[237, 238] This may be because such messages are seen as more relevant and hence worthy of closer inspection.[239]

A commonly used way by communicators and specifically advertisers today, is to use the categories offered by various online platforms to segment citizens based on socio-demographics and interests. These approaches are useful, especially when a specific service is offered or promoted by a public administration. Wanting to communicate the benefits of ERASMUS+, for example, should be primarily directed at those who are eligible, i.e. the young and mobile.

However, it is important to understand the limits of such categorisations. They may offer a good overview of the current behaviour of people, at least as performed on the platforms they frequent. But they are less insightful on understanding the motivation why people want to engage in a certain behaviour and even less so when it comes to policy preferences.[236] There is often a lack of transparency about how these categories are developed, such that it is unclear whether they truly reflect what they are marketed for.[240] Finally, tailoring and matching can backfire when weak arguments are provided. A poorly substantiated matched message can be less convincing than a stronger generic message.[241-243] As Bruns & Nohlan state in a report on how to use tailoring for food waste reduction: "In fact, tailoring is (still) more of an art than a science" highlighting that the use thereof should be well informed.[235]

However, there is an additional concern for public communicators with targeting. An excessive focus on the "moveable middle" may impoverish democracy and in the case of the EU, its image in the long run. For example, people often do not know the details about how the EU works – for many different reasons – including the fact that media usually focus on national matters.[244] If then, the communication trying to inform citizens about the EU is overly targeted, few people will see what is being done. Consequently, the common, shared knowledge and understanding of what the EU is may therefore further erode.

Economic actors can use strategies that focus on very specific target groups because the negative consequences associated with large parts of a country not knowing about their activities are limited. However, the situation is very different for public administrations that rely on the democratic support of all citizens. Additionally, numerous studies have found that no matter how strong one's opinion about something is, new information always leads people to update their beliefs, at least to some degree.[245] Therefore, in some instances, it is useful to target the moveable middle, but overall a more cautious approach is preferable

when it comes to communication, especially about broader, relevant and important policies.

One interesting approach for targeting is to focus on values because they are motivational and express what people want (in contrast to various socio-demographics). Values determine what is important to people and are therefore at the very core of democracies. Values such as Freedom, Security, or Power are motivations for citizens and influence their attitudes, beliefs and behaviours.[246–248]

The approach presented in this report is based on the theory of 'basic human values', the most broadly used values theory in cross-cultural and social psychology.[249] The theory has been tested and validated in many countries and all continents of the world. While these values are generally quite abstract, people will try to act in accordance with the motivations

underlying the values they prioritise.[250] For example, people who prioritise the value Security (i.e., social stability, family and personal safety) are likely to evaluate certain domestic security or criminal law policies positively if they believe these policies may serve to promote the realisation of this value.

Specifically for public communicators, it is important to understand that people differ in their understanding of the policy-to-value link, depending on their personal background, knowledge and ways their social circles think about it.[251] Pointing out the direct links in communication through concrete examples will help people make the connection more readily and align intended values and policy intentions.

Additionally, citizens prioritise values differently, e.g. someone endorsing the value 'Self-direction' (i.e., exploring, discovering, and being creative), does not

Figure 7 Personal values circle
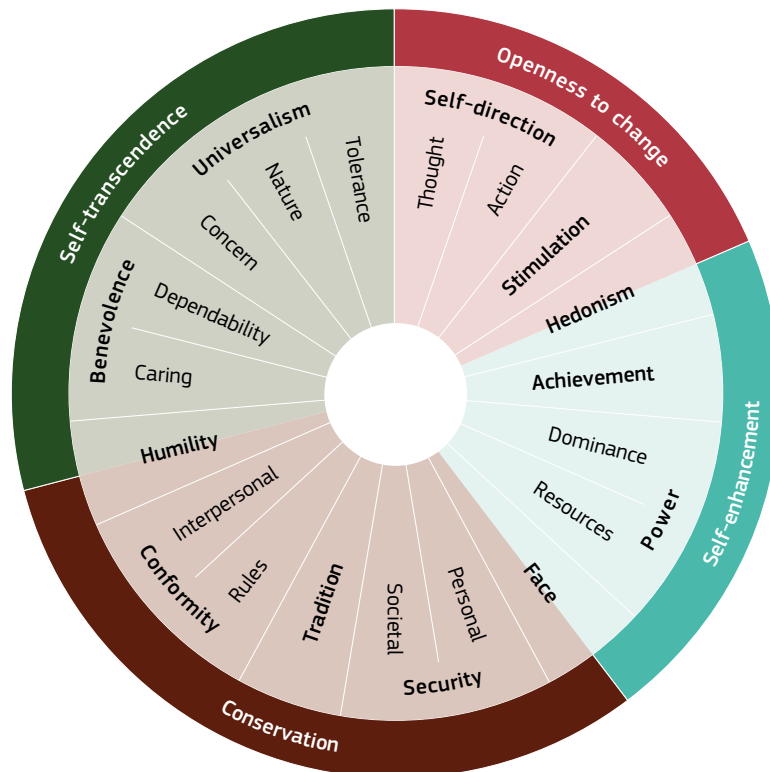
Source: Schwartz et al. (2012)[252]

usually place high importance on the value 'Tradition' (i.e., honouring traditional rules and customs) or 'Conformity' (conforming to the expectations of society), which others may find very important. Such tension often holds true for policies as well. Some policies may help increase security in society and at the same time raise the possibilities for individual freedoms, but many policies naturally require at least some trade-offs between values. Importantly, citizens in all countries differ in their values priorities, which ultimately leads to the need for recognition of values trade-offs within societies.[73]

Matching

Matching comprises several dimensions, for example matching the message to the characteristics of the message object, and matching this to the characteristics of the message receiver. To illustrate, when communicating about behaviours intended to reduce the impact of climate change, reducing meat consumption can be matched to the values of Universalism (caring about others and nature), as there is a natural correspondence between the behaviour and the value. Alternatively, one could match the message to the value priorities of the receiving audience, which may include Universalism, but also Power (money, wealth). In the case for climate change, it may be useful to make the aspect of saving money salient in the message, e.g. car-sharing is cheaper than driving individually.

The evidence shows that there is a positive effect for both types of matching even if there are some conflicting findings. For example, "Self-transcendence frames" that focus on caring for nature and welfare of others have been found to reduce meat consumption, shower frequency, and increase intentions to enrol in energy-saving programmes.[253–256] The evidence on

> " Pointing out the direct links in communication through concrete examples will help people make the connection more readily and align intended values and policy intentions.

COVID-19 related communication is, however, more mixed.[257, 258] Meanwhile, & meta-study found a small average effect for tailored motivational matching effects using values.[259]

In further support of this strategy, the current authors carried out a comprehensive study investigating various values communication strategies relating to different EU policies and found support at least for the matching strategy relating to the object of the message. The study found that messages using both aligned and unrelated value frames had a positive effect on a behavioural measure (donations). This result was seen across policies in general, while a stronger effect was noted for security-related policies (border policy powers, safety inspections of food, immigration limits, language training for immigrants).

Additionally, when using several values at the same time in a message, the effects remained the same. Thus, once messages are designed, public communicators can combine different values frames to reach multiple parts of the population. Therefore, the need for personalisation of the message is no longer required. Although an understanding of different values perspectives is needed to craft effective messages, this approach does not require strong personalisation. Instead, this approach is likely to be seen as more trustworthy as a majority of citizens opposes the collection and use of sensitive personal information, as demonstrated in a study on representative samples from the US, the UK and Germany.[234]

To provide further guidance, the authors tested the values relations to various policies to ascertain how people see the link to policies. Figure 8 shows a map of the relations between the four higher-order values mentioned above and 19 different policies. The closer

a value and a policy are on the map, the more people saw them as related to each other. For example, the more people value "Openness to change", the more they agreed that same-sex couples should have the same rights as other couples.

Figure 8 Mapping values and policy relations
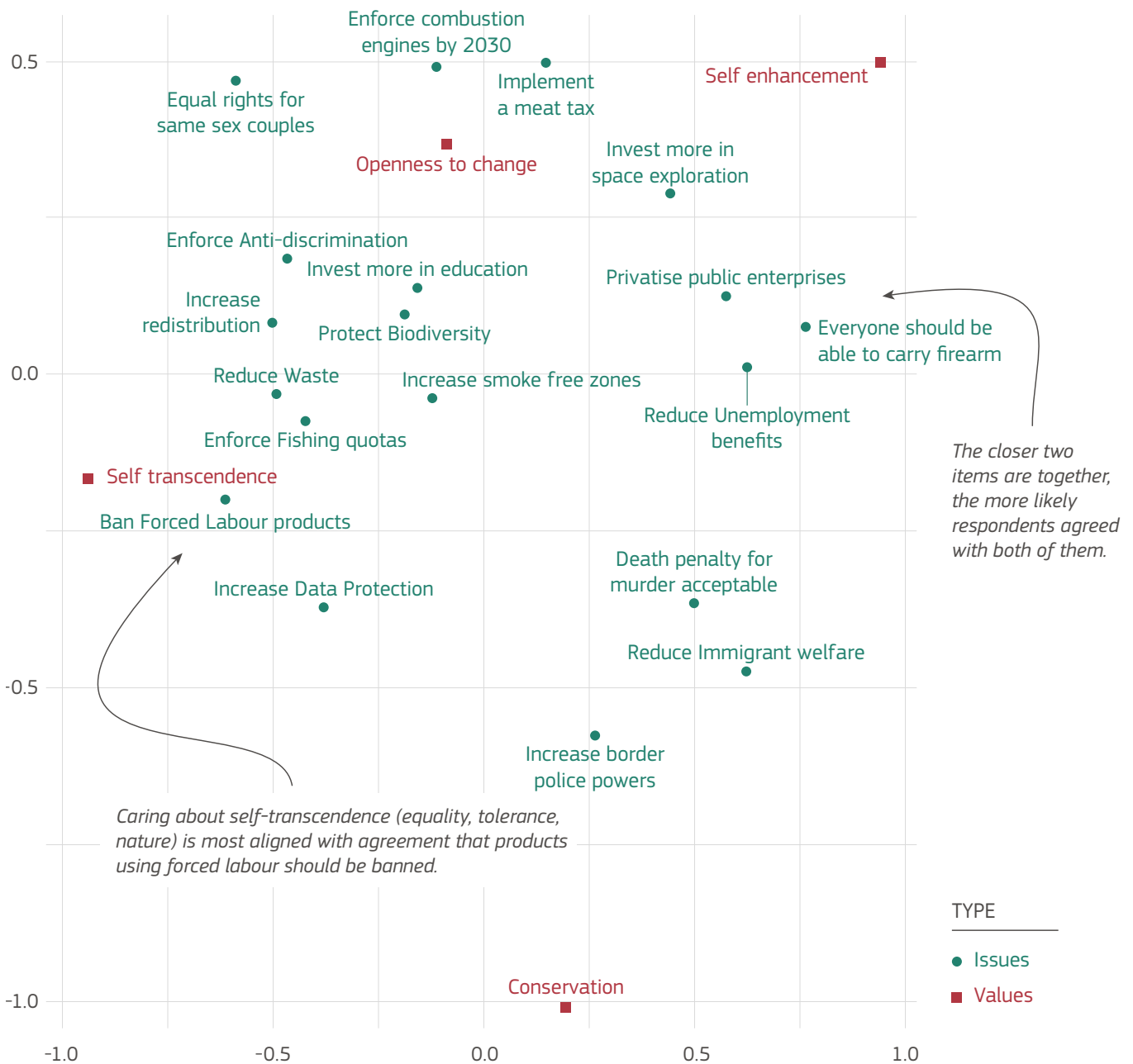
Notes: The multidimensional scaling graph visually expresses the relation between values (red) and policy attitudes (black). Axis are simply statistical representations and have no direct interpretation. Survey participants were asked to evaluate how important the values are to them and how much they agree with a given policy statement. The location on the map is determined by the similarity between the answers, meaning the closer two items are, the more likely it is that people see them in the same way and the further apart, the less they are seen as compatible.

Values and identities-based profiles in the EU

To better understand the prevalence of different values priorities in Europe, the following section refers to citizens' profiles derived from their values and social identities from a dedicated Eurobarometer. The analysis revealed five value- and identity-based profiles:

1. **Pragmatists** (12% of the EU population): Pragmatists are family-centred in values and identities. They care about their close ones, about security and are generally in favour of the EU.

2. **Progressives** (14%): Progressives tend to be young and highly educated citizens who care about equality, nature, and politics and are strong supporters of the EU.

3. **Moderates** (25%): Moderates are citizens with balanced values profiles, who identify strongly with their occupation, education but also political beliefs and being European.

4. **Individualists** (23%): Individualists value wealth and power but do not exhibit any strong social identification. They are the most sceptical about the EU but also of their national democracy.

5. **Traditionalists** (26%): Traditionalists endorse conservation values of security, conformity and tradition and identify strongly with their nation, religion/beliefs, ethnicity/race, age and gender.

Overall, four out of five of the profiles declared explicitly positive attitudes towards the EU. Progressives are the most positive about the EU and Individualist are the most sceptical about the EU's actions and membership benefits.

Distribution of the five identity profiles varies across the EU: Pragmatists and Progressives are primarily found in the North and West of the EU, Moderates are present mainly in the East and South, while Indi-vidualists are most likely to be found in Central and Eastern Europe. Traditionalists are the most dispersed group of all and can be found both in the East and in the West of the EU.

This knowledge about values priorities and social identities of EU's citizens can provide an innovative framework for policy implementation and improve trustworthy Public Communication. Thinking about the values citizens hold and the groups they affiliate with can inform which policy problems they perceive as most important and help to prioritise and know how to communicate with them.

For each of the profiles, Figure 9 shows the distributions per country and Table 4 shows the most important characteristics and takeaways for public communicators, including views on optimal channels of communications and preferred message content.
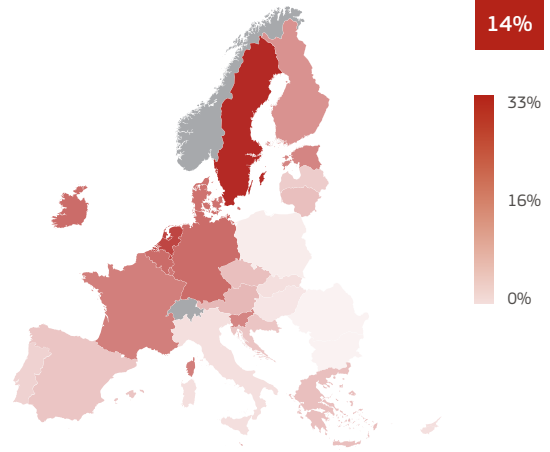
The clustering of populations has been done according to values and identities, based on data from Eurobarometer wave 508.[260]

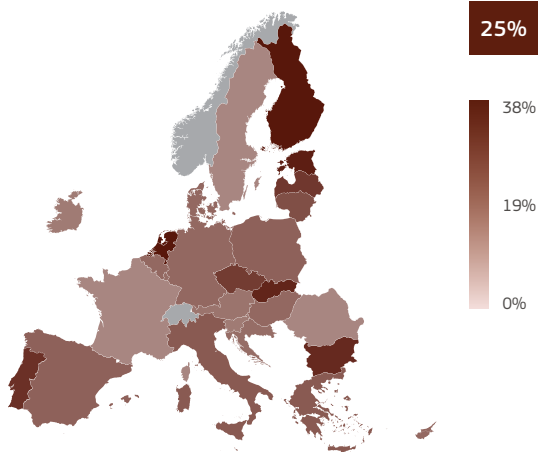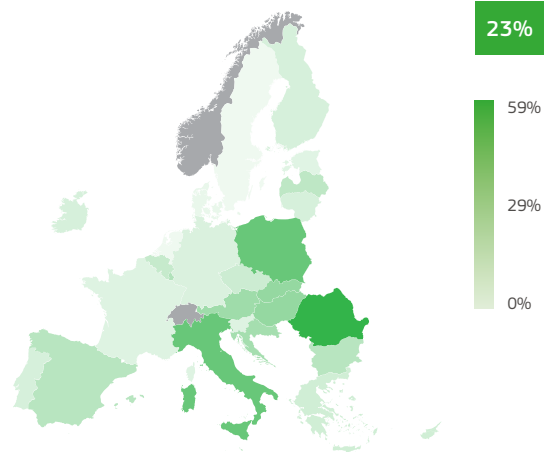**Figure 9 Values and identities mapping in the EU**

1. PRAGMATISTS
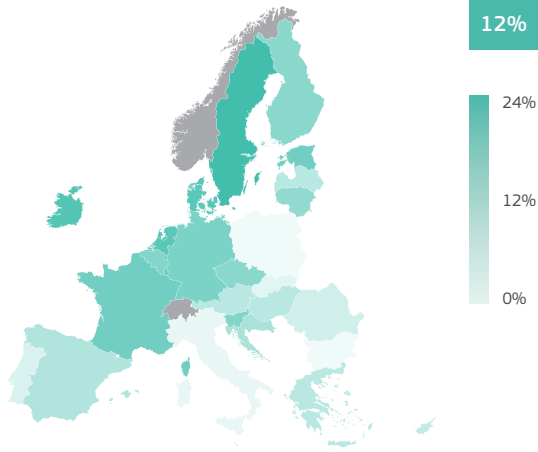
2. PROGRESSIVES

3. MODERATES

4. INDIVIDUALISTS

5. TRADITIONALISTS
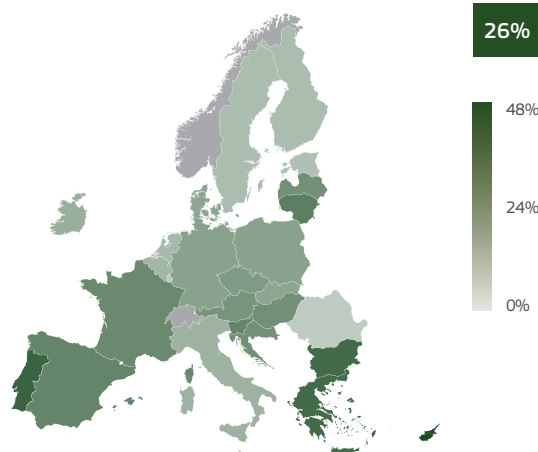
Table 4 Values and Identities profiles in the EU

	Pragmatists	Progressives
Percentage	12%	14%
Values	Highly value Self-transcendence, Openness and Conservation, but are less traditional	Highest in Openness to change and high in Self-transcendence, low in Conservation and Self-Enhancement
Identities	Identify strongest with family, other dimensions less important	Strongly identify with political orientation, least likely to identify with local area/region or nationality
Geographical distribution	More present in Northern European states such as Sweden, Denmark, the Netherlands, or Ireland	More present in Northern European and Western countries, such as Sweden, the Netherlands, or Germany
Socio-demographics	Close to EU average, somewhat better educated and more white-collar jobs	Young, highly educated, often in managing positions or students, lowest retiree share, equal gender. A bit more urban than rural, highest life satisfaction
National Democracy Satisfaction	High satisfaction with nat. democracy (Very/Fairly 65%)	Highest satisfaction with nat. democracy (Very/Fairly 69%)
Agreement with "Membership in the EU is a good thing"	76%	83%
Main asset of EU	The EU's respect for democracy, human rights and the rule of law (37%)	The EU's respect for democracy, human rights and the rule of law (45%)
Main challenges for the EU	#1 Social inequalities (51%) #2 Migration issues (47%)	#1 Environmental issues and climate change (61%) #2 Social inequalities (60%)
Priorities to face major global challenges	#1 The environment and climate change (48%) #2 Social fairness and equality (38%)	#1 The environment and climate change (62%) #2 Social fairness and equality (46%)
Left/Centre/Right/ (Refuse/Don't know)	20/51/23 (/5)	37/48/11 (/4)
Future Vote	#1 Renew (20%) #2 EPP (18%) #3 S&D (17%)	#1 S&D (18%) #2 Greens/EFA (18%) #3 Renew (17%)
How to reach them	• Focus on Northern and Western countries of the EU • Channel mix (online/offline)	• Focus on Northern and Western countries • Mostly online communication
Content Communication priorities	• Focus on mitigation of risk (COVID, climate change, terrorism), but not on traditions and norms • Protection of family and close ones • Uphold democracy and its values	• Climate change and green transition • Social inequalities • Openness/Discovery • European joint action

Moderates	Individualists	Traditionalists
25%	23%	26%
Moderate on all values positions, second most likely to value Self-enhancement values	Strongest focus on values of Self-enhancement, low on all other values	Strong focus on Conservation values, lower on Openness and Self-enhancement
Identify strongly with occupation, education, political beliefs and being European	No strong identity, relatively high on religion/belief and political orientation, low in family	Strongest identity in ethnicity/race, religion/beliefs, area/region, gender, sexual orientation, nationality and age
More present in Eastern European states such as Bulgaria, Estonia, or Slovakia; also high in Finland and Portugal	More present in Southern or Eastern European states such as Romania, Poland, Hungary, or Italy	More present in Southern or Eastern European states such as Bulgaria, Lithuania, Cyprus, or Greece
Slightly more male, similar in age to EU average, education and occupation profile	A bit younger, highest share of middle level education, and manual workers. Highest difficulty paying bills, lowest life satisfaction	Older, more female, slightly less educated (but more than individualists) and more retirees. A bit more rural
Moderate satisfaction with nat. democracy (Very/Fairly 60%)	Moderate satisfaction with nat. democracy (Very/Fairly 57%)	Moderate satisfaction with nat. democracy (Very/Fairly 57%)
66%	51%	65%
The economic, industrial and trading power of the EU / The EU's respect for democracy, human rights and the rule of law (both 32%)	The economic, industrial and trading power of the EU (27%)	The EU's respect for democracy, human rights and the rule of law (33%)
#1 Migration issues (45%) #2 Social inequalities (44%)	#1 Unemployment (42%) #2 Migration issues (31%)	#1 Unemployment/ Migration issues (51%) #2 Social inequalities (50%)
#1 Health and safety (41%) #2 Social fairness and equality (36%)	#1 Health and safety (34%) #2 Social fairness and equality (31%)	#1 Health and safety (48%) #2 Social fairness and equality (39%)
16/49/29 (/6)	14/47/32 (/7)	16/51/24 (/8)
#1 EPP (20%) #2 S&D (18%) #3 Renew (16%)	#1 EPP (21%) #2 S&D (20%) #3 Renew (12%)	#1 EPP (24%) #2 S&D (19%) #3 Renew (14%)
• Distributed widely, some focus on Eastern and Southern countries • Channel mix (online/offline)	• Focus on Eastern and Southern countries • Channel mix (online/offline)	• Distributed widely, some focus on Southern countries • Mostly offline communication
• Balanced (values) communication • Work/growth opportunities • Economic focus	• Focus on success in fighting COVID • Fight against unemployment • Opportunities of participation in social and economic life	• Focus on mitigation of risk (COVID, climate change, terrorism) • Economic recovery • Avoid antagonistic language towards nations or traditions

Culture

Values are invariably related to culture. Understanding cultural norms, values, and beliefs is crucial for effective communication. Public communicators working in intercultural settings must be aware of cultural differences and how they might influence perceptions and responses to communication of various forms. Not surprisingly, research has shown that culturally appropriate messages, channels and senders of those messages improve trust and persuasiveness of the message.[261] For example, when using framing as a technique, the same frames have different effectiveness in different cultures.[262]

When relating cultural adaptation to values, recent research shows how citizens gravitate towards a national core, see Figure 10.[263] The figure shows the clustering of the population in several countries based on different variables. For most variables, the clusters in a country are close together, meaning there is little difference between the values regarding that variable. For example, on average men and women in most countries have similar values. Among the biggest differences on the values scale relates to citizens' political leaning and the region they live in. For these variables, values clusters are further apart and could be used as guidance to adapt messages.

Given the EU has 27 Member States with various cultural and historical backgrounds, cultural competences are vitally important for public communicators. The previously mentioned need to listen to citizens therefore becomes paramount. A related challenge for the EU is the multilingualism of messages. Fortunately, recent advances in automatic translations have made

> " Values are invariably related to culture. Understanding cultural norms, values, and beliefs is crucial for effective communication.

strides in allowing the quick and low-cost translation of content into all EU languages. Furthermore, innovative online platforms, such as the one used for the Conference on the Future of Europe (COFE)[8] and the more recent Citizens' Engagement Platform [9], are able to let citizens communicate and discuss with each other in their native language, which is then translated into the language of the receiver. Thus, today multilingual debates are possible in real-time and should be a prototype for the future to build a pan-European polis. This could also be a model for initiatives under UN or OECD leadership to bring the global community of citizens closer together and avoid narrow national debates, particularly on global challenges.

Moralisation and policy support

An additional reason why values matter is that they may influence the moralisation of policies. Moralisation means the feeling that people have that an issue is about fundamental right or wrong in society, resulting in the conversion of normal preferences into key battlegrounds for citizens. Policymakers and public communicators need to tread carefully on the issues that are moralised, especially when there are large camps on opposite sides.

Citizens in many countries are perceived to be very polarised, in some cases more than ever, and there is some evidence to support this claim.[264, 265] Research in social psychology shows that the level of moralisation of opinions is the one key factor that activates people

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8 For more information, see https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/new-push-european-democracy/conference-future-europe_en and research based on this https://aclanthology.org/2022.aacl-short.52/.

9 https://citizens.ec.europa.eu/index_en

Figure 10 Values diversity in selected countries by various clustering variables
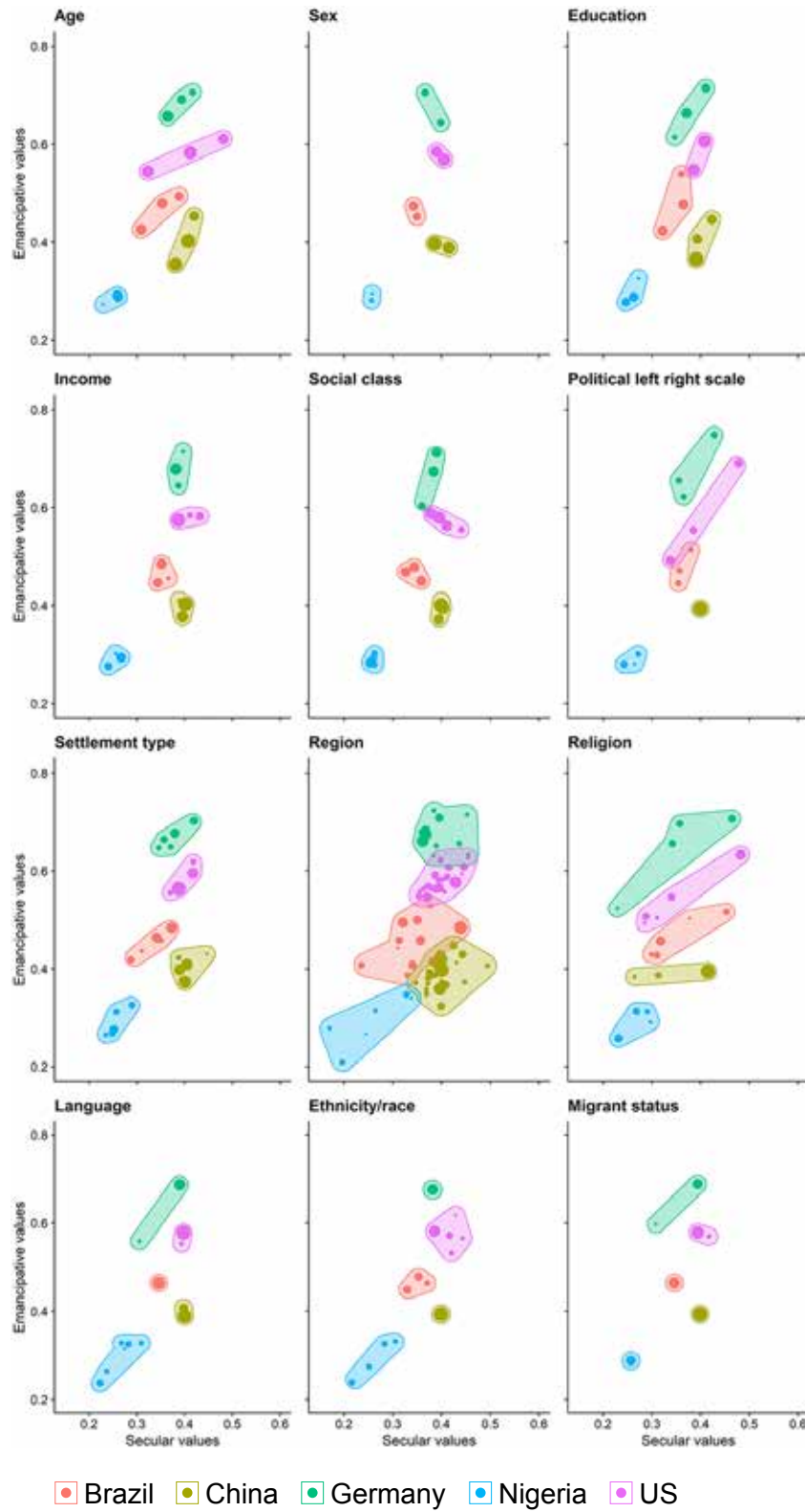

Notes: The image shows the distribution of clusters for five countries based on two major values dimensions using data from the World Value Survey. The horizontal axis shows the dimension of secular values going from more traditional and religious (left) to more secular (right). The vertical axis goes from more independent (top) to a stronger orientation towards the group and authorities (bottom). The different panels show the clusters derived by different variables, such as age or education. For more details, see Akaliyski et al., 2021.[263].

to get involved in politics and fight for their convictions. This same factor also encourages people to be more intolerant of opposing opinions.[266, 267]

Unsurprisingly, moralisation is high for issues such as immigration. However, we found evidence that on top of various common policies that are regularly covered by the media, others are also considered highly moral, see Figure 11.

Communication in the areas that tend to be more moralised (as seen in Figure 11) benefit less from simple Evidence Communication. On the one hand, some of the morally charged topics appear to have wide support in our survey, such as banning products made by forced labour, or policies on strengthening data protection. In these areas, policymakers and communicators need to be careful not to overlook important nuances because they believe that they are morally right. On the other hand, some policies that

Figure 11 Share of Moralisers per Policy Area
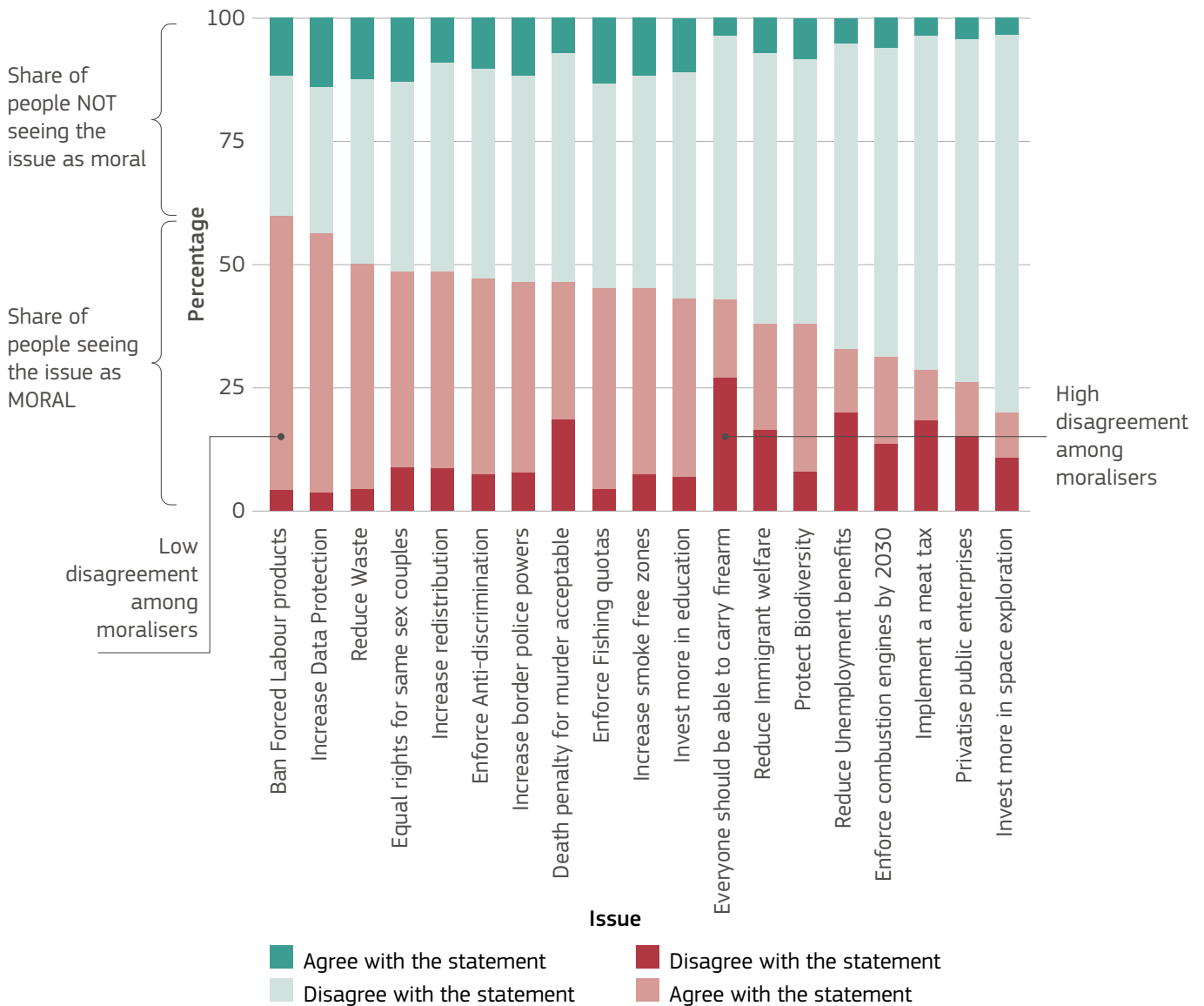
Notes: *Green colours represent the share of people agreeing an issue is moralised, red not moralised. Share of moralisers to non-moralisers per policy. Moralisers are defined as those responding to the question: "To what extent is your position on this policy connected to your beliefs about fundamental right and wrong?" either "much – 4" or "very much 5". Agree is similarly defined as those answering "much – 4" and "very much – 5" to the question: "How much do you agree with the following statement?" Representative data from 6 EU countries and the US.*

have a high share of moralised attitudes also have a high level of opposition, such as the death penalty, firearm ownership, immigrant welfare and unemployment benefits. For these areas, simple information campaigns may be ill-advised. Public communicators should look at the shared values profiles of the groups involved, engage more with the underlying concerns, and aim to understand the fundamental stakes affecting different groups.

Putting science into practice: Top tips for ethical dissemination strategies

On culture:
- Communication strategies should be adapted to fit the cultural context, involving the adjustment of tone, style, content, or channel of communication to fit the target context.
- Public communicators should reach out to local representatives to offices, let them cross-check communications for cultural sensitivities.
- Public communication departments should develop capacities for political intelligence that enable measurement and learning from social and news media. This should focus on how policies are debated, cultural specificities, and which values conflicts are mentioned around policies, in order to adapt communications accordingly.

On personalisation:
- Sensitive data, such as personality or sexual orientation that is not provided by users but has been inferred from behavioural data will not be considered transparent or trustworthy.

- Transparent, content-based targeting is not only ethically more desirable, but also more trustworthy, ideally not from inferred data, but targeting topics of interest that recipients provide themselves.

On message design:
- Identify the natural corresponding value dimension for the policy (or test it empirically).
- Design the appropriate values-framed messages based on the values circle avoiding the opposing values frame.
- Test and evaluate message effectiveness to determine the most appropriate.

> “Communication strategies should be adapted to fit the cultural context, involving the adjustment of tone, style, content, or channel of communication to fit the target context.

RECOMMENDATION 8:
PUBLIC COMMUNICATORS SHOULD ACKNOWLEDGE PUBLIC CONCERNS PRE-EMPTIVELY, BEFORE POLICY SOLUTIONS HAVE BEEN DEVELOPED; THIS INCLUDES STRATEGIES TO COMBAT MIS- AND DISINFORMATION

❝ Providing information on legitimate concerns, values trade-offs, and uncertainties will help establish the public communicator as a trustworthy information source.

Authentic communication means listening more and addressing specific issues raised, honestly. When concerns are known, public communicators can engage in powerful pre-emptive communications. Providing information on legitimate concerns, values trade-offs, and uncertainties will help establish the public communicator as a trustworthy information source. Consequently, anticipating misunderstandings, information gaps, pre-emptively debunking mis- and disinformation will be more impactful when there is a track-record in place.

Should the public communicator be concerned about mis- and disinformation?

Most public communicators will be familiar with the terms misinformation and disinformation, however they may not be aware of how to differentiate between them, identify, monitor or respond to these phenomena. As a starting point, previous work by the JRC has defined mis- and disinformation as follows:[3]

- Misinformation: false or misleading content created and initially presented without malicious intent.
- Disinformation: False, fabricated, misleading, or manipulated content shared with intent to mislead or cause harm.

It may appear that there is disagreement in the academic community about the gravity of these topics. Despite a majority of studies suggesting that mis- and disinformation are a fundamental threat to society, some scholars argue that such information is not sufficiently identifiable or

widespread to warrant much concern or action.[268–271] For the public communicator, this may bring into question how best to respond.

Some disagreement stems from different schools of thought about belief formation, and the extent to which this can be influenced.[272] Importantly, studies are increasingly demonstrating that belief formation is not always a rational or vigilant process. Individuals can be susceptible to accepting false information when they have many other things on their mind or when the information resonates with existing knowledge, beliefs, and attitudes.[273–275]

In addition to understanding belief change, the public communicator will want to understand the potential for attitudinal and behavioural changes from mis- and disinformation. This is where the science is seriously lacking. A recent study reviewed 555 published academic papers and concluded that very few directly examined the effects of mis- or disinformation on behaviour (only 1%) or behavioural intentions (10%).[276] Instead measuring beliefs or attitudes was used as a proxy while conclusions stated impacts on "real-world behaviour".

66 In addition to understanding belief change, the public communicator will want to understand the potential for attitudinal and behavioural changes from mis- and disinformation.

Although some laboratory studies show that exposure to mis- and disinformation affects the sentiment of social media posts people write and increases their propensity to share/like misleading content, public communicators could infer from the state-of-the-science that in the absence of fully understanding the direct impact on behaviour change, ignoring the phenomena, or dismissing them as noise, could be a legitimate choice.[277, 278] Furthermore, by focusing on trustworthiness, the public communicator is already

contributing to a long-term strategy to combat disinformation.

Nevertheless, there is causal evidence that demonstrates a direct link between mis- and disinformation and dangers to public health.[40, 274, 279] When coupled with the fact that specific categories of the population are particularly vulnerable to believing mis- and disinformation, including those who identify as strong conservatives and right-wing populists, there are compelling arguments for the public communicator to act for the public good.[280] Furthermore, disinformation is most effective when democracy is at risk and public trust in public administrations is low. At such times, intentionally misleading information that threatens civil discourse can unravel a shared sense of reality and harm a democracy further.[269, 281] In short, the public communicator needs to know how to manage mis- and disinformation.

Susceptibility to believing mis- and disinformation

There are multiple factors that make people susceptible to believing mis- and disinformation:[38]

Cognitive factors play a significant role, as people tend to rely on intuitive thinking and are frequently faced with memory failures, which can lead to a bias towards perceived validity of information. Secondly, people tend to believe in the truth of information based on peripheral cues such as familiarity, ease of processing, and cohesion, which are often signals for truth. Unfortunately, online these cues can be subject to being gamed and algorithmically amplified. Furthermore,

the strength of these cues increases with repetition, meaning that the more a claim is repeated, the more believable it becomes, regardless of its accuracy.

Social factors also contribute to false-belief formation. People often overlook, ignore, forget, or confuse cues about the source of information, and they tend to judge the accuracy of a headline based primarily on the plausibility of the content rather than the quality of the news outlet.[55] The perceived credibility of a source also varies across recipients, and individuals tend to trust sources that are perceived to share their values and worldviews. Therefore, corrections that threaten a person's worldview can be ineffective, hindering information revision.

Affective factors, such as mood and emotions, also influence the susceptibility to mis- and disinformation. Emotional content of the information shared can affect false-belief formation, as misleading content that spreads widely on the internet often contains appeals to emotion, which can increase persuasion. People tend to use their feelings as information, and this can leave them susceptible to deception, e.g. a happy or angry mood can make people more vulnerable to deception, while a sad mood might reduce gullibility.

Understanding these drivers of false beliefs is essential for countering mis- and disinformation effectively.

Engaging with mis- and disinformation online

Experts have identified and developed a framework comprising four key stages to classify how people engage with mis -and disinformation: source selection, information selection, evaluation, and reaction. The framework has been developed with the aim of identifying entry points for effective targeted interventions.[282]

Note that the stages of the framework are iterative, not strictly chronological. For example, realising that

a piece of information is inaccurate may prompt a person to unfollow the source of that information.

1. **Source Selection:** This stage involves a person's curation of sources within their online information environment. People design their own online information environment by selecting sources such as online newspapers, channels, blogs, and podcasts. The quality of information provided by these sources can vary dramatically, and this self-driven source selection is influenced by environmental constraints such as platform restrictions and network structure.

2. **Information Selection:** In this stage, individuals choose what information to consume or ignore. The digital realm, where platforms curate content, adds complexity to this stage as it can impact potential exposure to information from self-selected sources.

3. **Evaluation:** At this stage, individuals evaluate the accuracy of the information and/or the credibility of the source. This entails distinguishing accurate information from falsehood and separating low-quality from high-quality sources. However, research suggests that people often neglect to engage in the process of evaluating information for accuracy or source credibility, and may share social media posts without reading beyond the headline.

4. **Reaction:** The reaction stage involves judging whether and how to react to the information, such as liking, sharing, or commenting on a post. Individuals may be influenced by factors such as inattention to accuracy, social motives, reputation management, and self-control. This stage is influenced by decisions made at earlier stages and can lead individuals to share mis- and disinformation if they have been exposed to it.

The framework underscores the importance of tailoring interventions to address the specific challenges and

Table 5 Adapted Online Misinformation Engagement Framework from Geers et al., 2024[282]

Stage	Description	Behavioural examples	Target
Source selection	Curating the sources of the online information environment	Visiting a news website, following an account on social media	Platforms and information suppliers (incl. other users)
Information selection	Choosing what information to consume or ignore	Scrolling through a social media news feed, reading a headline, clicking on an article	Specific pieces of information
Evaluation	Evaluating the accuracy of the information and/ or credibility of sources	Reviewing the information for consistency with memory, leaving a website to vet it and its information (lateral reading)	Specific sources or pieces of information
Reaction	Judging whether and how to react to the information	Clicking a "share" button, commenting on a post	Specific pieces of information

opportunities presented by each stage of engagement with online mis- and disinformation. For example: interventions promoting the evaluation of specific pieces of information may be beneficial for individuals who regularly evaluate and select high-quality sources, while interventions encouraging higher quality source selection or discouraging sharing misinformation may benefit individuals who browse through a mix of low- and high-quality content.

> " Interventions promoting the evaluation of specific pieces of information may be beneficial for individuals who regularly evaluate and select high-quality sources.

Proactive communications: Information inoculation in the anti-vaxx era

> " Inoculation is a prebunking strategy for countering misinformation that aims to help people recognise and resist subsequently encountered mis-disinformation, even if it is novel. It is a pre-emptive intervention that seeks to build immunity against persuasive arguments by engaging critical-thinking skills.

Empirical measures	Key psychological factors	Typical interventions
Followed pages and users, network structures	Source cues, source like-mindedness, mindless access	Source credibility labels ("Verified" badges), friction (Have you checked the accuracy? message)
Clicks, dwell time, mouse cursor movement, eye tracking	Novelty seeking, negativity bias	Labels and warning signs ("Fact-checked"), critical ignoring (digital media literacy tips)
Accuracy/credibility ratings, confidence, self-reported or inferred use of assessment strategies	Intuitive thinking, cognitive failures, illusory truth, source cues, emotion, worldview	Debunking, lateral reading, prebunking, media literacy tips
Likes, shares, comments	Inattention to accuracy, social motives, reputation management, self-control	Accuracy prompts ("Fact-checked"), friction ("Read before sharing"), social norms (generic "Think twice message)

Not every intervention outlined above is within the control of the public communicator; however, fully in line with the recommendations on Evidence Communication, public communicators can anticipate themes that could be subject to mis- and disinformation and ensure fact-based alternative accounts are available for pre-emptive (prebunking) or quick reactive (debunking) responses.

Prebunking interventions can take various forms, from simple warnings to more involved literacy interventions and psychological inoculation, the latter being more in line with boosts while the simple warnings would be considered nudges. Inoculation theory applies the principle of vaccination to knowledge. One key element of such as strategy is warning recipients of the threat of misleading persuasion. For example, people could be warned that many claims about climate change are false and that there are vested interests that are motivated to mislead them. The second, perhaps even more crucial element is providing a "weakened" form of the misinformation, for example by presenting a false claim and concurrently explaining how it is based on flawed logic. Such techniques equip individuals with knowledge and skills to critically evaluate the information they encounter and helps them build immunity against subsequent misleading arguments. The aim is to prepare individuals to recognise and resist mis and disinformation before they are exposed to it again, which can reduce its longer-term impact.[283]

Overall, prebunking is a proactive approach to addressing mis- and disinformation, aiming to empower individuals with the necessary tools to identify and resist false information before it takes hold. By providing early warnings and factual explanations, prebunking seeks to build cognitive resilience against such information, ultimately reducing its impact on belief formation and decision-making.

Prompting accuracy to reduce misinformation

In terms of how to frame a response to mis- or disinformation, the public communicator may be interested to note that an increasing trend is emerging in the scientific literature: the importance of shifting attention to accuracy can reduce mis- and disinformation online.

TESTED BY THE JRC...

In an effort to support the European Commission and public communicators more broadly, the JRC conducted research to determine to what extent the EU is perceived as a trusted source when proactively and reactively fighting against mis- and disinformation[10].

In an experiment with more than 5,000 people from four EU countries (Germany, Greece, Ireland and Poland), the effectiveness of debunking and prebunking strategies were tested on climate change and COVID-19 misinformation. Details of the methodology are provided in Annex 1. The study found that:

- To fight misinformation, communicators can use debunking (e.g., a refutation exposing misinformation and explaining why it is false) and prebunking (e.g., inoculation: training people to recognise misleading argumentation techniques and defend themselves against misinformation) interventions. The interventions tested were effective at combating misinformation.
- Identifying the European Commission as the messenger of the debunking and prebunking interventions did not affect their effectiveness in combating misinformation.
- Importantly, the effectiveness of prebunks from the European Commission did not depend on the level of people's trust in the European Union (EU).
- The debunking interventions originating from the European Commission were slightly more effective for participants with high levels of trust in the EU.
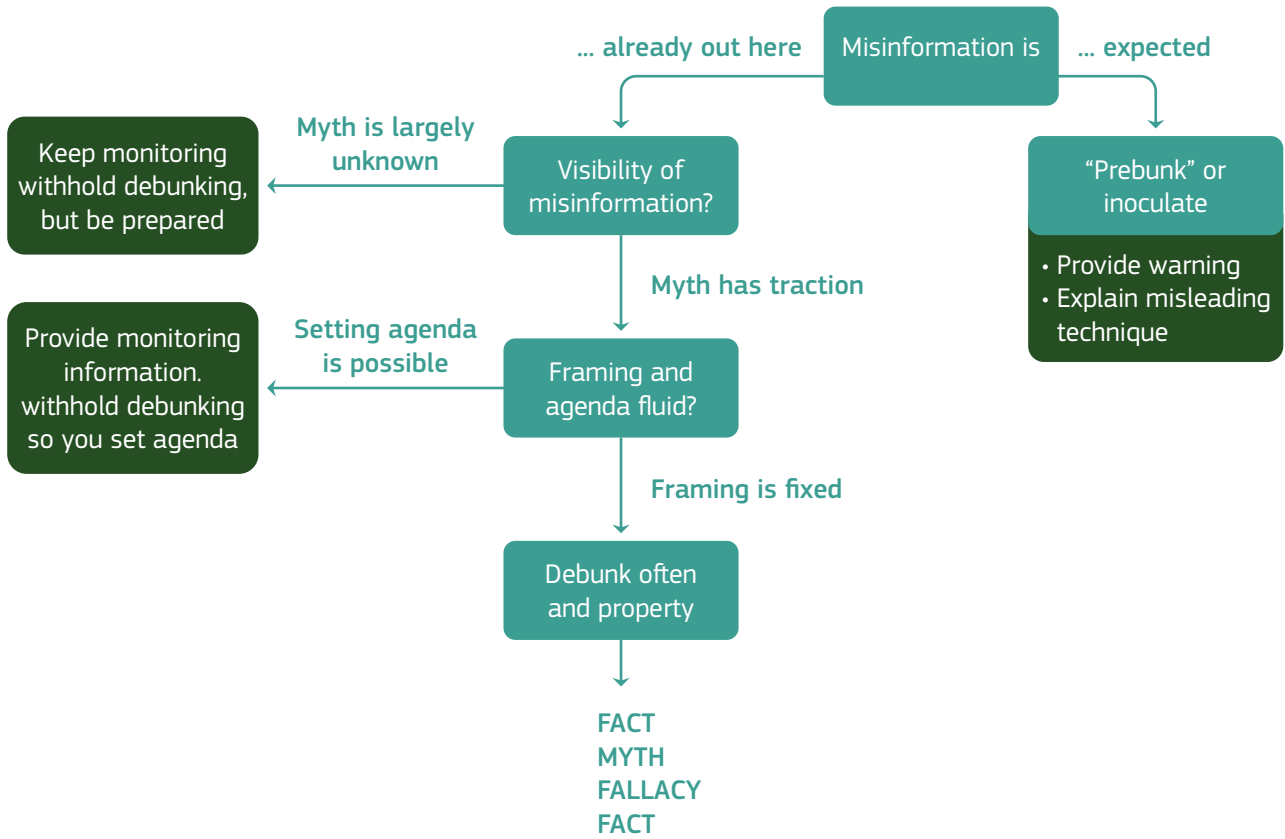
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[10] More information can be found here: https://publications.jrc. ec.europa.eu/repository/handle/JRC133598

Subtly shifting attention to accuracy increases the quality of news that people subsequently share, as when they share misinformation, their attention is often focused on factors other than accuracy (Pennycook et. al., 2021). A meta-analysis of this technique found accuracy prompts to be a replicable and generalisable approach for reducing the spread of misinformation.[284] Importantly, such prompts are also effective in environments with relatively low misinformation prevalence. However, it must be noted that the effects of such prompts are small and not long-lasting.

Putting science into practice

Recommendation 2 outlined the importance of listening more effectively to citizens to increase trust in public administrations and support democracy. Such activities are crucial in an increasingly complex information ecosystem, polluted by mis- and disinformation, as they pose serious challenges for expert knowledge and the democratic legitimacy of public policy that is informed by expertise. Emerging empirical studies suggest that deliberative forums could assist in addressing misperceptions about politicised knowledge while contributing to the health of democracies.[285] However, there are a number of other tools at the disposal of the public communicator. The following decision-tree is based upon the collective inputs of 19 scholars who worked on the scientific consensus about how to combat mis and disinformation through the publication of a practical handbook, it addresses when and how to apply prebunking and debunking interventions:

Figure 12 Prebunking and debunking decision-tree from Lewandowsky et al., 2020[286]

FACT	Simple, concrete, and plausible. It must "fit" with the story.	
	• Prominent, not a simple retraction, similar tonality and degree of complexity. If too complex, lead with why the myth is wrong.	
WARN ABOUT THE MYTH	Warn beforehand that a myth is coming... mention it once only.	
	• State directly prior to the correction. One repetition of the myth is beneficial to belief updating	
	• Corrections are most successful if people are suspicious, or made to be suspicious, of the source of the false information and their intent.	
	• Given the ethical trade-offs the TARES framework should be used.	
EXPLAIN FALLACY	Explain how the myth misleads.	
	• Why the mistaken information was thought to be correct in the first place and	
	• Why it is now clear it is wrong	
	• Why the alternative is correct	
FACT	Finish by reinforcing the fact—multiple times if possible. Make sure it provides an alternative causal explanation.	
	• Repeat, repeat, repeat	

RECOMMENDATION 9:
PUBLIC COMMUNICATORS SHOULD INVEST IN EVALUATION TO INCREASE THE IMPACT OF THEIR COMMUNICATIONS

> " If the public administration does not have a strategic method for evaluation and learning, it will fail repeatedly.

Investing in analytical capacity for the evaluation of communication impact should take precedence over short-term communication demands. If the public administration does not have a strategic method for evaluation and learning, it will fail repeatedly, often at the expense of the taxpayer and in accountability measures that affect overall trust. Pre-testing messages and sharing successes and failures transparently to support the profession of Public Communication will help increase trust in the overall system.

Communications is a two-way process and as much as it is important to design and appropriately resource public communication activities, it is imperative to listen. Listening in this sense comprises two dimensions:

1. Evaluation of the impact of communication
2. Feedback relevant to a policy process

Evaluating the impact of communications

Measuring the success of communication today appears easier than ever before. Many platforms offer their own metrics of communication success, such as reach, likes, shares, and impressions. However, these easily available metrics can be misleading or even point in the wrong direction altogether for public communicators. Motivated reasoning is a major issue and pervasive in politics, namely the fact that people believe in, like and share information that confirms what they want to believe in the first place.[287] However, when policies are debated, using shares and likes to promote a policy, this may be counterproductive, as the more policies are polarised, the more a one-sided presentation will drive likes and shares. In other words, likes and shares can be signals for moral outrage and one-sided content rather than genuine engagement. This report recommends that different modes of communication should lead to different outcomes, from better understanding, memory or recall, satisfaction with own decisions made, attitude and belief shift or even

behavioural changes. None of these measures are captured in likes and shares.

It is important to note that even behavioural experts are bad at predicting which message will work best. Therefore, one of the most important checks for communication impact is to pre-test messages to prevent content from being polarising or counter-productive.

Pretesting

It is still commonplace to pre-test messages with focus groups, but this practice is very problematic. They may be interesting to get potential positive and negative feedback that may arise once the campaign is out in the field. However, as mentioned in previous chapters, people are very unreliable in their estimation of how something influences them. They are often unaware of the influence something has on them, but nevertheless come up with reasons for their beliefs or behaviours that may have nothing to do with their true origin, thus producing evidence in focus groups that is unreliable[288]. Additionally, it is very hard to quantify the exact effect of the message as focus groups are usually small and unrepresentative samples, where participants are interacting with each other, potentially leading to many confounding effects.

Today, quantifying the impact of planned communications is easier than ever. Doing small experiments measuring the impact of communication ahead of time using online panels is cheap and easy with numerous online panel providers offering such services. Quantification is important as very often communication, such as some nudges, on average have a very small impact on changing attitudes or behaviour. Behaviour is especially hard to change and an average effect of expert interventions can lead to as little as a 1.5-2.0 % shift.[105] The average communication should not therefore, be expected to significantly change a situation.

The following methods are useful ways to successfully pre-test messages:

1. Fine-Tuning:
   a. Focus groups/Interviews: only for testing how reactions might turn out, getting new ideas, refining messages and ultimately developing responses to common critical perspectives;
   b. Cognitive interviewing: is a method used to actively engage with someone looking at the communication and leading them through the process to get deeper insights from a small sample;[289] and
   c. Eye-tracking studies: can be used to analyse how people engage with visual communication, such as images or websites, providing insights into their attention and comprehension.[290, 291]

2. Impact quantification:
   a. **Surveys with vignette studies:** Very useful for testing a large number of potential combinations of shorter messages/images/videos. Vignettes allow the combination of different elements without having to show all combinations to all participants. Adding open-ended questions on a limited number of key elements, together with modern methods for text analysis enables the gathering of deeper insights;[292] and
   b. **Randomised Control Trials[11]:** The core method for testing the impact of a small number of selected messages, potentially in the environment they are supposed to be fielded, and quantifying the impact ex-ante. This step should always be done on bigger communications activities, e.g. campaigns, to be able to extrapolate the impact.

Knowing prior to launching a communication initiative what will happen and what impact to expect is very useful, not only for impactful message selection, but also to be able to predict relatively precisely what to expect when the communication is rolled out, e.g. to prepare for likely reactions or backlash. Evaluating the activities should be done as well; however, if the pre-testing was able to quantify likely impacts,

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[11] https://www.economie.gouv.fr/igpde-editions-publications/thearticle_n1

the need for rigorous post-testing, which may prove difficult in practice, decreases.

Evaluation

In addition to having the necessary evidence for the accountable use of public funds, testing communications activities also allows the public communicator to learn from successes and failures. Some of the pre-testing methods will help to get an idea of measures such as knowledge retention, attitude or behavioural change; ex-post many things can happen that should additionally be measured.

Some important dimensions:

- **Media monitoring:** Tracking media metrics of performance and listening to reactions to be able to feed back into the policymaking process. Media reactions are hard to predict and therefore tracking this, e.g. using the political intelligence capabilities and the European Media Monitor of the JRC, is useful[12].
- **Interaction KPIs:** Key Performance Indicators oriented towards key behavioural measures, such as web traffic, contacts, or downloads are useful, particularly when specific goals are to be achieved.
- **Measuring public opinion, trust and behaviour:** In line with the different modes of communication from decision support to behavioural change, these outcomes should be measured. Ideally, this could be done with a randomised treatment of the target audience, but equity reasons may make this impossible. In such cases, other options like staggered roll-outs or before and after measures, controlling for co-occurring events, is possible.

Table 5 provides an overview of the fit between communication mode and methods that can be used to develop the message and evaluation criteria that could be used against them. It also provides some examples for appropriate communication methods.

Putting science into practice: Top Dos & Don'ts

- Build up easy and fast testing capacity for communications, rather than having to organise it every time ad-hoc.
- Clearly define the communication goal so that the right measures can be pre-tested and evaluated against it.
- Build in possibilities for automatic post-hoc measurement of the communications impact, such as automatic media monitoring, pre/post surveys or staggered rollouts.
- Be careful with automatically generated measures such as likes and shares as measures of success, especially on morally divisive policy topics.

> " Testing communications activities also allows the public communicator to learn from successes and failures.

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[12] https://knowledge4policy.ec.europa.eu/text-mining/about_en

Table 6 Overview communication modes and uses

Type	Primary Goal	Example	Primary Success Measure
Inform	• Increase ability of people to make the right decision, as judged by themselves	Decision about which cancer treatment to take in light of pros & cons	Confidence of citizen in their own decision; Trust in the public administration delivering information
Argue	• Update information currently top of mind for people • Increase topic salience	Inform about actions taken by the EU on a certain topic; Inform about risks/benefits of a certain policy to increase awareness	Knowledge retention, recall; Salience of topic/issue; Low knowledge decay
Persuade	• Get people to change either attitudes or behaviour in transparent ways • Improve reputation of communicator	Align people's preferences or behaviours with policy goal, e.g. nature protection	Attitudes; Behaviour
Coerce	• Enforce a particular behaviour	Force people to behave in line with policy	Behaviour
Listen	• Learn responses, needs, thoughts of citizens	Learn from citizens about how policies can be improved; Build co-ownership	Breadth of information; Breadth of participation

Appropriate Methods	Channels	Message type	Evaluation need based on ethical implication
Information interface (e.g. chat bots, FAQ/Q&A); decision trees; diverse testimonials; fact sheets	At decision making interaction, e.g. doctor consultation	One-way; Optimal when interactive	Small
Layered information; Linking to personal goals/values/needs; Visual aids; repetition	Various	Layered, expansive	Medium
Framing, narratives, storytelling; Appeals to values, social proof, reciprocity, (true) scarcity; metaphors	Where people are most open to change (e.g. places they spend time at)	Focused	Large
Regulation	Official	Announcements	Large
Feedback forms; Consultations, citizen engagement	Where policies are discussed; Where people are naturally (both needed)	Inviting	Small

RECOMMENDATION 10:

NEW CHALLENGES REQUIRE NEW SKILLS, COMPETENCES AND CENTRES OF EXPERTISE TO SUPPORT PUBLIC COMMUNICATION PROFESSIONALS

" More than three quarters of respondents identified human resources as a key factor inhibiting the effective implementation of core communication functions.

With the rapid development of AI, in an online 'clickbait' media environment, the public communicator will be under pressure. Adopting new techniques in support of a healthy information ecosystem will require professional and ethical trade-offs. Mastering the imminent challenges will require new job profiles, skills, and competences. In support of the profession, the creation of centres of excellence in e.g. understanding the online world, risk communications, science communication, etc. need to be championed. The role of public communicators should be recognised and resourced accordingly. Through citizen listening initiatives, public communicators will have unparalleled insights into grassroots' concerns. Recognising their potential as key knowledge brokers to evidence-informed policy-making will benefit all.

New reality for public communication

As the previous chapters have shown, today's information environment has evolved radically from previous decades. AI, especially in the form of large language models (LLM) and image and picture generation, will lead to a rapid change in information supply, which is likely to become unmanageable for many citizens in the near future even with efforts by large online platforms.[293] At the same time, information demand is brokered through non-transparent algorithms, whose deploying companies do not share the same democratic goals as public administrations, and new regulations in the EU such as the Digital Markets Act, Digital Services Act, AI Act, Code of Practice on Disinformation and others still have to show their effectiveness. This all means that citizens' passive information consumption is more challenging to predict and more difficult to match with the needs of democracy than ever before. Young people in particular are increasingly turning away from news, and local news sources are increasingly under pressure, reducing the

impact of traditional gatekeepers and curated information.[294, 295] Additionally, active information search online by citizens through search engines or on large online platforms has been shown to lead to illusions of understanding which can increase partisanship and radicalisation.[88, 296, 297] This was even before AI¬ tools were able to produce large amounts of information quickly and at very low cost, and which can be used by nefarious agents to produce fake or dubious content perceived to be real or valid.

Public communicators, whose task it is not only to inform citizens but also to support democracy through enabling public reasoning, have to be prepared to face these new challenges, which are moving targets such as AI which is developing at breakneck speed. In contrast, citizens should be seen as "an active part of a common solution to social problems, bringing experiential expertise and local knowledge".[298] Here, public communication has the dual function of setting realistic citizen expectations regarding what is being done and then communicating about the delivery itself.[211] Trust and trustworthiness as key goals of this communication are challenged by the new information environment and need to be approached strategically and at the organisational rather than at the individual level.

Resource reality

In 2017, the Organisation for Economic Co-operation and Development (OECD) published a report on "Skills for a High Performing Civil Service" in which it identified that skill sets commonly used within the public sector are "no longer keeping up with the pace of change in the societies".[154] Further research published in 2021, specifically looking at the function of Public Communication, identified the sector as "under-skilled" and "under-staffed".[4] According to a survey completed by OECD member countries, more than three quarters of respondents identified human resources as a key factor inhibiting the effective implementation of core communication functions. The report highlighted that equipping relevant teams with

the right resources and skills was a challenge and that public administrations needed to be prepared, given the constantly evolving and fragmenting media and information ecosystem in which they operate.

In addition to human resource constraints, financial restrictions were also highlighted as an obstacle to fulfilling an optimal public communication mandate. In some cases, OECD country members had difficulties identifying budget lines, as they are not clearly recognised as a profession. This situation has deteriorated since the 2008 financial crisis, which saw an increase in demands for transparency and accountability of public sector expenditure.

Consequently, many public communicators need to balance the tension between budgetary constraints, upscaling delivery and ensuring taxpayer value-for-money. As this report shows, however, such investment in resources is not a "nice to have" when the goal is to build long-term trust in public administrations, which ultimately decreases enforcement costs at a later stage. Instead, considering the role of the public communication profession as a standard-bearer for democracy should assist with future strategic prioritisation discussions, particularly when it comes to resource allocation.

Skills and competences

Previous JRC work has highlighted the fact that beyond new topic-specific competences (e.g., AI and data science), there is an urgent need for complementary skills, knowledge, and attitudes to build and strengthen the bridge between science, society and policy, and it is in that nexus that the public communicator can often be found.[299] In some cases, needs are evolving from traditional communication skills to knowledge brokerage in support of trusted and transparent government decision-making.[300]

The JRC has developed competence frameworks for 'Innovative Policymaking' and 'Science for Policy'

that can deliver immediate benefit as they provide comprehensive overviews of the cross-disciplinary and cross-policy competences including extensive modules on communication. Each competence is described according to the skills, knowledge and attitudes involved and features so-called learning outcomes describing, across four levels of proficiency, how a competence manifests. These elements can be used to map gaps in learning catalogues, inspire innovation in other competence frameworks or to align them and conceptualise new learning solutions.

Public administrations can design self and team assessment instruments (e.g. surveys) based on the competence descriptors and learning outcomes contained in the frameworks to support professional development efforts on cross-disciplinary and cross-policy competences, e.g. by linking the framework or assessment results to a learning catalogue or providing tailored learning recommendations to increase or refresh proficiency on competences.

Strengthening the public communication profession

Public communication in democracies is not at all limited to pro-active communication campaigns, speeches and press releases. It encompasses every interaction citizens have with public administrations, such as helpdesks, hotlines, every form citizens need to fill out, every email citizens receive from authorities and much more. Each of those communications is a chance for a positive encounter with citizens, presenting public services as amenities that can help them navigate a complex life and that can uphold democratic values. Unfortunately, communications are often perceived to do the opposite, making citizens feel like supplicants.

In support of galvanising the profession, centres of excellence could be established with the aim of building democracy supporting communication, enabling best practices to be shared, topic-specific insights to be gleaned and opportunities for the creation of

powerful networks to support these communities at local, regional, national, and international levels. New job profiles in public communication are emerging and should be introduced strategically, such as public deliberation managers and moderators. Importantly, communication is increasingly handled via algorithms by companies that are not prioritising public deliberation or the need to inform citizens. Individual communicators will not be able to stem the tide but collaborative, collective action among peers will reinforce the public communication profession and consequently our democracies.

CONCLUSIONS & FUTURE RESEARCH AGENDA

In response to the increasingly complex issues facing public communicators, the JRC is currently reflecting upon new research in the following areas:

The future of democracy

The JRC project 'Challenges and opportunities for the Future of Democracy' (COFD) explores key future trends and critical challenges faced by European democratic systems, so as to anticipate and respond to them with the aim to increase trust in democracy and public administrations. Specifically, the project is seeking to provide a framework to explore potential democratic innovations. The project includes contributions from international experts and academics from a range of disciplines as well as engagement of citizens.

The future of truth

In a Europe fit for the digital age, we need to understand the societal repercussions if seeing no longer means believing. AI has many possible benefits but also brings into question our fundamental understanding of trust, reality and authenticity, creating paradigm shifts at the individual, organisational, societal and regulatory levels. Learning from our offline behaviours, this report helps us understand how to optimally design new information ecosystems.

Collaborative Policymaking

Collaboration between departments has always been essential to delivering on priorities. However, both the number and complexity of problems public administrations are asked to solve is growing. At the same time, they need to operate in an increasingly polarised political environment, which makes policymaking more challenging and time-consuming. Hence the need for even deeper collaboration is imperative.

The JRC has embarked on a strategic project aimed at reinforcing a whole of government approach to collaborative policymaking. Its aim is to identify the most prominent barriers and enablers of better collaboration in policymaking and propose strategies and solutions to tackle them. To this end, this project will inspect the scientific literature in cognitive, behavioural, and organisational sciences to draft evidence-informed, actionable recommendations designed to enhance the quality and efficiency of collaboration across the organisation, thereby strengthening its capacity to deliver on its priorities and serve the diverse needs of citizens more effectively. Through this research, the JRC is not only contributing to public administration reform in the EU.

Public Civic Knowledge Project

Information today is more abundant as ever. No citizen will be able to ever learn everything, and this has never been needed. They specialise professionally and need to stay up-to-date in their field, and otherwise learn based on interest, their social networks, happenstance and the general focusing effect of various media. However, democratic societies rely on an informed public. Newest research shows that at least in some countries, realities no longer lead to accurate perceptions about the state of the economy, and it is easy to believe that the same is true for other dimensions of society. This project will intend to explore what citizens think are the most important dimensions of

knowledge to evaluate democratic performance of governments, how information about those areas is made available and disseminated in today's society to identify needs for improvement in the civic information infrastructure of democratic societies.

Information ecosystem audits

There have been many studies looking at the individual psychological factors behind information seeking, belief retention and information sharing. At the same time, there is research on various media source effects in information input and distribution, magnification of certain types of information etc. However, in a time of extremely rapid technological, environmental and societal changes, where knowledge becomes obsolete fast and societal learning becomes more important than ever, there is no research into the aggregated information ecosystem. In short, in times of information overload, mis- and disinformation, will societies be able to learn? Will scientific facts prevail, or will facts, myths and fake information always be retained concurrently? This project would embark on measuring the complete ecosystem of information, from the current knowledge of citizens, their information seeking behaviour, auditing ways to get informed such as search engines, online information, social media information spread, expert information, education and many others to estimate if, at least for secured facts, societies will ever arrive at knowing.

" In times of information overload, mis- and disinformation, will societies be able to learn? Will scientific facts prevail, or will facts, myths and fake information always be retained concurrently?

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REFERENCES

1   Wanless, Alicia. "Seeing the Disinformation Forest Through the Trees: How to Begin Cleaning Up the Polluted Information Environment" OECD, (November 13, 2023).

2   S. Lewandowsky, U. K. H. Ecker, J. Cook, S. van der Linden, J. Roozenbeek, and N. Oreskes, "Misinformation and the epistemic integrity of democracy," *Curr. Opin. Psychol.*, vol. 54, p. 101711, 2023, doi: 10.1016/j.copsyc.2023.101711.

3   S. Lewandowsky *et al.*, "Technology and Democracy: Understanding the influence of online technologies on political behaviour and decision-making," Luxembourg, 2020. doi: 10.2760/709177.

4   OECD, *OECD Report on Public Communication.* 2021. doi: 10.1787/22f8031c-en.

5   L. Boucher, S., Hallin, C. A., & Paulson, *The Routledge Handbook of Collective Intelligence for Democracy and Governance.* Taylor & Francis, 2023.

6   European Commission, "Supporting and connecting policymaking in the Member States with scientific research," *Eur. Comm. Jt. Res. Centre.*, 2022.

7   D. Nord, Marina, Martin Lundstedt, A. Altman, Fabio Angiolillo, Cecilia Borella, Tiago Fernandes, Lisa Gastaldi, and and S. I. L. Good God, Natalia Natsika, "Democracy Report 2024: Democracy Winning and Losing at the Ballot," 2024.

8   P. Oborne, *The Rise of Political Lying.* Free press, 2005.

9   K. Yang, "Trust and citizen involvement decisions: Trust in citizens, trust in institutions, and propensity to trust," *Adm. Soc.*, vol. 38, no. 5, pp. 573–595, 2006, doi: 10.1177/0095399706292095.

10 G. E. Bolton and A. Ockenfels, "A Theory of Equity, Reciprocity, and Competition," *Am. Econ. Rev.*, vol. 90, no. 1, pp. 166–193, 2000, doi: 10.1257/aer.90.1.166.

11 O. S. Curry *et al.*, "Cooperative conservation: Seven ways to save the world," *Conserv. Sci. Pract.*, vol. 2, no. 1, pp. 1–7, 2020, doi: 10.1111/csp2.123.

12 P. Sapienza, A. Toldra-Simats, and L. Zingales, "Understanding trust," *Econ. J.*, vol. 123, no. 573, pp. 1313–1332, 2013, doi: 10.1111/ecoj.12036.

13 J. Woo *et al.*, *Fault Lines: Expert Panel on the Socioeconomic Impactsof Science and Health Misinformation.* 2023. [Online]. Available: https://cca-reports.ca/wp-content/uploads/2023/01/Report-Fault-Lines-digital.pdf

14 C. and G. J. Townley, "'Public trust' in Trust: Analytic and Applied Perspectives," pp. 141–151, 2013, doi: 10.4324/9781003104933-13.

15 V. Carrieri, S. Guthmuller, and A. Wübker, "Trust and COVID-19 vaccine hesitancy," *Sci. Rep.*, vol. 13, no. 1, pp. 1–17, 2023, doi: 10.1038/s41598-023-35974-z.

16 C. Erisen, M. Guidi, S. Martini, S. Toprakkiran, P. Isernia, and L. Littvay, "Psychological Correlates of Populist Attitudes," *Polit. Psychol.*, vol. 42, no. S1, pp. 149–171, 2021, doi: 10.1111/pops.12768.

17 P. Fernández-Vázquez, S. Lavezzolo, and L. Ramiro, "The technocratic side of populist attitudes: evidence from the Spanish case," *West Eur. Polit.*, vol. 46, no. 1, pp. 73–99, 2023, doi: 10.1080/01402382.2022.2027116.

18 B. Geurkink, A. Zaslove, R. Sluiter, and K. Jacobs, "Populist Attitudes, Political Trust, and External Political Efficacy: Old Wine in New Bottles?," *Polit. Stud.*, vol. 68, no. 1, pp. 247–267, 2020, doi: 10.1177/0032321719842768.

19 C. Erisen and S. Vasilopoulou, "The affective model of far-right vote in Europe: Anger, political trust, and immigration," *Soc. Sci. Q.*, vol. 103, no. 3, pp. 635–648, 2022, doi: 10.1111/ssqu.13153.

20 D. Devine, "Does Political Trust Matter? A Meta-analysis on the Consequences of Trust," *Polit. Behav.*, no. 0123456789, 2024, doi: 10.1007/s11109-024-09916-y.

21 P. Norris, *In praise of skepticism: Trust but verify*. Oxford University Press, 2022.

22 M. Tannenberg, "The autocratic bias: self-censorship of regime support," *Democratization*, vol. 29, no. 4, pp. 591–610, 2022, doi: 10.1080/13510347.2021.1981867.

23 P. Slovic, Perceived risk, trust, and democracy. Risk Analysis, 13(6), 675-682 https://onlinelibrary.wiley.com/doi/10.1111/j.1539-6924.1993.tb01329.x

24 R. Hardin, "Russell Hardin The Street-Level Epistemology of Trust," *Anal. Krit.*, vol. 14, no. 1992, pp. 152–176, 1992.

25 D. Balliet and P. A. M. Van Lange, "Trust, conflict, and cooperation: A meta-analysis," *Psychol. Bull.*, vol. 139, no. 5, pp. 1090–1112, 2013, doi: 10.1037/a0030939.

26 S. Marien and M. Hooghe, "Does political trust matter? An empirical investigation into the relation between political trust and support for law compliance," *Eur. J. Polit. Res.*, vol. 50, no. 2, pp. 267–291, 2011, doi: 10.1111/j.1475-6765.2010.01930.x.

27 O. O'Neill, "Questioning trust," *Routledge Handb. Trust Philos.*, pp. 17–27, 2020, doi: 10.4324/97813155 42294-1.

28 S. Lewandowsky, "Fake news and participatory propaganda," *Cogn. Illusion. Intriguing Phenom. Thinking, Judgment, Mem. Third Ed.*, no. December 2016, pp. 324–340, 2022, doi: 10.4324/9781003154730-23.

29 E. M. Uslaner, *The moral foundations of trust*. Cambridge University Press, 2002.

30 OECD, "Building Trust to Reinforce Democracy," p. 16, 2022, [Online]. Available: https://www.oecd.org/governance/trust-in-government/oecd-trust-survey-main-findings-en.pdf

31 T. J. Rudolph, "Political trust as a heuristic," in *Handbook on political trust*, 2017, p. 197.

32 Ki. E. Wahl I, Kastlunger B, "Trust in Authorities and Power to Enforce Tax Compliance : An Empirical Analysis of the " Slippery Slope Framework "," 2010.

33 WEF, *Global Risk Report 2024*. 2024. [Online]. Available: https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2024.pdf

34 S. Altay and A. Acerbi, "People believe misinformation is a threat because they assume others are gullible," *New Media Soc.*, 2023, doi: 10.1177/14614448231153379.

35 S. Altay, M. Berriche, and A. Acerbi, "Misinformation on Misinformation: Conceptual and Methodological Challenges," *Soc. Media Soc.*, vol. 9, no. 1, 2023, doi: 10.1177/20563051221150412.

36 F. M. Simon, S. Altay, and H. Mercier, "Misinformation reloaded? Fears about the impact of generative AI on misinformation are overblown," *Harvard Kennedy Sch. Misinformation Rev.*, vol. 4, no. 5, pp. 1–11, 2023, doi: 10.37016/mr-2020-127.

37 H. Mercier, *Not born yesterday: The science of who we trust and what we believe*. Princeton University Press., 2020.

38 U. K. H. Ecker *et al.*, "The psychological drivers of misinformation belief and its resistance to correction," *Nat. Rev. Psychol.*, vol. 1, no. 1, pp. 13–29, 2022, doi: 10.1038/s44159-021-00006-y.

39 L. K. Fazio, D. G. Rand, and G. Pennycook, "Repetition increases perceived truth equally for plausible and implausible statements," *Psychon. Bull. Rev.*, vol. 26, no. 5, pp. 1705–1710, 2019, doi: 10.3758/s13423-019-01651-4.

40 L. Bursztyn, A. Rao, C. Roth, and D. Yanagizawa-Drott, "Misinformation During a Pandemic," 2020. doi: 10.3386/w27417.

41 S. Loomba, R. Maertens, J. Roozenbeek, F. M. Götz, and ..., "Ability to detect fake news predicts sub-national variation in COVID-19 vaccine uptake across the UK," *medRxiv*, pp. 1–52, 2023, [Online]. Available: https://www.medrxiv.org/content/10.1101/2023.05.10.23289764.abstract

42 Andrey Simonov, S. K. Sacher, J.-P. H. Dubé, and S. Biswas, "The Persuasive Effect of Fox News: Non-Compliance with Social Distancing During the Covid-19 Pandemic," w27237, 2020.

43   H. Mercier and D. Sperber, "Why do humans reason? Arguments for an argumentative theory," *Behav. Brain Sci.*, vol. 34, no. 2, pp. 57–74, 2013.

44   O. O. Neill, "Reith Lectures," *N/a*, 2002.

45   A. C. & B. Monnery, "EconomiX survey experiment among citizens and experts A survey experiment among citizens and experts," 2023.

46   P. Brinol and R. E. Petty, "Source factors in persuasion: A self-validation approach," Eur. Rev. Soc. Psychol., vol. 20, pp. 49–96, 2009, doi: 10.1080/10463280802643640.

47   D. M. Mackie, L. T. Worth, and A. G. Asuncion, "Processing of Persuasive In-Group Messages," *J. Pers. Soc. Psychol.*, vol. 58, no. 5, pp. 812–822, 1990, doi: 10.1037/0022-3514.58.5.812.

48   M. Scharfbillig, L. Smillie, D. Mair, M. Sienkiewicz, J. Keimer, and L. Pinho Dos Santos, R. Vinagreiro Alves, H. Vecchione, E. Scheunemann, *Values and identities - A policymaker's guide*. 2021. doi: 10.2760/349527.

49   S. Lewandowsky and J. Cook, "Beyond Misinformation : Understanding and Coping with the ' Post-Truth ' Era Beyond Misinformation : Understanding and coping with the post-truth era University of Western Australia Journal of Applied Research in Memory," *J. Appl. Res. Mem. Cogn.*, vol. 6, no. October, pp. 353–369, 2017.

50   J. M. Pierre, "Mistrust and misinformation: A two-component, socio-epistemic model of belief in conspiracy theories," *J. Soc. Polit. Psychol.*, vol. 8, no. 2, pp. 617–641, 2020, doi: 10.5964/jspp.v8i2.1362.

51   D. De Coninck *et al.*, "Beliefs in Conspiracy Theories and Misinformation About COVID-19: Comparative Perspectives on the Role of Anxiety, Depression and Exposure to and Trust in Information Sources," *Front. Psychol.*, vol. 12, no. April, pp. 1–13, 2021, doi: 10.3389/fpsyg.2021.646394.

52   J. Roozenbeek *et al.*, "Susceptibility to misinformation about COVID-19 around the world: Susceptibility to COVID misinformation," *R. Soc. Open Sci.*, vol. 7, no. 10, 2020, doi: 10.1098/rsos.201199.

53   M. C. & S. M. Jones-Jang, "Red Media, Blue Media, Trump Briefings, and COVID-19: Examining How Information Sources Predict Risk Preventive Behaviors via Threat and Efficacy," *Health Commun.*, vol. 37, no. 14, pp. 1707–1714, 2022, doi: DOI: 10.1080/10410236.2021.1914386.

54   S. Dada, H. C. Ashworth, M. J. Bewa, and R. Dhatt, "Words matter: Political and gender analysis of speeches made by heads of government during the COVID-19 pandemic," *BMJ Glob. Heal.*, vol. 6, no. 1, pp. 1–12, 2021, doi: 10.1136/bmjgh-2020-003910.

55   N. Dias, G. Pennycook, and D. G. Rand, "Emphasizing publishers does not effectively reduce susceptibility to misinformation on social media," *Harvard Kennedy Sch. Misinformation Rev.*, vol. 1, no. 1, pp. 1–12, 2020, doi: 10.37016/mr-2020-001.

56   D. S. (1993) Johnson, M. K., Hashtroudi, S., & Lindsay, "Source monitoring," *Psychol. Bull.*, vol. 114, no. 1, pp. 3–28, 1993, [Online]. Available: https://doi.org/10.1037/0033-2909.114.1.3

57   S. A. Connor Desai, T. D. Pilditch, and J. K. Madsen, "The rational continued influence of misinformation," *Cognition*, vol. 205, no. October, 2020, doi: 10.1016/j.cognition.2020.104453.

58   U. K. H. Ecker and L. M. Antonio, "Can you believe it? An investigation into the impact of retraction source credibility on the continued influence effect," *Mem. Cogn.*, vol. 49, no. 4, pp. 631–644, 2021, doi: 10.3758/s13421-020-01129-y.

59   J. J. Guillory and L. Geraci, "Correcting erroneous inferences in memory: The role of source credibility," *J. Appl. Res. Mem. Cogn.*, vol. 2, no. 4, pp. 201–209, 2013, doi: 10.1016/j.jarmac.2013.10.001.

60   L. Illia, E. Colleoni, and S. Zyglidopoulos, "Ethical implications of text generation in the age of artificial intelligence," *Bus. Ethics, Environ. Responsib.*, vol. 32, no. 1, pp. 201–210, 2023, doi: 10.1111/beer.12479.

61   S. Kreps, R. M. McCain, and M. Brundage, "All the News That's Fit to Fabricate: AI-Generated Text as a Tool of Media Misinformation," *J. Exp. Polit. Sci.*, vol. 9, no. 1, pp. 104–117, 2022, doi: 10.1017/XPS.2020.37.

62   Europol, "Facing Reality? Law Enforcement and The Challenge of Deepfakes," *Obs. Rep. from Eur. Innov. Lab*, pp. 1–21, 2022, doi: 10.2813/158794.

63   P. Verhoeven, A. Zerfass, D. Verčič, Á. Moreno, and R. Tench, "Strategic Communication across Borders: Country and Age Effects in the Practice of Communication Professionals in Europe," *Int. J. Strateg. Commun.*, vol. 14, no. 1, pp. 60–72, 2020, doi: 10.1080/1553118X.2019.1691006.

64   S. Baker and D. Martinson, "The TARES Test: Five Principles for Ethical Persuasion," *J. Mass Media Ethics*, vol. 16, no. 2, pp. 148–175, 2001, doi: 10.1207/s15327728jmme1602&3_6.

65   S. Bok, *Lying: Moral choice in public and private life.* New York: Vintage, 1989.

66   T. Cooper,T. Kelleher, "Colloquium 2000: The Ethics of Persuasion," in *Remarks in discussion among Fellows.*, Park City, Utah.

67   G. B. Cunningham, "The Importance of a Common In-Group Identity in Ethnically Diverse Groups," *Gr. Dyn.*, vol. 9, no. 4, pp. 251–260, 2005, doi: 10.1037/1089-2699.9.4.251.

68   D. Dukes *et al.*, "The rise of affectivism," *Nat. Hum. Behav.*, vol. 5, no. 7, pp. 816–820, 2021, doi: 10.1038/s41562-021-01130-8.

69   C. Fitzpatrick, K., & Gauthier, "Colloquium 2000: The Ethics of Persuasion.," in *Remarks in discussion among Fellows.*, Park City, Utah.

70   Frank Deaver, "On Defining Truth," *J. Mass Media Ethics*, vol. 5, no. 3, pp. 168–177, 1990, doi: DOI: 10.1207/s15327728jmme0503_2.

71   P. P. Lee Wilkins, Chad Painter, *Media Ethics: Issues and Cases.* Rowman & Littlefield, 2021, 2022.

72   S. L. Waltz, "A list of acid tests," *J. Mass Media Ethics*, vol. 14, pp. 127–128, 1999.

73   S. Claessens, K. Fischer, A. Chaudhuri, C. G. Sibley, and Q. D. Atkinson, "The dual evolutionary foundations of political ideology," *Nat. Hum. Behav.*, vol. 4, no. 4, pp. 336–345, 2020, doi: 10.1038/s41562-020-0850-9.

74   D. Bromell, *Ethical competencies for public leadership: Pluralist democratic politics in practice.* 2019. doi: 10.1007/978-3-030-27943-1.

75   H. Mercier and H. Landemore, "Reasoning is for arguing: Understanding the successes and failures of deliberation," *Polit. Psychol.*, vol. 33, no. 2, pp. 243–258, 2012, doi: 10.1111/j.1467-9221.2012.00873.x.

76   H. Mercier and D. Sperber, "Why do humans reason ? Arguments for an argumentative theory . To cite this version : HAL Id : hal-00904097 Why do humans reason ? Arguments for an argumentative theory," *Behav. Brain Sci.*, vol. 34, no. 2, pp. 57–74, 2013.

77   C. A. Sims, "Stickiness," in *Carnegie-rochester conference series on public policy*, Elsevier, 1998, pp. 317–356.

78   C. A. Sims, "Implications of rational inattention," *J. Monet. Econ.*, vol. 50, no. 3, pp. 665–690, 2003, doi: 10.1016/S0304-3932(03)00029-1.

79   B. Caplan, *The Myth of the Rational Voter: Why Democracies Choose Bad Policies*, New Editio. Princeton: Princeton University Press., 2008. doi: https://doi.org/10.1515/9781400828821.

80   J. T. Jost, C. M. Federico, and J. L. Napier, "Political ideology: Its structure, functions, and elective affinities," *Annu. Rev. Psychol.*, vol. 60, pp. 307–337, 2009, doi: 10.1146/annurev.psych.60.110707.163600.

81   S. Feldman and J. Zaller, "The Political Culture of Ambivalence: Ideological Responses to the Welfare State," *Am. J. Pol. Sci.*, vol. 36, no. 1, p. 268, 1992, doi: 10.2307/2111433.

82   C. Chwalisz, "Citizen engagement in politics and policymaking: Lessons from the UK," no. April, p. 42, 2017.

83   Suiter & Reid, "Does Deliberation Help Deliver Informed Electorates: Evidence from Irish Referendum Votes," *J. Represent. Democr.*, 2020, doi: 10.1080/00344893.2019.1704848.

84   Jane Suiter & Theresa Reid, "Does Deliberation Help Deliver Informed Electorates: Evidence from Irish Referendum Votes," *J. Represent. Democr.*, 2020, doi: 10.1080/00344893.2019.1704848.

85   M. MacKuen, J. Wolak, L. Keele, and G. E. Marcus, "Civic engagements: Resolute partisanship or reflective deliberation," *Am. J. Pol. Sci.*, vol. 54, no. 2, pp. 440–458, 2010, doi: 10.1111/j.1540-5907.2010.00440.x.

86   S. Rathje, J. J. van Bavel, and S. van der Linden, "Out-group animosity drives engagement on social media," *Proc. Natl. Acad. Sci. U. S. A.*, vol. 118, no. 26, pp. 1–9, 2021, doi: 10.1073/pnas.2024292118.

87   W. J. Brady, J. A. Wills, J. T. Jost, J. A. Tucker, J. J. Van Bavel, and S. T. Fiske, "Emotion shapes the diffusion of moralized content in social networks," *Proc. Natl. Acad. Sci. U. S. A.*, vol. 114, no. 28, pp. 7313–7318, 2017, doi: 10.1073/pnas.1618923114.

88   A. L. Schmidt, F. Zollo, A. Scala, C. Betsch, and W. Quattrociocchi, "Polarization of the vaccination debate on Facebook," *Vaccine*, vol. 36, no. 25, pp. 3606–3612, 2018, doi: 10.1016/j.vaccine.2018.05.040.

89   M. Manacorda, G. Tabellini, and A. Tesei, "Mobile Internet and the Rise of Political Tribalism in Europe," *SSRN Electron. J.*, no. 187, 2022, doi: 10.2139/ssrn.4235470.

90   L. Bursztyn, B. Handel, R. Jiménez-Durán, and C. Roth, "When Product Markets Become Collective Traps: The Case of Social Media," 2023. doi: 10.2139/ssrn.4622595.

91   OECD, "Innovative Citizen Participation and New Democratic Institutions. Catching the Deliberative Wave," 2020. doi: 10.1787/339306da-en.

92   J. A. Elkink, D. M. Farrell, T. Reidy, and J. Suiter, "Understanding the 2015 marriage referendum in Ireland: context, campaign, and conservative Ireland," *Irish Polit. Stud.*, vol. 32, no. 3, pp. 361–381, 2017, doi: 10.1080/07907184.2016.1197209.

93   I. Ajzen, "The theory of planned behavior," *Organ. Behav. Hum. Decis. Process.*, vol. 50, no. 2, pp. 179–211, 1991, doi: https://doi.org/10.1016/0749-5978(91)90020-T.

94   J. N. Druckman and A. Lupia, "Preference Change in Competitive Political Environments," *Annu. Rev. Polit. Sci.*, vol. 19, pp. 13–31, 2016, doi: 10.1146/annurev-polisci-020614-095051.

95   R. Steurer, "Disentangling governance: A synoptic view of regulation by government, business and civil society," *Policy Sci.*, vol. 46, no. 4, pp. 387–410, 2013, doi: 10.1007/s11077-013-9177-y.

96   S. Cohen, "Nudging and Informed Consent," *Am. J. Bioeth.*, vol. 13, no. 6, pp. 3–11, 2013, doi: 10.1080/15265161.2013.781704.

97   G. Felsen and P. B. Reiner, "Having the capacity for autonomy is insufficient to provide meaningful autonomy," *AJOB Neurosci.*, vol. 4, no. 4, pp. 52–53, 2013.

98   K. D. Brownell, "Does a" toxic" environment make obesity inevitable?," *Obs. Manag.*, vol. 1, no. 2, pp. 52–55, 2005.

99   M. Nestle and M. F. Jacobson, "Halting the obesity epidemic: A public policy approach," *Public Health Rep.*, vol. 115, no. 1, pp. 12–24, 2000.

100   B. Y. Lee, S. M. Bartsch, Y. Mui, L. A. Haidari, M. L. Spiker, and J. Gittelsohn, "A systems approach to obesity," *Nutr. Rev.*, vol. 75, pp. 94–106, 2017, doi: 10.1093/nutrit/nuw049.

101   L. O. Schulz *et al.*, "Effects of traditional and western environments on prevalence of type 2 diabetes in Pima Indians in Mexico and the U.S.," *Diabetes Care*, vol. 29, no. 8, pp. 1866–1871, 2006, doi: 10.2337/dc06-0138.

102   N. Chater and G. Loewenstein, "The i-frame and the s-frame: How focusing on individual-level solutions has led behavioral public policy astray," *Behav. Brain Sci.*, vol. 46, 2023, doi: 10.1017/S0140525X22002023.

103   B. Ewert, "Moving beyond the obsession with nudging individual behaviour: Towards a broader understanding of Behavioural Public Policy," *Public Policy Adm.*, vol. 35, no. 3, pp. 337–360, 2020, doi: 10.1177/0952076719889090.

104   M. Maier, F. Bartoš, T. D. Stanley, D. R. Shanks, A. J. L. Harris, and E. J. Wagenmakers, "No evidence for nudging after adjusting for publication bias," *Proc. Natl. Acad. Sci. U. S. A.*, vol. 119, no. 31, pp. 10–11, 2022, doi: 10.1073/pnas.2200300119.

105   S. DellaVigna and E. Linos, "RCTs to Scale: Comprehensive Evidence From Two Nudge Units," *Econometrica*, vol. 90, no. 1, pp. 81–116, 2022, doi: 10.3982/ecta18709.

106   A. T. Schmidt and B. Engelen, "The ethics of nudging: An overview," *Philos. Compass*, vol. 15, no. 4, pp. 1–13, 2020, doi: 10.1111/phc3.12658.

107   M. Hallsworth, "Making Sense of the 'Do Nudges Work?' Debate," *Behavioural Scientist*, Aug. 02, 2022. [Online]. Available: https://behavioralscientist.org/making-sense-of-the-do-nudges-work-debate/

108   M. Hallsworth, "A manifesto for applying behavioural science," *Nat. Hum. Behav.*, vol. 7, no. 3, pp. 310–322, 2023, doi: 10.1038/s41562-023-01555-3.

109   L. Koppel *et al.*, "Individual-level solutions may support system-level change–if they are internalized as part of one's social identity," 2023.

110   M. M. Willis and J. B. Schor, "Does Changing a Light Bulb Lead to Changing the World? Political Action and the Conscious Consumer," *Ann. Am. Acad. Pol. Soc. Sci.*, vol. 644, no. 1, pp. 160–190, 2012, doi: 10.1177/0002716212454831.

111   G. A. Veltri, F. Lupianez-Villanueava, F. Folkvord, A. Theben, and G. Gaskell, "The impact of online platform transparency of information on consumers' choices," *Behav. Public Policy*, vol. 7, no. 1, pp. 55–82, 2023, doi: 10.1017/bpp.2020.11.

112   R. Sugden, "Do people really want to be nudged towards healthy lifestyles?," *Int. Rev. Econ.*, vol. 64, no. 2, pp. 113–123, 2017, doi: 10.1007/s12232-016-0264-1.

113   C. R. Sunstein, L. A. Reisch, and J. Rauber, "A worldwide consensus on nudging? Not quite, but almost," *Regul. Gov.*, vol. 12, no. 1, pp. 3–22, 2018, doi: 10.1111/rego.12161.

114   C. Flows, "The Michael Bloomberg Nanny State In New York: A Cautionary Tale," *Forbes*, May 10, 2013. [Online]. Available: https://www.forbes.com/sites/realspin/2013/05/10/the-michael-bloomberg-nanny-state-in-new-york-a-cautionary-tale/?sh=38ff751c7109

115   K. Witsch and T. Sigmund, "Darf man Bürgern vorschreiben, wie sie heizen und duschen sollen?," *Handelsblatt*, Jul. 11, 2022. [Online]. Available: https://www.handelsblatt.com/meinung/kommentare/pro-und-contra-darf-man-buergern-vorschreiben-wie-sie-heizen-und-duschen-sollen/28491860.html

116   B. Brzezinski, "Conservative backlash kills off EU's Green Deal push to slash pesticide use," *Politico*, Nov. 22, 2023. [Online]. Available: https://www.politico.eu/article/european-parliament-kills-off-landmark-pesticide-reduction-bill/

117   J. R. Kerr, C. R. Schneider, A. L. J. Freeman, T. Marteau, and S. van der Linden, "Transparent communication of evidence does not undermine public trust in evidence," *PNAS Nexus*, vol. 1, no. 5, pp. 1–11, 2022, doi: 10.1093/pnasnexus/pgac280.

118   A. M. Van Der Bles *et al.*, *Communicating uncertainty about facts, numbers and science*, vol. 6, no. 5. 2019. doi: 10.1098/rsos.181870.

119   S. L. Joslyn and J. E. Leclerc, "Climate Projections and Uncertainty Communication," *Top. Cogn. Sci.*, vol. 8, no. 1, pp. 222–241, 2016, doi: 10.1111/tops.12177.

120   L. J. Joslyn SL, "Uncertainty forecasts improve weather-related decisions and attenuate the effects of forecast error." *J Exp Psychol Appl.*, vol. 18, no. 1, pp. 126–40, 2012, doi: doi: 10.1037/a0025185.

121   E. Batteux, A. Bilovich, S. G. B. Johnson, and D. Tuckett, "Negative consequences of failing to communicate un-certainties during a pandemic: an online randomised controlled trial on COVID-19 vaccines," *BMJ Open*, vol. 12, no. 9, pp. 1–8, 2022, doi: 10.1136/bmjopen-2021-051352.

122   O. O'Neill, "Linking trust to trustworthiness," *Int. J. Philos. Stud.*, vol. 26, no. 2, pp. 293–300, 2018.

123   C. Brick, A. L. J. Freeman, S. Wooding, W. J. Skylark, T. M. Marteau, and D. J. Spiegelhalter, "Winners and losers: communicating the potential impacts of policies," *Palgrave Commun.*, vol. 4, no. 1, pp. 1–13, 2018, doi: 10.1057/s41599-018-0121-9.

124   M. Blastland, A. L. J. Freeman, S. van der Linden, T. M. Marteau, and D. Spiegelhalter, "Five rules for evidence communication," *Nature*, vol. 587, no. 7834, pp. 362–364, 2020, doi: 10.1038/d41586-020-03189-1.

125 R. Van Eemeren, F. H., Grootendorst, R., & Grootendorst, *A systematic theory of argumentation: The pragma-dialectical approach*. Cambridge University Press, 2004.

126 E. C. Walton, D., & Krabbe, *Commitment in dialogue: Basic concepts of interpersonal reasoning*. SUNY press, 1995.

127 V. D. Quintanilla, "Human-Centered Civil Justice Design," *Ssrn*, 2015, doi: 10.2139/ssrn.2655818.

128 T. R. Tyler, "Conditions leading to value-expressive effects in judgments of procedural justice: A test of four models.," *J. Pers. Soc. Psychol.*, vol. 52, no. 2, pp. 333–344, 1987, doi: https://doi.org/10.1037/0022-3514.52.2.333.

129 S. Niemeyer, F. Veri, J. S. Dryzek, and A. Bächtiger, "How Deliberation Happens: Enabling Deliberative Reason," *Am. Polit. Sci. Rev.*, vol. 46, no. 3, pp. 1–18, 2023, doi: 10.1017/S0003055423000023.

130 D. J. O'Keefe, "How to Handle Opposing Arguments in Persuasive Messages: A Meta-Analytic Review of the Effects of One-Sided and Two-Sided Messages," *Ann. Int. Commun. Assoc.*, vol. 22, no. 1, pp. 209–249, 1999, doi: 10.1080/23808985.1999.11678963.

131 M. Eisend, "Two-sided advertising : A meta-analysis," vol. 23, pp. 187–198, 2006, doi: 10.1016/j.ijresmar.2005.11.001.

132 E. T. Molden, D. C., & Higgins, "Motivated Thinking," *Encycl. Mind*, 2013, doi: 10.4135/9781452257044.n196.

133 C. S. Taber and M. Lodge, "Motivated skepticism in the evaluation of political beliefs," *Am. J. Pol. Sci.*, vol. 50, no. 3, pp. 755–769, 2006, doi: 10.1111/j.1540-5907.2006.00214.x.

134 D. P. Redlawsk, A. J. W. Civettini, and K. M. Emmerson, "The Affective Tipping Point: Do Motivated Reasoners Ever 'Get It'?," *Polit. Psychol.*, vol. 31, no. 4, pp. 563–593, 2010, doi: 10.1111/j.1467-9221.2010.00772.x.

135 J. T. Petty, R. E. and Cacioppo, "The Elaboration Likelihood Model of persuasion," in *Advances in Experimental Social Psychology*, vol. 19, New York: Academic Press, 1986, pp. 123–205.

136 R. E. Petty and J. T. Cacioppo, *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*. Springer Science & Business Media, 2012. doi: https://doi.org/10.2307/1422805.

137 K. El Hedhli and H. Zourrig, "Dual routes or a one-way to persuasion? The elaboration likelihood model versus the unimodel," *J. Mark. Commun.*, vol. 29, no. 5, pp. 433–454, 2023, doi: 10.1080/13527266.2022.2034033.

138 A. W. Kruglanski and E. P. Thompson, "Persuasion by a single route: A view from the unimodel," *Psychol. Inq.*, vol. 10, no. 2, pp. 83–109, 1999, doi: 10.1207/S15327965PL100201.

139 D. Mair *et al.*, *Understanding our political nature: How to put knowledge and reason at the heart of political decision-making*. 2019. doi: 10.2760/374191.

140 Sam Wineburg & Sarah McGrew, "Reading Less and Learning More When Evaluating Digital Information," *Ssrn*, vol. 221, no. 1974, pp. 1017–1042, 2002.

141 N. Mackie, D. M., & Schwarz, "From information to attitude change: The heuristic-systematic model," in *In R. E. Petty, T. M. Ostrom, & T. C. Brock (Eds.), Cognitive responses in persuasion*, Hillsdale, NJ: Erlbaum, 1992, pp. 191–225.

142 M. W. Susmann *et al.*, "Persuasion amidst a pandemic: Insights from the Elaboration Likelihood Model," *Eur. Rev. Soc. Psychol.*, vol. 33, no. 2, pp. 323–359, 2022, doi: 10.1080/10463283.2021.1964744.

143 Robert Noggle, "Pressure, Trickery, and a Unified Account of Manipulation," *Am. Philos. Q.*, vol. 3, no. 57, pp. 241–252, 2020.

144 M. Gorin, "Do Manipulators," *Am. Philos. Q.*, vol. 51, no. January 2014, pp. 51–61, 2014.

145 M. Gorin, "Towards a theory of interpersonal manipulation," in *In C. Coons & M. Weber (Eds.), Manipulation: Theory and practice*, Oxford University Press, 2014, pp. 73–97.

146 A. Gagneux-Brunon *et al.*, "Public opinion on a mandatory COVID-19 vaccination policy in France: a cross-sectional survey," *Clin. Microbiol. Infect.*, vol. 28, no. 3, pp. 433–439, 2022, doi: 10.1016/j.cmi.2021.10.016.

147   McCoy CA, "Adapting Coercion: How Three Industrialized Nations Manufacture Vaccination Compliance," *J Heal. Polit Policy Law*, vol. 44(6), no. Dec 1, 2019.

148   S. Lewandowsky, D. Holford, and P. Schmid, "Public policy and conspiracies: The case of mandates," *Curr. Opin. Psychol.*, vol. 47, p. 101427, 2022, doi: 10.1016/j.copsyc.2022.101427.

149   C. R. Kuehnhanss, "The challenges of behavioural insights for effective policy design," *Policy Soc.*, vol. 38, no. 1, pp. 14–40, 2019, doi: 10.1080/14494035.2018.1511188.

150   C. R. Kuehnhanss, "Nudges and Nodality Tools," *Routledge Handb. Policy Des.*, pp. 227–242, 2021, doi: 10.4324/9781351252928-15.

151   D. Kahneman, *Thinking, fast and slow*. 2017.

152   R. H. Thaler and C. R. Sunstein, *Nudge: Improving decisions about health, wealth, and happiness*. Penguin, 2009.

153   P. G. Hansen, *Tools and ethics for applied behavioural insights: the BASIC toolkit*. Organisation for Economic Cooporation and Development, OECD, 2019.

154   OECD, "Skills for a High Performing Civil Service, Public Governance Reviews," Paris, 2017. doi: https://doi.org/10.1787/9789264280724-en.

155   L. K. Lades and L. Delaney, "Nudge FORGOOD," *Behav. Public Policy*, vol. 6, no. 1, pp. 75–94, 2022, doi: 10.1017/bpp.2019.53.

156   OECD, *Tools and Ethics for Applied Behavioural Insights: The BASIC Toolkit*. 2019. [Online]. Available: http://oe.cd/BASIC

157   S. Michie, M. M. Van Stralen, and R. West, "The behaviour change wheel : A new method for characterising and designing behaviour change interventions The behaviour change wheel : A new method for characterising and designing behaviour change interventions," vol. 42, no. April, 2011.

158   O. Service *et al.*, "EAST Four simple ways to apply behavioural insights," 2014. [Online]. Available: http://www.behaviouralinsights.co.uk/wp-content/uploads/2015/07/BIT-Publication-EAST_FA_WEB.pdf

159   M. Baggio, E. Ciriolo, G. Marandola, and R. Van Bavel, "The evolution of behaviourally informed policy-making in the EU," *J. Eur. Public Policy*, vol. 0, no. 0, pp. 1–19, 2021, doi: 10.1080/13501763.2021.1912145.

160   The Behavioural Insights Team, "How can we encourage adoption of home energy efficiency measures?" [Online]. Available: https://www.bi.team/blogs/how-can-we-encourage-adoption-of-home-energy-efficiency-measures/

161   K. M. Atkinson *et al.*, "Effectiveness of digital technologies at improving vaccine uptake and series completion – A systematic review and meta-analysis of randomized controlled trials," *Vaccine*, vol. 37, no. 23, pp. 3050–3060, 2019, doi: 10.1016/j.vaccine.2019.03.063.

162   C. R. Sunstein, "Nudges that fail," *Behav. public policy*, vol. 1, no. 1, pp. 4–25, 2017.

163   M. Alt, H. Bruns, N. DellaValle, and I. Murauskaite-Bull, "Synergies of interventions to promote pro-environmental behaviors – A meta-analysis of experimental studies," *Glob. Environ. Chang.*, vol. 84, no. January, p. 102776, 2024, doi: 10.1016/j.gloenvcha.2023.102776.

164   P. G. Hansen and A. M. Jespersen, "Nudge and the manipulation of choice: A framework for the responsible use of the nudge approach to behaviour change in public policy," *Eur. J. Risk Regul.*, vol. 4, no. 1, pp. 3–28, 2013, doi: 10.1017/s1867299x00002762.

165   D. M. Hausman and B. Welch, "Debate: To nudge or not to nudge," *J. Polit. Philos.*, vol. 18, no. 1, pp. 123–136, 2010, doi: 10.1111/j.1467-9760.2009.00351.x.

166   L. Bovens, "Haw far to Nudge," in *Preference change*, Dordrecht: Springer, 2009, pp. 207–219. doi: 10.4337/9781786430557.00012.

167   D. R. Marchiori, M. A. Adriaanse, and D. T. D. De Ridder, "Unresolved questions in nudging research: Putting the psychology back in nudging," *Soc. Personal. Psychol. Compass*, vol. 11, no. 1, pp. 1–13, 2017, doi: 10.1111/spc3.12297.

168   C. R. Sunstein, L. A. Reisch, and M. Kaiser, "Trusting nudges? Lessons from an international survey," *J. Eur. Public Policy*, vol. 26, no. 10, pp. 1417–1443, 2019, doi: 10.1080/13501763.2018.1531912.

169   R. Hertwig and T. Grüne-Yanoff, "Nudging and Boosting: Steering or Empowering Good Decisions," *Perspect. Psychol. Sci.*, vol. 12, no. 6, pp. 973–986, 2017, doi: 10.1177/1745691617702496.

170   R. Hertwig, "When to consider boosting: some rules for policy-makers," *Behav. Public Policy*, vol. 1, no. 2, pp. 143–161, 2017, doi: 10.1017/bpp.2016.14.

171   R. Hertwig and M. D. Ryall, "Nudge versus boost: Agency dynamics under libertarian paternalism," *Econ. J.*, vol. 130, no. 629, pp. 1384–1415, 2020, doi: 10.1093/EJ/UEZ054.

172   A. Kozyreva, S. Wineburg, S. Lewandowsky, and R. Hertwig, "Critical Ignoring as a Core Competence for Digital Citizens," *Curr. Dir. Psychol. Sci.*, vol. 32, no. 1, pp. 81–88, 2023, doi: 10.1177/09637214221121570.

173   G. Gigerenzer, W. Gaissmaier, E. Kurz-Milcke, L. M. Schwartz, and S. Woloshin, "Helping doctors and patients make sense of health statistics," *Psychol. Sci. Public Interes. Suppl.*, vol. 8, no. 2, pp. 53–96, 2007, doi: 10.1111/j.1539-6053.2008.00033.x.

174   D. Schunk, E. M. Berger, H. Hermes, K. Winkel, and E. Fehr, "Teaching self-regulation," *Nat. Hum. Behav.*, vol. 6, no. 12, pp. 1680–1690, 2022, doi: 10.1038/s41562-022-01449-w.

175   S. Banerjee and P. John, "Nudge plus: incorporating reflection into behavioral public policy," *Behav. Public Policy*, vol. 8, no. 1, pp. 69–84, 2024, doi: 10.1017/bpp.2021.6.

176   S. Shahab and L. K. Lades, "Sludge and transaction costs," *Behav. Public Policy*, pp. 1–22, 2021, doi: 10.1017/bpp.2021.12.

177   D. Soman, "Sludge : A Very Short Introduction," 2020.

178   H. Bruns, A. Fillon, Z. Maniadis, and Y. Paunov, "'Fear of the Light'? Transparency Does Not Reduce the Effectiveness of Nudges.," 2023. [Online]. Available: https://www.southampton.ac.uk/~assets/doc/2304 Combined.pdf

179   H. Bruns, E. Kantorowicz-Reznichenko, K. Klement, M. Luistro Jonsson, and B. Rahali, "Can nudges be transparent and yet effective?," *J. Econ. Psychol.*, vol. 65, no. December 2017, pp. 41–59, 2018, doi: 10.1016/j.joep.2018.02.002.

180   S. Altay, M. Schwartz, A. S. Hacquin, A. Allard, S. Blancke, and H. Mercier, "Scaling up interactive argumentation by providing counterarguments with a chatbot," *Nat. Hum. Behav.*, vol. 6, no. 4, pp. 579–592, 2022, doi: 10.1038/s41562-021-01271-w.

181   T. H. Costello, G. Pennycook, and D. G. Rand, "Durably reducing conspiracy beliefs through dialogues with AI," 2024.

182   Routledge, *Routledge Encyclopedia of Narrative Theory*, 1st editio. Routledge, 2005. doi: https://doi.org/10.4324/9780203932896.

183   J. Bruner, "The narrative construction of reality," *Crit. Inq.*, vol. 18, no. 1, pp. 1–21, 1991.

184   D. Herman, *Basic elements of narrative.* John Wiley & Sons, 2009.

185   Jens Brockmeier and Hanna Meretoja, "Understanding Narrative Hermeneutics," *Storyworlds A J. Narrat. Stud.*, vol. 6, no. 2, p. 1, 2014, doi: 10.5250/storyworlds.6.2.0001.

186   M. Mäkelä, S. Björninen, L. Karttunen, M. Nurminen, J. Raipola, and T. Rantanen, "Dangers of narrative: A critical approach to narratives of personal experience in contemporary story economy," *Narrative*, vol. 29, no. 2, pp. 139–159, 2021, doi: 10.1353/nar.2021.0009.

187   H. Mäkelä, M., & Meretoja, "Critical approaches to the storytelling boom," *Poet. Today*, vol. 43, no. 2, pp. 191–218, 2022.

188   European Union Fundamental Rights Agency, "10 Keys to Effectively Communicating Human Rights," 2022. [Online]. Available: https://fra.europa.eu/en/publication/2022/10-keys-effectively-communicating-human-rights-2022-edition

189   J. Dennison, "Emotions: functions and significance for attitudes, behaviour, and communication," *Migr. Stud.*, vol. 12, no. 1, pp. 1–20, 2024, doi: 10.1093/migration/mnad018.

190   L. F. Barrett, M. Lewis, and J. M. Haviland-Jones, *Handbook of emotions*. Guilford Publications, 2016.

191   S. J. Breckler, "Empirical validation of affect, behavior, and cognition as distinct components of attitude," *J. Pers. Soc. Psychol.*, vol. 47, no. 6, pp. 1191–1205, 1984, doi: 10.1037/0022-3514.47.6.1191.

192   R. B. Zajonc, "Feeling and thinking: Preferences need no inferences.," *Am. Psychol.*, vol. 35, no. 2, p. 151, 1980.

193   G. Haddock and M. P. Zanna, "Cognition, Affect, and the Prediction of Social Attitudes," *Eur. Rev. Soc. Psychol.*, vol. 10, no. 1, pp. 75–99, 1999, doi: 10.1080/14792779943000026.

194   S. Van Der Linden *et al.*, "Culture versus cognition is a false dilemma," *Nat. Clim. Chang.*, vol. 7, no. 7, p. 457, 2017, doi: 10.1038/nclimate3323.

195   J. S. Lerner and D. Keltner, "Beyond valence: Toward a model of emotion-specific influences on judgement and choice," *Cogn. Emot.*, vol. 14, no. 4, pp. 473–493, 2000, doi: 10.1080/026999300402763.

196   G. R. Maio *et al.*, *The Cambridge Handbook of Human Affective Neuroscience*. Cambridge University Press, 2018.

197   C. Cruz, J. Labonne, and F. Trebbi, "Campaigning Against Populism Emotions and Information in Real Election Campaigns," *SSRN Electron. J.*, 2024, doi: 10.2139/ssrn.4716676.

198   E. N. Simas, S. Clifford, and J. H. Kirkland, "How Empathic Concern Fuels Political Polarization," *Am. Polit. Sci. Rev.*, pp. 258–269, 2019, doi: 10.1017/S0003055419000534.

199   S. Clifford, "How Emotional Frames Moralize and Polarize Political Attitudes," *Polit. Psychol.*, vol. 40, no. 1, pp. 75–91, 2019, doi: 10.1111/pops.12507.

200   N. Walter, R. Tukachinsky, A. Pelled, and R. Nabi, "Meta-analysis of anger and persuasion: An empirical integration of four models," *J. Commun.*, vol. 69, no. 1, pp. 73–93, 2019, doi: 10.1093/joc/jqy054.

201   L. Feldman and P. S. Hart, "Is There Any Hope? How Climate Change News Imagery and Text Influence Audience Emotions and Support for Climate Mitigation Policies," *Risk Anal.*, vol. 38, no. 3, pp. 585–602, 2018, doi: 10.1111/risa.12868.

202   P. Winkielman and Y. Gogolushko, "Influence of suboptimally and optimally presented affective pictures and words on consumption-related behavior," *Front. Psychol.*, vol. 8, no. JAN, pp. 1–15, 2018, doi: 10.3389/fpsyg.2017.02261.

203   S. L. Franconeri, L. M. Padilla, P. Shah, J. M. Zacks, and J. Hullman, "The Science of Visual Data Communication: What Works," *Psychol. Sci. Public Interes.*, vol. 22, no. 3, pp. 110–161, 2021, doi: 10.1177/15291006211051956.

204   W. Msemburi, A. Karlinsky, V. Knutson, S. Aleshin-Guendel, S. Chatterji, and J. Wakefield, "The WHO estimates of excess mortality associated with the COVID-19 pandemic," *Nature*, vol. 613, no. 7942, pp. 130–137, 2023, doi: 10.1038/s41586-022-05522-2.

205   S. Motallebi, R. C. Y. Cheung, B. Mohit, S. Shahabi, A. Alishahi Tabriz, and S. Moattari, "Modeling COVID-19 Mortality Across 44 Countries: Face Covering May Reduce Deaths," *Am. J. Prev. Med.*, vol. 62, no. 4, pp. 483–491, 2022, doi: 10.1016/j.amepre.2021.09.019.

206   K. Ruggeri *et al.*, "A synthesis of evidence for policy from behavioural science during COVID-19," *Nature*, vol. 625, no. 7993, pp. 134–147, 2024, doi: 10.1038/s41586-023-06840-9.

207   S. Bin Naeem and R. Bhatti, "The Covid-19 'infodemic': a new front for information professionals," *Health Info. Libr. J.*, vol. 37, no. 3, pp. 233–239, 2020, doi: 10.1111/hir.12311.

208   E. Ash, S. Galletta, D. Hangartner, Y. Margalit, and M. Pinna, "The Effect of Fox News on Health Behavior during COVID-19," *Polit. Anal.*, pp. 275–284, 2023, doi: 10.1017/pan.2023.21.

209   R. L. Oliver, "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions," *J. Mark. Res.*, vol. 17, no. 4, p. 460, 1980, doi: 10.2307/3150499.

210   N. A. Gardberg and C. J. Fombrun, "Corporate citizenship: Creating intangible assets across institutional environments," *Acad. Manag. Rev.*, vol. 31, no. 2, pp. 329–346, 2006, doi: 10.5465/AMR.2006.20208684.

211   V. Luoma-aho, L. Olkkonen, and M. J. Canel, "Public sector communication and citizen expectations and satisfaction," *Handb. Public Sect. Commun.*, pp. 303–314, 2020, doi: 10.1002/9781119263203.ch20.

212   E. H. Bohle and K. Warner, *Resilience and Social Vulnerability*, no. 10. 2008.

213   V. Proag, "The Concept of Vulnerability and Resilience," *Procedia Econ. Financ.*, vol. 18, no. September, pp. 369–376, 2014, doi: 10.1016/s2212-5671(14)00952-6.

214   J. A. Heise, "Towards Closing the Confidence Gap: An Alternative Approach to Communication Between Public and Government," *Public Aff. Q.*, vol. 9, no. 2, pp. 196–217, 1985.

215   B. Tombleson and K. Wolf, "Rethinking the circuit of culture: How participatory culture has transformed cross-cultural communication," *Public Relat. Rev.*, vol. 43, no. 1, pp. 14–25, 2017, doi: 10.1016/j.pubrev.2016.10.017.

216   C. Azzopardi, "Communicating with Vulnerable Groups," 2008.

217   R. W. Gibbs and H. Franks, "Embodied Metaphor in Women's Narratives about Their Experiences with Cancer," *Health Commun.*, vol. 14, no. 2, pp. 139–165, 2002, doi: 10.1207/S15327027HC1402_1.

218   E. Semino, Z. Demjén, A. Hardie, S. Payne, and P. Rayson, "Introduction," *Metaphor. Cancer End Life*, pp. 1–21, 2018, doi: 10.4324/9781315629834-1.

219   I. Ajzen, *Attitudes, personality and behaviour*. McGraw-hill education (UK), 2005.

220   C. Betsch, L. H. Wieler, and K. Habersaat, "Monitoring behavioural insights related to COVID-19," *Lancet*, vol. 395, no. 10232, pp. 1255–1256, 2020, doi: 10.1016/S0140-6736(20)30729-7.

221   S. Rathje, D. Mirea, I. Sucholutsky, R. Marjieh, and C. E. Robertson, "GPT is an effective tool for multilingual psychological text analysis," *PsyArXiv*, pp. 0–22, 2023.

222   et al Lourenço, Joana Sousa, "Behavioural insights applied to policy-country overviews 2016," Seville, 2016.

223   K. L. Milkman *et al.*, "Megastudies improve the impact of applied behavioural science," *Nature*, vol. 600, no. 7889, pp. 478–483, 2021, doi: 10.1038/s41586-021-04128-4.

224   R. van Bavel, B. Herrmann, G. Esposito, and A. Proestakis, "Applying behavioural sciences to EU policy-making," *Jt. Res. Cent. Sci. Policy Reports. Eur. Com.*, p. 13, 2013, doi: 10.2788/4659.

225   S. Timmons, F. McGinnity, C. Belton, M. Barjaková, and P. Lunn, "It depends on how you ask: Measuring bias in population surveys of compliance with COVID-19 public health guidance," *J. Epidemiol. Community Health*, vol. 75, no. 4, pp. 387–389, 2021, doi: 10.1136/jech-2020-215256.

226   A. M. Nascimento, D. S. da Silveira, J. S. Dornelas, and J. Araújo, "Exploring contextual factors in citizen-initiated platforms to non-functional requirements elicitation," *Transform. Gov. People, Process Policy*, vol. 14, no. 5, pp. 777–789, 2020, doi: 10.1108/TG-03-2020-0042.

227   K. Janicki, *Confusing discourse*. Springer, 2009.

228   K. Janicki, *Language misconceived: Arguing for applied cognitive sociolinguistics*. Routledge, 2014.

229   P. Lutz and M. Bitschnau, "Misperceptions about Immigration: Reviewing Their Nature, Motivations and Determinants," *Br. J. Polit. Sci.*, vol. 53, no. 2, pp. 674–689, 2023, doi: 10.1017/S0007123422000084.

230   M. Vlasceanu *et al.*, "Addressing climate change with behavioral science: A global intervention tournament in 63 countries," *Sci. Adv.*, vol. 10, no. 6, p. eadj5778, 2024, doi: 10.1126/sciadv.adj5778.

231   J. Hainmueller and D. J. Hopkins, "Public attitudes toward immigration," *Annu. Rev. Polit. Sci.*, vol. 17, pp. 225–249, 2014, doi: 10.1146/annurev-polisci-102512-194818.

232   D. A. Scheufele, N. M. Krause, I. Freiling, and D. Brossard, "What we know about effective public engagement on CRISPR and beyond," *Proc. Natl. Acad. Sci. U. S. A.*, vol. 118, no. 22, 2021, doi: 10.1073/pnas.2004835117.

233   P. Lunn and D. Robertson, "Using behavioural experiments to pre-test policy," 2018, [Online]. Available: http://www.esri.ie/publications/using-behavioural-experiments-to-pre-test-policy/

234   A. Kozyreva, P. Lorenz-Spreen, R. Hertwig, S. Lewandowsky, and S. M. Herzog, "Public attitudes towards algorithmic personalization and use of personal data online: evidence from Germany, Great Britain, and the United States," *Humanit. Soc. Sci. Commun.*, vol. 8, no. 1, pp. 1–11, 2021, doi: 10.1057/s41599-021-00787-w.

235   H. Bruns and H. Nohlen, "Segmenting consumers and tailoring behavioural interventions to reduce consumer food waste," 2023. doi: 10.2760/541400.

236   J. D. Teeny, J. J. Siev, P. Briñol, and R. E. Petty, "A Review and Conceptual Framework for Understanding Personalized Matching Effects in Persuasion," *J. Consum. Psychol.*, vol. 31, no. 2, pp. 382–414, 2021, doi: 10.1002/jcpy.1198.

237   R. E. Petty and D. T. Wegener, "Matching versus mismatching attitude functions: Implications for scrutiny of persuasive messages," *Personal. Soc. Psychol. Bull.*, vol. 24, no. 3, pp. 227–240, 1998, doi: 10.1177/0146167298243001.

238   K. L. Blankenship and D. T. Wegener, "Opening the Mind to Close It: Considering a Message in Light of Important Values Increases Message Processing and Later Resistance to Change," *J. Pers. Soc. Psychol.*, vol. 94, no. 2, pp. 196–213, 2008, doi: 10.1037/0022-3514.94.2.94.2.196.

239   K. G. DeBono and M. Packer, "The Effects of Advertising Appeal on Perceptions of Product Quality," *Personal. Soc. Psychol. Bull.*, vol. 17, no. 2, pp. 194–200, 1991, doi: 10.1177/014616729101700212.

240   N. Diakopoulos, "Accountability, transparency, and algorithms," *Oxford Handb. ethics AI*, vol. 17, no. 4, p. 197, 2020.

241   K. G. DeBono and R. J. Harnish, "Source Expertise, Source Attractiveness, and the Processing of Persuasive Information: A Functional Approach," *J. Pers. Soc. Psychol.*, vol. 55, no. 4, pp. 541–546, 1988, doi: 10.1037/0022-3514.55.4.541.

242   E. W. Wan and D. D. Rucker, "Confidence and construal framing: When confidence increases versus decreases information processing," *J. Consum. Res.*, vol. 39, no. 5, pp. 977–992, 2013, doi: 10.1086/666467.

243   J. A. Dimmock, B. Jackson, S. E. Clear, and K. H. Law, "Matching temporal frame to recipients' time orientation in exercise messaging: Does argument quality matter?," *Psychol. Sport Exerc.*, vol. 14, no. 6, pp. 804–812, 2013, doi: 10.1016/j.psychsport.2013.06.002.

244   A. V. M. Alarcón, "Media Representation of the European Union: Comparing Newspaper Coverage in France, Spain, and the United Kingdom," *Int. J. Commun.*, vol. 4, pp. 398–415, 2010.

245   A. Coppock, *Persuasion in Parallel*. 2023. doi: 10.7208/chicago/9780226821832.001.0001.

246   G. M. Jiga-Boy, G. R. Maio, G. Haddock, and K. Tapper, "Values and behavior," in *Handbook of Value: Perspectives from Economics, Neuroscience, Philosophy, Psychology and Sociology*, 2015, pp. 234–262. doi: 10.1093/acprof.

247   G. R. Maio, A. Pakizeh, W. Y. Cheung, and K. J. Rees, "Changing, Priming, and Acting on Values: Effects via Motivational Relations in a Circular Model," *J. Pers. Soc. Psychol.*, vol. 97, no. 4, pp. 699–715, 2009, doi: 10.1037/a0016420.

248   G. R. Maio, *Chapter One: Mental representations of social values*, vol. 42. Elsevier Inc. 2010, 2010. doi: 10.1016/S0065-2601(10)42001-8.

249   S. H. Schwartz, "Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries," *Adv. Exp. Soc. Psychol.*, vol. 25, no. C, pp. 1–65, 1992, doi: 10.1016/S0065-2601(08)60281-6.

250   L. Sagiv and S. H. Schwartz, "Value Priorities and Readiness for Out-Group Social Contact," *J. Pers. Soc. Psychol.*, vol. 69, no. 3, pp. 437–448, 1995, doi: 10.1037/0022-3514.69.3.437.

251   P. H. P. Hanel, K. C. Vione, U. Hahn, and G. R. Maio, "Value Instantiations: The Missing Link between Values and Behaviour?," in *Values and Behavior - Taking a Cross Cultural Perspective*, S. Roccas and L. Sagiv, Eds., Springer, Cham, 2017, pp. 175–190.

252 S. H. Schwartz *et al.*, "Refining the Theory of Basic Individual Values," *J. Pers. Soc. Psychol.*, vol. 103, no. 4, pp. 663–688, 2012, doi: 10.1037/a0029393.

253 V. Carfora, M. Bertolotti, and P. Catellani, "Informational and emotional daily messages to reduce red and processed meat consumption," *Appetite*, vol. 141, no. July, p. 104331, 2019, doi: 10.1016/j.appet.2019.104331.

254 T. Graham and W. Abrahamse, "Communicating the climate impacts of meat consumption: The effect of values and message framing," *Glob. Environ. Chang.*, vol. 44, pp. 98–108, 2017, doi: 10.1016/j.gloenvcha.2017.03.004.

255 M. S. Tijs, J. C. Karremans, H. Veling, M. A. de Lange, P. van Meegeren, and R. Lion, "Saving water to save the environment: contrasting the effectiveness of environmental and monetary appeals in a residential water saving intervention," *Soc. Influ.*, vol. 12, no. 2–3, pp. 69–79, 2017, doi: 10.1080/15534510.2017.1333967.

256 A. Nilsson, M. Wester, D. Lazarevic, and N. Brandt, "Smart homes, home energy management systems and real-time feedback: Lessons for influencing household energy consumption from a Swedish field study," *Energy Build.*, vol. 179, pp. 15–25, 2018, doi: 10.1016/j.enbuild.2018.08.026.

257 S. Banker and J. Park, "Evaluating prosocial COVID-19 messaging frames: Evidence from a field study on facebook," *Judgm. Decis. Mak.*, vol. 15, no. 6, pp. 1037–1043, 2020, doi: 10.1017/s1930297500008226.

258 L. Jordan and A. Tang, "Exploring Communication Framing Methods that Link Changes in Air Pollution Exposure and COVID-19 to Promote Post-pandemic Sustainability Policy," in *Springer*, no. May, 2021, pp. 3–6. doi: 10.1007/978-3-030-69284-1.

259 K. Joyal-Desmarais, A. K. Scharmer, M. K. Madzelan, J. V. See, A. J. Rothman, and M. Snyder, "Appealing to Motivation to Change Attitudes, Intentions, and Behavior: A Systematic Review and Meta-Analysis of 702 Experimental Tests of the Effects of Motivational Message Matching on Persuasion," *Psychol. Bull.*, vol. 148, no. 7–8, pp. 465–517, 2022, doi: 10.1037/bul0000377.

260 M. Scharfbillig, D. Seddig, and T. Magdalena, "Values and Identities Profiles in the EU – Implications for Communication Strategies," 2024.

261 M. W. Kreuter and S. M. McClure, "The role of culture in health communication," *Annu. Rev. Public Health*, vol. 25, pp. 439–455, 2004, doi: 10.1146/annurev.publhealth.25.101802.123000.

262 V. A. Shaffer, E. S. Focella, A. Hathaway, L. D. Scherer, and B. J. Zikmund-Fisher, "On the Usefulness of Narratives: An Interdisciplinary Review and Theoretical Model," *Ann. Behav. Med.*, vol. 52, no. 5, pp. 429–442, 2018, doi: 10.1093/abm/kax008.

263 P. Akaliyski, C. Welzel, M. H. Bond, and M. Minkov, "On 'Nationology': The Gravitational Field of National Culture," *J. Cross. Cult. Psychol.*, vol. 52, no. 8–9, pp. 771–793, 2021, doi: 10.1177/00220221211044780.

264 S. Iyengar, Y. Lelkes, M. Levendusky, N. Malhotra, and S. J. Westwood, "The origins and consequences of affective polarization in the United States," *Annu. Rev. Polit. Sci.*, vol. 22, pp. 129–146, 2019, doi: 10.1146/annurev-polisci-051117-073034.

265 A. Kekkonen and T. Ylä-Anttila, "Affective blocs: Understanding affective polarization in multiparty systems," *Elect. Stud.*, vol. 72, no. January, 2021, doi: 10.1016/j.electstud.2021.102367.

266 L. J. Skitka, "The Psychology of Moral Conviction," *Soc. Personal. Psychol. Compass*, vol. 4, no. 4, pp. 267–281, 2010, doi: 10.1146/annurev-psych-063020-030612.

267 L. J. Skitka, B. E. Hanson, G. S. Morgan, and D. C. Wisneski, "The Psychology of Moral Conviction," *Annu. Rev. Psychol.*, vol. 72, pp. 347–366, 2021, doi: 10.1146/annurev-psych-063020-030612.

268 Z. Adams, M. Osman, C. Bechlivanidis, and B. Meder, "(Why) Is Misinformation a Problem?," *Perspect. Psychol. Sci.*, vol. 18, no. 6, pp. 1436–1463, 2023, doi: 10.1177/17456916221141344.

269 S. Lewandowsky, U. K. H. Ecker, J. Cook, S. van der Linden, J. Roozenbeek, and N. Oreskes, "Misinformation and the epistemic integrity of democracy," *Curr. Opin. Psychol.*, vol. 54, p. 101711, 2023, doi: 10.1016/j.copsyc.2023.101711.

270 S. McKay and C. Tenove, "Disinformation as a Threat to Deliberative Democracy," *Polit. Res. Q.*, vol. 74, no. 3, pp. 703–717, 2021, doi: 10.1177/1065912920938143.

271 H. M. Alberto Acerbi, Sacha Altay, "Research note : Fighting misinformation or fighting for information ?," vol. 3, no. 1, pp. 1–15, 2022.

272 N. Porot and E. Mandelbaum, "The science of belief: A progress report," *Wiley Interdiscip. Rev. Cogn. Sci.*, vol. 12, no. 2, pp. 55–91, 2021, doi: 10.1002/wcs.1539.

273 K. Goffin, "Feeling is believing: recalcitrant emotion & Spinozan belief formation," *Synthese*, vol. 200, no. 6, pp. 1–14, 2022, doi: 10.1007/s11229-022-03980-9.

274 P. Schmid, S. Altay, and L. D. Scherer, "The Psychological Impacts and Message Features of Health Misinformation: A Systematic Review of Randomized Controlled Trials," *Eur. Psychol.*, vol. 28, no. 3, pp. 162–172, 2023, doi: 10.1027/1016-9040/a000494.

275 P. Lorenz-Spreen, L. Oswald, S. Lewandowsky, and R. Hertwig, "A systematic review of worldwide causal and correlational evidence on digital media and democracy," *Nat. Hum. Behav.*, vol. 7, no. 1, pp. 74–101, 2023, doi: 10.1038/s41562-022-01460-1.

276 G. Murphy *et al.*, "What do we study when we study misinformation? A scoping review of experimental research (2016-2022)," *Harvard Kennedy Sch. Misinformation Rev.*, vol. 4, no. 6, pp. 1–57, 2023, doi: 10.37016/mr-2020-130.

277 L. Q. Tay, S. Lewandowsky, M. J. Hurlstone, T. Kurz, and U. K. H. Ecker, "Thinking clearly about misinformation," *Commun. Psychol.*, vol. 2, no. 1, pp. 3–7, 2024, doi: 10.1038/s44271-023-00054-5.

278 D. MacFarlane, L. Q. Tay, M. J. Hurlstone, and U. K. H. Ecker, "Refuting Spurious COVID-19 Treatment Claims Reduces Demand and Misinformation Sharing," *J. Appl. Res. Mem. Cogn.*, vol. 10, no. 2, pp. 248–258, 2021, doi: 10.1016/j.jarmac.2020.12.005.

279 B. Swire-Thompson and D. Lazer, "Public health and online misinformation: Challenges and recommendations," *Annu. Rev. Public Health*, vol. 41, pp. 433–451, 2020, doi: 10.1146/annurev-publhealth-040119-094127.

280 S. González-Bailón *et al.*, "Asymmetric ideological segregation in exposure to political news on Facebook," *Science (80-.).*, vol. 381, no. 6656, pp. 392–398, 2023, doi: 10.1126/science.ade7138.

281 T. Van Raemdonck, N., & Meyer, "Why disinformation is here to stay. A socio-technical analysis of disinformation as a hybrid threat," in *Addressing Hybrid Threats*, Cheltenham, UK: Edward Elgar Publishing, 2024, pp. 57–83. doi: https://doi.org/10.4337/9781802207408.00009.

282 M. Geers, B. Swire-Thompson, P. Lorenz-Spreen, S. M. Herzog, A. Kozyreva, and R. Hertwig, "The Online Misinformation Engagement Framework," *Curr. Opin. Psychol.*, vol. 55, p. 101739, 2024, doi: 10.1016/j.copsyc.2023.101739.

283 J. Roozenbeek, S. van der Linden, B. Goldberg, S. Rathje, and S. Lewandowsky, "Psychological inoculation improves resilience against misinformation on social media," *Sci. Adv.*, vol. 8, no. 34, pp. 1–11, 2022, doi: 10.1126/sciadv.abo6254.

284 G. Pennycook and D. G. Rand, "Accuracy prompts are a replicable and generalizable approach for reducing the spread of misinformation," *Nat. Commun.*, vol. 13, no. 1, 2022, doi: 10.1038/s41467-022-30073-5.

285 S. Himmelroos and L. Rapeli, "Can Deliberation Reduce Political Misperceptions? Findings from a Deliberative Experiment on Immigration," *J. Deliberative Democr.*, vol. 16, no. 1, pp. 58–66, 2020, doi: 10.16997/jdd.392.

286 D. Lewandowsky, S., Cook, J., Ecker, U. K. H., Albarracín, D., Amazeen, M. A., Kendeou, P., Lombardi, P. Newman, E. J., Pennycook, G., Porter, E. Rand, D. G., Rapp, D. N., Reifler, J., Roozenbeek, J., Schmid, Z. Seifert, C. M., Sinatra, G. M., Swire-Thompson, B., van der Linden, S., Vraga, E. K., Wood, T. J., and M. S., "Debunking Handbook," 2020.

287 Z. Kunda, "The case for motivated reasoning," *Psychol. Bull.*, vol. 108, no. 3, pp. 480–498, 1990, doi: 10.1037/0033-2909.108.3.480.

288 J. Haidt, "Chapter 53: The Emotional Dog and Its Rational Tail:A Social Intuitionist Approach to Moral Judgment," in *Reasoning - Studies of Human Inference and Its Foundations*, J. Adler and L. Rips, Eds., Cambridge University Press, 2001, pp. 1024–1052. doi: 10.1007/s10503-014-9315-5.

289 P. C. Beatty and G. B. Willis, "Research synthesis: The practice of cognitive interviewing," *Public Opin. Q.*, vol. 71, no. 2, pp. 287–311, 2007, doi: 10.1093/poq/nfm006.

290 J. N. Lahey and D. Oxley, "The power of eye tracking in economics experiments," *Am. Econ. Rev.*, vol. 106, no. 5, pp. 309–313, 2016, doi: 10.1257/aer.p20161009.

291 M. Wedel, "Attention Research in Marketing: A Review of Eye Tracking Studies," *SSRN Electron. J.*, pp. 1–28, 2014, doi: 10.2139/ssrn.2460289.

292 C. Atzmüller and P. M. Steiner, "Experimental vignette studies n survey research," *Methodology*, vol. 6, no. 3, pp. 128–138, 2010, doi: 10.1027/1614-2241/a000014.

293 R. Gorwa, R. Binns, and C. Katzenbach, "Algorithmic content moderation: Technical and political challenges in the automation of platform governance," *Big Data Soc.*, vol. 7, no. 1, 2020, doi: 10.1177/2053951719897945.

294 M. Djourelova, R. Durante, and G. Martin, "The Impact of Online Competition on Local Newspapers: Evidence from the Introduction of Craigslist," *SSRN Electron. J.*, vol. 16130, 2021, doi: 10.2139/ssrn.3849868.

295 N. Newman, "Overview and key findings of the 2023 Digital News Report," 2023. [Online]. Available: https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2023/dnr-executive-summary

296 P. M. Fernbach, T. Rogers, C. R. Fox, and S. A. Sloman, "Political Extremism Is Supported by an Illusion of Understanding," *Psychol. Sci.*, vol. 24, no. 6, pp. 939–946, 2013, doi: 10.1177/0956797612464058.

297 M. Fisher, M. K. Goddu, and F. C. Keil, "Searching for explanations: How the internet inflates estimates of internal knowledge," *J. Exp. Psychol. Gen.*, vol. 144, no. 3, pp. 674–687, 2015, doi: 10.1037/xge0000070.

298 C. Durose, J. Justice, and C. Skelcher, *Governing at arm's length: Eroding or enhancing democracy?*, vol. 43, no. 1. 2015. doi: 10.1332/030557314X14029325020059.

299 L. Topp, D. Mair, L. Smillie, and P. Cairney, "Knowledge management for policy impact: the case of the European Commission's Joint Research Centre," *Palgrave Commun.*, vol. 4, no. 1, 2018, doi: 10.1057/s41599-018-0143-3.

300 P. D. Gluckman, A. Bardsley, and M. Kaiser, "Brokerage at the science–policy interface: from conceptual framework to practical guidance," *Humanit. Soc. Sci. Commun.*, vol. 8, no. 1, pp. 1–10, 2021, doi: 10.1057/s41599-021-00756-3.

301 M. Scharfbillig *et al.*, "Values and identities - A Policymaker's Guide," Luxembourg, 2021. doi: 10.2760/349527.

302 L. Evans, G. R. Maio, A. Corner, C. J. Hodgetts, S. Ahmed, and U. Hahn, "Self-interest and pro-environmental behaviour," *Nat. Clim. Chang.*, vol. 3, no. 2, pp. 122–125, 2013, doi: 10.1038/nclimate1662.

303 B. Enke, "Kinship, cooperation, and the evolution of moral systems," *Q. J. Econ.*, vol. 134, no. 2, pp. 953–1019, 2019, doi: 10.1093/qje/qjz001.

304 M. Scharfbillig, L. Smillie, and E. Kock, "The landscape of political moralisation in the EU and the US."

ANNEX

While the previous projects in the Enlightenment 2.0 multi-annual research programme were entirely based upon state-of-the-art scientific reviews, this project required a different approach. Here, a state-of-the-art scientific review also provided the fundamental basis for the report, but this was insufficient. It was necessary to engage in new primary research and in setting up a citizen engagement exercise across different Member States on what they consider to be meaningful and ethical communications. This engagement exercise made use of the knowledge accrued during the previous phases of the project. Overall, the following research phases were undertaken:

Phase 1: Multidisciplinary state-of-the-art scientific reviews;
Phase 2: New empirical research across multiple Member States on:
  i. Values-based messaging techniques;
  ii. Moralisation of policy areas; and
  iii. The role of trusted sources when prebunking and debunking misinformation; and
Phase 3: In-depth focus groups with citizens in nine Member States.

Multidisciplinary state-of-the-art scientific reviews

For the state-of-the-art scientific reviews to provide the fundamental basis for the report, they were structured around a list of relevant themes to address questions such as 'How can scientists and governments ensure that their communication resonates more deeply with citizens without resorting to the manipulative tactics used by those who seek to undermine liberal democracy?' or 'How can scientific and government actors ensure their communications are equally meaningful and ethical?'

The thematic clusters for the scientific reviews focused on deep dives into areas where improvements can be made, rather than on how and why certain systems are broken, as many of these learnings have been addressed in previous reports. The academics were selected in response to an international call for expertise (Behavioural Economics;; Cognitive Psychology; Ethics; Linguistics; Philosophy; Policy Studies; Pedagogy; Political Behaviour; Political Science; Risk Communications; Psychology; Social Psychology; Sociology; and Theology); they were organised into 20 interdisciplinary clusters, with most participating in several clusters. Each review was organised around two overarching questions:

1. How does the multi-disciplinary science about the topic of the cluster affect meaningful and ethical communications?; and
2. In light of this knowledge, what recommendations would you give to public administration communicators?

The 20 clusters addressed 15 themes, two case studies, two methodological perspectives as well as future outlooks.

New empirical research across multiple Member States

This study was subdivided into three research tasks, the first one focused on values-based messaging techniques. This work was performed by the JRC in collaboration with the external provider Kantar, who was awarded a procurement contract following a public tender procedure. The research consortium used a comprehensive set of values and relevant policies to systematically examine the effectiveness of value-based messaging techniques. To that end, a large online sample was recruited with 1,548 participants

across four Member States: Czechia, France, Greece and Sweden. The criteria used for the selection were geographical scope, population size, attitudes towards the policy issues of interest, and correlation of attitudes across policy areas.

Then, three policies that pre-testing confirmed to be relevant to different value types (Scharfbillig et al., 2021) were selected: 1) environmental policies; 2) security policies; and 3) economic policies. For each policy, value-based messages covering all value types were developed. These messages allowed the comparison of aligned, opposed and unrelated value frames with a control frame across policies. The effects on attitudes and donations towards the policies were also tested.

The study also considered other ways in which value-based messaging may affect policy support[302] via spill-over effects or unintended consequences. The research examined attitudes and donations on a secondary policy within a similar area (e.g., renewable energy and public transport within the environmental policy area) to explore spill-over effects.

Finally, the research tested whether matching a value-framed message to the "naturally" related policy (e.g. security policies and the value of security) or the recipients' value priorities increased the persuasiveness of a message. Participants were then asked to assess the ethical concerns of the use of multiple values frames should they be used by public administrations. Previous research had not considered the full range of personal values[249], making it important to examine the effects of value matching more comprehensively.

Please refer to Figure 5: Values communication study. Additionally see, Figure 9: Eurobarometer (Special Eurobarometer 508 on Values and Identities of EU citizens, wave 94.1, 2020, https://europa.eu/eurobarometer/surveys/detail/2230; doi:10.2760/206143).

Political moralisation survey

This study focused on surveying policy moralisation, as no research to date has tried to map political issue moralisation systematically and beyond the US. This work used data from representative samples in Denmark, France, Germany, Poland, Portugal, Romania and the US totalling more than 2,000 participants to map 19 political topics, including issues such as immigrant welfare, privatisation, meat taxation, car bans, and unemployment benefits, on their level or moralisation. In a pre-registered study, the research tested for each issue whether people's personal values, the root to people's moral foundations[267, 303], lead them to moralise issues, beyond the attitude they have towards the issue.

The survey was run online using Limesurvey as a platform. Respondents were routed to the survey from professional panel providers using quotas on country, gender and age, and one attention check question. The survey was not incentivised and ran in the first part of 2023. A companion scientific paper will be published based on the same data, see Scharfbillig et al.[304].

The role of trust in the source of prebunks and debunks of misinformation

This study was an online experiment involving a representative sample of 5,228 individuals from four Member States: Germany, Greece, Ireland and Poland. Participants were presented a misleading article on either COVID-19 or climate change. They were then assigned to one of three groups: prebunking message (before the article), debunking message (after the article) or no message (with debriefing at the end).

The debunking message exposed the falsehoods in the article and outlined the misleading strategies used. The prebunking message did so without directly referring to the specific false claim in the article. The messages were either associated with the European Commission or not associated with it. After being exposed to the misinformation and the interventions, participants

were asked about their beliefs in the false claim, their intentions to share the article, their reasons for this, and their rating of the article's credibility. In addition, participants indicated their level of trust in the EU.

The researchers assessed whether debunks and prebunks work, if they work differently when implemented by the European Commission and if they perform worse when implemented by the European Commission for people with low levels of trust in the EU.

Citizen engagement on meaningful and ethical communications

For this study, the JRC worked with an external consultant Kantar who was awarded a procurement contract following a public tender procedure. The engagement process adopted a qualitative and participatory approach.

The research consortium agreed on the selection of nine countries for the focus groups as well as on a citizen recruitment strategy. During this phase, a discussion guide was developed in consultation with the experts from the Citizen Engagement cluster (please refer to Phase 1 above). The fieldwork began, including a pilot in Malta and two groups in each of eight further Member States. The final selection of countries was Malta (pilot), Belgium, Germany, Greece, Italy, Latvia, Poland, Romania and Slovakia. While clearly recognising that qualitative insights are not representative, these countries were nevertheless selected in order to provide diversity in terms of:

- Geographic coverage of the EU (North, South, East and West)
- Year of accession to the EU (pre- and post-2004 enlargement)
- Share of the EU population covered
- Levels of trust in different public administrations

The work in this phase of the study concluded with the analysis of the data collected. While the pilot group was run with ten participants, the subsequent groups were with two focus groups comprising five or six participants.

The citizens were recruited to achieve diversity in terms of age, gender, education level, employment status, interest in the news and politics and trust in government. The participants kindly completed a short homework exercise prior to the focus group that lasted three hours. The discussions in the focus groups were structured as follows:

- Prior to the session, all participants were asked to find two pieces of public administration communications: one that they liked and one that they did not like. This was used to understand what (if anything) citizens imagine under the term "public administration communication".
- The focus group started with a short introduction and ice-breaker exercise for participants to share their ideas on what they liked and disliked in terms of public administration communication based on the examples they found.
- Then, the group focused on exploring the participants' expectations for communications from public public administrationpublic administrations.
- The discussion then addressed a specific communication technique: value framing (mock-ups), with the aim of testing how far a piece of communication could go without making citizens feel uncomfortable.
- Then came a co-creation exercise to encourage participants to explore their own views on what makes for meaningful and ethical communications.
- In the wrap up, participants shared their thoughts on 'dos and don'ts' for public administrationpublic administrations communicators.

Where normative judgements were required, the authors used the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities, as laid down in Article 2 of the Treaty on European Union, to guide all recommendations.

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