



A guide to information hygiene

About EUNOMIA

EUNOMIA is a 3-year EU-funded Innovation Action project supporting social media users to critically engage with online information. The toolkit is a decentralised and open-source solution to enable active participation in the trustworthiness assessment process.

EUNOMIA toolkit assists users to:

- Identify the provenance of information;
- Assess online information;
- Protect their network from misinformation.



Decentralized social media are social networks that operate on independently run servers rather than being owned by a company. This gives the users more autonomy and control

EUNOMIA USERS

The EUNOMIA tools are **co-designed** by the communities to which they refer. In particular, three broad end-user categories are involved in the co-design process:



Citizens



Traditional journalists



Social journalists

EUNOMIA TOOLS

EUNOMIA tools allow users to adopt a routine of **information hygiene**. The tools allow the user to check the context of a post, to identify the provenance of information and changes over time, along with other indicators of trustworthiness. EUNOMIA also allows the user to identify the provenance of information and changes over time, along with other indicators of trustworthiness. The trust/don't trust voting encourages social media users to think before they interact with online information consulting information hygiene guides and EUNOMIA indicators. EUNOMIA also nudges users to assess trustworthiness on the basis of human decisions supported by AI-generated contextual information.



EUNOMIA focuses on protecting the privacy and integrity of the data and ensuring transparency, building on blockchain, peer-to-peer and encryption technologies.



Consortium

EUNOMIA unites a highly complementary consortium of 10 partners from 9 European countries from cross-disciplines and cross-sectors including academic, decentralised social media, public journalism organisations and SMEs.



The challenge of the infodemic



One of the characteristics of social media is their potential for **spreading information quickly through a large community of users**. That by itself is not a bad thing; the possibility to share information within a community is actually one of the benefits of social media. However, due to the mix of sources on social media – such as family members, friends, mass media, advertisements, satirical news – **the decisions which information to trust is becoming increasingly complex** (Heuer & Breiter 2018). In this context, we have to understand misinformation as a **societal challenge** with multiple layers, and as a phenomenon that is intertwined with the existence of social media. The COVID-19 outbreak has raised afresh the debate about the dangers of misinformation on social media. Especially during the beginning of the pandemic, myths about coronavirus cures and treatments, its origins and the reasons behind it, even conspiracy theories about the virus, were widely spread on social network platforms leading in cases to dangerous and even fatal actions such as bleach consumption. António Guterres, the Secretary-General of the United Nations, urged for the **need to address the “infodemic” of misinformation**.

The World Health Organisation (WHO) explained that “infodemics” are caused an excessive amount of information, including both factual information and misinformation. During the COVID-19 pandemic we could observe how misinformation, disinformation and

Misinformation is false information that is unintentionally propagated

Disinformation is deliberately propagated false information and includes what is understood under the term ‘fake news’

Malinformation is information that is distributed with the intent to inflict harm on a person, organisation or country

(Tucker et al. 2018)

rumours are being spread, **thus challenging effective public health responses, causing confusion and creating distrust among people.**

While fact checking and debunking misinformation are important reactions to the infodemic, they are limited in their effectiveness. **Therefore, EUNOMIA has developed an alternative approach to tackle misinformation, focussing on information hygiene to flatten the curve of the infodemic.**

Our solution: information hygiene

Existing guidelines such as “check the source”, “check whether the account is a bot”, “check how the information reached you” and “flag untrustworthy information for the benefit of others” are regularly recommended to social media users to help curb the spread of misinformation and disinformation (“the infodemic”). There are hundreds of such recommendations provided by experts but they are often too **vague, too time-consuming or too difficult** to adopt as part of one’s everyday routine.

To counteract the rapid and wide spreading of misinformation online, we can benefit from looking at **how the health sector is addressing epidemics**. A primary measure for curbing epidemics is to promote personal hygiene recommendations, such as washing one’s hands for 30 seconds or practicing physical distancing.

We can look similarly towards **adopting information hygiene for curbing infodemics** in social media. Information hygiene is not the same as guidelines for detecting misinformation or disinformation. To use the medical analogy, hygiene is not about actively looking for pathogens, but about **routines that reduce the risk of ‘infection’ on a daily basis**. We define information hygiene in social media as **the practice of following daily routines that reduce the risk of acting upon and sharing misinformation to one’s network**.

EUNOMIA has produced a first systematic set of information hygiene recommendations. **All social media users can adopt information hygiene routines to protect themselves and their network against the infodemic of rapidly spreading misinformation.**



Practice information hygiene:

our recommendations

BE CAUTIOUS OF INFORMATION FORWARDED TO YOU THROUGH YOUR NETWORK.

Because we tend to trust our friends, our **cognitive filters weaken, making a social media feed fertile ground for misinformation, disinformation and 'fake news'** to sneak into our consciousness. **Refrain from letting your guard down just because a piece of news came from a friend.** While friends forwarding news may be generally trusted and have no ill intent, this does not mean that they themselves have not been deceived by information that is mal-intentioned or biased.

How EUNOMIA helps

EUNOMIA tools allow the user to see the information cascade, i.e., an overview of similar posts, of the post received from friends. This gives the user the possibility to determine where friends may have received the information from before forwarding it.

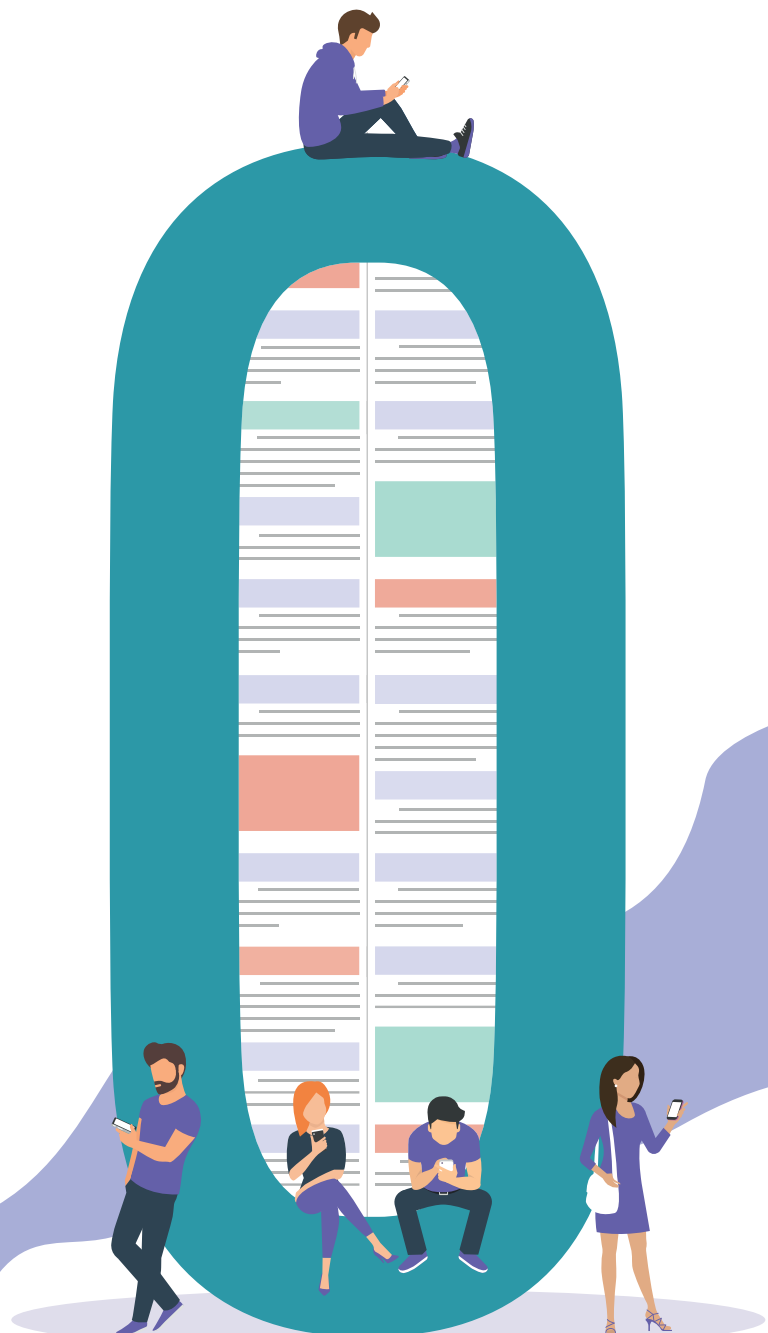
BE WARY OF POPULAR POSTS.

Misinformation travels **significantly faster, deeper and more broadly** than the truth. Posts from individuals or organisations that are experts in a topic are **not necessarily popular** in social media.

This by no means indicates that a viral post is misinformation just because it is viral, but it certainly is a reason to think twice before reposting.

How EUNOMIA helps

EUNOMIA tools allow users to check for similar posts on the 'information cascade'. These can be filtered by date to visualise the topic's current popularity.





BE WARY OF LANGUAGE THAT IS MAKING YOU FEEL EMOTIONAL.
IT IS DESIGNED TO BECOME VIRAL, NOT TO INFORM.

Online content that evokes intense emotions such as anger and anxiety has been shown to **spread faster and more broadly** than neutral content. Emotions also impact our memories: **emotional memories are vivid and lasting** but not necessarily accurate. Misinformation often uses **inflammatory and sensational language**, which may alter people's emotions.

How EUNOMIA helps

EUNOMIA tools visualise the sentiment across similar posts within a topic, i.e., along the information cascade. This supports users to understand how and when a topic is becoming emotional.

BE MINDFUL OF YOUR EMOTIONS WHEN READING A POST.
ANGER MAKES YOU SUSCEPTIBLE TO BIASES.

Anger encourages **biased evaluation of information**, while anxiety promotes initial beliefs based on the information environment. Heightened emotionality was **predictive of increased belief** in misinformation.

How EUNOMIA helps

EUNOMIA tools visualise the sentiment across similar posts supporting users to understand their own emotional state when reading a post.

REFRAIN FROM SHARING BASED ONLY ON HEADLINE.

Already reading a false statement once is enough to **increase later perceptions of its accuracy** (illusory truth effect). The effect holds true **even if participants forgot having seen the information previously**. Even if participants **disagree with information**, repetition made it more plausible.

How EUNOMIA helps

EUNOMIA tools to test the restriction of users' further actions on a post if they have not first trusted the information. Furthermore, to test the addition of an explanatory comment when clicking on 'trust' so to encourage users to critically reflect on the story.

TAKE A MOMENT TO THINK WHEN PROVIDED WITH A NUDGE, SUCH AS SOME FORM OF FLAG.

Most people do not want to spread misinformation, but the social media **context focuses their attention on factors other than truth and accuracy**. Asking users to rate articles pushes them to **think more critically** about the truthfulness of the articles. Flagging misinformation **is most effective if a warning is shown even before reading** misinformation, e.g., in the form of a tag that marks the information as suspect.

How EUNOMIA helps

EUNOMIA tools act in the form of nudge. **EUNOMIA provides the only personalised nudge to assess information trustworthiness, tailored to the user's preferences.**



BE WARY OF RESHARING INFORMATION FOR ITS HIGH NOVELTY.

Misinformation not only travels faster than true information, it is also more novel. Novel information is more likely to be retweeted, because **novelty attracts human attention**, contributes to productive decision-making, and encourages information sharing. Breaking news are increasingly **shared on social media before news outlets report on it**.

How EUNOMIA helps

EUNOMIA's information cascade of the post illustrates how recent a certain piece of information is in this network.

REPOST TO REFUTE WITH EVIDENCE.

When resharing a post with a comment aiming to discredit it, **we may still be contributing to its amplification**. To be effective, corrections must explain why the misinformation was disseminated in the first place or **provide an alternative explanation** of the **relevant information**.

How EUNOMIA helps

EUNOMIA's information cascade - an overview of similar posts - provides further information of the posts shared in the network allowing users to assess better the trustworthiness and responds to missing information.



USE A DEDICATED TOOL OR BUTTON TO FLAG MISINFORMATION.

Users are generally **more likely to believe articles that agree with their point of view**. Asking users to rate articles **pushes them to think more critically** about the truthfulness of the articles.

How EUNOMIA helps

Clicking on EUNOMIA's "don't trust" button allows users to flag misinformation without contributing to its further amplification.



PROJECT FACTS

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CONSORTIUM

University of Greenwich (Coordinator)

IT Hub SRL

Trilateral Research Limited

SYNYO GmbH

INOV INESC INOVACAO

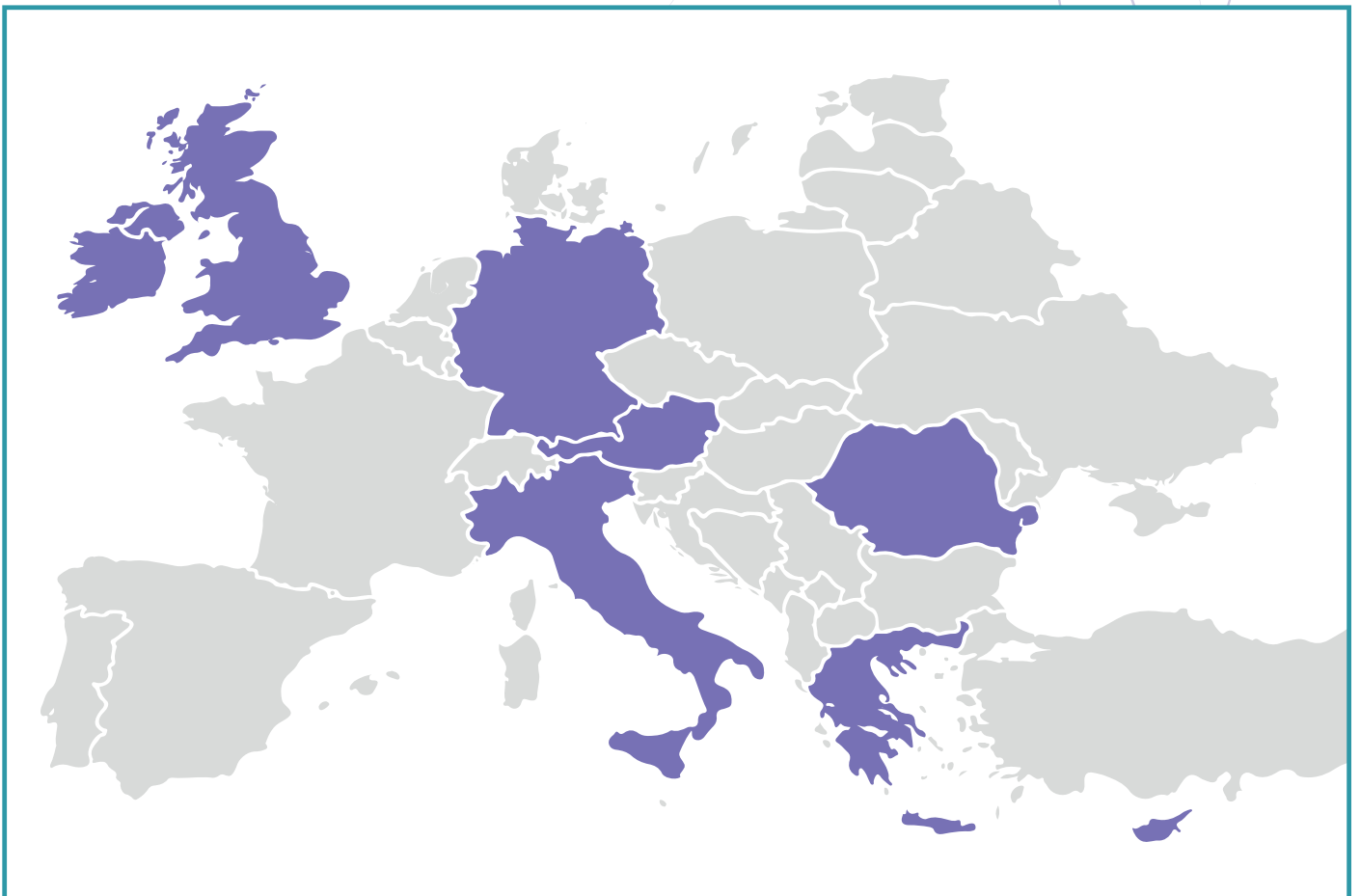
University of West Attica

University of Nicosia

Österreichischer Rundfunk

Eugene Rochko

Software Imagination & Vision SRL



CONTACT

 <https://eunomia.social/>

 [@projectEUNOMIA](https://twitter.com/projectEUNOMIA)

 <https://mastodon.social/@Eunomia>

EUNOMIA

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AUTHORS

George Loukas, Xing Liang & Ryan Heartfield,
University of Greenwich

Diotima Bertel, SYNNO

Pinelopi Troullinou, Trilateral Reserach